NI43-101 Technical Report on the

Mount Washington Property

Vancouver Island, British Columbia

NTS 092F/11 & 092F/14

BCGS 092F074 & 092F075

Latitude 49^0 45’ 39” Longitude 125^0 15’ 23”

UTM NAD83 Zone 10N 337500E 5514500N

For

North Bay Resources Inc.

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September 15, 2014

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Summary

The Mount Washington Property ("Property") is an advanced gold-silver-copper-molybdenum exploration property located on east-central Vancouver Island, British Columbia, Canada. The Property consists of 26 cell mineral claims covering 2,421 hectares held 100% by North Bay Resources Inc. ("North Bay"). The geology underlying the Property consists of Triassic Karmutsen mafic volcanics, Cretaceous Nanaimo Group sediments, and Eocene Mt. Washington Intrusive Suite quartz diorite and quartz feldspar porphyry dikes and sills, pyroclastic dacitic flows and breccias. The Property and adjacent properties host at least two known styles of metallic mineralization as follows:

- Gold-silver-copper bearing, shallowly-dipping quartz-sulphide veins such as the Lakeview-Domineer-Mt. Washington Copper zones (BC MINFILE's 092F116 ,-117), interpreted as Eocene in age
- Copper-gold-silver-molybdenum bearing, steeply dipping silicified breccias such as the Washington, Murray, Quarry, Glacier, Oyster (MINFILE 092F365) and Murex (MINFILE 092F206) breccias, also interpreted as Eocene in age

The Lakeview-Domineer and Mt. Washington Copper zones have been partially mined in two open pits, and have been explored by extensive surface diamond drilling, trenching, bulk sampling and two underground adits mainly from 1940 to 1992 by different companies. From 1964 to 1967, 381,773 tonnes were mined by the Mt. Washington Copper Co. Ltd., yielding 131 kg. gold, 7,235 kg. silver and 3,548 t. copper, grading 0.34 g/t gold, 19 g/t silver and 0.93% copper. Historical and non-NI43-101 compliant mineral resource estimates are as follows:

- Lakeview-Domineer Zone – 550,298 tonnes @ 6.75 g/t gold, 32.23 g/t silver and 0.57% copper (Better Resources Ltd., 1989) located partially on the Property
- Mt. Washington Pit Area – 305,720 tonnes @ 1.07% copper, and undocumented gold and silver contents (W.G. Stevenson, 1970) not located on the Property

CIM and NI43-101 compliant mineral resource estimates are as follows:

- Mt. Washington Tailings – 241,625 tonnes @ 0.119 g/t gold, 5.68 g/t silver, 0.098% copper, 8.26 g/t tellurium indicated mineral resource, and 83,775 tonnes @ 0.119 g/t gold, 5.68 g/t silver, 0.098% copper, 8.26 g/t tellurium inferred mineral resource (J. Houle, 2014 in this report) located on the Property

The area covering the Lakeview-Domineer Zone and the Mt. Washington Open Pits are covered by several mineral tenures with varied ownership, including four contiguous crown grant mineral claims which hold gold and silver rights and partially underlie three of North Bay's mineral tenures. North Bay holds mineral tenures over a portion of the Lakeview-Domineer Zone, including the 2009 bulk sample site and the adit portal. The area of previous open pit mining by the Mt. Washington Copper Co. Ltd. ("MWC") has been identified as a source of acid rock drainage and elevated copper levels in at least one local watershed, but the recent reclamation project completed in 2012 by the provincial government appears to be effective in mitigating the problem. North Bay does not hold mineral tenures over, or any environmental liability for the immediate area of the open pits. The sites of exploration trenches, bulk sample sites and the underground adit portal excavated by previous operators are all fully reclaimed. The former MWC mill site and tailings dam are located on mineral tenures held by North Bay, and have not been reclaimed, but North Bay does not hold any environmental liability for them. The Murex Breccia Area target, the largest and most prospective located entirely on the Property, underlies the area of former mill site and tailings dam. The Mount Washington Alpine Resort lies immediately southwest of the Property, and Strathcona Provincial Park and adjacent no staking reserves are located approximately one kilometre southwest of the Property.

The Mount Washington Property is worthy of further exploration, building on past successful work, new mineral exploration and processing technology, and excellent local infrastructure. The potential exists both on and near the property to establish economically viable mineral resources of gold, silver, copper, molybdenum and/or tellurium that could be permitted, mined and processed. An initial $1 million program is designed to target primarily bulk mineable mineral resources at the Murex Breccia, other known occurrences, and new discoveries, while establishing environmental and socio-economic programs necessary for long term success.

Introduction

The Technical Report on the Mount Washington Property ("Report") has been prepared for North Bay Resources Inc. by the author, at the request of Mr. Perry Leopold, President of North Bay. The Report is to be used to provide technical guidance to North Bay, to help market the Property, and to document assessment work for mineral tenure maintenance. Data used to complete the Report came from public sources, primarily BC government websites, private reports and maps used by the author in previous reports, test work completed by Blue Coast Research for North Bay (see Appendix 5) and the author's own experience on the Property (see References). The author visited the Property several times between 2000 and 2014.

In 2011, the author designed and supervised a drilling program on the Mount Washington Copper (MWC) Tailings dam for a previous owner of that portion of the Property.

In 2013 the author completed a preliminary field work program on the Property for North Bay, including select outcrop grab sampling with highlights achieved at the following locations:

- Wolf Lake Area – 2 samples taken from three separate known mineralized sites yielded up to 16.4 g/t gold and 1.18% copper
- Murex Breccia Area – 4 samples taken from four separate known mineralized sites and 7 select outcrop grab samples taken from areas of recently exposed or previously undocumented mineralized sites yielded up to 3.55 g/t gold, 0.749% copper and 0.026% molybdenum

In 2014 the author and D. Middleditch of Blue Coast Research obtained bulk samples from the MWC tailings dam, from which metallurgical testing yielded the following key points:

- Composite sample grades of 0.13 g/t gold, 0.15% copper, 3.43% iron and 1.03% sulphur
- Flotation produced concentrate recoveries of 67% for gold and 60% for copper
- Specific gravity determination of 2.7 g/cc for average solids density

Reliance on Other Experts

Technical information in this report was derived from private company files, government publications and published reports. Original source data has been used where available. Reasonable care and diligence has been taken by the author to verify all historical information. The author has seen no reason to doubt the validity and accuracy of this source data and historical information, most of which was generated and signed by qualified, professional persons at the times the work was done, prior to the implementation of NI 43-101. The author is not a Qualified Person in some of the more technical aspects of environmental, metallurgical, mill processing and land tenure issues, which may be of potential significance at the Mount Washington Property. The author has relied in part on the expertise of professional persons who worked on these issues in the past on the Property. No reasons have been seen by the author to doubt the validity of this data.

Property Description and Location

The Mount Washington Property is centred approximately 25 kilometres due west of the city of Courtenay, B.C. in east-central Vancouver Island at latitude 49^0 46’ N. and longitude 125^0 15’ W, as shown in Figure 1a. The Property covers approximately 2421 hectares, as shown in several of the accompanying figures, but best shown in Figure 2a. It is comprised of 26 cell mineral claims held 100% by North Bay as shown in Table 1; including partial overlap of portions of four crown granted mineral claims Domineer 1, 3, 4 and 6 which hold gold and silver rights only. The cell mineral claims are located on NTS maps sheets 092F/11 or 092F/14 in the Nanaimo Mining Division. The crown granted mineral claims held by Clibetre Explorations Ltd. pre-date and have precedence over mineral rights held through all overlapping cell mineral tenures.

Table 1 – Mount Washington Property Mineral Tenures as of September 15, 2014

Tenure Number	Claim Name	Owner	Tenure Type	Tenure Sub Type	Issue Date	Good To Date	Status	Area (ha)
752243	OYSTER	204090 (100%)	Mineral	Claim	2010/apr/19	2016/sep/08	GOOD	83.4505
839450	MW	204090 (100%)	Mineral	Claim	2010/dec/02	2016/jul/18	GOOD	20.8653
840463	MW 2	204090 (100%)	Mineral	Claim	2010/dec/09	2016/jul/18	GOOD	20.8653
890186	DOVE 4	204090 (100%)	Mineral	Claim	2011/aug/18	2016/jul/18	GOOD	41.7282
939370	CONNIE 3	204090 (100%)	Mineral	Claim	2011/dec/31	2016/jul/18	GOOD	83.4576
966589	CONNIE HILL	204090 (100%)	Mineral	Claim	2012/mar/19	2016/jul/18	GOOD	125.1714
966609	MUREX	204090 (100%)	Mineral	Claim	2012/mar/19	2017/jan/19	GOOD	333.9375
966629	MT WASHINGTON	204090 (100%)	Mineral	Claim	2012/mar/19	2017/mar/19	GOOD	166.9684
966649	DOVE	204090 (100%)	Mineral	Claim	2012/mar/19	2016/jul/18	GOOD	20.858
980271	MUREX W	204090 (100%)	Mineral	Claim	2012/apr/15	2016/jul/18	GOOD	250.4421
980277	OYSTER 3	204090 (100%)	Mineral	Claim	2012/apr/15	2016/jul/18	GOOD	20.8653
980286	MUREX TLS	204090 (100%)	Mineral	Claim	2012/apr/15	2016/jul/20	GOOD	41.746
980310	MUREX CTR	204090 (100%)	Mineral	Claim	2012/apr/16	2017/jan/19	GOOD	20.8724
1014745	DOVE 2	204090 (100%)	Mineral	Claim	2012/nov/23	2016/jul/18	GOOD	62.5775
1017938	MUREX N	204090 (100%)	Mineral	Claim	2013/mar/20	2016/jul/18	GOOD	125.1795
1017939	CONNIE 4	204090 (100%)	Mineral	Claim	2013/mar/20	2016/jul/18	GOOD	104.2998
1017940	MUREX FR	204090 (100%)	Mineral	Claim	2013/mar/20	2016/jul/18	GOOD	20.865
1018530	OYSTER 2	204090 (100%)	Mineral	Claim	2012/apr/15	2016/jul/18	GOOD	83.4453
1018531	OYSTER SW	204090 (100%)	Mineral	Claim	2012/apr/15	2016/jul/18	GOOD	20.8652
1018594	MUREX NW	204090 (100%)	Mineral	Claim	2013/apr/16	2016/jul/18	GOOD	125.2025
1018597	OYSTER W	204090 (100%)	Mineral	Claim	2013/apr/16	2016/jul/18	GOOD	62.5887
1018599	MUREX TLS 2	204090 (100%)	Mineral	Claim	2013/apr/16	2016/jul/24	GOOD	166.9832
1018600	MW S	204090 (100%)	Mineral	Claim	2013/apr/16	2016/jul/18	GOOD	62.6228
1020833	MUREX S	204090 (100%)	Mineral	Claim	2013/jul/05	2016/jul/18	GOOD	104.3783
1020834	MUREX TLS 3	204090 (100%)	Mineral	Claim	2013/jul/05	2016/jul/18	GOOD	146.1225
1020835	MUREX NE	204090 (100%)	Mineral	Claim	2013/jul/05	2016/jul/28	GOOD	104.3514
Totals	**27 Mineral Claims**							**2420.71**

Surface rights in the area of the Mount Washington Property are held primarily by TimberWest, a large forestry company. TimberWest also has made surface tenure arrangements with the Mount Washington Alpine Resort (MWAR) for portions covering some of the resorts' buildings and transport infrastructure, located just along the southwestern portions of the Property. The perimeters of the surface rights blocks that may in part overlap the mineral claims of the

Property appear in Figures 1a and 2a, and are listed in Table 2. Verification of disposition of rights between TimberWest, Mount Washington Alpine Report, and possibly others has not been completed by the author. For the purpose of this report, surface rights in the area of the Property are held by one or the other. TimberWest holds timber rights to all or most of the area, and has agreements in place with various logging contractors to harvest timber and build and maintain logging roads. The BC government built and maintains Strathcona Parkway.

Table 2 – Surface Rights Tenures and Owners

Block No.	Tenure Type	Legal Description	SID No.	Owner/Leasee	Land District	Area (ha)
29	Crown Grant	Block 29, Comox District	454760	Timberwest	Comox	12642.7
76	Crown Grant	Block 76, Comox District	422280	Timberwest	Comox	845.5
267	Crown Grant	Block 267, Comox District	15094620	Timberwest	Comox	4.6
695	Crown Grant	Block 695, Comox District	426240	Timberwest	Comox	2112.9
914	Crown Grant	Block 914, Comox District	16317300	Timberwest	Comox	2101.8
975	Crown Grant	Block 975, Comox District	16327800	Timberwest	Comox	798.0
1109	Crown Grant	Block 1109, Comox District	16327930	Timberwest	Comox	2529.2
1223	Crown Grant	Block 1223, Comox District	16328000	Timberwest	Comox	854.0
1341	Crown Grant	Block 1341, Comox District	16328130	Timberwest	Comox	195.3
1357	Crown Grant	Block 1357, Comox District	15089540	Timberwest	Comox	1201
1450	Crown Grant	Block 1450, Comox District	15089670	MWAR	Comox	147.3
1466	Crown Grant	Block 1466, Comox District	15089700	MWAR	Comox	99.4
1469	Crown Grant	Block 1469, Comox District	16328260	MWAR	Comox	64.5

Legal access to the mineral claims of the Property by the tenure holder and its agents is provided through the BC Mineral Tenure Act and by providing Section 19 Notices to the overlapping surface rights tenure holders at least eight days prior to access. In addition, North Bay has entered into an agreement with TimberWest dated July 8, 2013 for access over land owned by TimberWest during a specified time period in 2013 (see Appendix 7).

Maintenance of the mineral tenures of the Property by the tenure holder is also provided through the BC Mineral Tenure Act, by completing and filing statements of costs for assessment work completed on the contiguous mineral tenures within the previous 12 month period but prior to the good to dates of those tenures, and by submitted appropriate reports to support and document the assessment work. All mineral tenure selection, assessment work filing and assessment report submitting is done online through the BC Mineral Titles Online system.

No permits are required by the mineral tenure holder and its agents for non-mechanized exploration activities on the mineral tenures, such as geochemical, geophysical and geological surveys. Mechanized exploration activities including drilling, access trail construction or modification, and bulk sampling require the tenure holder or its agent to apply for and obtain a valid mineral exploration and reclamation permit issued by the BC Inspector of Mines in advance of undertaking those activities. Permits are acquired through the online Front Counter BC Natural Resource Application system, and typically require 90 to 180 days to process and issue. Reclamation securities are required to post by the applicant in advance of programs which may impact the environment. Permits are normally issued for 5 years, and require annual notices of exploration activity to be completed and submitted by the tenure holder or its agent to the Inspector of Mines in order to maintain the permit in good standing.

Similar to many other places in British Columbia, Canada and world-wide, the ability to perform work on an exploration property like Mount Washington may be affected by other factors and risks. These can include opposition by local individuals, First Nations, and/or Non-Government Organizations; intervention by local, regional, provincial or federal governments; or weather, earthquakes, and other natural disasters.

Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Mount Washington Property is situated along the eastern side of the insular mountains of Vancouver Island with elevations ranging from 550 metres in the east to 1,590 metres at the top of Mt. Washington. Topography ranges from steep mountains to poorly drained swamps, but is mostly covered by northeast draining creek valleys. Most of the Property is covered by second growth mixed forest including active logging areas, except the areas above 1,100 metres which are mostly primary coniferous forest including minor sub-alpine areas above 1,400 metres. The climate is warm and dry in the summer and cool and wet in the winter, with snow accumulations of up to 5 metres above 1,000 metres elevation from November to June. This allows a snow-free field season of approximately 4 months from July to October for any field work, although site specific or underground work could continue throughout the year. Forest fire hazard due to severely dry conditions typically in August, may cause field work to be suspended.

Access to the Mount Washington Property from the full service communities of Comox and Courtenay is via 4-lane Highway 19 north from the Comox Valley Parkway for 12 kilometres to the paved 2-lane Strathcona Parkway, and west for 10 kilometres to the beginning of the Tsolum Main, Branch 62 and Branch 101 logging roads, which provide access to the eastern part of the Property. The Strathcona Parkway proceeds west for a further 5 kilometres to the Mt.

Washington Alpine Resort, where lodging and basic supplies are readily available year-round. Just south of the resort, Nordic Drive branches west from the Parkway and continues northwest as Piggott Main logging road, which along with Branch 126 provides access to the western part of the Property. Comox has both an international airport and a small hospital. Campbell River, 25 kilometres north of Mt. Washington, is the mining service hub for the Myra Falls Operation and the Quinsam Coal Mine. Nanaimo, 100 kilometres southeast of Mt. Washington, is a regional government centre. Travel time from either Comox or Campbell River to the property is 45 minutes, and from Nanaimo is 1 hour and 15 minutes. See Figure 1b and 2b for infrastructure details for the Property.

The nearby Mt. Washington Alpine Resort and condominium complex is connected to the provincial hydroelectric grid, but the transmission infrastructure may not have sufficient capacity to supply a mining operation, particularly a large one, without expansion of its capacity or other upgrades. The Mount Washington Property has only small lakes in its western part, including McKay Lake and Pyrrhotite Lake. The eastern side of the Property is adjacent to Wolf Lake, and has adequate water supply and suitable sites for processing plants, and waste and tailings disposal, if required.

History

The following history is summarized primarily from publicly available government sources including BC Minister of Mines, Assessment and MINFILE Summary Reports listed in Appendix 3. Panning for gold on the Oyster River, which drains an area including the western slopes of Mt. Washington, was a common occupation during the depression. Some individuals panned four dollars' worth of gold per day (D.J.T. Carson, 1960). This work, presumably from the 1920's, is the earliest documentation of any metallic mineral exploration in the area. M.E. Hurst of the G.S.C. identified and documented occurrences arsenic in the Wolf Lake area east of Mt. Washington (M.E. Hurst, 1227). H.C. Gunning of the G.S.C. identified and documented occurrences of gold, silver and copper in the Forbidden Plateau area, southwest of Mt. Washington (H.C. Gunning, 1930).

In 1940 J.M. MacKay discovered and staked several gold-silver-copper veins on the Central and West arms of Mt. Washington, including the No.1, No.2 and No.3 Veins on the Domineer mining claim group. An access trail, trenching, channel sampling, bulk sampling and metallurgical testing were completed in 1941. The most significant results were obtained from channel sampling of the 20^0 west-dipping No.1 (Main) Vein by geologist D.F. Kidd as follows:

13.8 g/t gold

232 g/t silver

0.945 m. average thickness

27.4 m. strike length

The metallurgical testing consisted of flotation and cyanidation of a 12 kg. composite sample of assay rejects from the Domineer mining claim group was completed by the Canadian Bureau of Mines, including six polished thin sections, at the request of D.F. Kidd. The sample head grade assayed as follows:

8.23 g/t gold

216 g/t silver

5.48 % arsenic

1.74 % copper

15.33% iron

13.88% sulphur

0.45 % zinc

0.76 % lead

Mineralogical work identified pyrite, arsenopyrite, chalcopyrite, tetrahedrite and covellite in order of decreasing abundance in the sample. No native gold or silver were seen. Metallurgical test work suggested that the material was refractory, and that the gold was not amenable to gravity, cyanidation or bulk flotation. Five different tests were conducted, all showing high reagent consumptions and tailings assays, and poor metal recoveries, in part due to the oxidized nature of the sample. Results indicate that a method of selective flotation offered the best possibilities for treating the Domineer ore.

In 1944, the Domineer mining claim group was acquired by the Consolidated Mining and Smelting Co. of Canada Ltd. (Cominco), who completed geological mapping and additional trenching and sampling, along with several short adits during the period 1944-45. Cominco first identified and documented the presence of intrusive breccias on the west arm of Mt. Washington, and discovered the No.4, No.5, No.6 and No.7 Veins on the Domineer Group. Cominco located and sampled the No.8 Vein, which Kidd mapped as a possible northwest extension of the No.1 Vein, on the adjacent President Group to the west. They also recorded and assayed for base metals when present. Channel sampling results from six discontinuous trenched exposures on the 50^0 east-dipping No.2 Vein yielded the highest gold grades of any veins sampled to date, as follows:

39.1 g/t gold

93.7 g/t silver

0.107 m. average thickness

122 m. strike length

In 1949, G.C. Murray staked the Murex Claim Group, located approximately 3 km. east of Mt. Washington, to cover north-south quartz stringers containing chalcopyrite, pyrite, pyrrhotite, and minor arsenopyrite and sphalerite exposed in outcrop along the bed of Murex Creek.

In 1951, the Domineer Group was acquired by Noranda Mines Ltd. (Noranda), who completed 13 exploration diamond drill holes in that year. The most significant intercepts were as follows:

- DDH No.2 yielded 41.7 m. @ 0.194% copper, including:
    - 0.27 m. @ 7.2 g/t gold, 20.6 g/t silver, 0.10% copper and 6.4% zinc
- DDH No.4 yielded 1.5 m. @ 6.21% copper, 68.6 g/t silver (gold not recorded)
- DDH No.7 yielded 1.5 m. @ 4.11% copper, 34.3 g/t silver (gold not recorded)

In 1956, the Mt. Washington Copper Co. Ltd. (Mt. Washington Copper) was formed by G.C. Murray, and an access road was completed to the West Arm of Mt. Washington, along with trenching in the Murex area. Also in 1956, A.C. Skerl, P.Eng. completed geological mapping in the Murex area, and identified an E-W striking fault breccia zone up to 6.1 m. thick containing lenses, seams and disseminations of pyrrhotite, chalcopyrite and pyrite hosted in mafic volcanics and tuffs. Five packsack exploration diamond drill holes were completed on a single section, for which no assays are recorded, but with mineralogical descriptions of massive sulphide intercepts as follows:

- Hole No.1 recovered 3.14 m. averaging 52% chalcopyrite, 34% pyrrhotite, 13% pyrite over an intercept length of 4.57 m. from 0 m. to 4.57 m. at a 75^0 core angle
- Hole No.5 recovered 1.83 m. containing 30% chalcopyrite, 50% pyrrhotite over an intercept length of 2.13 m. from 2.13 m. to 4.26 m. at a 45^0 core angle

In 1957, Noranda and Mt. Washington Copper began to jointly explore the Mt. Washington Property (Domineer and Murex areas). They completed an access road, 4 diamond drill holes, trenching, geological mapping, a self-potential survey, and soil sampling in the Murex area. No logs are available for the diamond drill holes, but a drilling summary table shows the following averaged intercepts (only copper reported):

- Hole 57-1 yielded 22.9 m. @ 0.24% copper
- Hole 57-2 yielded 18.9 m. @ 0.41% copper
- Hole 57-3 yielded 25.6 m. @ 0.63% copper
- Hole 57-4 yielded 50.3 m. @ 0.36% copper

In 1958, Noranda resumed drilling in the area of the West Arm of Mt. Washington, and completed an electromagnetic survey, mechanized stripping, and 10 diamond drill holes in two clusters 40 metres apart starting 50 metres north of the Domineer No.1 Vein. No drill logs are available for these holes, but the drill hole collar locations and traces are plotted on old map copies. As a result of the work completed in 1958, a near-surface flat-lying vein or zone containing several veins was indicated. Its thickness varied from 2 to 4.5 metres and its grade averaged about 2% copper. It outcropped at surface in several places and occurred over an area of about 75 by 200 metres (Carson, 1960).

In 1960-61, Noranda again resumed drilling, and completed 57 vertical definition diamond drill holes at nominal 50’ spacing in the West Arm area, plus 2 exploration diamond drill holes in the Murex area. The most significant intercepts from the West Arm area were as follows:

- DDH 60-9 yielded 13.0 m. @ 0.66% copper, including:

    - 1.5 m. @ 3.3% copper, 0.86 g/t gold, 55 g/t silver
- DDH P.S. 60-8 yielded 3.0 m. @ 0.72% copper, ending in mineralization
- DDH P.S. 60-9 yielded 3.1 m. @ 0.75% copper, including:
    - 1.6 m. @ 1.2% copper (gold silver not recorded) ending in mineralization
- DDH 61-MW-1 yielded 3.0 m. @ 1.6% copper, 0.17 g/t gold, 6.9 g/t silver
- DDH 61-MW-2 yielded 1.9 m. @ 2.4% copper, 1.7 g/t gold, 27 g/t silver
- DDH 61-MW-6 yielded 3.3 m. @ 1.8% copper, 0.17 g/t gold, 34 g/t silver
- DDH 61-MW-7 yielded 4.6 m. @ 1.0% copper, 0.34 g/t gold, 45 g/t silver
- DDH 61-MW-9 yielded 2.4 m. @ 1.7% copper, 0.17 g/t gold, 38 g/t silver
- DDH 61-MW-10 yielded 6.9 m. @ 1.0% copper, trace gold, 63 g/t silver, incl.:
    - 1.2 m. @ 2.8% copper
- DDH 61-MW-16 yielded 1.5 m. @ 2.9% copper
- DDH 61-MW-18 yielded 4.6 m. @ 2.1% copper, 0.34 g/t gold, 38 g/t silver
- DDH 61-MW-27 yielded 1.4 m. @ 2.9% copper, 0.17 g/t gold, 10 g/t silver
- DDH 61-MW-28 yielded 2.2 m. @ 1.9% copper, 0.17 g/t gold, 27 g/t silver
- DDH 61-MW-30 yielded 1.8 m. @ 2.9% copper, 1.0 g/t gold, 48 g/t silver
- DDH 61-MW-31 yielded 2.9 m. @ 1.7% copper, 0.17 g/t gold, 17 g/t silver
- DDH 61-MW-35 yielded 2.3 m. @ 1.4% copper, 0.17 g/t gold, 21 g/t silver
- DDH 61-MW-37 yielded 1.4 m. @ 3.5% copper, 3.8 g/t gold, 161 g/t silver
- DDH 61-MW-39 yielded 1.7 m. @ 1.8% copper, 4.1 g/t gold, 26 g/t silver

In the Murex area, one of 2 diamond drill holes (DDH 61-M1) collared 120 metres apart oriented due north at -50^0 intersected mafic volcanics containing multiple zones of quartz-calcite fracture controlled and locally disseminated pyrite, pyrrhotite and chalcopyrite, with intercepts achieved as follows:

- 2.7 m. @ 0.14% copper from 23.2 m. to 25.9 m., and
- 1.4 m. @ 0.17% copper from 48.7 m. to 50.1 m., and
- 1.2 m. @ 0.50% copper from 68.1 m. to 69.3 m., and
- 1.8 m. @ 0.15% copper from 75.9 m. to 77.7 m.

No records exist of any assays other than for copper from the Murex holes. Also of note, in 1960 D.J.T. Carson completed and published his M.Sc. thesis at the University of British Columbia, which was titled “Geology of Mount Washington Vancouver Island British Columbia”. Carson’s thesis documented in detail the geological setting and mineralization in the Mt. Washington area, including many of the various breccias.

In 1961, Mt. Washington Copper and Noranda formed a new company, Qualicum Mines Limited, to develop the Mt. Washington Property, and engaged consulting engineers Hill, Starck & Associates Ltd. to undertake the mining geology and engineering. An agreement was reached with the Esquimalt and Nanaimo Railway Company Limited, owners of the base metals on the Mt. Washington Property, to mine and process ore. Development of the Mt. Washington Copper Mine was commenced, including installation of an all-season camp west of McKay Lake, and driving an exploration adit, which was completed in early 1962. The 2 m. x 2.5 m. adit was driven in a northerly direction along the strike of the mineralized zone for a distance of about 210 m, at an average elevation of 1315 m., and at an average gradient of +1.4%. The mineralization exposed in the ribs of the adit was mapped, and chip or channel sampled at 5’ (1.52 m.) intervals, and assayed for copper, gold and silver. The initial (southern) portion of the adit yielded the following values:

160 m. length

2.07 m. average vertical thickness

2.03% copper

0.855 g/t gold

35.7 g/t silver

The thicknesses and grades confirmed the definition drilling results, and established the continuity of copper mineralization in the flat-lying vein structure through the southernmost of the two zones. The adit was stopped short of and not extended into the northernmost zone, and the northernmost 50 m. of the adit yielded much lower values of copper, silver and gold where chip or channel sampled. The southernmost zone was initially referred to as the Tunnel Block or the No.1 Zone, and the northernmost zone as the Noranda Block or the No.2 Zone. These were subsequently developed into the South Pit and North Pit, respectively. Pre-production mining commenced in the No. 1 Zone (South Pit), from which 4,000 tonnes of low grade ore was mined, trucked to Comox and shipped to the Britannia concentrator, plus 800 tonnes of higher grade ore was mined, trucked and shipped to the Tacoma smelter. Recovery information from the ore shipments is not available.

In 1962, an additional 31 diamond drill holes and 35 percussion drill test holes, along with stripping and trenching were completed on the No.2 Zone (North Pit) by Hill, Starck & Associates. Total indicated ore reserves were estimated at 553,400 tonnes @ 1.40% copper, 0.51 g/t gold and 41 g/t silver, consisting of 217,700 tonnes @ 1.43% copper in the No.2 Zone (North Pit) and 335,700 tonnes @ 1.39% copper in the No.1 Zone (South Pit). Open pit ratios of ore to waste were estimated at 1:1 to 1:4. Inferred ore located between the two zones was estimated at 132,500 tonnes @ 0.65% copper. The mineral resource estimates reported at this time are not to current industry standards.

In 1963-64, Mt. Washington Copper reached an agreement to complete development and construction of the Mt. Washington Mine with Consolidated Woodgreen Mines Limited, subsequently renamed Cumberland Mining Ltd. The companies formed a subsidiary company, Mount Washington Milling Co. Ltd., to operate the Mt. Washington Mine and Mill. Woodgreen/Cumberland’s 800-1000 ton per day flotation mill from the Motherlode Property near Greenwood, B.C., was dismantled, moved and erected 3.1 km. east of and 550 m. lower than the Mt. Washington mine site (7.2 km. by road). A tailings dam was constructed 2.3 km. east of and 180 m. below the mill site (2.4 km. by pipeline). Contract mining and trucking was undertaken by Tymac Construction Company. By late 1964, 82,500 tonnes of ore had been mined and stockpiled at the mill site, and 122,000 tonnes of waste had been moved. Furukawa Mining Co. provided advance funding for startup of the mine and mill in exchange for the sale of the entire output of copper concentrate. The Mt. Washington mine was officially opened on December 5, 1964. It is significant to note that the mill was a single stage crushing, grinding and flotation plant with a design throughput of 750 TPD based on year round milling, and on seasonal mining from the open pit mine during the summer and fall.

In 1963, Cominco optioned the portion of the Mt. Washington Property below 4000' elevation (1219 m.), and in 1963-64 completed geological mapping, ground magnetics, and 22 diamond drill holes. Cominco's focused its exploration efforts on the bulk ore potential of the various breccias identified across the property, but only split and sampled selected portions of the core, analyzed samples routinely for copper only, and subsequently dropped the option on the property in early 1965. The following significant drill intercepts were achieved and reported by Cominco, and are listed by target area:

In 10 drill holes testing the Murex Breccia:

- Hole No. C-1 yielded:
    - 56.1 m. @ 0.25% copper from 0 to 56.1 m., and,
    - 11.4 m. @ 0.19% copper from 114.5 m. to 125.9 m.
- Hole No. C-2 yielded:
    - 37.3 m. @ 0.25% copper from 33.5 m. to 70.8 m.
- Hole No. C-14 yielded:
    - 75.7 m. @ 0.28% copper from 12.2 m. to 87.9 m.
- Hole No. C-16 yielded:
    - 5.6 m. @ 0.56% copper from 11.1 m. to 16.7 and
    - 36.6 m. @ 0.29% copper from 34.7 m. to 71.3 m.
- Hole No. C-18 yielded:
    - 19.5 m. @ 0.28% copper from 48.9 m. to 68.4 m.
- Hole No. C-19 yielded:
    - 26.8 m. @ 0.29% copper from 22.6 m. to 49.4 m., and
    - 7.5 m. @ 0.39% copper from 64.0 m. to 71.5 m., and
    - 8.8 m. @ 0.26% copper from 141.6 m. to 150.4 m., and
    - 1.8 m. @ 4.8% copper from 195.8 m. to 197.6 m.

In 7 drill holes testing the Washington Breccia beneath, or on trend with the open pits:

- Hole No. C-5 yielded:
    - 6.4 m. @ 0.92% copper from 17.4 m. to 23.8 m., and
    - 0.8 m. @ 0.88% copper from 40.5 m. to 41.3 m.
- Hole No. C-6 yielded:
    - 2.4 m. @ 0.80% copper from 15.2 m. to 17.6 m.
- Hole No. C-7 yielded:
    - 4.1 m. @ 1.51% copper from 7.8 m. to 11.9 m., and
    - 11.9 m. @ 0.34% copper from 103.6 m. to 115.5 m.
- Hole No. C-9 yielded:
    - 26.5 m. @ 0.40% copper from 3.4 m. to 29.9 m.
- Hole No. C-10 yielded:
    - 1.8 m. @ 1.1% copper from 35.1 m. to 36.9 m., and
    - 7.3 m. @ 0.43% copper from 149.1 m. to 156.4 m.

In 2 drill holes testing the Murray Breccia southwest of the open pits:

- Hole C-15 yielded:
    - 31.7 m. @ 0.27% copper, 0.26 g/t gold & 6.7 g/t silver (61.0m.-92.7m.)

In 3 drill holes testing outcropping mineralization discovered during road construction northeast of the open pits, no significant drill intercepts were achieved.

In 1965, the Mount Washington Milling Co. mined 219,700 tonnes of ore, milled 170,100 tonnes of ore, stockpiled 49,600 tonnes of ore, and produced 8,100 tonnes of concentrate containing 1,704,300 kilograms of copper, 59,300 grams of gold and 3,723,000 grams of silver. In addition, 542,200 tonnes of waste and overburden was removed. The open pit operated from May 16th to December 10th, and the mill operated all year.

In 1966, the Mount Washington Milling Co. mined 156,100 tonnes of ore, milled 162,800 tonnes of ore, and produced 7,700 tonnes of concentrate containing 1,481,400 kilograms of copper, 67,900 grams of gold and 3,423,800 grams of silver. In addition, 273,200 tonnes of waste and overburden was removed. The open pit operated from the beginning of June to the end of November, and the mill operated all year.

In 1967, the Mount Washington Milling Co. milled 9,700 tonnes of stockpiled ore, and produced 1,400 tonnes of concentrate containing 257,500 kilograms of copper, 14,300 grams of gold and 552,700 grams of silver. At the end of March, the mill ceased operation and on April 3, 1967 the company was placed in receivership and all operations closed. The parent company maintained ownership of the property.

Over its 2 year mine life, the Mt. Washington mill processed 342,600 tonnes of ore averaging 1.005% copper, 0.413 g/t gold, and 22.5 g/t silver, generating 17,200 tonnes of concentrate containing 3,443,200 kilograms of copper, 141,500 grams of gold and 7,699,500 grams of silver. This data is from the Minister of Mines Annual Reports, and there exists conflicting data quoted elsewhere. Although mill recovery information is not available, calculated recoveries compared to the total indicated resources are estimated at 71% for copper, 81% for gold, and 55% for silver. The calculated tonnage and grades of the tailings dam are therefore estimated at 325,400 tonnes @ 0.41% copper, 0.10 g/t gold and 18 g/t silver, but is not a resource estimate to NI43-101 standards, and cannot be relied upon.

In 1966-68, the Mt. Washington Copper Co. Ltd. and Qualicum Mines Ltd. engaged consulting engineer W.G. Stevenson, P.Eng. to undertake exploration work targeting primarily porphyry copper style mineralization on the Mt. Washington property. In 1966, Stevenson completed a reconnaissance soil geochemistry survey along selected roads between Wolf Lake and McKay Lake, and analyzed several hundred samples for zinc, with poor results. In 1967, Stevenson completed geological mapping, grid-based soil geochemistry, and initiated a few widely spaced lines of ground magnetic and induced polarization (I.P.) surveys in the Murex area surrounding the mill site. Approximately two hundred samples were analyzed for copper, showing a broad area of 1.6 km. by 1 km. with elevated copper values in soils, exceeding 280 ppm, the anomalous threshold as determine by J.S. Scott, P.Eng. The geophysics delineated a co-incident magnetic high and chargeability high over an area of 1100 metres by 700 metres, co-incident with the northern portion of the soil anomaly. The magnetic survey was supervised by D.W. Smellie, P.Eng. and the I.P. survey was supervised and interpreted by D.B. Sutherland, M.A. and R.A. Bell, PhD. of McPhar Geophysics Limited, who conducted the I.P. survey.

In 1968, the Mt. Washington property was optioned by Marietta Resources Ltd. (Marietta) from the Mt. Washington Copper Co. Ltd. Marietta engaged consulting engineer W.G. Stevenson, P.Eng. to continue exploring the property for porphyry copper style mineralization. In 1968, Stevenson initiated additional I.P.-resistivity survey lines and an airborne magnetic survey was conducted over much of the Mt. Washington property. The geophysics delineated three large magnetic highs along an E-W trend across the property, flanked by chargeability highs and resistivity lows from which 4 significant targets were established, named Zones A-D. The best target, Zone A, was delineated over a length of 4 km. and a width of 750 metres. C. Elliot, Mining Geophysical Engineer, supervised and interpreted both surveys. The airborne survey was conducted by Canadian Aero Mineral Surveys Limited.

In 1968-69 on behalf of Marietta, W.G. Stevenson obtained, re-logged and selectively sampled diamond drill core from Cominco's 1963-64 drilling programs, specifically for drill holes C-1 to C-4, C7 to C-10, C13 to C16 and C18 to C21. All sampled drill core was analyzed for copper, molybdenum, gold and silver. The following intercepts were obtained from essentially previously un-sampled core intervals from Cominco holes:

- Hole No.C-2 from the Murex Breccia which yielded:
    - 13.6 m. @ 0.15% copper, 0.06% molybdenum from 78.2 m. to 91.8 m., including:
    - 7.2 m. @ 0.17% copper, 0.10% molybdenum from 83.0 m. to 90.2 m.
- Hole No.C-7 from the Washington Breccia beneath the North Pit which yielded:
    - 70.4 m. @ 0.16% copper, 0.006% molybdenum from 33.2 m. to 70.4 m., including:
    - 24.3 m. @ 0.16% copper, 0.016% molybdenum from 61.0 m. to 85.3 m.

- Hole No.C-9 from the Washington Breccia east of the North Pit which yielded:
  - 76.2 m. @ 0.25% copper, 0.03% molybdenum, 0.22 g/t gold and 2.2 g/t silver from 0 m. to 76.2 m., including:
  - 42.7 m. @ 0.26% copper, 0.05% molybdenum, 0.20 g/t gold and 1.9 g/t silver from 6.1 m. to 48.8 m.
- Hole No.C-10 from the Washington Breccia south of the South Pit which yielded:
  - 30.3 m. @ 0.17% copper and 2.0 g/t silver from 4.5 m. to 34.7 m., and,
  - 43.6 m. @ 0.24% copper and 2.0 g/t silver from 34.7 m. to 78.3 m., and,
  - 34.1 m. @ 0.28% copper, 0.006% molybdenum and 1.7 g/t silver from 131.1 m. to 165.2 m.
- Hole No. C-15 from the Murray Breccia southwest of the South Pit which yielded:
  - 15.3 m. @ 0.24% copper from 94.4 m. to 109.7 m.

In 1969, on behalf of Marietta, W.G. Stevenson completed 15 diamond drill holes on the Mt. Washington property, following up new surface targets, geophysical targets and Cominco's drilling targets. Most of the holes were split and sampled over their entire lengths, and the samples analyzed for copper, molybdenum, silver and gold. The following drill results were achieved by Marietta, listed by target area:

In four holes testing I.P. target Zone A in the Murex area, no significant intercepts achieved, the best being:

- Hole 69-1 yielded 3 m. @ 0.26% copper, 5 ppm molybdenum and 2 ppm silver from 115.8 m. to 119.8 m., but averaged approximately 350 ppm copper over its entire 141 m. logged as mainly Karmutsen volcanics with some intrusives
- Hole 69-3 yielded 3 m. @ 0.03% copper and 0.02% ppm molybdenum from 100.6 m. to 103.6 m., but averaged approximately 250 ppm copper and 15 ppm molybdenum from 40 m. to the bottom of the hole at 305 m., logged as entirely Karmutsen volcanics

- Hole 69-6 yielded 3 m. @ 0.20% copper and 2.2 ppm silver from 116 m. to 119 m., but averaged approximately 250 ppm copper over its entire 152 m. depth, logged as entirely Karmutsen volcanics

In one hole testing co-incident I.P. target Zone C and magnetic target Body B in the Murex area, no significant intercepts achieved, the best being:

- Hole 69-2 yielded 3.0 m. @ 0.24% copper, 0.003% molybdenum and 1.8 ppm silver from 128 m. to 131 m., but averaged approximately 450 ppm copper over its entire 155 m. depth, logged as entirely Karmutsen volcanics

In one hole testing co-incident I.P. target Zone B and magnetic target Body A in the Murex area, the following significant intercept was achieved:

- Hole 69-4 yielded 3 m. @ 0.40% copper, 0.001% molybdenum and 5 ppm silver from 122 m. to 125 m., in silicified and sulphidic Karmutsen volcanics

In one hole testing magnetic target Body A in the Murex area, no significant intercepts achieved, the best being:

- Hole 69-7 yielded 3 m. @ 0.05% copper, 0.03% molybdenum and 1.5 ppm silver from 54.9 m. to 57.9 m., and was logged as hornblende syenite over its entire 305 m. length

In three holes testing surface copper-molybdenum mineralization exposed in a road cut east of McKay Lake, the following significant intercept, and two non-significant intercepts achieved:

- Hole 69-13 yielded 27.4 m. @ 0.009% copper and 0.0375% molybdenum in a mineralized breccia body (later named the Quarry Breccia), and minor intrusives

- Hole 69-8 yielded 4.6 m. @ 0.14% copper from 1.5 m. to 6.1 m. , and averaged approximately 250 ppm copper over its entire 67 m. depth, intersecting intrusives surrounding a breccia body

- Hole 69-9 yielded 3 m. @ 0.05% ppm molybdenum at 85 m. to 88 m., and averaged approximately 250 ppm copper over its entire 93 m. depth, intersecting intrusives, Karmutsen volcanics and minor breccias

In two holes testing co-incident I.P. target Zone C and magnetic target Body B in the Murex area, the following two significant intercepts achieved:

- Hole 69-10 yielded 82.3 m. @ 0.20% copper, 0.015% molybdenum and 3.3 g/t silver from surface to 82.3 m. in mineralized Murex Breccia
- Hole 69-14 yielded 27.4 m. @ 0.22% copper, 0.005% molybdenum and 3.4 g/t silver from surface to 27.4 m. in mineralized quartzite and intrusives

In one hole following up Cominco's hole C-9 in the Washington Breccia east of the North Pit, the following significant intercept achieved:

- Hole 69-11 yielded 45.7 m. @ 0.09% copper, 0.028% molybdenum and 1.8 g/t silver from surface to 45.7 m., intersecting mineralized Washington Breccia

In one hole following up Cominco's holes C-10 and C-15 testing surface mineralization in the Washington Breccia south of the South Pit, the following significant intercept achieved:

- Hole 69-15 yielded 19.5 m. @ 0.17% copper, 0.003% molybdenum and 4.2 g/t silver from 1.8 m. to 21.3 m., intersecting mineralized intrusives overlying Washington Breccia

In 1970, Marietta Resources Ltd. dropped the option on the Mt. Washington Property. R. Dunsmore, Geologist, supervised a ground electromagnetic survey over portions of property for the Mt. Washington Copper Co. in 1970, and located many anomalies.

In early 1972, the Minerals Section of Imperial Oil Limited (Esso) optioned the Mt. Washington property from Mt. Washington Copper Co. Ltd. Esso also completed agreements with all other tenure holders over an extensive area surrounding Mt. Washington, including five separate agreements with Canadian Pacific Oil & Gas (C.P.O.G.), the base metals rights holders, and surface rights holders, prior to commencing exploration work.

In 1972, Esso commenced a multi-year, systematic exploration program of the Mt. Washington Property under the direction of geologist D.A. Bridge. In the first year, Esso completed detailed geological mapping and chip sampling of the open pits and road cuts, assaying all samples for copper, molybdenum, gold and silver, plus selected samples for arsenic. A grid was established and two baselines were soil sampled, and soils analyzed for copper and molybdenum. An I.P. survey was conducted along one of the grid baselines. No significant results were reported by Esso in 1972.

In 1973, Esso completed an airborne magnetic and electromagnetic (E.M.) geophysical survey over most of the property, a ground E.M. survey, an induced polarization (I.P.) survey, and seven diamond drill holes. The airborne geophysical survey was supervised by D.C. Fraser, Ph.D. of Aerodat Limited. The survey detected a large, elliptical east-west magnetic high 5 km. by 2.5 km. in size in the southeast portion of the property, corresponding with the Murex Breccia and quartz diorite intrusions, with numerous electromagnetic conductors along its northeast and southeast flanks. The survey also detected two circular, 500 m. diameter magnetic highs, one centred just northwest of McKay Lake, and one centred just west of Pyrrhotite Lake, corresponding with the North open pit and with the Oyster Breccia, respectively. The aeromagnetic high northwest of McKay Lake also displayed several electromagnetic conductors along its northern and western flanks. The ground E.M. survey was undertaken to locate airborne conductors near the open pits, and conducted by F.S. Eeg, C.E.T., but was terminated prior to its completion. The I.P. survey was conducted by P.E. Walcott, P.Eng., and was undertaken on two areas of the Murex Breccia, with nebulous results.

The drilling program in 1973 consisted of 7 holes in the Murex area, the first hole (Hole 73-1) which was abandoned in overburden. The fifth hole (Hole 73-5) was drilled to test an E.M. anomaly in the vicinity of Marietta drill hole M-1, and failed to achieve any significant intercepts, but only two core samples were taken over its 134 m. depth in spite of many notations of pyrite and chalcopyrite mineralization. The last hole (Hole 73-7) tested E.M. anomalies along the northeast flank of the large, elliptical magnetic anomaly in the vicinity of Marietta drill hole 69-3, and failed to achieve significant intercepts, the best being:

- Hole 73-7 yielded 50.3 m. @ 0.05% copper from 9.1 m. to 59.4 m.

The remaining four drill holes (Holes 73-2, 73-3, 73-4, and 73-6) were clustered in the vicinity of Marietta drill holes 69-8, 69-9 and 69-13, and yielded the following significant intercepts:

- Hole 73-3, which was systematically sampled and assayed for copper only, yielded:
    - 120.2 m. @ 0.24% copper from 3.2 m. to 123.4 m., including:
        - 12.0 m. @ 0.48% copper from 3.2 m. to 15.2 m., and,
        - 12.2 m. @ 0.61% copper from 36.6 m. to 48.8 m., and,
        - 6.1 m. @ 0.65% copper from 117.3 m. to 123.4 m.
- Hole 73-4, which was only selectively sampled and generally assayed only for copper, yielded:
    - 6.1 m. @ 0.40% copper, 0.019% molybdenum and 0.26 g/t silver from 83.2 m. to 89.3 m. (only section assayed for anything but copper), and
    - 2.0 m. @ 0.22% copper from 94.2 m. to 96.2 m., and,
    - 3.1 m. @ 0.15% copper from 129.5 m. to 132.6 m., and,
    - 2.6 m. @ 0.24% copper from 134.1 m. to 136.7 m., and,
    - 1.8 m. @ 0.27% copper from 137.8 m. to 139.6 m., and,
    - 0.8 m. @ 0.20% copper from 144.9 m. to 145.7 m.
- Hole 73-6, which was systematically sampled and assayed for copper only, yielded:
    - 60.3 m. @ 0.20% copper from 2.6 m. to 62.9 m., including:
        - 33.5 m. @ 0.27% copper from 6.1 m. to 39.6 m., and,
    - 15.9 m. @ 0.15% copper from 72.5 m. to 88.4 m., including:
        - 3.1 m. @ 0.39% copper from 85.3 m. to 88.4 m., and,
    - 13.4 m. @ 0.31% copper from 139.6 m. to 153.0 m., ending in good mineralization, according to the drill log

In 1974, Esso completed exploration work in 10 areas on the Mt. Washington property, consisting of geological mapping, prospecting, trenching, geochemical sampling, ground magnetic and electromagnetic surveys, and 21 diamond drill holes in 4 of those areas.

Two drill holes were completed in the northeast portion of the Murex area, referred to as the Murex Trend Breccia, with significant results as follows:

- Hole 74-2 intersected biotitic, mineralized shock breccia which yielded:
    - 46.5 m. @ 0.53% copper, 0.17 g/t gold and 7.2 g/t silver from 9.1 m. to 55.6 m., and
    - 30.0 m. @ 0.245% copper, 0.003 g/t gold and 4.1 g/t silver from 62.9 m. to 89.9 m.

In the Upper Murex Breccia, located in the southwest portion of the Murex area, and described as being clast-supported with a quartz-sulphide matrix, twenty one trenches and four drill holes were completed, with significant results as follows:

- Trench 1 chip sampling yielded 2.1 m. @ 0.32% copper, 0.79 g/t gold and 45 g/t silver, and
- Trench 4 chip sampling yielded 1.0 m. @ 0.28% copper, 9.8 g/t gold and 6.2 g/t silver
- Hole 74-3 yielded 57.15 m. @ 0.058% copper, 0.73 g/t gold and 2.1 g/t silver from 0 m. to 57.15 m., including:
    - 21.3 m. @ 0.082% copper, 1.6 g/t gold and 2.3 g/t silver from 18.3 m. to 39.6 m.
- Hole 74-5 yielded 91.4 m. @ 0.13% copper, 0.08 g/t gold and 2.9 g/t silver from 0 m. to 91.4 m. ending in mineralization, and including:
    - 33.5 m. @ 0.17% copper, 0.11 g/t gold and 3.5 g/t silver from 10.7 m. to 44.2 m., and
    - 12.5 m. @ 0.14% copper, 0.21 g/t gold and 4.1 g/t silver from 78.9 m. to 91.4 m., ending in mineralization

In the West Murex Zone, grid-based soil sampling upslope from hole 69-10 yielded an area of approximately 200 m. by 100 m. with six samples exceeding 410 ppm copper, corresponding to a ground magnetic high trend. No drilling was done here in 1974.

In the Tsolum Breccia Zone, located at the east end of the Murex area, grid-based soil sampling and ground magnetics were conducted in the vicinity of an outcrop of intrusive breccia which contains visible chalcopyrite mineralization over approximately 25 m. Geophysics yielded a magnetic low over an area of approximately 300 m. by 100 m., and geochemistry yielded six corresponding soil samples exceeding 320 ppm copper, and two samples exceeding 28 ppm molybdenum. No drilling was done here in 1974.

In the Oyster Ridge Breccia, described as a collapse breccia with a matrix of quartz, chlorite, calcite and iron oxides, and located west of Pyrrhotite Lake, grid-based soil sampling and a ground magnetic survey were completed in 1974. No significant result were obtained from the breccia, and no drilling was completed here in 1974, but outcrop chip sampling from intrusive dikes exposed in Pyrrhotite Creek 100 m. to the southwest yielded the following significant results:

- 0.9 m. @ 7.5 g/t gold, 5.2% arsenic, 0.05% copper, 0.13% lead and 0.05% zinc in a sulphidic intrusive breccia, and
- 0.9 m. @ 2.67% copper, 0.69 g/t gold, 27 g/t silver from a chalcopyrite-bornite bearing shear zone

In the Meadows Anomaly, located on the west flank of Mt. Washington, prospecting, grid-based soil sampling, a ground electromagnetic survey, and seven drill holes were completed in 1974. Prospecting yielded three sulphide showings in outcrop, one which yielded significant values from grab sampling as follows:

- 29 g/t gold, 142 g/t silver, 24% arsenic and 0.83% copper

The Murray Vein (probably synonymous with the Domineer No.1 Vein), exposed in outcrop 550 metres east of the Meadows Anomaly, yielded significant values from two grab samples as follows:

- 2.7 to 20 g/t gold, 244 to 376 g/t silver, 1.7 to 4.7% arsenic, and 1.4 to 3.2% copper

Also at the Meadows Anomaly, soil geochemistry yielded two parallel, north-south elongate zones of co-incident anomalous copper, silver and gold. Geophysics yielded numerous electromagnetic conductors. Drilling in 1974 consisted of a fence of four holes (74-12, -13, -14 and -19) testing the geochemical anomaly to the east of the outcrop showing, and another three holes (74-16, -17 and -18) testing the geophysical conductors, with potentially significant results as follows, considering that no gold analyses were completed on the core samples:

- Hole 74-12 intersected multiple fractured limonitic zones, including two which yielded:
    - 3.1 m. @ 0.043% copper, 0.128% arsenic and 13.4 g/t silver from 3.0 m. to 6.1 m., and,
    - 0.8 m. @ 0.64% copper, 0.052% arsenic and 5.0 g/t silver from 18.3 m. to 19.1 m.
- Hole 74-13 intersected multiple fractured limonitic zones, including two which yielded:
    - 0.6 m. @ 0.22% copper, 0.022% arsenic and 3.1 g/t silver from 6.1 m. to 6.7 m., and
    - 3.7 m. @ 0.027% copper, 0.32% arsenic and 12.1 g/t silver from 12.8 m. to 16.5 m.
- Hole 74-15 intersected multiple thin sulphidic zones, including one which yielded 1.2 m. @ 0.32% copper, 0.013% arsenic and 3.0 g/t silver from 2.8 m. to 4.0 m.
- Hole 74-17 intersected multiple thin sulphidic zones, including one which yielded 1.5 m. @ 0.15% copper, 0.024% arsenic and 2.5 g/t silver from 0.9 m. to 2.4 m.
- Hole 74-19 intersected fractured, limonitic and sulphidic zones, including one which yielded 3.1 m. @ 0.35% copper, 1.8% arsenic and 43 g/t silver from 1.5 m. to 4.6 m.

In the area of the former Mt. Washington Copper open pits, seven drill holes (74-6, 74-7, 74-8, 74-9, 74-10, 74-20 and 74-21) were completed in 1974 to test both for vein extensions and for disseminated copper mineralization within 300 metres of the pits. The following significant results were achieved:

- Hole 74-6 yielded 97.5 m. @ 0.20% copper, 0.14 g/t gold and 5.3 g/t silver from 23.8 m. to 121.3 m. (only 60.9 m. of the section were analyzed for gold and silver), including:
    - 1.5 m. @ 3.8% copper, 0.51 g/t gold and 119 g/t silver from 73.9 m. to 74.4 m.
- Hole 74-7 yielded 80.2 m. @ 0.13% copper, 0.96% arsenic, 0.18 g/t gold, and 3.1 g/t silver from 19.5 m. to 99.7 m., including:

  - 0.9 m. @ 1.64% copper, 0.022% arsenic, 0.10 g/t gold and 45 g/t silver from 25.6 to 26.5 m., and

  - 3.0 m. @ 0.142% copper, 2.25% arsenic, 2.6 g/t gold and 69 g/t silver from 69.2 m. to 72.2 m.

- Hole 74-9 yielded 31.4 m. @ 0.146% copper, 0.007% arsenic, 0.017 g/t gold and 3.03 g/t silver from 10.7 m. to 42.1 m., including:

  - 10.2 m. @ 0.252% copper, 0.002% arsenic, 0.013 g/t gold and 4.43 g/t silver from 13.7 m. to 23.9 m.

- Hole 74-10 yielded 115.8 m. @ 0.094% copper (only copper analyzed consistently) from 1.5 m. to 117.3 m. (the entire hole), including:

  - 1.5 m. @ 0.678% copper, 0.034 g/t gold and 8.57 g/t silver from 38.1 m. to 39.6 m.

- Hole 74-21 yielded 21.6 m. @ 0.097% copper (only copper analyzed consistently) from 0 m. to 21.6 m. (the entire hole), including:

  - 0.9 m. @ 0.298% copper, 0.041% arsenic, 0.103 g/t gold and 9.26 g/t silver from 11.0 m. to 11.9 m.

Additional soil geochemistry and prospecting were completed by Esso in 1974 in three other areas: McKay Creek, the 101 Zone and the South Comox Zone, but no significant results were obtained.

In 1975, Esso completed work in 4 areas on the Mt. Washington property, including a ground magnetic survey, soil sampling and trenching in the Murex area, trenching and a test induced polarization line over the Tsolum Breccia, and three drill holes in two other areas.

In the Oyster Ridge Breccia, two widely spaced drill holes (75-1, -2) were completed, but with no significant results. In the Murray Breccia, one drill vertical hole (75-3) was completed from the ridge crest to a depth of 300.8 m., yielding several significant intercepts as follows:

- 3.2 m. @ 3.6 g/t gold, 7.5 g/t silver from 102.4 m. to 105.6 m.(abundant arsenopyrite in quartz, suggesting the Murray/Domineer No.1 Vein), and,

- 32.3 m. @ 0.117% copper, 0.008 g/t gold (no other analyses) from 210.6 m. to 242.9 m., including:
    - 15.4 m. @ 0.173% copper and 0.027 g/t gold (no other analyses) from 224.5 m. to 239.9 m., and
- 15.2 m. @ 0.200% copper and 0.062 g/t gold (no other analyses) from 279.5 m. to 294.7 m.

In the Tsolum Breccia, the I.P. test line was inconclusive, and two trenches 9 metres apart yielded the following significant results from bulk sampling:

- 3.7 m. @ 0.40% copper, and
- 1.5 m. @ 0.21% copper

In the Murex area, the ground survey confirmed a magnetic low response from the previous airborne survey. Soil sampling indicated a 65 m. diameter molybdenum anomaly from the edge of the magnetic low. A rock chip sample from fractured siltstone within the magnetic low yielded 0.172% copper and 0.039% molybdenum.

Also in 1975, P.J. McGuigan completed a B.Sc. thesis at the University of British Columbia entitled, “Certain Breccias of the Mount Washington Property, Vancouver Island”, based on work completed while he was working for Esso in 1972 and 1973.

In 1976, Esso drilled a single 344 metre hole (MW-84) collared at -60 in a southwest direction, approximately 400 metres southwest of McKay Lake. The hole tested the area near the Murray Breccia, was logged only in a cursory way by P.J. McGuigan, was only selectively sampled, and those samples were consistently analyzed only for copper. Hole MW-84 yielded multiple significant and largely un-bracketed intercepts as follows:

- 146.3 m. @ 0.284% copper from 9.1 m. to 155.4 m. and,
- 9.1 m. @ 0.222% copper from 167.6 m. to 173.7 m. and,
- 3.0 m. @ 0.143% copper from 192.0 m. to 195.0 m. and,

- 3.0 m. @ 0.203% copper from 204.2 m. to 207.2 m. and,
- 3.0 m. @ 0.192% copper from 216.4 m. to 219.4 m. and,
- 3.0 m. @ 0.131% copper from 228.6 m. to 231.6 m. and,
- 3.0 m. @ 0.103% copper from 240.8 m. to 243.8 m. and,
- 3.0 m. @ 0.205% copper from 253.0 m. to 256.0 m. and,
- 3.0 m. @ 0.193% copper from 265.2 m. to 268.2 m. and,
- 3.0 m. @ 0.225% copper from 277.4 m. to 280.4 m. and,
- 11.6 m. @ 0.134% copper from 290.2 m. to 301.8 m. and,
- 9.1 m. @ 0.396% copper from 306.9 m. to 316.0 m. and,
- 3.0 m. @ 0.499% copper from 338.4 m. to 341.4 m.

From 1977 to 1982, Esso did not undertake any more exploration work on the Mt. Washington property, but instead concentrated primarily on metallurgical studies to investigate the feasibility of an on-site, low grade, heap leach copper operation. The lead consultant for these studies was A. Bruynesteyn of B.C. Research, and the project manager with Esso was R. Somerville, P.Eng. This time period coincided with a gradual decrease in the market price for copper, but also high volatility in the market prices for gold, silver and molybdenum, the other metals of potential interest at Mt. Washington. Esso terminated agreements covering the Mt. Washington property, and returned the mineral claims and crown grants to Mt. Washington Copper in 1982.

In late 1982, the mineral claims and crown grants covering the Mt. Washington property were acquired by Veerman-Botel Ltd. through an agreement with Mt. Washington Copper. Veerman-Botel did little work on the property before optioning it to Better Resources Ltd. (Better) in early 1983. In May, 1983, K.E. Northcote, P.Eng., completed a summary report on the property for Better Resources, and recommended that future exploration work be focused on both the high grade gold potential in the flat lying silicified zone, and the on the bulk tonnage gold potential of the breccia zones. He also noted that previous drilling was done using small diameter core, yielding poor recoveries in the fractured, weathered mineralized zones, and that the core samples were not systematically analyzed for gold. Mr. Northcote recommended a 2-phase, $310,000 exploration program on the Mt. Washington property, commencing with detailed re-evaluations of all previous work, including gold analyses of selected sample rejects. Better then staked many more claims, covering the West Arm, Murex Breccia and Oyster Breccia areas, and completed agreements with both Fording Coal Ltd. for the base metal rights and with the surface rights owner for the area covering the mineral claims and crown grants.

From 1983 to 1990, Better completed systematic exploration work targeting primarily the gold potential in the West Arm area of Mt. Washington. Most of Better's work on the Mt. Washington property was done under the direction of either J.F. Bristow, P.Eng. or C.C. Rennie, P.Eng., both former presidents and directors of Better. The company completed extensive grid-based soil geochemistry and targeted trenching across the property and chip sampling of showings, but the main exploration technique utilized was diamond drilling, using large diameter (generally NQ size) core, routinely analyzing core samples for gold, and surveying all drill collar locations.

In 1983 and 1984 on their Lupus Property in the Wolf Lake area, Proquest Resource Corporation discovered two new gold-bearing quartz-sulphide veins named the Lake Showing (north of Wolf Lake) and the Creek Showing (east of Wolf Lake). Select outcrop grab sampling from the showings yielded significant values as follows:

- 70.1 g/t gold, 115 g/t silver, 6.1% arsenic and 7.2% zinc (Lake Showing)
- 11.9 g/t gold, 2.9% arsenic (Creek Showing)

In 1985, Homestake Mineral Development Company acquired and expanded Proquest's Lupus Property and completed extensive soil and rock geochemistry surveys. Select outcrop grab sampling from quartz-sulphide veins at the known Lake showings and a new showing both on the Lupus 1 claim northwest of Wolf Lake yielded significant values as follows:

- 35.6 g/t gold, 44.5 g/t silver, 5.59% zinc (Lake Showing)
- 5.9 g/t gold, 55.0 g/t silver, 1.54% copper (Lupus 4 and possibly Bluff Zone)

In 1985, west of Wolf Lake, St. James Minerals Ltd. discovered disseminated pyrite and pyrrhotite in altered volcanics exposed for 250 metres in an east-flowing creek bed, from which an outcrop grab sample yielded elevated values as follows:

- 12.7 g/t silver and 0.37% copper

In 1986, Pan World Ventures Inc. acquired Proquest's Lupus Property, completed geological mapping, soil and rocks geochemistry and geophysical I.P. surveys. Outcrop chip sampling on quartz-sulphide veins the Lake Showing and Creek Showing, and sub-crop grab sampling on the Road Showing, a new discovery west of Wolf Lake, yielded significant values as follows:

- 92.5 g/t gold, 195 g/t silver, 0.96% copper, 0.45% lead, 5.98% zinc, 5.74% arsenic over 0.09 metres (Lake Showing)

- 4.49 g/t gold, 145 g/t silver, 0.54% copper, 2.1% lead, 1.61% zinc and 4.95% arsenic over 0.2 metres (Creek Showing)

- 21.9 g/t gold, 30.9 g/t silver, 0.66% copper (Road Showing)

In 1986, Westmin Resources Ltd. acquired the Dove Property located between Wolf Lake and Mt. Washington from J. Paquet, and completed geological mapping and prospecting, including outcrop grab sampling from narrow quartz-sulphide veins in Murex Creek and Murex Breccia areas which yielded significant values as follows:

- 9.87 g/t gold, 24.9 g/t silver, 0.82% lead and 1.18% zinc over 0.02 metres (Lower Murex Creek)

- 0.42% copper and 2.43% zinc over 0.06 metre (Central Murex Creek)

- 0.45% copper over 0.05 metres (Eastern Murex Breccia area)

By the end of 1986, Better had completed 55 drill holes in the West Arm area of Mt. Washington, renamed the Lakeview-Domineer area; and 10 holes in the Murex area. Most of the drill holes in the Lakeview-Domineer area yielded significant intercepts in gold and/or silver, including some of the better intercepts as follows:

- Hole 83-2 yielded 2.7 m. @ 9.8 g/t gold, 121 g/t silver and 3.2% arsenic from 7.3 m. to 10.0 m. including:
    - 1.2 m. @ 16.2 g/t gold, 263 g/t silver and 4.1% arsenic from 8.8 m. to 10.0 m. (5% chalcopyrite logged but not analyzed for copper)
- Hole 84-15 yielded 0.9 m. @ 17.5 g/t gold, 120 g/t silver and 2.0% arsenic from 17.4 m. to 18.3 m.
- Hole 86-5 yielded 5.3 m. @ 7.5 g/t gold, 36.6 g/t silver and 1.6% arsenic from 4.6 m. to 9.9 m., including:
    - 1.5 m. @ 13.0 g/t gold, 3.8 g/t silver and 0.25% arsenic from 4.6 m. to 6.1 m., and
    - 1.6 m. @ 24.3 g/t gold, 111.4 g/t silver, 2.15% copper and 4.8% arsenic from 8.3 m. to 9.9 m.
- Hole 86-17 yielded 0.9 m. @ 9.3 g/t gold, 8.8 g/t silver, 0.08% copper and 1.35% arsenic from 4.3 m. to 5.2 m. and,
- 1.5 m. @ 13.4 g/t gold, 20.9 g/t silver, 0.58% copper and 4.2% arsenic from 15.8 m. to 17.3 m.

In 1987, Cactus West Explorations Ltd. completed prospecting work on its Lake and Bluff claims northwest of Wolf Lake, and reported the following significant outcrop chip and grab sample results:

- 78.9 g/t gold, 145 g/t silver and 9.48% zinc over 0.11 m. (Lake Zone), and
- 90.5 g/t gold, 192 g/t silver and 9.58% zinc over 0.11 m. (Lake Zone), and
- 75.8g/t gold (grab from Bluff Zone)

In February, 1987 J.J. McDougall, P.Eng. completed a summary report on the Mt. Washington Property for Better Resources, and completed preliminary mineral resource estimates using only drilling data (historical and not to current standards) for the Lakeview-Domineer area as follows:

Drill-Indicated Underground:

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
Lakeview	3.4 g/t gold	3.0 metres	176,632	7.9 g/t	33.6 g/t
Domineer	3.4 g/t gold	3.0 metres	37,387	7.2 g/t	66.5 g/t

Drill-Indicated Open Pit:

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
West Grid	1.7 g/t	not specified	119,115	2.4 g/t	15.4 g/t

Inferred Underground:

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
Central	not specified	not specified	440,627	6.2 g/t	not specified

In the Murex area, the following significant drill intercepts were achieved in 1986, but none of the core samples were analyzed for molybdenum:

- Hole MX-86-1 yielded 16.0 m. @ 6.1 g/t gold, 4.2 g/t silver and 0.17% copper from 1.5 m. to 17.5 m., including:
    - 6.8 m. @ 11.0 g/t gold, 5.0 g/t silver and 0.27% copper from 10.7 m. to 17.5 m.
- Hole MX-86-6 yielded 22.0 m. @ 0.32 g/t gold, 0.92 g/t silver and 0.10% copper from 15.2 m. to 37.2 m., including:
    - 7.8 m. @ 0.77 g/t gold, 1.84 g/t silver and 0.15% copper from 23.9 m. to 31.7 m.
- Hole MX-86-7 yielded 19.8 m. @ 0.22 g/t gold, 9.9 g/t silver & 1.5% copper from 29.4 m. to 49.2 m. and,
- 6.8 m. @ 0.38 g/t gold, 21 g/t silver & 3.3% copper from 55.5 m. to 62.3 m.

In 1987, Better completed an additional 113 drill holes to increase the confidence in the Lakeview-Domineer area mineral resource, plus an additional 5 drill holes in the Murex area, and grid-based geological mapping, soil and rock geochemistry and ground magnetic surveys, along with 8 diamond drill holes in the area of the Oyster Breccia.

The Lakeview-Domineer definition drilling was reasonably successful and the company commenced an underground exploration adit, which was completed in early 1988. The 3 m. x 3 m. adit was driven in an east-northeasterly direction along the strike of the mineralized zone for a total distance of about 290 m., including a northeasterly crosscut, at an average elevation of 1375 m., and at an average gradient of +2.5%. The mineralization exposed in both ribs of the adit was geologically mapped after the initial 45 m., and channel or panel sampled at roughly 10' (3 m.) intervals more or less in its entirety, and samples assayed for gold, silver, copper and arsenic. Grab samples from blast rock (muck grabs) were also routinely taken along the adit while it was being advanced. The initial (un-mapped) western portion of the adit yielded the following values from 35 channel samples along 15 consecutive cuts in the southeast rib:

45 m. length

1.4 m. average vertical thickness

21.8 g/t gold

139 g/t silver

0.73% copper

6.30% arsenic

A portion of the adit yielded the following values from 8 consecutive muck grab samples over 10 m. length from near the middle of the initial 45 m. un-mapped portion:

10 m. length

3 m. assumed vertical height

9.67 g/t gold

94.3 g/t silver

0.41% copper

2.04% arsenic

In the initial western portion of the adit, drift sampling results confirmed the thickness and exceeded the grades of the definition drilling results, and established the continuity of gold-silver-copper-arsenic mineralization of the flat-lying vein structure in that portion of the drift. However, it appears from the channel sampling information that the vein structure may dip eastward into the footwall of the drift at the 45 m. mark, beyond which channel, panel and muck grab sampling results were extremely erratic and much lower in values. It has been suggested by C.C. Rennie that this section of the adit obliquely intersected one of a series of en-echelon, gently southeast dipping "sigmoid" veins within the flat-dipping shear structure along which the adit was driven.

In the 1987 Murex drilling, the drill core was only sporadically sampled, and analyzed routinely only for copper, gold and silver, but yielded the following significant intercepts:

- Hole MX-87-11 yielded 1.5 m. @ 0.31% copper and 1.0 g/t silver from 32 to 33.5 m., and 1.5 m. @ 0.29% copper and 1.0 g/t silver from 38.5 to 40 m.
- Hole MX-87-13 yielded 3.2 m. @ 0.40% copper and 2.5 g/t silver from 12 to 15.2 m., including 1.7 m. @ 0.52% copper and 3.8 g/t silver from 12 to 13.7 m.
- Hole MX-87-14 yielded 1.1 m. @ 0.44% copper and 2.1 g/t silver from 41.6 m. to 42.7 m., and 1.5 m. @ 0.37% copper & 2.1 g/t silver from 45.1 m. to 46.6 m.
- Hole MX-87-15 yielded 4.6 m. @ 0.56% copper and 4.8 g/t silver from 48.9 m. to 53.5 m., and 4.6 m. @ 0.13% copper from 61.3 m. to 65.9 m.
- Hole MX-87-15A yielded 4.3 m. @ 0.71% copper, 0.28 g/t gold and 8.9 g/t silver from 46.8 m. to 53.1 m.

In the 1987 Oyster Breccia work, soil geochemistry and ground magnetic surveys failed to yield significant results. Select outcrop rock grab samples taken from four locations along the southern, eastern and northern perimeter of the 450 metre diameter Oyster Breccia yielded significant values in 6 of 7 samples as follows:

- Sample 87-P-2 yielded 13.2 g/t gold, 29.1 g/t silver, 1.04% lead, 8.01% arsenic from a 0.3 m. silicified fault breccia along the southern perimeter
- Sample 87-P-3 yielded 4.72 g/t gold, 4.38 g/t silver, 0.18% copper, 3.16% arsenic from a 0.15 m. flat lying zone along the southeast perimeter

- Sample 87-P-4 yielded 626 g/t silver, 2.76% arsenic from a 0.05 m. brecciated quartzite along the southeast perimeter
- Sample 87-P-5 yielded 626 g/t silver, 0.36% arsenic from a 0.05 m. vuggy, brecciated quartzite along the northeast perimeter
- Sample 87-P-6 yielded 12.4 g/t gold, 23.5 g/t silver, 1.15% arsenic from a 0.2 m. silicified massive pyrite zone along the eastern perimeter
- Sample 87-P-7 yielded 626 g/t silver, 20.01% arsenic from a 0.3 m. vuggy, silicified and brecciated quartzite along the southern perimeter

Better completed 8 drill holes from 3 setups over a 40 metre strike length to test down-dip beneath samples 87-P-1, -2 and -7 along the southern perimeter of the Oyster Breccia, but failed to yield any significant intercepts, the best being as follows:

- Hole 87-116 yielded 0.4 m. @ 2.8 g/t gold, 6.9 g/t silver, 0.07% copper and 3.7% arsenic from 38.7 m. to 39.1 m. from a vuggy, kaolinized, limonitic brecciated volcanic containing pyrite, arsenopyrite and chalcopyrite

In September, 1987 Noranda Exploration Company Ltd. (Noranda) optioned a 51% interest in the Murex portion of the Mt. Washington property (Murex property) from Better Resources. From 1987 to 1989, Noranda completed systematic exploration work on the Murex property, targeting primarily the copper-gold potential of the breccia bodies.

In 1987, Noranda completed an airborne magnetics and electromagnetic survey (see Figure 2f), grid-based geological mapping, rock, soil and stream sediment geochemistry, ground magnetic and electromagnetic surveys, down-hole Mise-a-la Masse (on Better's drill hole MX-86-01), and test induced polarization surveys on the Murex Property.

Geological mapping of the Murex Property by D.R. Bull of Noranda led to the interpretation of the Murex area as a post-intrusive collapse structure containing multi-phase intrusions, four types of related breccias and local quartz-sulphide mineralization. Soil geochemistry and ground geophysics outlined 4 target areas worthy of follow-up work, and were identified as Zones A, B, C, and D. The Mise a la Mass survey failed to reach the target zone due to caving of the hole above it. Select outcrop rock grab samples (81) were systematically analyzed for copper, silver, gold and arsenic, of which 7 were also analyzed for lead, zinc and molybdenum. These samples contained various amounts of pyrite, pyrrhotite and chalcopyrite, occasionally with magnetite or realgar, and many yielded elevated values in copper, and occasionally in silver, gold, arsenic and/or molybdenum as well. Some of the more significant samples were as follows:

- Sample 17333 yielded 0.085% copper, 8.0 g/t silver and >100 g/t gold from a pyritic, pyrrhotitic alteration zone in a mixed lithology breccia from Zone D
- Sample 17348 yielded 0.47% copper, 6.2 g/t silver, 0.14 g/t gold and 0.0026% molybdenum from a quartz veinlet in basalt with pyrite, pyrrhotite and chalcopyrite from Zone A
- Sample 19012 yielded >1% copper, 18.2 g/t silver and 0.22 g/t gold from a quartz fracture filling in basalt from Zone B
- Sample 19017 yielded >1% copper, 42.0 g/t silver and 1.4 g/t gold from a breccia containing pyrite, chalcopyrite and pyrrhotite from Zone B
- Sample 19022 yielded >1% copper, 11.8 g/t silver and 0.22 g/t gold from a basalt fragment breccia containing pyrite, chalcopyrite & pyrrhotite from Zone B
- Sample 19024 yielded >1% copper, 38.0 g/t silver and 0.24 g/t gold from gangue filled fractures in basalt from Zone B
- Sample 27568 yielded 0.194% copper, 3.2 g/t silver and >1% arsenic from a pyritic, realgar bearing alteration zone between diorite and basalt from north of the grid area
- Sample 27583 yielded >1% copper, 54.0 g/t silver and 0.12 g/t gold from an alteration zone in a pyritic diorite breccia from Zone C
- Sample 27584 yielded >1% copper, 10.8 g/t silver and 0.08 g/t gold from pyrite and chalcopyrite bearing quartz veinlets in fractured basalt from Zone D

In 1988, Better completed 66 additional definition drill holes into, and commenced metallurgical studies for, the Lakeview-Domineer Zone, and also deepened Esso hole MX-75-1 in the Oyster Breccia on the Mt. Washington Property. The Esso hole MX-75-1 was deepened from 184 m. to 542 m., and failed to yield any significant intercepts, but was only sporadically sampled and those samples analyzed only for gold and silver.

The definition drilling at the Lakeview-Domineer Zone was reasonably successful, and also confirmed the presence of multiple en-echelon quartz-sulphide veins within the much thicker, flat-lying shear structure as interpreted from geological mapping and sampling of the adit. The vein intercepts displayed a continuum from gold-rich to copper-rich, and of various thicknesses, as exemplified in the following drill holes:

- Hole 88-183 yielded the following intercepts:
    - 2.0 m. @ 0.34 g/t gold, 2.1 g/t silver, 0.77% copper and <0.01% arsenic from 54.7 to 56.7 m. and,
    - 8.4 m. @ 0.89 g/t gold, 10.8 g/t silver, 0.79% copper and 0.40% arsenic from 61.9 to 70.3 m. and,
    - 1.9 m. @ 1.70 g/t gold, 12.4 g/t silver, 0.12% copper & 1.13% arsenic from 73.1 to 75.0 m. and,
    - 8.3 m. @ 1.04 g/t gold, 9.7 g/t silver, 0.91% copper and 0.05% arsenic from 82.9 to 91.2 m.
- Hole 88-185 yielded the following intercepts:
    - 3.6 m. @ 7.6 g/t gold, 11.7 g/t silver, 0.08% copper and 2.77% arsenic from 66.1 to 69.0 m. and,
    - 1.8 m. @ 1.2 g/t gold, 12.3 g/t silver, 1.98% copper and 0.20% arsenic from 89.2 to 87.4 m.
- Hole 88-202 yielded the following intercepts:
    - 2.8 m. @ 0.07 g/t gold, 1.9 g/t silver, 0.55% copper & <0.01% arsenic from 38.1 to 40.9 m. and,
    - 5.3 m. @ 0.22 g/t gold, 6.7 g/t silver, 0.87% copper & <0.01% arsenic from 50.6 to 55.9 m. and,
    - 3.9 m. @ 0.39 g/t gold, 4.4 g/t silver, 1.20% copper & <0.01% arsenic from 59.3 to 63.2 m. and,
    - 3.0 m. @ 0.75 g/t gold, 6.2 g/t silver, 1.83% copper & <0.01% arsenic from 79.2 to 82.2 m. and,
    - 1.6 m. @ 9.12 g/t gold, 92.9 g/t silver, 0.20% copper & 3.1% arsenic from 91.2 to 92.8 m. and,

- 1.6 m. @ 0.17 g/t gold, 2.7 g/t silver, 1.17 % copper & <0.01% arsenic from 99.0 to 100.6 m.

Better's metallurgical studies for the Lakeview-Domineer Zone were conducted by G.W. Hawthorne, P.Eng., and culminated in the design of an on-site 200 ton per day concentrator using a 5 step process to produce two products: a flotation gold-copper concentrate containing 26% of the gold and 68% of the copper, and gold bullion containing 66% of the gold using a combination of bio-oxidation and cyanidation. The recovery of silver was not considered in the process, and the on-site tailings pond would contain 8% of the gold, 32% of the copper and 99% of the arsenic (as ferric arsenate after bio-oxidation). The total cost of the plant and site services was estimated to be approximately C$7 million in 1988. As part of the metallurgical work, microscope studies including photomicrographs were completed by J.F. Harris, Ph.D., who identified and described the relationships between the following metallic minerals in the flotation concentrate: pyrite, arsenopyrite, pyrrhotite, chalcopyrite, tetrahedrite, gold, sphalerite and galena.

In 1988 on the Murex Property, Noranda completed geological mapping and outcrop rock geochemistry along grid lines, road cuts and stream beds, grid-based soil geochemistry, ground geophysics including magnetics, electromagnetics and induced polarization surveys, and 9 diamond drill holes. Geophysics identified targets in Zone A and Zone D. Geological mapping identified a fifth distinct breccia type exposed in outcrop. Soil geochemistry including test pits identified elevated values in gold, silver, copper and arsenic associated with Zone D and the Zone E. Rock geochemistry from select float or outcrop grab samples, or representative outcrop chip or panel samples, yielded numerous significant values in gold, silver, copper and/or arsenic as follows:

- Sample R-28001 yielded 1.3 g/t gold, 63 g/t silver, 5.1% copper from a select outcrop grab of massive sulphide in a basaltic breccia in Zone A
- Sample R-28002 yielded 0.56 g/t gold, 26 g/t silver, 2.2% copper from a select outcrop grab of chalcopyrite vein in a basaltic breccia in Zone A
- Sample R-28042 yielded 12 g/t gold, 28 g/t silver, 0.36% copper, >10% arsenic from a select float grab of sulphidic basalt in Zone A
- Sample R-28052 yielded 0.12 g/t gold, 17 g/t silver, 2.5% copper from a select matrix only outcrop grab sample from a mixed lithology breccia in Zone A

- Sample R-44004 yielded 0.24 g/t gold, 27 g/t silver, 2.2% copper from a select outcrop grab sample of a fractured basalt with quartz and sulphides in Zone A
- Sample R-43017 yielded 1.4 g/t gold, 17 g/t silver, 1.9% copper from a 1 m. square panel sample of sulphidic basaltic breccia in Zone A
- Sample R-44028 yielded 0.74 g/t gold, 31 g/t silver, 3.8% copper from a select matrix only outcrop grab sample from a sulphidic basaltic breccia in Zone A
- Sample R-27605 yielded 9.3 g/t gold, 125 g/t silver, 7.0% copper from a select outcrop grab of a sulphidic mixed lithology breccia in Zone D
- Sample R-27606 yielded 6.9 g/t gold, 2.1 g/t silver, 0.23% copper from a select outcrop grab of a sulphidic mixed lithology breccia in Zone D
- Sample R-28625 yielded 0.07 g/t gold, 83 g/t silver, 4.5% copper from a select outcrop grab of a sulphidic alteration zone in diorite breccia in Zone D
- Sample R-28628 yielded 3.4 g/t gold, 54 g/t silver, 2.5% copper from a select outcrop grab of a sulphidic alteration zone with quartz veinlets in Zone D
- Sample R-28010 yielded 4.8 g/t gold, 128 g/t silver, 5.7% copper from a select outcrop grab of a sheared, sulphidic basaltic breccia in Zone D
- Sample R-28026 yielded 7.4 g/t gold, 0.5 g/t silver, 0.07% copper from a 0.27 m. chip sample from a sheared, quartz and iron oxide rich basalt in Zone D
- Sample R-28089 yielded 9.0 g/t gold, 4.9 g/t silver, 0.26% copper from a select outcrop grab of a sulphidic basaltic breccia in Zone D
- Sample R-28092 yielded 4.0 g/t gold, 31 g/t silver, 0.98% copper from a 0.88 m. channel sample of an altered, sulphidic shear in basalt breccia in Zone D
- Sample R-28098 yielded 4.0 g/t gold, 16 g/t silver, 1.0% copper from a 0.19 m. channel sample of an altered shear zone in basalt breccia in Zone D
- Sample R-28014 yielded 2.3 g/t gold, 22 g/t silver, 2.8% copper from a 0.1 m. channel sample of a sulphidic quartz vein in Zone D
- Sample R-28120 yielded 5.0 g/t gold, 2.1 g/t silver, 0.13% copper from a 0.5 m. channel sample of a basaltic breccia in Zone D

- Sample R-28122 yielded 10.4 g/t gold, 1.5 g/t silver, 0.13% copper from a 0.5 m. channel sample of a basaltic breccia in Zone D
- Sample R-28123 yielded 4.3 g/t gold, 28 g/t silver, 1.4% copper from a 0.5 m. channel sample of a basaltic breccia in Zone D
- Sample R-28124 yielded 4.4 g/t gold, 106 g/t silver, 5.9% copper from a 0.1 m. channel sample of a massive sulphide pod in a basaltic breccia in Zone D
- Sample R-79784 yielded 8.5 g/t gold, 4.3 g/t silver 0.12% copper from a 5 m. chip sample of a sulphidic mixed lithology breccia in Zone D
- Sample R-79797 yielded 1.1 g/t gold, 28 g/t silver, 2.8% copper from a sample of a sheared sulphidic quartz vein in basalt in Zone D

1988 Diamond drilling on the Murex Property by Noranda yielded intercepts as follows:

- NMX-88-17 yielded 0.25m. @ 3.7 g/t gold, 46 g/t silver and 9.7% copper from 196.5 to 197.21 m. from a massive sulphide vein in Zone A
- NMX-88-19 intersected a sulphidic mixed lithology breccia in Zone D yielding:
    - 11.0 m. @ 5.0 g/t gold, 0.50 g/t silver and 0.10% copper from 12.7 m. to 23.7 m., including:
    - 3.0 m. @ 12 g/t gold, 1.4 g/t silver, 0.22% copper from 20.7 to 23.7 m.
- NMX-88-20 intersected a sulphidic mixed lithology breccia in Zone D yielding:
    - 12.4 m. @ 1.1 g/t gold, 2.0 g/t silver, 0.16% copper and 0.004% molybdenum from 28.9 m. to 41.3 m. and,
    - 8.0 m. @ 1.2 g/t gold, 2.6 g/t silver, 0.21% copper and 0.002% molybdenum from 45.7 to 53.7 m.
- NMX-88-22 yielded 0.52 m. @ 0.14% molybdenum from 33.65 to 34.17 m. in a quartz vein hosted in basalt in Zone D
- NMX-88-23 yielded 1.54 m. @ 19 g/t silver and 1.6% copper from 72.48 to 74.02 m. in a mixed lithology breccia in Zone D

Also in 1988, the 3 following academic geology papers on the Property area were completed:

- Tertiary Low-Angle Faulting and Related Gold and Copper Mineralization on Mount Washington, Vancouver Island by J.E. Muller, Consulting Geologist
- Mount Washington, Vancouver Island, British Columbia: A Tertiary Calc-Alkaline Intermediate to Acid Volcanic Centre by R. Dahl & D.H. Watkinson of Carleton University and H.P. Wilton of the B.C. Geological Survey Branch
- The Lakeview-Domineer Gold Deposit of Mount Washington, Vancouver Island, British Columbia: A Thrust Controlled Epithermal Gold-Silver Deposit in Volcanic Setting by R. Dahl, D.H. Watkinson, and J.F. Bristow of Better Resources Ltd.

In 1987 and 1988 on the Dove Property, Westmin Resources Ltd. completed an airborne magnetic and electromagnetic geophysical survey. This survey covered the eastern half of the current Mount Washington Property, and extended far to the northwest and to the southeast. The area of greatest magnetic high responses and frequency of high amplitude conductors lies in and around the Murex Breccia Zone. Westmin also completed extensive line-cutting over various portions of the Dove Property, including the Main and Murex grids partially on the current Mount Washington Property.

In 1989, Better completed and published a revised mineral resource estimate for the Lakeview-Domineer Zone as follows, which are not to current industry standards:

<u>Drill-Indicated Underground:</u>

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
Lakeview-Domineer	3.4 g/t gold	2.0 metres	301,270	7.2 g/t	37.7 g/t

<u>Drill-Indicated Open Pit:</u>

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
West Grid	1.7 g/t	not specified	249,546	6.2 g/t	25.4 g/t

Better also completed outcrop trenching and sampling, and 17 drill holes testing in two areas west of the Lakeview-Domineer Zone on the Mt. Washington property. Trenching was completed in two areas, referred to as the Sump Area (SW of the adit) and the Float Area (North of the adit). In the Float Area, 3 trenches each 15 m. apart exposed a N-S trending shear zone over a strike length of 30 m. from which 4 chip samples yielded the following average width and values:

- 1.3 m. @ 11 g/t gold, 42 g/t silver, 0.48% copper and 12% arsenic

In the Sump Area, 5 chip samples taken from a N-S trending vertical breccia yielded the following average widths and values:

- 1.1 m. @ 5.1 g/t gold, 24 g/t silver, 0.66% copper

None of the 5 holes in the Float Area yielded any significant intercepts. Although sampling of the drill core was very selective and samples only analyzed for gold, silver and copper, many of the 12 holes from the Sump Area intersected multiple veins with a continuum of significant gold-rich to copper-rich intercepts, as follows:

- Hole 89-221 yielded the following intercepts:
    - 0.2 m. @ 0.10 g/t gold, 0.35 g/t silver, 0.88% copper from 9.1 to 9.4 m.,
    - 2.7 m. @ 2.3 g/t gold, 16 g/t silver, 0.96% copper from 10.6 to 21.3 m.,
    - 3.0 m. @ 1.5 g/t gold, 5.1 g/t silver, 0.14% copper and 0.18% arsenic from 25.9 to 28.9 m.
- Hole 89-222 yielded 2.9 m. @ 0.65 g/t gold, 2.4% copper from 3.0 to 5.9 m.
- Hole 89-224 yielded the following intercepts:
    - 1.4 m. @ 1.1 g/t gold and 2.4% copper from 3.3 to 4.7 m. and,
    - 4.0 m. @ 2.0 g/t gold, 28 g/t silver, 1.6% copper from 27.9 to 37.8 m.,
    - 1.1 m. @ 3.1 g/t gold, 50 g/t silver, 9.7% copper from 36.7 to 37.8 m.,
    - 9.8 m. @ 4.7 g/t gold, 36 g/t silver, 2.7% copper from 40.5 to 50.3 m.
- Hole 89-225 yielded the following intercepts:
    - 2.9 m. @ 5.0 g/t gold, 37 g/t silver, 2.1% copper from 25.4 to 28.3 m.,
    - 3.0 m. @ 0.7 g/t gold, 25 g/t silver, 1.6% copper from 47.0 to 50.0 m.,
    - 1.1 m @ 1.7 g/t gold, 38 g/t silver, 1.1% copper from 53.0 to 54.1 m.,
    - 1.1 m. @ 0.7 g/t gold, 7.9 g/t silver, 0.53% copper from 58.8 to 59.9 m.

- Hole 89-227 yielded the following intercepts:
    - 1.4 m.@ 6.2 g/t gold, 9.9 g/t silver, 0.29% copper from 2.7 to 4.1 m.,
    - 0.3 m. @ 0.27 g/t gold, 32 g/t silver, 2.0% copper from 17.1 to 17.4 m.,
    - 1.6 m. @ 1.6 g/t gold, 7.9 g/t silver, 1.8% copper from 21.8 to 24.4 m.,
    - 0.7 m. @ 0.7 g/t gold and 3.0% copper from 30.8 to 32.3 m. and,
    - 0.8 m. @ 1.6 g/t gold and 3.1% copper from 43.6 to 44.4 m.

In 1989, Noranda completed grid-based soil geochemistry, detailed outcrop channel or chip sampling and geochemistry, detailed geological mapping, geophysical surveys consisting of electromagnetics and induced polarization, and 2 diamond drill holes focusing entirely on the D Zone of the Murex property. The outcrop channel sampling yielded significant values in gold, silver and/or copper in the D Zone as follows:

- Sample R112764 yielded 3 m. @ 3.2 g/t silver and 0.39% copper from a Karmutsen-Comox breccia with 2% sulphides
- Sample R112794 yielded 3.5 m. @ 2.0 g/t silver, 0.22% copper and 0.18% arsenic from a siliceous breccia with 1% pyrite
- Sample R112800 yielded 3 m. @ 11 g/t silver and 0.32% copper from a limonitic, siliceous diorite with 1% pyrrhotite
- Sample R112802 yielded 2.5 m. @ 5.5 g/t silver and 0.39% copper from an altered, malachitic diorite
- Sample R112805 yielded 3 m. @ 22 g/t silver and >1% copper from an altered, siliceous, malachitic diorite with 1-2 % sulphides
- Sample R112809 yielded 0.5 m. @ 10 g/t silver and >1% copper from a 0.1 m. quartz-sulphide vein containing 60% sulphides mostly pyrite, with chalcopyrite, arsenopyrite

Drilling yielded two significant intercepts 100 metres apart stepping out 100-200 metres east of Better's 1986 drill hole cluster in the D Zone as follows:

- NMX-89-25 yielded 4.0 m. @ 6.5 g/t gold, 30 g/t silver and 4.1% copper from 29 to 33 m., including:

- 1.0 m. @ 21 g/t gold, 71 g/t silver and 9.3% copper from 29 to 30 m. in a massive sulphide vein in basalt with pyrrhotite, chalcopyrite and pyrite

- NMX-89-26 yielded 6.5 m. @ 0.23 g/t gold, 7.3 g/t silver and 1.1% copper from 16.2 to 22.7 m. in a siliceous basaltic breccia with pyrrhotite and chalcopyrite

In late 1989, Noranda terminated its option agreement, returning the Murex Property to Better Resources. In 1990, Better engaged in the B.C. Mine Development Review process, completed acid-base accounting studies on the 6,000 tonne stockpile of rock extracted from the adit driven to test the Lakeview-Domineer Zone, and drilled an additional 5 holes south of the Sump Area. Only one of the holes yielded a significant intercept as follows:

- 90-237 yielded 12 m. @ 1.5 g/t gold, 20 g/t silver & 0.95% copper in an altered feldspar porphyry with patches and veinlets of pyrrhotite, pyrite and chalcopyrite

In late 1990, North Slope Minerals Inc. (North Slope) commissioned a summary report on the Murex Property by J.J. McDougall, P.Eng., and subsequently negotiated an option agreement with Better. In 1991, North Slope engaged L. Sookochoff, P.Eng. who managed a 6 hole drilling program on the Murex property based largely on recommendations made by McDougall to follow up results from Noranda's 1989 drilling program. North Slope's 1991 drilling program consisted of 3 holes (NSM 91-1 to 3) fanning down-dip of and on-section with NMX-89-25, 2 holes (NSM 91-4 & 5) fanning down-dip of and on-section with NMX-89-26, and 1 hole testing Noranda's EM Conductor C, approximately 200 metres to the south. Although the core was only sporadically split and sampled, several significant intercepts were achieved:

- Hole NSM 91-1 (-70^0) yielded the following intercepts:
    - 1.0 m. @ 2.7 g/t silver and 0.50% copper from 33 to 34 m. including a 0.3 m. thick massive sulphide vein in a wider breccia zone in basalt and,
    - 1.0 m. @ 0.8 g/t silver and 0.22% copper from 62 to 63 m. including a 0.3 m. thick semi-massive sulphide vein in a second wider breccia zone
- Hole NSM 91-2 (-84^0) yielded the following intercept:
    - 4.0 m. @ 0.27% copper from 32 to 36 m. within a wider zone of sulphidic breccia in basalt
- Hole NSM 91-3 (-88^0) yielded the following intercept:

    - 1.0 m. @ 2.5 g/t silver and 1.3% copper from 32.5 to 33.5 m. including a 0.55 m. thick massive sulphide vein within a wider breccia zone in basalt

- Hole NSM 91-4 (-75^0) yielded the following intercept:

    - 4.0 m. @ 5.5 g/t silver and 1.2% copper from 34.8 to 38.8 m. hosted by quartz-carbonate-sulphide veins in a breccia zone in basalt, including:

        - 2.0 m. @ 0.11 g/t gold, 8.3 g/t silver and 1.7% copper from 34.8 to 36.6 m. and,

    - 2.0 m. @ 2.1 g/t silver and 0.59% copper from 67.5 to 69.5 m. in basalt containing sulphide patches and quartz-sulphide veins and,

    - 1.0 m. @ 3.9 g/t silver and 0.87% copper from 77.5 to 78.5 m. in a 1 m. thick quartz-carbonate-sulphide vein in basalt

- Hole NSM 91-5 (-88^0) was stopped short of its intended target and not sampled

- Hole NSM 91-6 was sampled by selecting, splitting and analyzing only short (<0.15 m.) portions of the mineralized sections, so drill intercepts cannot be calculated, but the selected sampling yielded the following significant values from sulphide veins hosted in silicified and hornfelsed sandstone:

    - 8.3 g/t silver, 0.68% copper and 0.04% zinc at 77.4 m. and,

    - 13.4 g/t silver, 0.03% copper, 0.07% lead and 0.01% zinc at 78.9 m. and,

    - 1.5 g/t silver and 0.22% copper at 104.9 m. and,

    - 1.5 g/t silver and 0.37% copper at 112.2 m. and,

    - 2.4 g/t silver and 0.38% copper at 138.1 m.

In 1992, North Slope Minerals dropped the option on the Murex Property and returned it to Better Resources. Also in 1992, Montgomery Consulting completed computer-based geochemical modeling of rock and drill core data for the Lakeview-Domineer area for Better.

In 1992, Westmin Resources completed geological mapping and rock geochemistry on the Dove Property, and subsequently dropped the option and returned the property to Mr. Paquet in 1993 after completing ground geophysical surveys on the northern part of the property.

The period from 1992 to 2003 was one of low metal prices, coinciding with mine closures, significant increases in parks, and low mineral exploration activity levels in British Columbia, and particularly on Vancouver Island. Better Resources was caught in this economic down-cycle for the mineral exploration and mining industry, closed the adit in the Lakeview-Domineer Zone, and reclaimed the waste dumps outside it. No significant exploration activity took place on the area of the Mount Washington property from 1992 to 2003, and only limited work since.

In 2004, Warren Geiger, Ph.D.,P.Eng., P.Geol. described and documented the geology and mineralization on James Laird's Wolf Lake Property, including the Lake Zone (on claims adjacent to and surrounded by the Mount Washington Property) and the Road and Bluff Zones, located on the Mount Washington Property. At the Lake Zone, 10 outcrop samples yielded elevated values in gold, silver and/or zinc including a 0.11 m. chip sample which yielded 90.5 g/t gold, 192 g/t silver and 9.58% zinc. At the Bluff Zone, 14 outcrop samples from 1987 yielded elevated values in gold, silver, copper and/or zinc, including one which yielded 75.8 g/t gold. Outcrop sampling previously documented in 1986 from the Road Zone was also described.

In 2005, Gary Thomson, P.Geo. and James Laird documented mineralogical and metallurgical work completed on behalf of Pearl Asian Mining Industries Inc. on samples from the Lake Zone of the Wolf Lake Property. John Payne, Ph.D., P.Geol. described quartz vein/replacement mineralization in two samples containing sphalerite, arsenopyrite, pyrite, chalcopyrite, tetrahedrite, galena, pyrrhotite, bornite and native gold (which occurs with arsenopyrite and tetrahedrite). Ishwinder Grewal, M.A.Sc., P.Eng. documented the results of gravity concentration tests on a 9.45 kg. sample with head grades and recoveries of 39.3 g/t gold (24.6% recovery), 61.7 g/t silver (12.9% recovery) and 0.01 g/t platinum (12.3% recovery).

In 2006, North Bay Resources Inc. (formerly Enterayon Inc.) began acquiring cell mineral claims in the area of Mt. Washington and Constitution Hill.

In 2007, the author was engaged by Blue Rock Resources Ltd. (formerly Better Resources) to complete a summary report on the Mt. Washington Property. In 2008 the claims of the Mt. Washington Property were transferred to the private company Clibetre Explorations Ltd.

In 2009 Clibetre extracted a 168 tonne bulk sample from a portion of the Lakeview- Domineer Vein exposed near the portal adit. The bulk sampled material was trucked to and stockpiled at a secure storage facility located on the property of M.R. Rennie in Courtenay, B.C., and the extraction site was reclaimed. In 2010, Clibetre engaged Mr. Finley Bakker, P.Geo., who completed representative sampling of the stockpiled material, yielding an estimated average grade of 51.53 g/t gold. In addition, most of the geochemical analyses from the stockpile yielded values exceeding 1% in copper and arsenic, and highly elevated values of silver, cobalt, antimony, bismuth, tellurium, iron and sulphur.

Also in 2009-2011, the B.C. government commissioned and funded a reclamation program at the North Pit of the former Mt. Washington Copper Mine to mitigate environmental damage.

In 2011, the author was engaged by Clibetre Explorations Ltd. to design, supervise and report on a sampling program of the tailings dam from the former Mt. Washington Copper Mine. Fifteen holes totaling 65 m. were completed, collecting 77 whole core tailings samples from the accessible northwest portion of the tailings dam. Length-weighted averages of the 77 samples from that portion of the tailings dam yielded elevated element values as follows:

0.124 g/t gold

5.83 g/t silver

0.102 % copper

10.18 ppm molybdenum

8.54 ppm tellurium

0.088 % arsenic

1.22% calcium

4.17% iron

1.05% sulphur

In 2012, Clibetre inadvertently allowed all of its mineral claims in the Mt. Washington area to forfeit, leading to cell acquisition by multiple tenure owners and resulting in complete fractionation of the mineral tenure situation in the immediate area covering the former Mt. Washington Copper open pits and the Lake-Domineer Resource area. Clibetre retained ownership of the underlying Domineer crown granted mineral claims covering a portion of the Lakeview-Domineer Resource area. North Bay expanded it cell mineral claims over the areas covering the Oyster Breccia, Murex Breccia and Mt. Washington Copper Mine tailings.

In 2013, the author completed a preliminary field work program on the Property for North Bay Resources Inc., consisting of re-locating and sampling of selected, known and accessible mineralized occurrences in outcrops. This work was implemented to both fulfill mineral tenure requirements as well as to document and verify various settings, styles, and grades of those mineralized occurrences, as follows.

- Oyster Breccia Area – 3 select outcrop grab samples taken from three separate known mineralized sites documented in ARIS report 17193

- Wolf Lake Area – 2 select outcrop grab samples taken three separate known mineralized sites documented in ARIS report 28405

- Murex Creek Area – 1 select outcrop grab samples taken near a known mineralized site

- Murex Breccia Area – 4 select outcrop grab samples taken from four separate known mineralized sites documented in ARIS report 18391; and 7 select outcrop grab samples taken from areas of recently exposed or previously undocumented mineralized sites

Select outcrop grab sampling yielded highlights at the following locations:

- Wolf Lake Area – 3 samples taken from three separate known mineralized sites yielded up to 16.4 g/t gold and 1.18% copper in 2 different samples

- Murex Breccia Area – 4 samples taken from four separate known mineralized sites and 7 select outcrop grab samples taken from areas of recently exposed or previously undocumented mineralized sites yielded up to 3.55 g/t gold, 0.749% copper and 0.026% molybdenum in 2 different samples

The Murex Breccia area samples from the 2013 field program yielded variably elevated values in copper, gold, silver, molybdenum, arsenic, bismuth, tellurium, tungsten and/or zinc. Many of the samples were from narrow quartz-sulphide veins cutting highly variable brecciated host rocks, and in all cases the sulphide mineralization occurs in stockwork veins, clusters and disseminations which appear to post-date the breccias. This is consistent with the form and geochemical signature of BC Mineral Deposit Profiles Subvolcanic Cu-Au-Ag (As-Sb) – L01, or Porphyry Cu-Mo-Au – L04; but the dimensions and grades found to date are far too small and low for economic considerations.

Pyrrhotite, chalcopyrite and pyrite are the dominant sulphide minerals in the 2013 samples, which are variably magnetic depending on their pyrrhotite content. Extensive historic diamond drilling from the Murex Breccia area yielded much higher sulphide contents (primarily pyrrhotite and chalcopyrite) and also higher intercept values in copper and gold than did either the historic or recent surface rock samples. It is probable that grades increase with depth in the Murex Breccia, and if the contents of pyrrhotite and chalcopyrite (and copper grade) continue to correlate, it is reasonable to assume that magnetism can be used to target areas of higher grades. Based on this assumption, the large, intense magnetic high response (see Figure 2d) in the eastern portion of the Murex Breccia area is a good target area for future deep exploration.

Geological Setting and Mineralization

The regional geological setting of the Mount Washington property is very complex, reflecting the multiple sedimentary, tectonic and plutonic events in the geological history of mid-Vancouver Island. Within 75 km. of the property are exposed and mapped examples of four volcano-sedimentary successions and four intrusive suites, as shown in Figure 1c, and summarized in the following geological legend:

Age	Volcano-sedimentary Units	Intrusive Units
Eocene	(unnamed) volcanics, pyroclastics	Mt. Washington
Cretaceous	Nanaimo Group sediments	
Jurassic	Bonanza Group Lemare Lake volcanics	Island
Triassic	Bonanza Group Parson Bay volc's., sed's.	
Triassic	Vancouver Group Quatsino limestones	
Triassic	Vancouver Group Karmutsen volcanics	Mt. Hall

Permian	Buttle Lake Group sediments	
Devonian	Sicker Group volcanics	West Coast

In the mid-Vancouver Island area, these volcano-stratigraphic units are gently folded along northwest-trending axes, and are generally gently northeast-dipping, with the younger units more extensive along the east side of the island. The West Coast intrusives are re-crystallized rocks of various origins occurring mainly along the Pacific coast. The Mt. Hall intrusive suites are relatively uncommon, basic intrusives coeval with the Karmutsen plateau basalts. The Jurassic Island Intrusives are the most extensive, forming elongate northwest-trending felsic batholiths, stocks and dykes, and often show magnetic high expressions (see Figure 1d). The Mt. Washington intrusives are felsic to intermediate, and occur in isolated clusters of small stocks both along the Pacific coast, and along a northeast corridor between Tofino and Comox.

Structurally, mid-Vancouver Island is dominated by steeply-dipping, northwest-trending horst and graben structures, and by steeply dipping, north-south strike-slip faults. There are also many short strike length, steeply-dipping, northeast-trending (possibly early) faults, and occasional, shallowly-dipping thrust faults. This complex structural history combined with the multiple intrusive events have served to juxtapose the various volcano-sedimentary units in unexpected relative positions, usually only apparent after detailed geological mapping and three dimensional (drilling) data compilation by very skilled and experienced geoscientists. Such detailed information is generally only available in areas of current or prior economic interest, such as at the former Forbidden Plateau area projects now in Strathcona Park (5-15 km southwest), the Myra Falls Mine (30 km southwest), the Catface Copper Project (75 km southwest), OK Copper Project (50 km northeast), and at Mt. Washington itself.

The local area around the Mount Washington Property from Strathcona Park in the west to Constitution Hill in the east (Figure 2c) hosts exposures of only three ages of rocks:

- Eocene volcanics, pyroclastics; and Mt. Washington intrusives and breccias
- Cretaceous Nanaimo Group sediments
- Triassic Vancouver Group Karmutsen volcanics and tuffs

Most of the local area is underlain and surrounded by massive, pillowed, or porphyritic volcanic flows and tuffs of the Triassic Karmutsen Formation, which are extensively faulted and locally brecciated and/or hornfelsed near intrusions. Gently east-dipping Cretaceous Nanaimo Group conglomerates, sandstones and/or siltstones increase eastwards in exposure, and unconformably overlie the Karmutsen volcanics. Some rocks previously mapped as hornfelsed Nanaimo Group sandstones (Carson, 1960) have been re-interpreted as Tertiary volcaniclastics and/or intrusive sills (Dahl et al., 1988; and Muller, 1988). Eocene Mt. Washington Intrusive Suite fine to medium grained and porphyritic felsic to intermediate stocks, sills, dikes and various breccias occur as circular to elliptical, upright cylindrical bodies and intrude all other rock types in the local area. These intrusions and related breccias are probably sub-volcanic, and may be more extensive and numerous at depth, where some may even coalesce.

The Mount Washington Property geology is particularly complex, probably due to what has been interpreted as a collapsed volcanic dome structure (Dahl et al.). Shallow-dipping thrust and normal faults are cut by variably trending, steeply-dipping faults. At least two sub-parallel thrust faults have apparently displaced the peaks of both Mt. Washington and Constitutional Hill, possibly along bedding planes of the Nanaimo sediments and/or Eocene volcaniclastics. This has been interpreted as a detachment fault environment similar to that found in the southwestern USA (Muller). Nine different breccia bodies have been mapped on the property, and range widely in texture and composition, some of which are associated with intrusive stocks, sills and dikes. All breccia bodies are spatially associated with polymetallic sulphide mineralization hosted in faults, veins, and breccia matrix. Economically important elements in the mineralization include gold, silver, copper, molybdenum and possibly tellurium. It appears that mineralization post-dates the breccias, the intrusions and the faulting, possibly including the detachment style thrust faulting. The northeast-trending faults appear to be oldest, and possibly control the emplacement of intrusions and breccias.

Twenty four distinct metallic mineral occurrences have been discovered and documented, and are located completely, partially or immediately adjacent to the Mount Washington Property as per the History section of this report and shown in by type in Figure 2b, with approximate locations, orientations and dimensions as follows:

<u>Quartz-Sulphide Veins and Zones:</u>

<u>Domineer No.1 Vein (contiguous with Lakeview Zone) (on crown grants on Property)</u>

- Centred at 5514250 N, 334250 E, 1415 m. elevation
- Orientation 0^0 Strike, 20^0 Dip West
- Dimension 750 m. length x 150 m. width x 1 m. thick
- Delineated by mapping, sampling of 10-15 trenches, 50-75 drill holes

Domineer No. 2 Vein (on crown grants on Property)

- Centred at 5514100 N, 334650 E, 1355 m. elevation
- Orientation 030^0 Strike, 50^0 Dip Southwest
- Dimension 125 m. length x unknown width x 0.1 m. thick
- Delineated by mapping, sampling of 5 trenches, possibly 1 drill hole

Domineer No. 3 Vein (on crown grants on Property)

- Centred at 5514100 N, 334900 E, 1415 m. elevation
- Orientation 020^0 Strike, Dip unknown
- Dimension 20 m. length x unknown width x 1 m. thick
- Delineated by mapping, sampling of 3 trenches, not drill-tested

Domineer No. 4 Vein (on crown grants on Property)

- Centred at 5514200 N, 334350 E, 1395 m. elevation
- Orientation 320^0 Strike, 25^0 Dip Northeast
- Dimension 50 m. length x unknown width x 0.5 m. thick
- Delineated by 10-15 trenches, possibly 3 drill holes

Mt. Washington Copper No.1 Zone (Tunnel Block, South Pit) (adjacent to Property)

- Centred at 5514800 N, 334200 E, 1315 m. elevation
- Orientation 0^0 Dip (Flat)
- Dimension 250 m. north-south x 200 m. east-west x 2 m. thick
- Delineated by trenching, 100's of drill holes, and 210 m. underground adit
- Largely mined out by open pit in the 1960's

<u>Mt. Washington Copper No.2 Zone (Noranda Block, North Pit) (adjacent to Property)</u>

- Centred at 55115230 N, 3342000 E, 1315 m. elevation
- Orientation 0^0 Dip (Flat)
- Dimension 250 m. length x 200 m. width x 2 m. thick
- Delineated by trench and 100's of drill holes
- Largely mined out by open pit in the 1960's; reclaimed 2009-2010

<u>Lakeview Zone (West Grid, Meadows, Domineer No.1 Vein) (partially on Property)</u>

- Centred at 5514200 N, 333850 E, 1375 m. elevation
- Orientation 0^0 Dip (Flat)
- Dimension 750 m. north-south x 375 m. east-west x 1-3 m. thick
- Delineated by trench samples, about 200 drill holes and 290 m. underground adit
- Mineral resource estimate of 550,298 tonnes @ 6.75 g/t gold, 32.23 g/t silver includes Domineer, West Grid (Historical, and not to NI43-101 standards)

<u>Sump Zone (on Property)</u>

- Centred at 5514100 N, 333800 E, 1315 m. elevation
- Orientation 0^0 Strike, Steeply West Dipping

- Dimension 60 m. length x unknown width x 40 m. thick (4-5 veins)
- Delineated by trench samples, 12 drill holes

Float Area (adjacent to Property)

- Centred at 5514800 N, 333750 E, 1330 m. elevation
- Orientation 0^0 Strike, Dip unknown
- Dimension 30 m. length x unknown width x 1 m. thick
- Delineated by trench samples, about 200 drill holes

Lower Murex Creek Vein (on Property)

- Centred at 5517468 N, 339641 E, 220 m. elevation
- Orientation 240^0 Strike, 10^0 West Dip
- Dimension 1 m. length x 1 m. width x 0.02 m. thick
- Delineated by outcrop samples, 1 drill hole

Central Murex Creek Vein (on Property)

- Centred at 5516180 N, 339410 E, 250 m. elevation
- Orientation 010^0 Strike, Dip unknown
- Dimension unknown
- Delineated by outcrop samples

Lupus Lake Zone (adjacent to Property)

- Centred at 5516350 N, 341700 E, 200 m. elevation
- Orientation 10^0 Strike, 30^0 East Dip

- Dimension 10 m. length x 5 m. width x 0.01 to 0.1 m. thick
- Delineated by trench samples

Lupus Road Zone (on Property)

- Centred at 5515935 N, 340737 E, 335 m. elevation
- Orientation 315^0 Strike, 25^0 Northeast Dip
- Dimension 10 m. length x 5 m. width x 0.1 m. thick
- Delineated by outcrop samples

Lupus Bluff Zone (on Property)

- Centred at 5515888 N, 341123 E, 317 m. elevation
- Orientation 305^0 Strike, 20^0 Northeast Dip
- Dimension 50 m. length x 2 m. width x 0.1 m. thick
- Delineated by outcrop samples

Sulphide Breccia Zones:

Washington & Glacier Breccias (on adjacent property)

- Centred at 5514650 N, 334200 E, 1315 m. elevation
- Orientation 350^0 Azimuth, unknown plunge
- Dimension 1100 m. length x 500 m. width x unknown depth
- Delineated by outcrop and trench mapping and sampling, 15-25 drill holes

Murray Breccia (on Property)

- Centred at 5514300 N, 333900 E, 1300 m. elevation

- Orientation 340^0 Azimuth, unknown plunge
- Dimension 750 m. length x 300 m. width x unknown depth
- Delineated by outcrop and trench mapping and sampling, 5-10 drill holes

Quarry Breccia (on Property)

- Centred at 5515000 N, 336000 E, 990 m. elevation
- Orientation circular / cylindrical with unknown plunge
- Dimension 200 m. diameter x unknown depth
- Delineated by outcrop and trench mapping and sampling, 5-10 drill holes

Oyster Breccia (on Property)

- Centred at 5516500 N, 334300 E, 1110 m. elevation
- Orientation circular / cylindrical with unknown plunge
- Dimension 400 m. diameter x unknown depth
- Delineated by outcrop and trench mapping and sampling, 9 drill holes

Murex Breccia Lower Creek Zone (Zone A, may include Tsolum Breccia) (on Property)

- Centred at 5514750 N, 337500 E, 750 m. elevation
- Orientation 315^0 Strike, Steep plunge
- Dimension 750 m. length x unknown width x 175 m. thick (4 zones)
- Delineated by outcrop and trench mapping and sampling, 10-15 drill holes

Murex Breccia Upper Creek Zone (Zone D) (on Property)

- Centred at 5514100 N, 337250 E, 900 m. elevation

- Orientation 300^0 Azimuth, Steep plunge
- Dimension 750 m. length x unknown width x 175 m. thick (2-3 zones)
- Delineated by outcrop trenching and mapping, 20-30 drill holes

Murex Breccia East Zone (on Property)

- Centred at 5513750 N, 339500 E, 575 m. elevation
- Orientation 300^0 Azimuth, Steep plunge
- Dimension unknown length x unknown width x 3 m. thick
- Delineated by outcrop trenching and mapping, 1 drill hole

Murex Creek Copper Moly Zone (on Property)

- Centred at 5516175 N, 339406 E, 331 m. elevation
- Orientation 010^0 Strike, 25^0 East Dip
- Dimension 5 m. length x 1 m. width x 0.25 m. thick
- Delineated by outcrop sampling

Mill Site Zone (on Property)

- Centred at 5514003 N, 337837 E, 777 m. elevation
- Orientation 110^0 Strike, 90^0 Dip
- Dimension 10 m. length x 1 m. width x 0.3 m. thickness
- Delineated by outcrop sampling

Other Types

Mt. Washington Copper Mine Tailings (on Property)

- Centred at 5513650 N, 304150 E, 580 m. elevation (sampled portion)
- Orientation flat lying
- Dimension 500 m. length x 200 m. width x 5 m. thick
- Delineated in part (60% of area and 75% of the volume) by core drilling
- NI43-101 compliant indicated mineral resource estimate of 241,625 tonnes 0.119 g/t gold, 5.68 g/t silver, 0.098% copper, 8.26 g/t tellurium, and inferred mineral resource estimate of 83,775 tonnes 0.119 g/t gold, 5.68 g/t silver, 0.098% copper, 8.26 g/t tellurium

Deposit Types

The mineral deposits that have been historically explored, developed and mined on the Mt. Washington property could be classified as one or more of the following types under the B.C. Mineral Deposit Profile categories which appear in Appendix 3 as follows:

- Epithermal Au-Ag-Cu: High Sulphidation - H04
- Epithermal Au-Ag: Low Sulphidation – H05
- Subvolcanic Cu-Au-Ag (As-Sb) – L01
- Porphyry Cu-Mo-Au – L04

The Lakeview-Domineer Developed Prospect (MINFILE 092F116) and the Mt. Washington Copper Past Producer (MINFILE 092F117) were classified under both the High Sulphidation Epithermal (H04) and Porphyry (L04) categories when last updated in MINFILE in 1989-90. The Murex Prospect (MINFILE 092F206) was classified as a Porphyry (L04) and the Oyster Prospect (MINFILE 092F365) as a Low Sulphidation Epithermal (L05), both in 1990. However, the Subvolcanic (L01) category created by the BC Geological Survey in 1995 (Panteleyev, 1995) to capture the Equity Silver Past Producer (MINFILE 093L001) in central B.C. appropriately describes all the metallic mineral occurrences in the Mount Washington Property area, in the author's opinion. Other deposits mined worldwide and allocated to the same category include

Rochester (Nevada, USA), Kori Kollo (Bolivia), Bor (Serbia), part of Resck (Hungary), and part of Lepanto (Philippines).

Metal grades and tonnage ranges for Subvolcanic Cu-Au-Ag deposits worldwide are 10-200 million tonnes @ 0.25 - 2.5% copper, 1–10 g/t gold, and 10–100 g/t silver, and most are Tertiary or Eocene in Age. At current metal prices, many of these types of deposits may have sufficient grades and dimensions to permit bulk underground mining, and are therefore well worth exploring beyond the depth limits of open pit mining methods. They are often spatially and genetically associated with all three of the other deposit types listed above, which have many economically significant examples worldwide, including several in British Columbia. The Mount Washington Property area has the correct geological setting to host one or more fully preserved porphyry, sub-volcanic and epithermal deposits and/or deposit clusters, in the author's opinion. Regional geochemistry data (Figures 1e to 1g and 2e to 2g) suggest high background geochemical values for copper, gold molybdenum in the area and the Property.

In the area of Central Vancouver Island and the South Coast, significant mineral prospects of the Porphyry type have been developed which occur in a similar geological setting as the Mount Washington Property, shown in Figure 1b, as follows:

- Catface Copper (MINFILE 092F120) – 56,863,000 tonnes @ 0.40% copper indicated mineral resources, 262,448,000 tonnes @ 0.38% copper inferred mineral resources (Selkirk Metals Corp., 2009)

- OK North (MINFILE 092K008) – 86,800,000 tonnes @ 0.31% copper, 0.014% molybdenum inferred mineral resources (Prophecy Resources Corp., 2006)

Exploration

The 50+ years of exploration work in the Mount Washington Property area described in the History section has identified a cluster of gold-silver-copper-molybdenum-arsenic occurrences over an area of 10 km. by 3 km. The mineral occurrences vary in style, orientation, size, content of metals, and development status from showings to developed prospects and past producers. The geological complexity of the Property has provided very different settings for the mineralization, ranging from steeply-plunging, pipe-like, sulphidic breccia bodies to flat-lying, structurally controlled quartz-sulphide vein systems. Mineral zonation ranges from gold-arsenic rich to copper-gold-molybdenum rich in different mineral occurrences. In early programs (1940-1966), explorers such as MacKay, Noranda and Cominco explored primarily for high grade (+10 g/t gold or +1% copper) deposits, and Mt. Washington Copper targeted only high grade copper deposits in their mining operations. W.G. Stevenson brought his porphyry copper expertise from the southwestern US and initiated exploration programs targeting large tonnage (+50 Mt.) copper-molybdenum deposits by Mount Washington, Marietta and Esso (1967-1982). As a result of the significantly increased gold price, Better Resources Ltd. targeted primarily moderate-high grade (+5 g/t) gold deposits (1982-1992), and Noranda targeted large tonnage copper-gold-molybdenum deposits (1987-1989) on the Murex area of the Property in their respective exploration programs. It has been estimated that total exploration expenditures on the property to be $5 million, exclusive of mining and development costs.

Historical sampling of stream sediments, soils, outcrops, trenches and drill core was generally done either by, or under the supervision of, qualified geoscientists engaged by the operators at the time the work was done using industry standard techniques of those times. Generally, in the earlier exploration programs (1940-1964), sampling was done very carefully due to the low cost of labour, and very selectively due to the high cost of assays. It appears that assays for specific elements were only requested and undertaken if minerals likely to contain those elements were visible in the media sampled, and only if those elements were of potential economic interest. For example, several notations of minor chalcopyrite or molybdenite occur in drill core logs, but no samples were taken, or the samples taken were not analyzed for copper or particularly molybdenum, which were only of economic interest at that time in high quantities. Another example is the notation of massive pyrrhotite or pyrite in drill core logs where samples were either not taken, or taken and not analyzed for gold or silver.

In the later exploration programs (1965 onwards), sampling tended to be much more extensive but also less specific. There are examples in the drill logs of continuous sampling of drill core through wide but variably mineralized sections using consistent 10’ (3.0 m.) sample intervals, regardless of variations in the lithology, or the amount and type of mineralization. Such sampling could blur contacts between higher grade and lower grade sections intersected, and cause grades of higher grade sections to be under-stated. Also, there are examples in trench and rock sampling records of samples exceeding the analytical limits in a metal of economic interest, say >10,000 ppm. or >1% copper using atomic absorption methods, for which no follow-up assays are available. This could result in grades of some zones to be understated as well. In the History section, the author has converted all of the units to metric formats, precious metal analyses to grams per tonne, and base metal analyses to percentages (unless very low) for consistency within the report, and with current industry standards.

Since the last significant exploration programs occurred on the Mount Washington Property in 1992, prices for target commodities gold, silver, copper, molybdenum and tellurium have greatly increased. The understanding of mineral deposits by economic geologists has improved substantially, and the exploration techniques used have improved dramatically. In addition, the property has been the focus of several academic geology papers by qualified geoscientists, including highly experienced government personnel. The understanding of mineral deposits by economic geologists has improved substantially since the last exploration and academic work was done in the Property area.

The Lakeview/Domineer bulk sampling program completed in 2009/2010 and the Mount Washington Copper (MWC) Tailings sampling program completed in 2011 by Clibetre Explorations Ltd. were implemented primarily to fulfill mineral tenure requirements, but the limited work completed was done to modern industry standards. The 2013 property field exploration program and the 2014 tailings metallurgical testing program completed by North Bay Resources Ltd. were also implemented primarily to fulfill mineral tenure requirements, but the limited work completed was also done to modern industry standards. These sample locations appear in Figures 2b, with detailed locations appearing by area in Figure 3a (Lakeview/Domineer Area), Figure 3b (MWC Tailings Drilling Area) and Figure 3c (MWC Tailings Metallurgical Sample Area), and an image of the MWC Tailings Dam appearing in Figure 3d. Details plans and stacked sections from the 2011 Tailings Drilling Program appear in Figures 4a-h and 5a-g, and the MWC Tailings Mineral Resource Blocks in Figure 6. Technical details for each program appear in Appendices 1 and 2 (Lakeview/Domineer bulk sample physical and technical reports), Appendices 3 and 4 (MWC tailings drill logs and geochemistry reports), and Appendices 5 and 6 (MWC tailings metallurgical test work and mineral resource estimate).

The 2009 Lakeview/Domineer bulk sampling program was supervised by the late C.C. Rennie, P.Eng., and the physical work report was completed by the author, both Qualified Persons. The 2010 sampling program on that bulk sample was completed by F. Bakker, P.Geo., a Qualified Person. The 2011 tailings drilling program, 2013 property field exploration program, and the 2014 tailings metallurgical sampling and testing program were either completed or supervised by the author.

Drilling

Since no diamond core drilling has been done since 1992 on the Mount Washington Property, relevant details of all drilling have been included in the History section of this report. No attempt has been made by the author to tabulate or verify total numbers of holes or total metres drilled, particularly since details of most of the pre-production definition percussion and diamond drilling by Mt. Washington Copper during the early 1960's is not available. All other operators used exclusively diamond drilling, and since the early 1980's all operators used primarily NQ size drill core, but earlier operators generally used smaller diameter drill core.

Generally, drilling of the flat-lying tabular zones and veins at the Mount Washington Copper North and South Pits and at the Lakeview-Domineer Zone was done using vertical or steeply inclined drill holes, and core angles of mineralized structures were generally recorded in the drill logs. Therefore, drill intercepts for these zones and veins are generally close to true thicknesses, confirmed in the underground adits and in the exposures in the open pits. In the sulphidic breccia zones in the Oyster Breccia and Murex Breccia areas, these mineralized zones have not been sufficiently drilled to establish their shapes and orientations, and therefore the relationships between drill intercepts and true thickness for these zones are unknown.

In early July 2011, the author planned the 2011 MWC tailings drilling program, which was commenced on July 12, 2011. Five people mobilized with equipment to the site of the tailings dam for the Mt. Washington Copper Mine, located on former cell mineral claim 607878. Mr. David McLelland, Mr. Adrian Houle and the author assisted with the mobilization and GPS survey of the proposed drill sites for one day only on July 12. Mr. Michael Rennie and Mr. Bruce Rennie of Clibetre Exploration Ltd. conducted the core drilling program including sample collection over 3 days from July 12 to July 14, using a hand-held electric drill with 3' core rods containing clear plastic core tubes. Fifteen (15) vertical holes were completed totaling 64.8 metres of 37.5 mm. diameter core, and 77 whole core samples were collected averaging 0.84 m. in length. Short wooden posts were left in the drill holes to mark their locations.

The author used Geosoft Target and Geochemistry programs to create Figures 4a to 5g inclusive showing selected technical data from the drilling program at 1:2,500 scale. These include maps showing hole locations, and contoured maps of hole depths in metres (interpreted as depth of tailings), and averaged values in ppm for each hole of gold, silver, arsenic, copper, molybdenum and tellurium. Also included are stacked sections looking northwest showing sample numbers, values and histograms for each of the same six elements for each hole. These values are summarized in Table 3, and averaged values were calculated for all 15 holes, and also for the five best holes located in the southwest portion of the tailings dam.

Table 3

2011 Tailings Drilling Program Averaged Values by Drill Hole													
Hole_ID	East	North	RL	Interval	Au_ppm	Ag_ppm	As_ppm	Cu_ppm	Mo_ppm	Te_ppm	Ca_%	Fe_%	S_%
03	340032	5513683	586	5.8	0.192	6.13	1100	1147	11.31	9.21	1.01	4.31	1.27
05	340104	5513750	586	4.1	0.131	5.36	1181	995	8.39	9.63	1.17	4.53	1.25
12	340029	5513611	587	2.7	0.259	9.25	1298	1604	15.72	9.24	0.74	3.89	1.10
13	340065	5513647	584	5.8	0.146	6.84	1139	1411	11.77	10.16	1.13	4.81	1.54
14	340100	5513681	582	5.0	0.077	7.51	670	724	9.84	6.13	1.35	3.87	0.98
15	340136	5513711	581	4.4	0.088	5.30	822	757	8.83	7.33	1.49	4.32	1.15
16	340173	5513748	581	2.1	0.072	5.26	697	1054	8.50	4.57	1.07	3.69	0.68
16A	340173	5513749	581	2.7	0.110	4.54	714	914	8.39	4.76	1.08	3.68	0.71
23	340103	5513608	580	5.2	0.165	7.51	1125	1513	12.14	17.10	1.09	4.67	1.50
25	340172	5513676	578	6.1	0.082	3.81	729	614	10.28	6.55	1.26	3.94	0.71
34	340168	5513603	587	6.7	0.081	3.96	641	694	9.60	6.21	1.48	3.76	0.84
35	340208	5513640	577	4.3	0.123	5.42	857	957	7.60	6.16	1.42	4.30	0.76
37A	340275	5513705	579	2.3	0.106	5.44	709	1441	11.10	7.65	1.05	4.18	0.98
44	340203	5513565	576	4.3	0.145	7.34	865	1183	9.38	13.44	1.35	4.21	1.14
47A	340307	5513684	576	3.4	0.101	4.70	607	845	9.67	6.03	1.14	3.78	0.74
Averages	15 holes			64.8	0.124	5.83	884	1024	10.18	8.54	1.22	4.17	1.05
Averages	holes 03,12,13,23,44			23.7	0.174	7.17	1095	1349	11.75	11.93	1.09	4.45	1.35

The 2011 tailings drilling program representatively tested the depths and metal values of the northwestern portion of the Mt. Washington Copper Mine tailings dam with 15 holes spaced approximately 50 metres apart. The southeastern portion of the tailings dam was not accessible due to shallow ponded water on its surface at the time of the drilling program. There is no reason to expect that the metal values of the untested portion of the tailings dam are significantly different than those obtained in the 2011 drilling program. The slightly higher metal values in 5 holes located in the southwest portion of the tailings dam are unexplained. The drilling program achieved significantly lower copper and silver values but slightly higher gold values than the calculated values from historical production data (0.41% copper, 0.10 g/t gold and 18 g/t silver – see P.19 in the History Section), which is unexplained. Overall the values are relatively consistent throughout the tailings dam, and show good correlation amongst gold, silver, arsenic, copper, molybdenum, tellurium, iron and sulphur. The metals of potential economic interest in the tailings dam include copper, gold, silver and possibly arsenic, tellurium and/or molybdenum, which could have combined in-situ values of up to C$5 million using current metal prices.

Sample Preparation, Analyses and Security

During the time period that extensive exploration work was conducted on the Mount Washington Property, it appears that industry standard methods were used for sample quality control, preparation, analyses and security by the operators undertaking the work. All field work was supervised by qualified and experienced professional geoscientists, who would have been able to identify unexpected discrepancies between sampled media and analytical results obtained from them. Although the use of blind analytical blanks and standards may have been employed on a few programs, it was neither a common practice nor routine procedure at the time the exploration work was done. In most cases, independent commercial analytical laboratories were used by the operators to prepare and analyses samples, and some certificates of analyses from those laboratories are available in ARIS reports for some the exploration programs. However, the larger integrated exploration and mining companies such as Cominco and Noranda operated and utilized in-house analytical laboratories to process samples from at least some of their exploration programs. Although the author cannot certify any of the historical work, there is no reason to doubt the adequacy of sample preparation, security and analytical procedures related to sampling on the Mount Washington Property during its exploration history.

During the 2011 tailings drilling program, the author used Inspectorate Laboratories to prepare and analyze the 77 whole core samples taken. The core samples were delivered by Bruce Rennie to the author on July 14, 2011 and shipped to Inspectorate Labs in Richmond, B.C via Greyhound bus parcel express on July 15, 2011. The sample were prepared as rock samples, and subjected to 4-acid digestion, 50 element ICPMS analyses and 1AT Fire Assay, with AAS finish for gold analyses. The author used field notes collected by the drillers to construct drill logs, to which geochemical analyses were added, and which appear in Appendix 3. The certificate of analysis 11-360-05850-01 from Inspectorate appears in Appendix 4. No duplicate samples, blanks or standards were submitted by the author to Inspectorate. For the 77 samples analyzed from the 2011 program, only the internal QA/QC procedures used by Inspectorate Laboratories were utilized and relied upon, which is deemed sufficient for the size and scope of the program, in the author’s opinion.

During the 2014 metallurgical testing program, all test work was completed by Blue Coast Research at their Parksville BC facility. On May 28, 2014, Mr. D. Middleditch of Blue Coast Research and the author collected 4 tailings samples via hand auger, and delivered them to Blue Coast Research’s facility in Parksville, B.C, with all other details provided in Appendix 5.

Data Verification

At the time that exploration work was conducted in the Mount Washington Property area, it appears that industry standard methods were used for quality control and data verification. Although the author cannot verify any of the historical work, there is no reason to doubt the adequacy of quality control measures and data verification procedures related to sampling during the exploration history of the area, and the Property.

In addition to the work completed in 2011, 2013 and 2014 described in the History and Exploration sections, the author visited some of the mineralized exposures on the Mount Washington property on three occasions between 2000 and 2005 as per the Introduction and Reference sections of this report.

The 2013 field program undertaken by the author for North Bay Resources Inc. constitutes verification of the nature and geochemistry of the gold-silver-arsenic-copper-molybdenum-antimony-zinc mineralization in the Oyster Breccia area; the gold-silver-arsenic-bismuth-copper-tellurium-zinc mineralization in the Wolf Lake area; and the gold-silver-copper-molybdenum-tellurium-zinc mineralization in the Murex Breccia area. None of the field verification by the author was of sufficient scope to verify dimensions and continuity of mineralized zones on or near the Mount Washington Property.

The 2014 metallurgical testing program undertaken by Blue Coast Research for North Bay Resources Inc. constitutes verification for both the historical production for the MWC operation and for the grades obtained in the 2011 MWC Tailings Drilling Program.

Mineral Processing and Metallurgical Testing

Mineral processing and/or metallurgical testing on mineral products from the Mount Washington Property area from 1941 to 2005 has been summarized in the History section of this report. These testing programs are listed by dates as follows:

- 1941 – by the Canada Department of Mines and Resources – Mines and Geology Branch, for D.F. Kidd
- 1977-1981 – by B.C. Research for Imperial Oil Limited

- 1986 – by Bacon, Donaldson & Associates Ltd. for Freeport-McMoran Gold Co.
- 1988 – by Bacon, Donaldson & Associates Ltd. for Imperial Metals Corp.
- 1990 – by Bacon, Donaldson & Associates Ltd. for Biomet Technology Inc.
- 1988-1990 – by G.W. Hawthorne for Better Resources Ltd.
- 2004-2005 – by Knelson Research & Technology for Pearl Asian Mining

The initial 1941 metallurgical test work and ore microscopy by the federal government identified the need to produce selective flotation to create multiple (3 or 4) concentrate products from the Domineer mineralization to effectively recover gold, silver and copper. This was probably considered too challenging for mine operators to develop at that time. Curiously, any metallurgical test work for its copper-rich deposits by Mt. Washington Copper Co. is absent in the public records. Although it is not known what if any metallurgical work was done by Mt. Washington Copper before starting production in 1961, the fact that they tried to produce a single (copper) flotation concentrate product suggests they were not concerned about recoveries of precious metals. They acquired, relocated and erected the former Woodgreen processing plant from the Motherlode Mine (MINFILE 082ESE034) near Greenwood, B.C. The plant processed copper-gold-silver mineralization from 1956 to 1959 primarily from local copper skarn deposits, in which all metals typically report to a single (copper) concentrate product. This plant may not have been appropriate for processing the more complex gold-silver rich Domineer mineralization, and not optimal for the copper rich Mt. Washington Copper Deposits from the South and North Pits. In the 1977-81, B.C. Research on behalf of Imperial Oil investigated copper heap leaching for processing mineralization at Mt. Washington, but without positive results.

As bio-leaching technology for processing complex ores began to evolve in the 1980's, several companies looked at Mt. Washington as a potential candidate site. Veerman-Botel Ltd. investigated bio-leaching in the early 1980's after acquiring the Mt. Washington property, as did metallurgical consultants Bacon, Donaldson & Associates for several mining companies in the late 1980's. Better Resources solicited proposals from several metallurgical consultants and engaged G.W. Hawthorne, P.Eng. in 1988 to design a processing plant to optimize primarily gold recoveries from the Lakeview-Domineer Zone. By 1989, Mr. Hawthorne, supported by ore microscopy work by J.F. Harris, used bio-oxidation technology to design a 200 TPD mine-site plant producing two products: a copper-gold flotation concentrate and a gold bullion, with combined recoveries of 92% gold and 68% copper. The plant would send 99% of the arsenic to the tailings dam as ferric arsenate, but the recoveries and distribution of silver and other metals in the ore are not mentioned.

In 2004, Pearl Asian Mining Industries Inc. engaged Knelson Research & Technology to conduct gravity concentration test work for gold, silver and platinum from the Lake Zone of Wolf Lake Property, with poor recoveries results. In 2005, mineralogical work on samples from the Lake Zone by John Payne, Ph.D., P.Geol. of Vancouver Petrographics Ltd. for Pearl Asian Mining provided detailed descriptions of gangue and sulphide minerals, and native gold which occurs mainly with arsenopyrite. This is similar to the style of mineralization at Lakeview-Domineer.

In 2014, North Bay Resources Inc. engaged Blue Coast Research to complete specific gravity tests and preliminary metallurgical testing of the MWC Tailings Dam. Four discrete samples were collected from the tailings dam, with average composite grades of 0.15% copper, 0.13 g/t gold, 3.43% iron and 1.03% sulphur. Solids specific gravity measurements from the four samples averaged 2.71 t/m^3; and in-situ specific gravity is estimated at 1.25 t/m^3, based on literature research by the author for comparable tailings dams. Flotation tests yielded copper and gold recoveries of up to 60% and 67% respectively in concentrate, with grades of 1.4% copper and 14% sulphur. Blue Coast's Metallurgical Test work Report appears in Appendix 5.

Mineral Resource Estimates

Only the MWC Tailings Dam has mineral resource estimates completed to NI43-101 and CIM standards, as summarized below and with details provided in Figure 6 and Appendix 6. Of the twenty four veins and zones identified in the Geological Setting and Mineralization section of this report, historical or other mineral resource estimates have been established on only four veins, none of which are to NI43-101 and CIM standards and therefore cannot be relied upon. None of the nine breccia zones has been subjected to sufficient and successful detailed work to date to establish mineral resources estimates. Of the four veins with mineral resource estimates, two were partially mined out by Mt. Washington Copper Co. Ltd. and have combined statistical data, and the other two may be contiguous and therefore one is included in the other. The four veins and tailings are summarized as follows:

<u>Domineer No.1 Vein (may be contiguous with Lakeview Zone to the west)</u>

Included in Lakeview-Domineer Resource by Better Resources (1989), shown below.

Mt. Washington Copper No.1 Zone (Tunnel Block, South Pit)

From 1965 to 1967, 342,600 tonnes of ore averaging 1.005% copper, 0.413 g/t gold, and 22.5 g/t silver were produced from the No.1 and No.2 Zones combined. In addition, mineral resources remaining adjacent to one or both pits were estimated at 305,720 tonnes @ 1.07% copper by W.G. Stevenson (1970). These zones are adjacent to and surrounded by the Mount Washington Property, shown schematically in Figures 2b and 3a.

Mt. Washington Copper No.2 Zone (Noranda Block, North Pit)

Included in Mt. Washington Copper No.1 Zone above.

Lakeview Zone (West Grid, Meadows; may be contiguous with Domineer No.1 Vein)

Combined Lakeview-Domineer mineral resource estimate by Better (1989) as follows:

Drill-Indicated Underground:

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
Lakeview-Domineer	3.4 g/t gold	2.0 metres	301,270	7.2g/t	37.7g/t

Drill-Indicated Open Pit:

Area/Zone	Min. Grade	Min. Thickness	Tonnes	Gold	Silver
West Grid	1.7 g/t gold	not specified	249,546	6.2g/t	25.4g/t

Based on the detailed observations from the Lakeview-Domineer adit driven by Better in 1987-88, as detailed in the History Section of this report, it appears that there are higher grade sections of the zone which may be defined by more detailed work. Only a portion of the Lakeview-Domineer historical mineral resources are located on the Mount Washington Property, shown schematically in Figures 2b and 3a.

Mt. Washington Copper (MWC) Tailings Dam

Tonnage of entire dam were calculated from production records in BC MINFILE as 342,600 tonnes milled less 17,200 tonnes concentrate produced for a net amount of 325,400 tonnes estimated to be contained in the tailings dam. Grades were estimated based on the 2011 sampling program completed on the accessible northwest portion of the tailings dam (see Appendix 3), using sample length weighted average grades calculated for each drill hole (see Table 3). Polygons were used to allocate grades by area to each drill hole and creating resource blocks named after each drill hole (see Figure 6). Volumes were estimated by multiplying resource block areas by drill hole depths for each block. Tonnages for each block were estimated using a density of1.25 t/m^3. The total tonnage within the resource blocks was estimated at 241,625 tonnes, and can be considered an indicated mineral resource according to CIM and NI43-101 standards. This represents about 75% of the total tonnage of tailings estimated to be contained in the tailings dam. The remaining 83,775 tonnes estimated to be contained in the tailings dam can be considered an inferred mineral resource, with grades estimated to be the same as that for the indicated resources. See summary in Table 4 below:

Table 4 – MWC Tailings Mineral Resource Estimate

Mount Washington Copper (MWC) Tailings Dam 2014 Mineral Resource Estimate												
Block ID	**Category**	**Mass**	**Mass**	**Gold**	**Silver**	**Arsenic**	**Copper**	**Moly**	**Tellurium**	**Calcium**	**Iron**	**Sulphur**
Name	**CIM**	**tonnes**	**percent**	**p.p.m.**	**p.p.m.**	**p.p.m.**	**p.p.m.**	**p.p.m.**	**p.p.m.**	**percent**	**percent**	**percent**
03	Indicated	20300	6.2%	0.192	6.13	1100	1147	11.31	9.21	1.01	4.31	1.27
05	Indicated	12556	3.9%	0.131	5.36	1181	995	8.39	9.63	1.17	4.53	1.25
12	Indicated	6075	1.9%	0.259	9.25	1298	1604	15.72	9.24	0.74	3.89	1.10
13	Indicated	16313	5.0%	0.146	6.84	1139	1411	11.77	10.16	1.13	4.81	1.54
14	Indicated	21875	6.7%	0.077	7.51	670	724	9.84	6.13	1.35	3.87	0.98
15	Indicated	14850	4.6%	0.088	5.30	822	757	8.83	7.33	1.49	4.32	1.15
16A	Indicated	3038	0.9%	0.110	4.54	714	914	8.39	4.76	1.08	3.68	0.71
16	Indicated	3938	1.2%	0.072	5.26	697	1054	8.50	4.57	1.07	3.69	0.68
23	Indicated	17550	5.4%	0.165	7.51	1125	1513	12.14	17.10	1.09	4.67	1.50
25	Indicated	30881	9.5%	0.082	3.81	729	614	10.28	6.55	1.26	3.94	0.71
34	Indicated	27638	8.5%	0.081	3.96	641	694	9.60	6.21	1.48	3.76	0.84
35	Indicated	32250	9.9%	0.123	5.42	857	957	7.60	6.16	1.42	4.30	0.76
37	Indicated	6900	2.1%	0.106	5.44	709	1441	11.10	7.65	1.05	4.18	0.98
44	Indicated	13438	4.1%	0.145	7.34	865	1183	9.38	13.44	1.35	4.21	1.14
47	Indicated	14025	4.3%	0.101	4.70	607	845	9.67	6.03	1.14	3.78	0.74
Totals	**Indicated**	**241625**	74.3%	28818	1372675	208031653	235804693	2407110	1995563	303280	1005737	244948
Averages	Indicated	16108	5.0%	0.119	5.68	861	976	9.96	8.26	1.26	4.16	1.01
50	**Inferred**	**83775**	25.7%	0.119	5.68	861	976	9.96	8.26	1.26	4.16	1.01
Total Dam	Historical	325400	100.0%									

Adjacent Properties

There are two areas with significant mineral properties including a past producer and a developed prospect immediately adjacent to and surrounded by the Mount Washington

Property, six significant prospects or developed prospects, and one producing mine in the Central Vancouver Island or nearby South Coast area. Refer to Figures 1a to 1g, 2a to 2g, and 3a for both regional and local significant mineral properties and other occurrences.

In the Wolf Lake Area of the Mount Washington Property, a one cell mineral claim 1017897 held 50% each by B.W. Scott and S.J. Scott covers Lupus 1 MINFILE 092F308, described both in the History Section and the Geological Setting and Mineralization Section of this report. The claim is surrounded by the Mount Washington Property, as shown if Figures 2a to 2g.

In the Domineer Area of the Mount Washington Property, 7 cell mineral claims covering a combined total of 14 cells are held by two individuals as follows:

- Claim 980266 – 1 cell held 100% by D.A. Zamida
- Claim 980267 - 4 cells held 100% by D.A. Zamida
- Claim 980268 – 3 cells held 100% by D.A. Zamida
- Claim 980270 – 1 cell held 100% by K.B. Funk
- Claim 980312 – 1 cell held 100% by D.A. Zamida
- Claim 980313 – 3 cells held 100% by D.A. Zamida
- Claim 1027586 – 1 cell held 100% by D.A. Zamida

These 7 claims are largely surrounded by the Mount Washington Property, as shown in Figures 2a and 3a. Cell claims 980266 and 980313 both held by Mr. Zamida cover approximately the northern half of the Lakeview-Domineer Resource Area, described both in the History Section and the Geological Setting and Mineralization Section of this report. Cell claim 966629 held by North Bay Resources Ltd. covers approximately the southern half of the Lakeview-Domineer Resource Area, as well as the Domineer Veins 1-4, subject to the limitations of the underlying 4 Domineer crown granted mineral claims discussed below. Cell claims 980266, 980267, 980268, 980312 and 980313 combined cover the former Mt. Washington Copper Mine Open Pits. The Washington and Glacier Breccias are covered by cell claims 090266 and 980268. Cell claim 980313 covers the Float Area occurrence.

Also in the Domineer Area, 4 crown granted mineral claims (Domineer No. 1, 3, 4 and 6 Mining Claims) which include gold and silver mineral right only are held 100% by Clibetre Explorations Ltd. and are partially overlapped by cell mineral claims as follows:

- Claim 966629 – 8 cells held 100% by North Bay Resources Inc.
- Claim 980266 – 1 cell held 100% by D. A. Zamida
- Claim 980268 – 3 cells held 100% by D.A. Zamida
- Claim 980271 – 12 cells held 100% by North Bay Resources Inc.

Not quite adjacent to the Property is the Forbidden Plateau area of Strathcona Provincial Park which begins 1 km. southwest of the Mount Washington Property, and is the site of several significant MINFILE prospects and showings discovered prior to and actively being explored up until the time of exclusion of the area from mineral exploration and mining by the B.C. government in 1990. Locations and selected highlights of these occurrences are as follows:

- The Gem Lake (MINFILE 092F239) prospect is located 5 km. southwest of the Mount Washington Property, and was explored extensively by Falconbridge Ltd. in the 1960's-1980's primarily for gold and silver, as the base metals were held by the crown. Five types of mineralization were discovered, including tectonic breccia bodies occurring along steeply-dipping, east trending fault structures, associated with Eocene quartz diorite intrusive stocks and dikes. Drilling in 1961 on the main showing yielded 18 metres @ 1% copper, and in 1963 another hole intersected 0.02% molybdenum over an unspecified width. Rock sample AF05320 taken in 1987 from a mineralized tectonic breccia measuring 15 m. by 30 m. and containing 5-20% chalcopyrite yielded 3.0 g/t gold and 18 g/t silver.

- The Faith Lake (MINFILE 092F240) prospect is located 6 km. southwest of the Mount Washington Property, and was also explored extensively by Falconbridge Ltd. in the 1960's-1980's. At least 30 quartz-sulphide veins occurring in steeply-dipping, north and east-trending shears and faults and associated with Eocene quartz diorite intrusive stocks and dikes were discovered and explored. Drilling in 1963 yielded an intercept of 0.15 m. @ 25 g/t gold, 120 g/t silver and 3% copper.

- The Schev (MINFILE 092F241) prospect is located 5.5 km. southwest of the Mount Washington Property, and was explored by Falconbridge Ltd. as part of the Faith Lake property in the 1960's-1980's. A sericitic tectonic breccia containing arsenopyrite, chalcopyrite and pyrrhotite is exposed over an area of 20 m. by 3 m., associated with a

Eocene felsic dike. Drilling in 1964 yielded an intercept of 1.5 m. @ 27 g/t gold and 43 g/t silver from a breccia zone with an orientation of 080^0 strike and 45^0 dip south.

- The Jo Anne (MINFILE 092F329) prospect is located 2.5 km. southwest of the Mount Washington Property, was explored by Iron River Resources Ltd., B.P.-Selco, and Noranda from 1984 to 1988. Drilling by Noranda in 1988 yielded multiple wide copper intercepts over an area 200 m. in diameter from quartz-sericite altered breccia associated with Eocene intrusives. This included hole NFP-88-5 which yielded 21.6 m. @ 0.43% copper from 48.4 to 70 m., and 12.4 m. @ 0.42% copper from 100.1 to 112.5 m., and two other holes, NFP-88-2 and NFP-88-3 which yielded wider zones of generally lower grade copper values.

The mineral occurrences on the Mount Washington Property and those of the Forbidden Plateau area establish a NE-SW trending belt of Eocene age intrusives with associated gold-silver-copper-arsenic bearing breccia bodies, shown if Figures 1a – 1g, and 2a – 2g. This trend may be projected to the southwest across Strathcona Provincial Park to the west coast of Vancouver Island, where Selkirk Metals Corp. holds the Catface Copper property, located 75 km. southwest of the Mount Washington Property. The Cliff Zone of the Catface Copper property contains an indicated mineral resource estimate of 56,863,000 tonnes @ 0.40% copper and inferred mineral resource estimate of 262,448,000 tonnes @ 0.38% copper (Selkirk Metals Corp., 2009). The Catface (MINFILE 092F120) and adjacent Irishman Creek (MINFILE 092F251) developed prospects are classified as porphyry copper-molybdenum-gold-rhenium deposits and are associated with multi-phase, Eocene intrusive stocks and dikes.

Near the centre of Strathcona Provincial Park along the southwest projection of the same trend lies Nyrstar’s Myra Falls Operation, which has been successfully producing and processing polymetallic sulphide deposits containing copper, zinc, lead, silver and gold since 1966. Myra Falls is located 30 km. southwest of the Mount Washington Property, and is hosted in the much older Devonian age Mount Sicker Volcanics which underlie portions of Vancouver Island.

Along the northeast projection of the same trend across Georgia Strait (Salish Sea), 50 km. northeast of the Mount Washington Property, Eastfield Resources Ltd. and Prophecy Resource Corp. hold the OK Copper property. The North Lake Zone of the OK North developed prospect (MINFILE 092K008) contains an inferred mineral resource estimate of 86,800,000 tonnes @ 0.31% copper and 0.014% molybdenum (Prophecy Resource Corp., 2006). The OK North and adjacent OK South MINFILE 092F057 developed prospects are classified as copper-molybdenum-gold-rhenium deposits and are associated with multi-phase Cretaceous and possibly younger intrusive stocks, dikes and breccia bodies.

Other Relevant Data and Information

Technically, the Mount Washington Property and adjacent properties represent an attractive advanced exploration project, with many clustered polymetallic mineral occurrences in a geological setting similar to active and successful mining camps elsewhere. However, the social license to develop and operate a mine is not guaranteed to the mineral tenure holder anywhere, including on Vancouver Island. Only one metal mine (Myra Falls Operation) is currently operating on Vancouver Island, no new metal mine has been permitted since the 1960's, and several active exploration properties were expropriated during expansion of local provincial parks in the early 1990's, as was done with the former Falconbridge Ltd. properties, Gem Lake and Faith Lake, and the former Jo Anne property operated by Noranda Exploration Company Ltd. when Strathcona Provincial Park was expanded. It is possible that local surface tenure holders, recreation/conservation groups and/or communities will actively and successfully oppose future mine development in the Mt. Washington area. The treaty process between various First Nations and federal and provincial governments is still in progress on Vancouver Island with one final agreement completed (Maa-nulth), another final agreement in negotiation (K'omoks) in place, and several more at various stages. Co-operation agreements between local First Nations and a proponent is usually required to successfully develop a mineral property today in B.C. However, it is assumed under the B.C. government's 2-Zone Model within its Sustainability in B.C. Mining Criteria that the Mount Washington Property is available for future exploration, development and mining, and that the B.C. Ministry of Energy and Mines will act as an effective advocate and permitting authority on behalf for any proponent who follows its laws and regulations required during all stages of any future work on the Mount Washington Property.

Interpretations and Conclusions

The various surveys, analyses, tests and excavations conducted on the Mount Washington Property area during the +50 year period mainly from 1940 to 1992 has identified at least 24 mineral occurrences containing varying combinations of gold, silver, copper, molybdenum and/or tellurium in clusters over an area of 10 km. by 4 km. Hundreds of ore-grade intercepts at current metal prices were achieved in natural and trenched outcrop samples or diamond drill holes by numerous operators on most of the 24 mineral occurrences on or adjacent to the Property. One attempt at mining and recovering primarily copper from a narrow vein deposit using open pit mining methods was not successful, and resulted in bankruptcy for the operating company, and environmental damage that has since been mitigated. This may have been due in part to problems with mining narrow vein deposits by open pit methods, and in part due to changes in market conditions. Based on the metallurgical report on the tailings dam from that operation (see Appendix 5), no further work is recommended at this time to attempt recovery of products from the dam, pending changes in market conditions and/or processing technology. The mineral inventory estimate for the MWC Tailings (see Table 4 and Appendix 6) is current to CIM and NI43-101 standards, and appropriate for publication and disclosure.

Systematic, multi-year exploration programs completed by junior and senior companies have been successful both on the Mount Washington Property and in the surrounding mineral area. However, a portion of the mineral area to the southwest of the Mount Washington Property was alienated from exploration and development in 1990 when it was being actively explored by major companies. At that time, the Lakeview-Domineer project was in the B.C. Mine Development Review process, and included a viable metallurgical process to recover both gold and copper. Funding to develop the project could not be obtained by owner Better Resources, due in part to the mining industry's negative perception of political environment for mining in B.C. at that time, including Vancouver Island, and due to low metal prices. The project ceased, and very limited exploration activity has occurred in the Mt. Washington area since 1992.

The Subvolcanic Cu-Au-Ag (As-Sb) - (L01) mineral deposit profile category created by the BC Geological Survey in 1995 to capture the Equity Silver Past Producer (MINFILE 093L001) in central B.C. appropriately describes all the metallic mineral occurrences in the Mount Washington Property area. This target exploration model was not published or well known at the time most of the exploration work was done in the area, and so is a new model to test. The older and more common Epithermal and Porphyry mineral deposit profiles and their sub-types can be genetically and spatially related to sub-volcanic types within a district, and are also appropriate and have been successfully used in the Mount Washington Property area.

With current metal prices, the Mount Washington Property warrants modern data compilation, and systematic multi-year exploration programs. Such programs would be more effective in both the Lakeview-Domineer area and in the Wolf Lake area, if the fragmented tenure status in those areas of the property were consolidated through agreements on various mineral tenures. The Murex Breccia and Oyster Breccia areas are well covered by North Bay's mineral tenures.

Recommendations

The Mount Washington property should first be re-evaluated based on its regional geological setting compared to other similar settings worldwide which host past or currently producing mines, with consideration to mineral deposit types and models. Today's geological literature is much more extensive than it was at the times when the Mt. Washington area was being actively explored. In the author's opinion, some of the key points to consider in such a comparison would be:

- Eocene age intrusive associated deposits and mineral districts
- Breccias – tectonic, intrusive and hydrothermal
- Fault structures – low angle detachment faults, steep faults
- Polymetallic – gold, silver, copper, molybdenum and/or tellurium
- Epithermal, porphyry and sub-volcanic mineral deposit types

Using today's and projected future estimates of metal prices for gold, silver, copper, molybdenum and tellurium, reasonable exploration target models should be established for the Mount Washington Property. An investigation should be made of current mining and processing techniques and costs at operations exploiting similar deposits worldwide, including both open pit and underground operations. In the author's opinion, the following combined exploration target models could be used as a starting point:

- Underground, flat-dipping, discontinuous but clustered narrow vein deposits totaling 1 million tonnes @ 10 g/t gold, 100 g/t silver, 0.50% copper, 10 g/t tellurium and 5% arsenic, requiring complex processing for optimal recovery of gold, silver , copper and tellurium while suppressing arsenic
- Underground, steeply-dipping, bulk mineable, clustered, breccia deposits totaling 100 million tonnes @ 1 g/t gold, 5 g/t silver, 0.50% copper, 0.01% molybdenum, 5 g/t tellurium and 0.5% arsenic, with similar processing requirements as above plus molybdenum recovery

The extensive data record available for the Mount Washington Property needs to be assembled into a single G.I.S.-based, 3-D model, and all rock units used by different operators need to be integrated into single, coherent geological legend. Because of the size and variable integrity of the data record, this process will take considerable time, effort and cost. At the end of the process, both property wide and detailed plan and sections views should be available for any selected portions of the property showing any and all combinations of historic geology, geochemistry, geophysics (by type), trenching, drilling, and excavations. Using this geo-referenced database, well-conceived exploration programs should be initiated.

A phased, systematic exploration program is warranted on the property to achieve the following primary exploration objectives, in the author's opinion:

- Discover new economic mineral deposits of any type on the property through systematic, phased exploration probably commencing with airborne geophysics
- Establish new, bulk-mineable indicated resources of sufficient grades to be mined by underground methods in one or more of the breccia zones by diamond drilling
- Establish measured resources in the Lakeview-Domineer Zone by re-opening the portal, re-mapping the adit, definition drilling and detailed interpretation

Also, the author recommends the following environmental and socio-economic programs be initiated to complement the exploration and environmental objectives:

- Establish baseline environmental database using historic and modern data
- Identify, negotiate and establish contract, employment and other co-operation agreements with local First Nations bands
- Negotiate and establish access road use and other co-operation agreements with local surface rights holders TimberWest and the Mount Washington Alpine Resort
- Negotiate and establish work progress update protocols with local recreation and conservation groups and communities
- Submit 5 year area-based permit application with BC Ministry of Energy and Mines

The following Phase 1 combined compilation. planning, exploration, environmental and socio-economic programs and budgets are proposed for the first year at the Mt. Washington property:

Table 5 – Proposed Work Program and Budget Summary

Item	Description	Units/Timing	Unit Cost	Item Cost
Re-evaluation	Mining Geol./Eng.	1 month	$10,000 / month	$ 10,000
GIS Compilation	2 GIS Technicians	3 months	$15,000 / month	$ 45,000
Geological Legend	Project Geologist	1 month	$10,000 / month	$ 10,000
Plan Exploration	Project Geologist	2 months	$10,000 / month	$ 20,000
Subtotal	**Compilation & Planning**	**Months 1-3**		**$ 85,000**
New Discoveries	1000 km. Airborne	1 month	$175 / km	$ 175,000
Explore Breccias	2000 m. Drilling	2 months	$200 / metre	$ 400,000
Lakeview-Domineer	Underground Work	2 months	$100,000 /month	$ 200,000
Subtotal	**Exploration**	**Months 4-5**		**$ 775,000**
Environmental	Baseline Program	10 months	$2,500 / month	$ 25,000
Road Use, Surface	Agreements	3 month	$5,000 / month	$ 15,000
First Nations	Agreements & Meetings	10 months	$5,000 / month	$ 50,000
Local Communities	Meetings	10 months	$5,000 / month	$ 50,000
Subtotal	**Environmental & Socio-Economic**	**Months 3-12**		**$ 140,000**
TOTALS		**12 Months**		**$ 1,000,000**

Phase 2 and subsequent programs and budgets would follow depending on the success of the Phase 1 programs, with the exploration program probably escalating annually in size and cost.

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Date and Signature Page

I, Jacques Houle, P.Eng. Do hereby certify that:

1. I am currently employed as a consulting geologist by Jacques Houle, P.Eng. Mineral Exploration Consulting 6552 Peregrine Road, Nanaimo, British Columbia, Canada V9V 1P8
2. I graduated with a Bachelor's of Applied Science degree in Geological Engineering with specialization in Mineral Exploration from the University of Toronto in 1978.
3. I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia, the Society of Economic Geologists, the Association for Mineral Exploration British Columbia, and the Vancouver Island Exploration Group; I am also a member of the Technical Advisory Committee for Geoscience B.C.
4. I have worked as a geologist for 36 years since graduating from university, including 5 years as a mine geologist in underground gold and silver mines, 15 years as an exploration manager, 3 years as a government geologist and 11 years as a mineral exploration consultant.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, membership in a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
6. I am responsible for the preparation of the Technical Report entitled "Mount Washington Technical Report". I visited and worked on the mineral property between 2000 and 2014.
7. I have had prior involvement with the properties that are the subject of the Technical Report, both as a government geologist and as a consultant.
8. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
9. I am independent of the issuer applying all the tests in NI 43-101.

10. I have read National Instrument NI 43-101, Companion Policy 43-101.CP and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument, policy and form.

Dated this 15th Day of September, 2014.

____

Signature of Qualified Person

Jacques Houle, P.Eng.

Print name of Qualified Person

Seal of Qualified Person

Central Vancouver Island Mineral Tenures

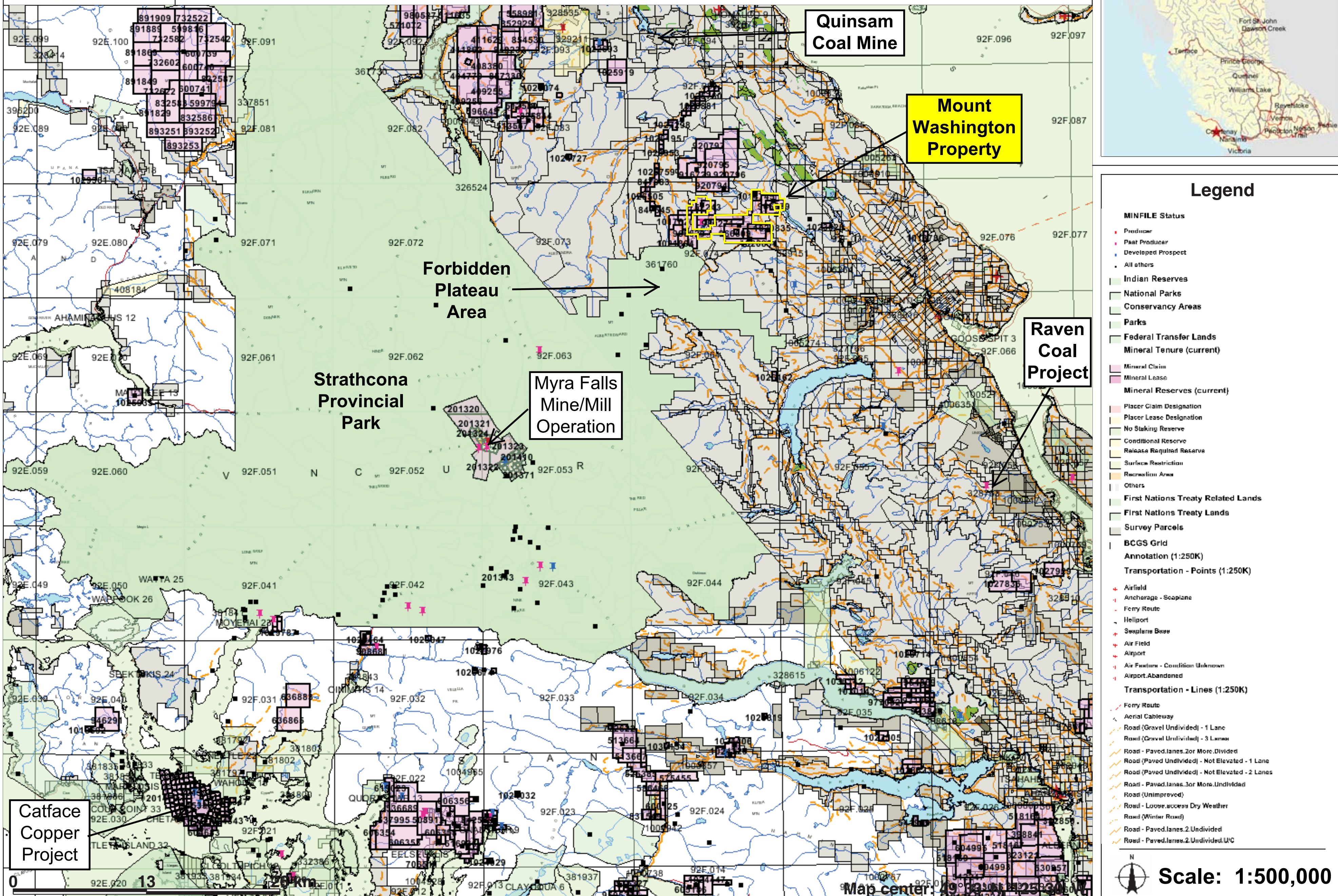

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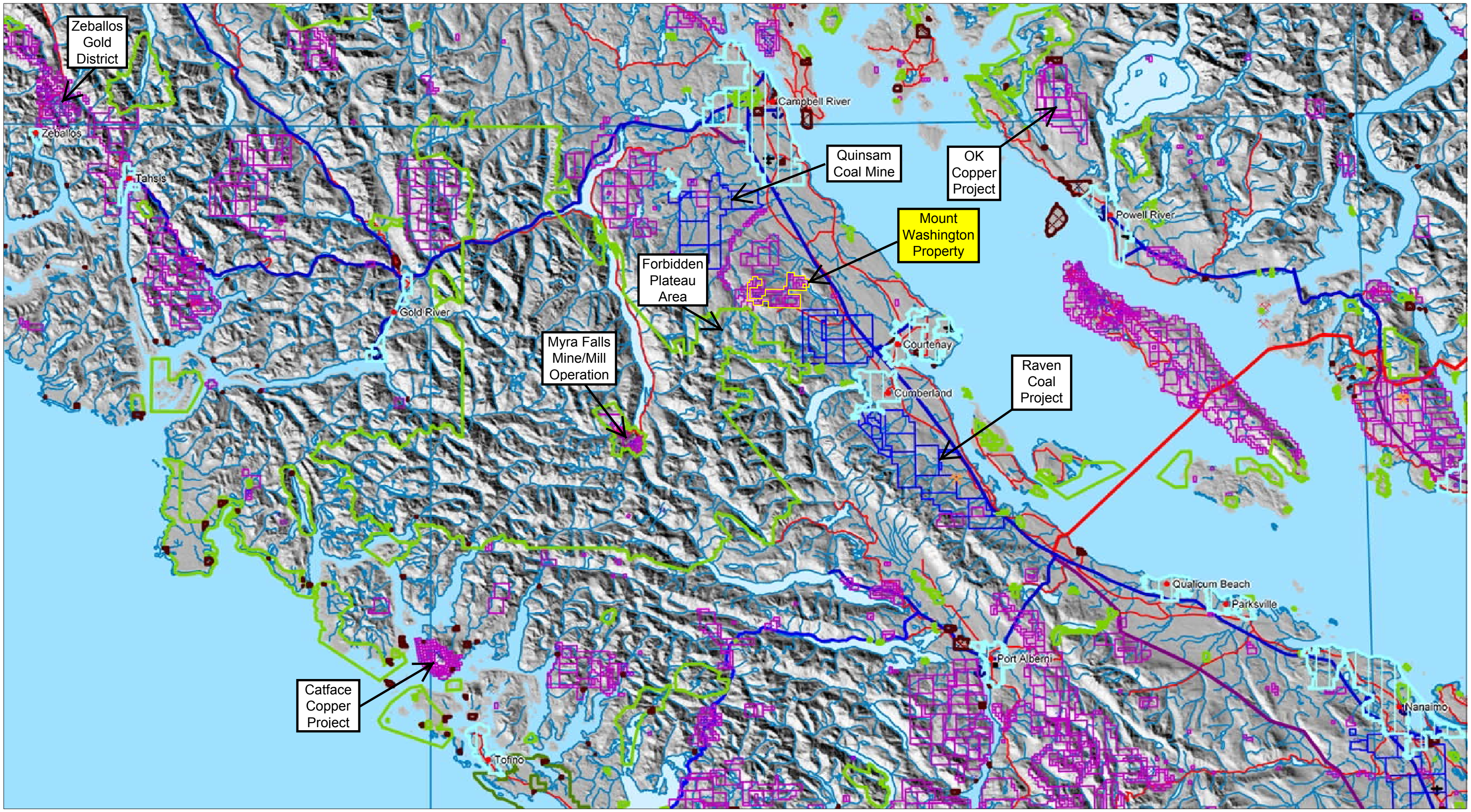
Figure 1a



for Map Legend
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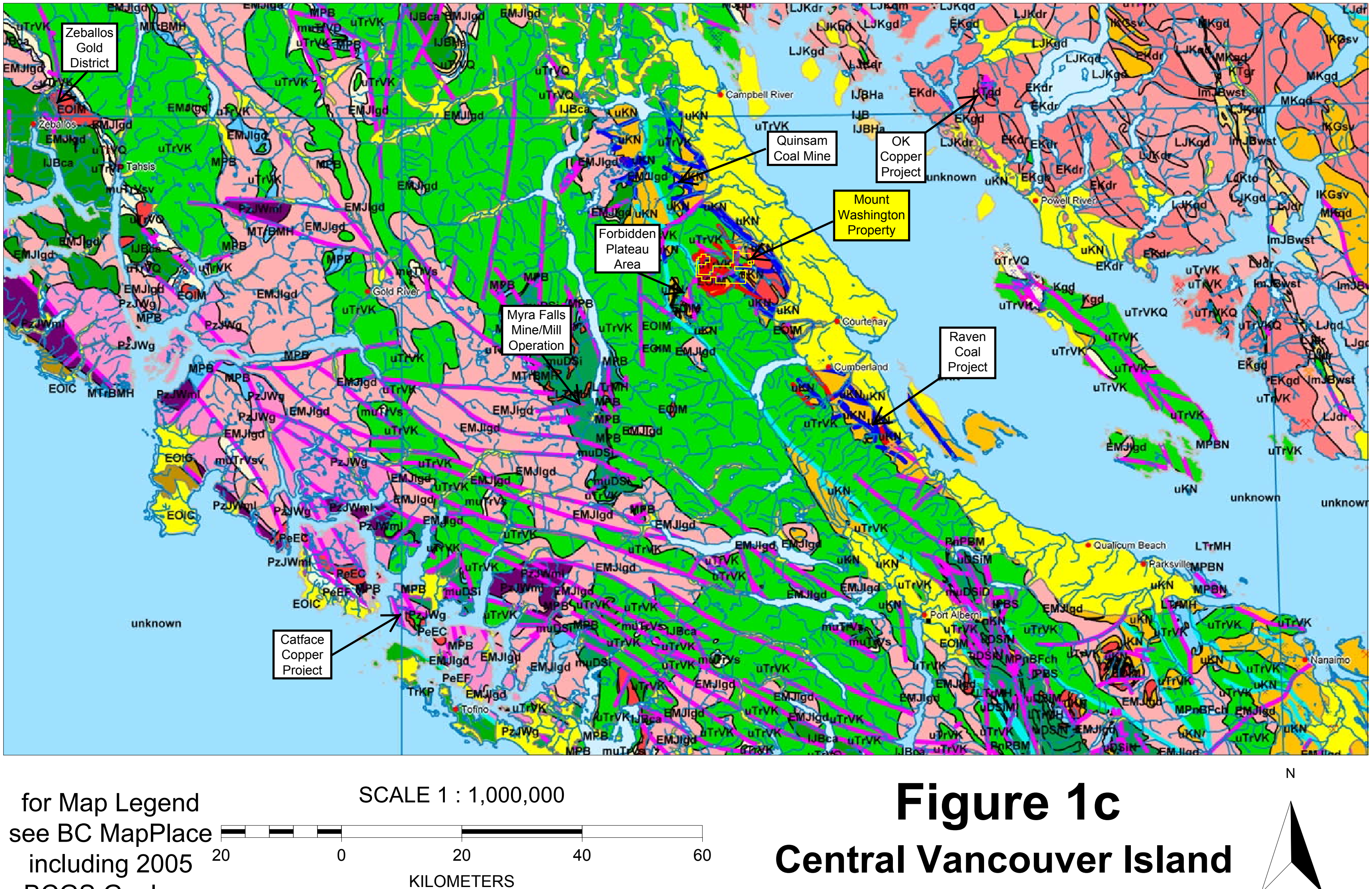
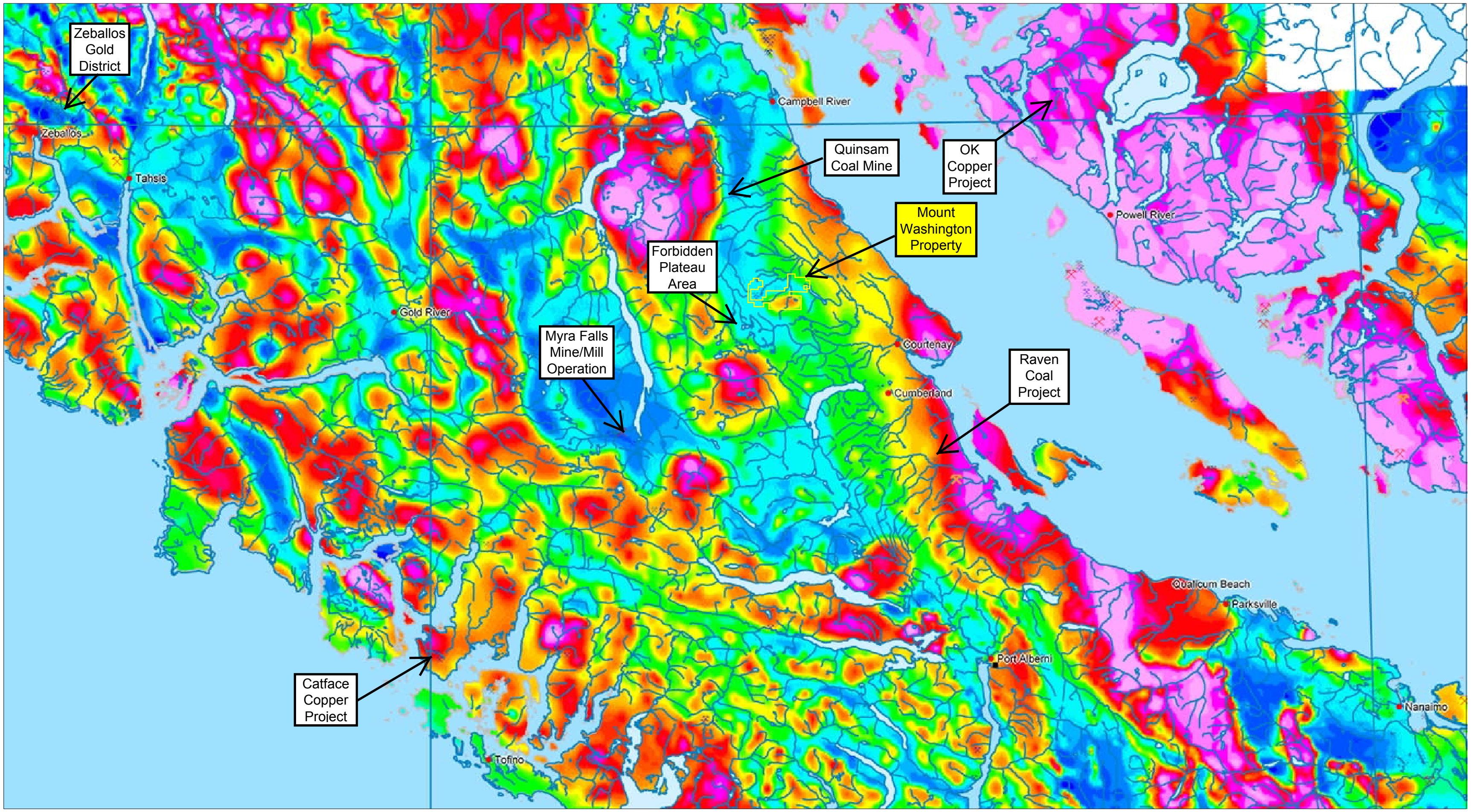
Figure 1b
Central Vancouver Island Infrastructure



for Map Legend see BC MapPlace including 2005 BCGS Geology

Figure 1c

Central Vancouver Island Geology



for Map Legend see BC MapPlace

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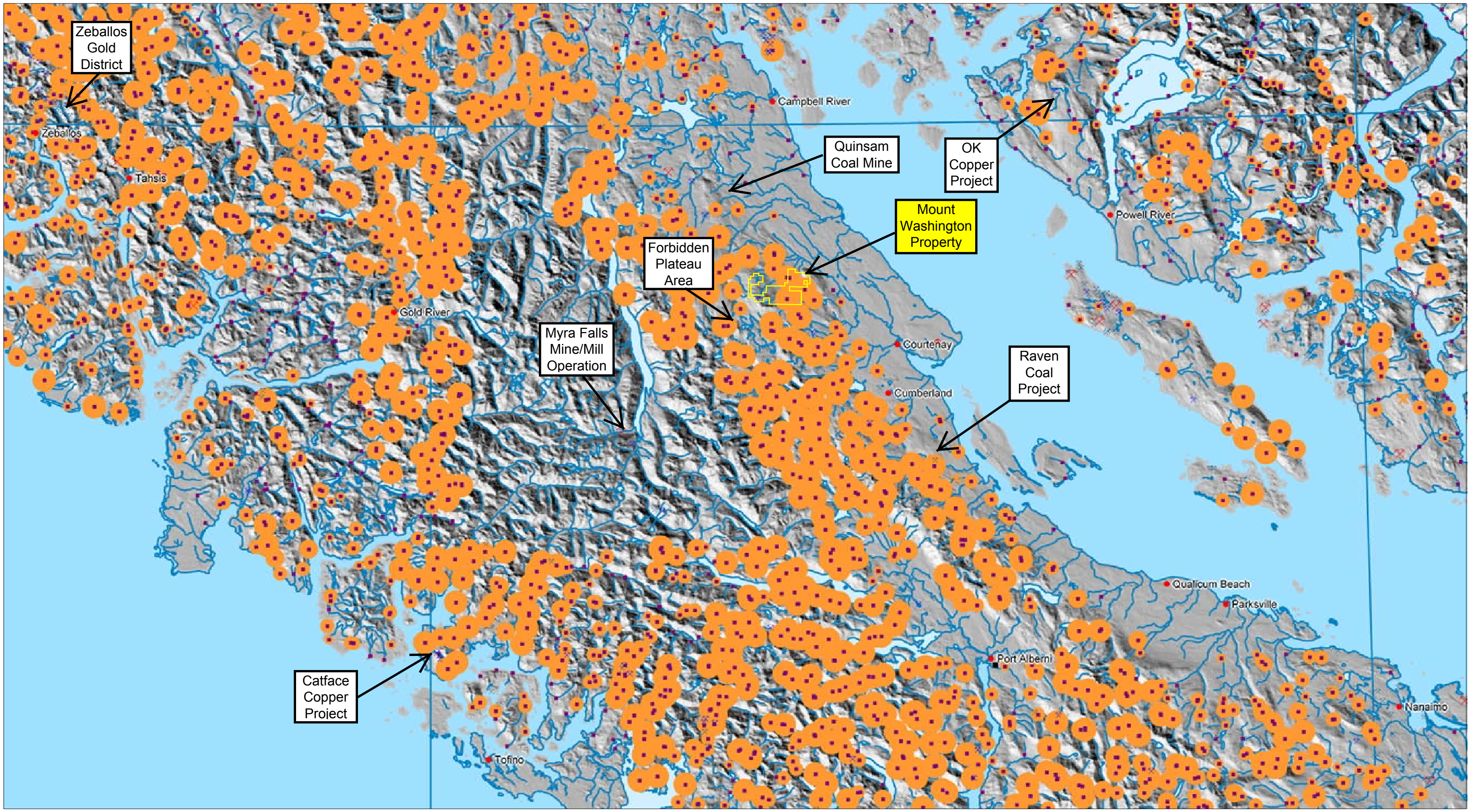
20 0 20 40 60
KILOMETERS

N

Figure 1d
Central Vancouver Island Aeromagnetics



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KILOMETERS

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Figure 1e
Central Vancouver Island Copper Geochemistry

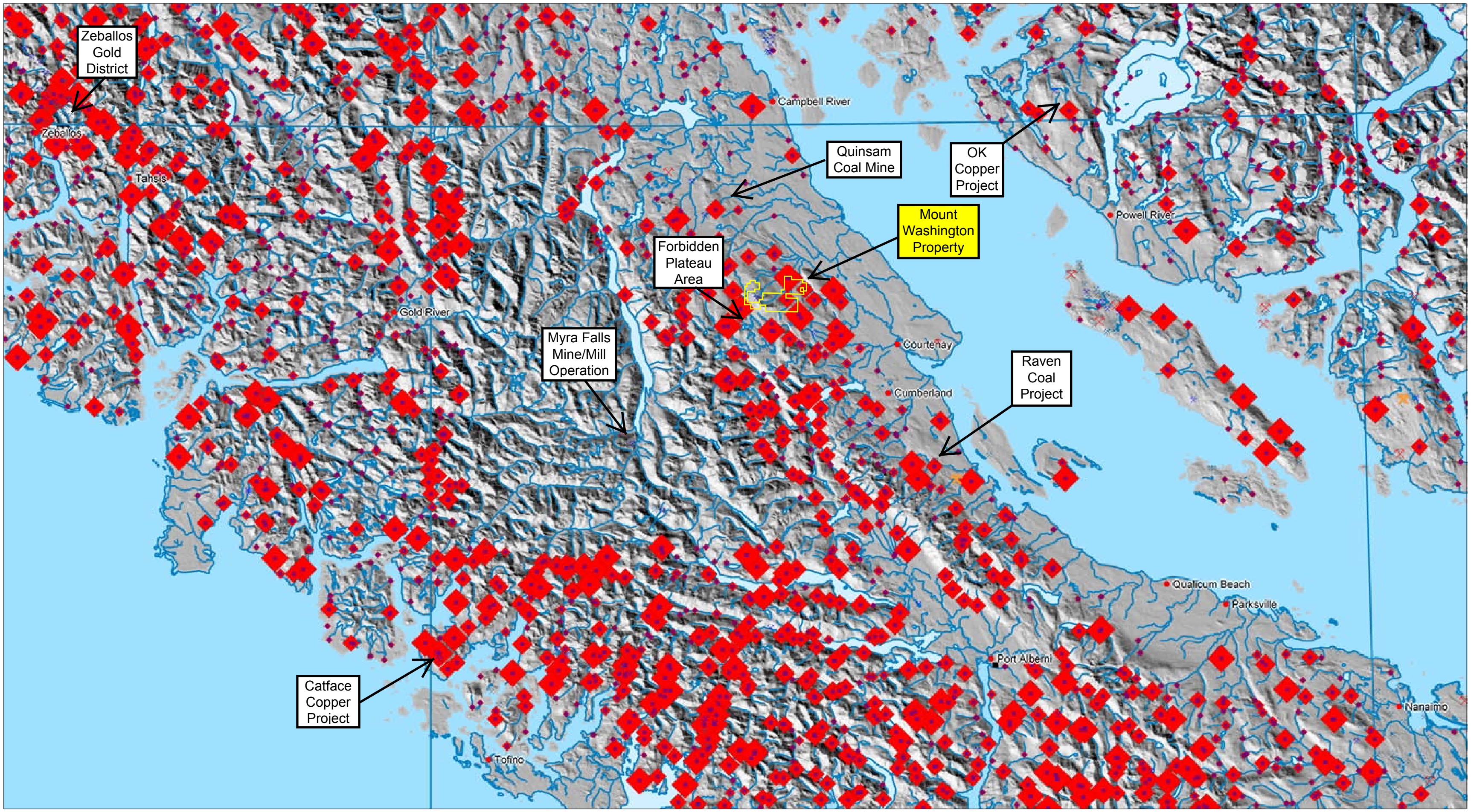

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Figure 1f

Central Vancouver Island Gold Geochemistry

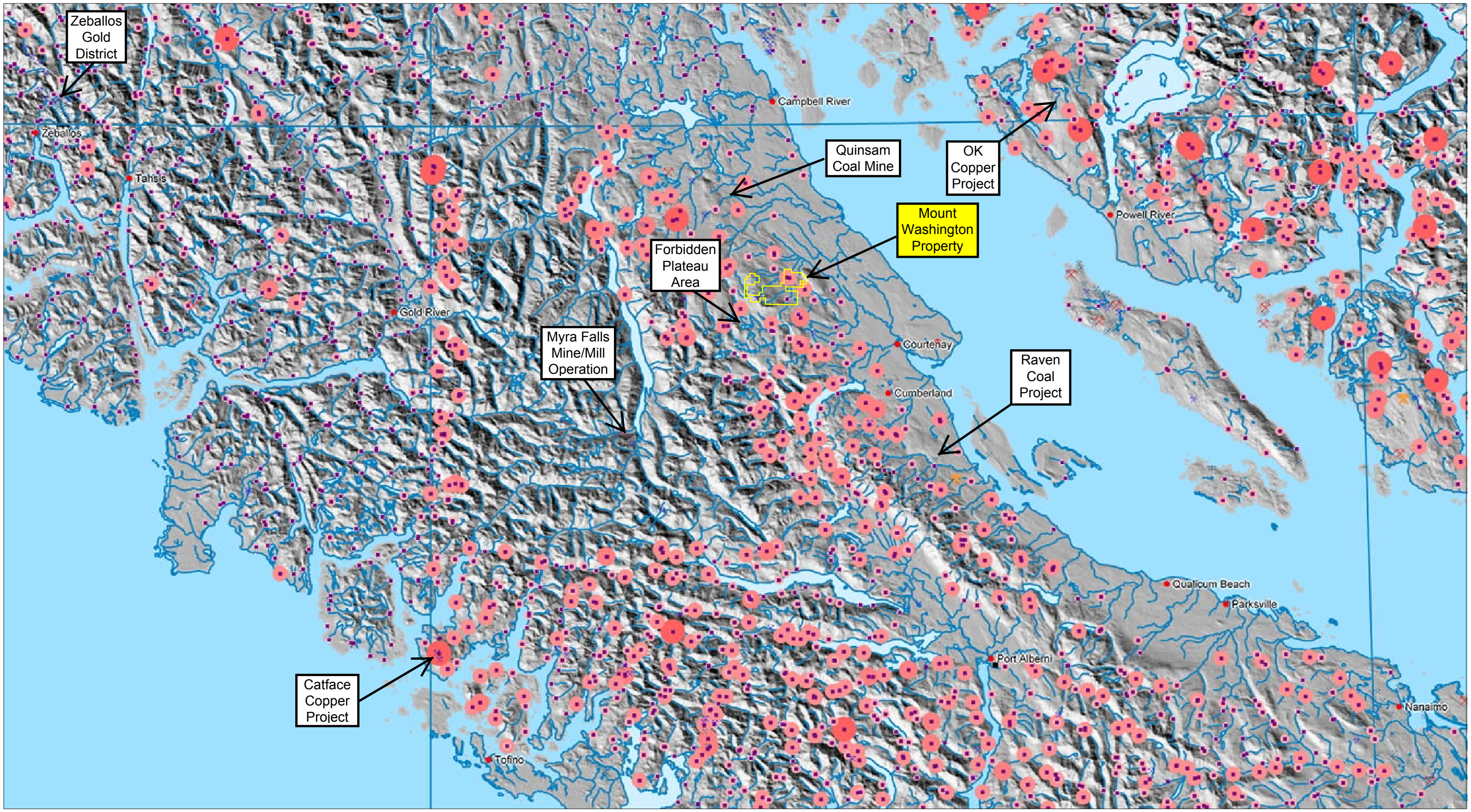

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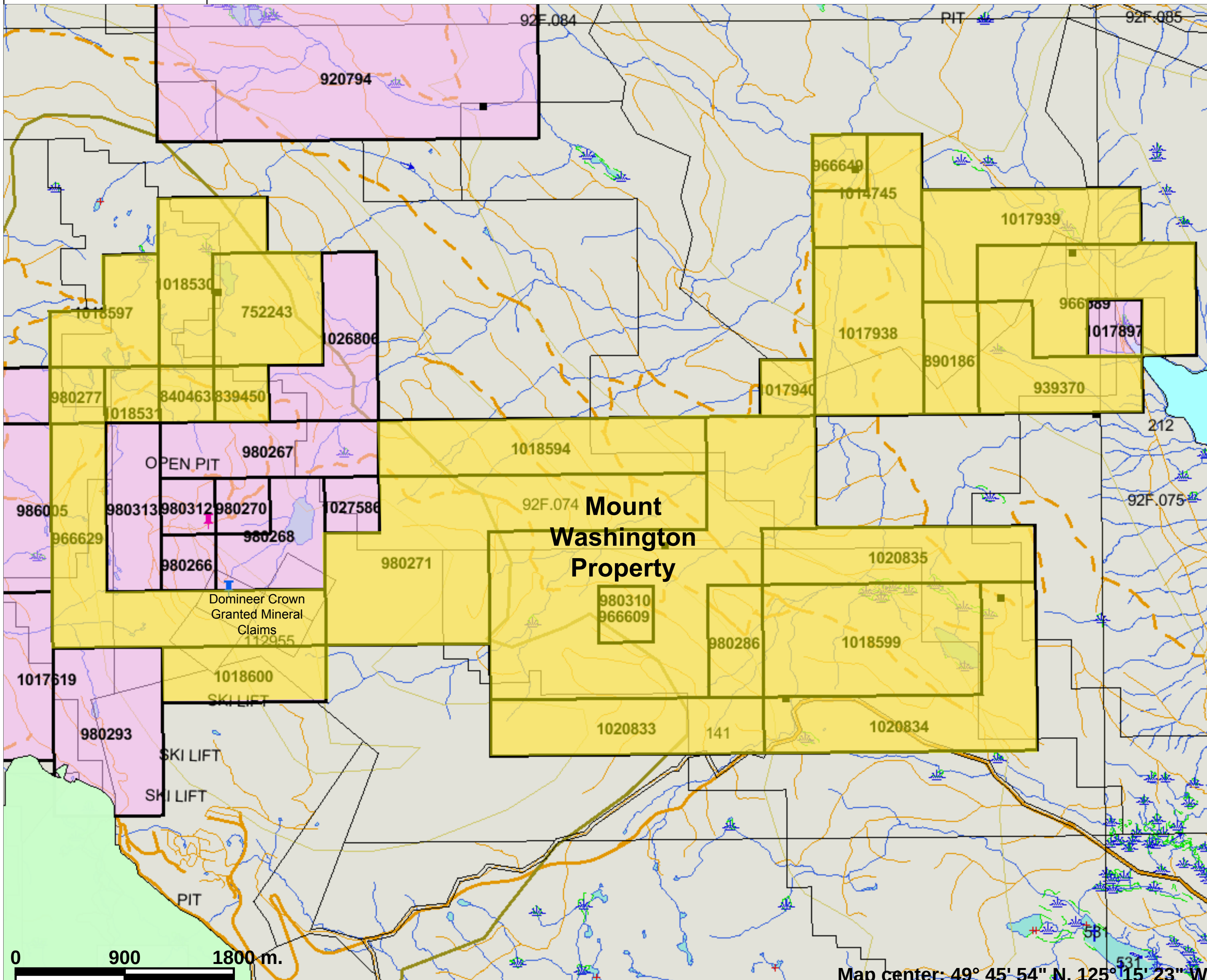
Figure 1g
Central Vancouver Island Molybdenum Geochemistry

Mount Washington Property Mineral Titles



Legend

MINFILE Status

- Producer
- Past Producer
- Developed Prospect
- All others

Indian Reserves
National Parks
Conservancy Areas
Parks
Federal Transfer Lands

Mineral Tenure (current)

- Mineral Claim
- Mineral Lease

Mineral Reserves (current)

- Placer Claim Designation
- Placer Lease Designation
- No Staking Reserve
- Conditional Reserve
- Release Required Reserve
- Surface Restriction
- Recreation Area
- Others

First Nations Treaty Related Lands

First Nations Treaty Lands
Survey Parcels
BCGS Grid

Contours (1:250K)

- Contour - Index
- Contour - Intermediate
- Areaof Exclusion
- Areaof Indefinite Contours

N

Scale: 1:50,000

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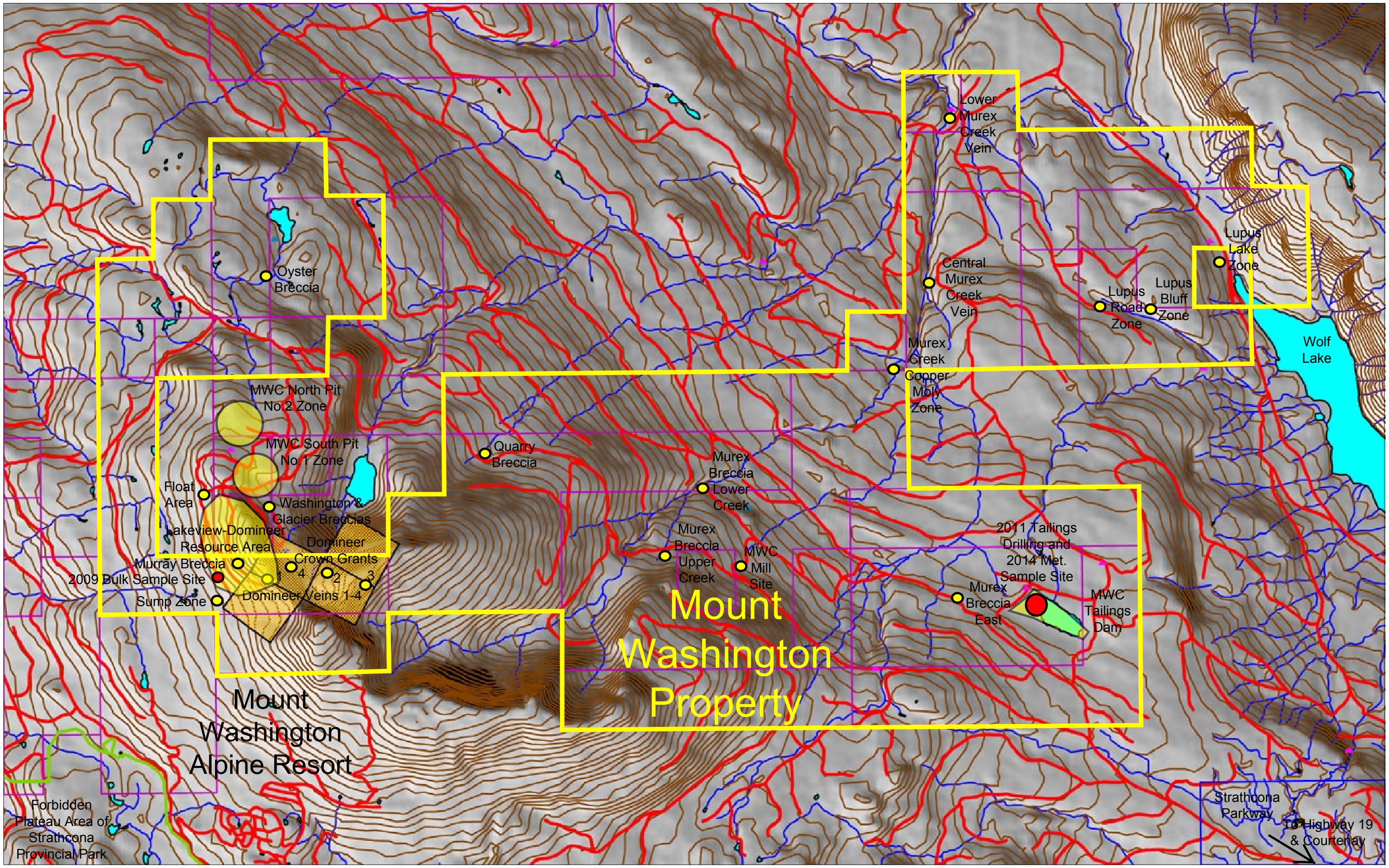
Figure 2a



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SCALE 1 : 50,000

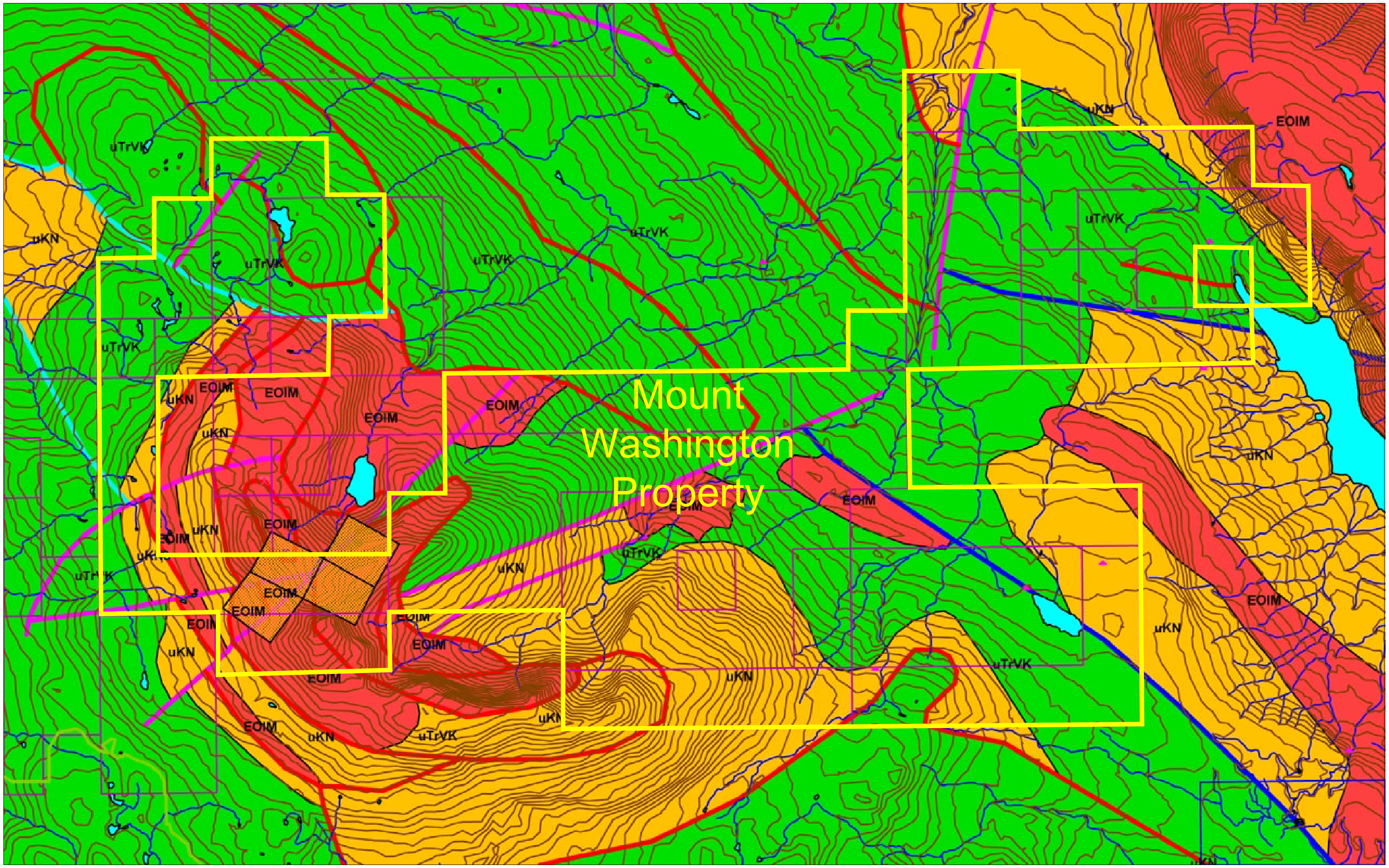
1 0 1 2 3

KILOMETERS

N

Figure 2b

Mount Washington Property Infrastructure



for Map Legend
see BC MapPlace
including 2005
BCGS Geology

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KILOMETERS

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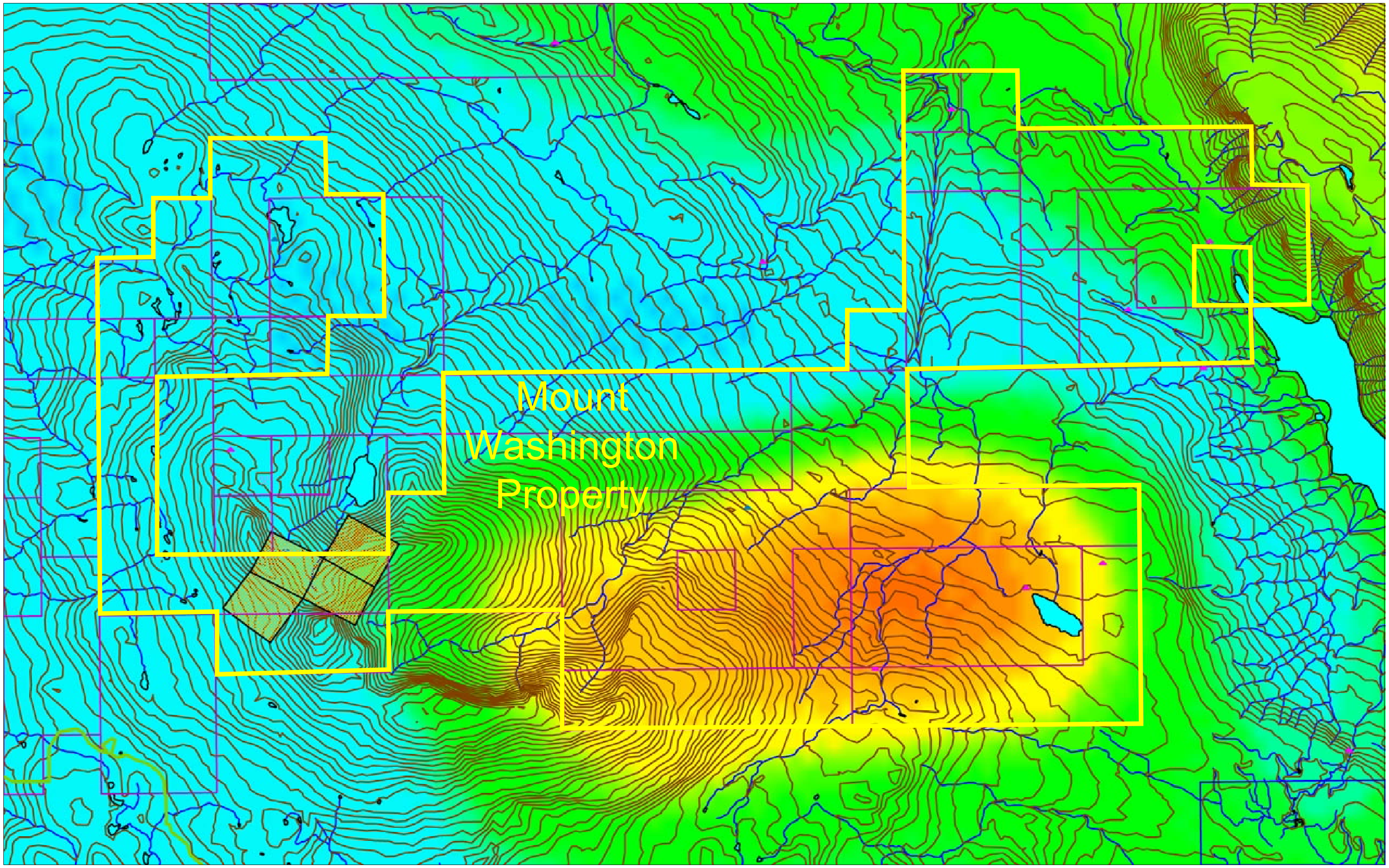
Figure 2c
Mount Washington Property Geology



for Map Legend
see BC
MapPlace

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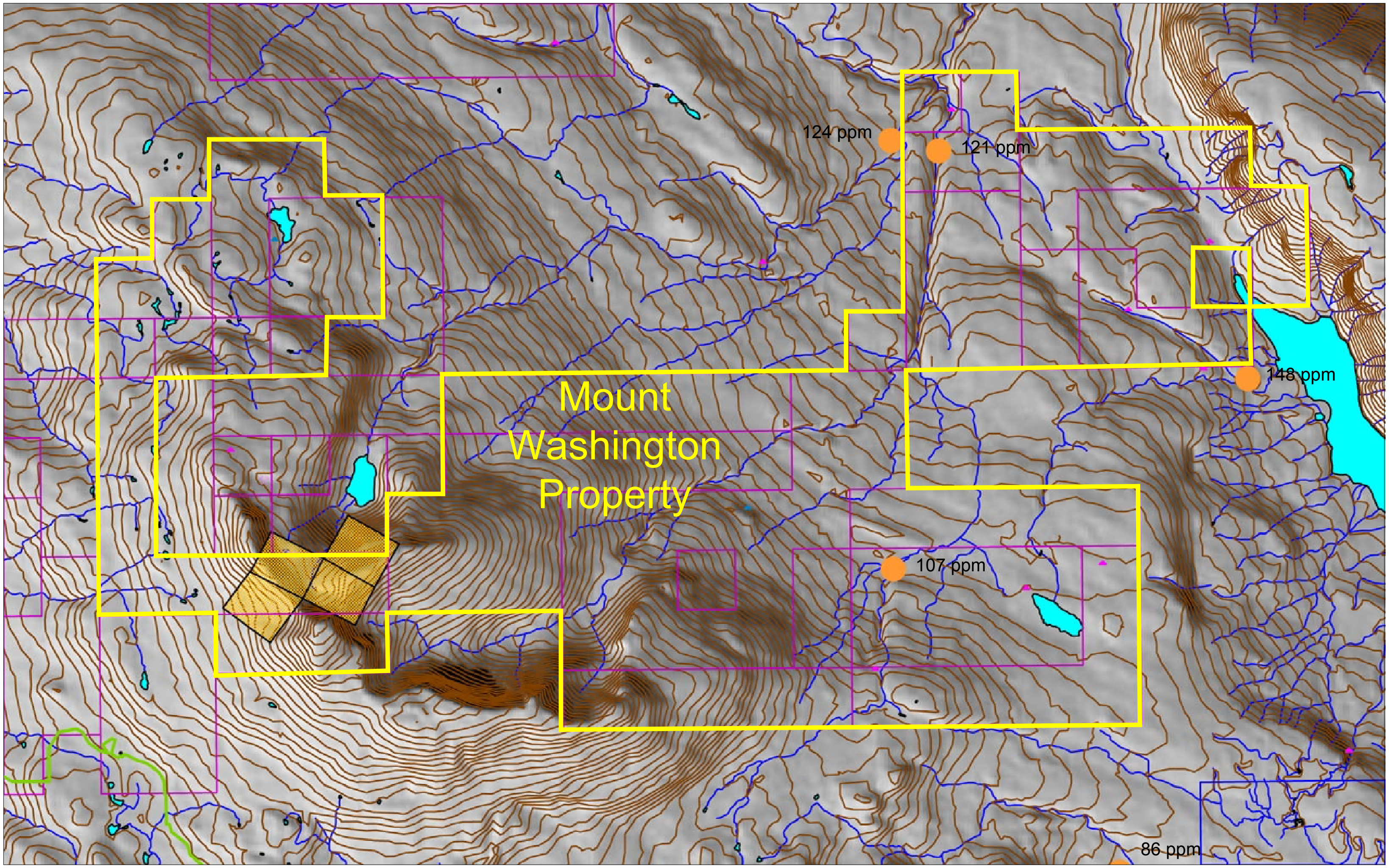
1 0 1 2 3

KILOMETERS

Figure 2d

Mount Washington Property Aeromagnetics

N



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KILOMETERS

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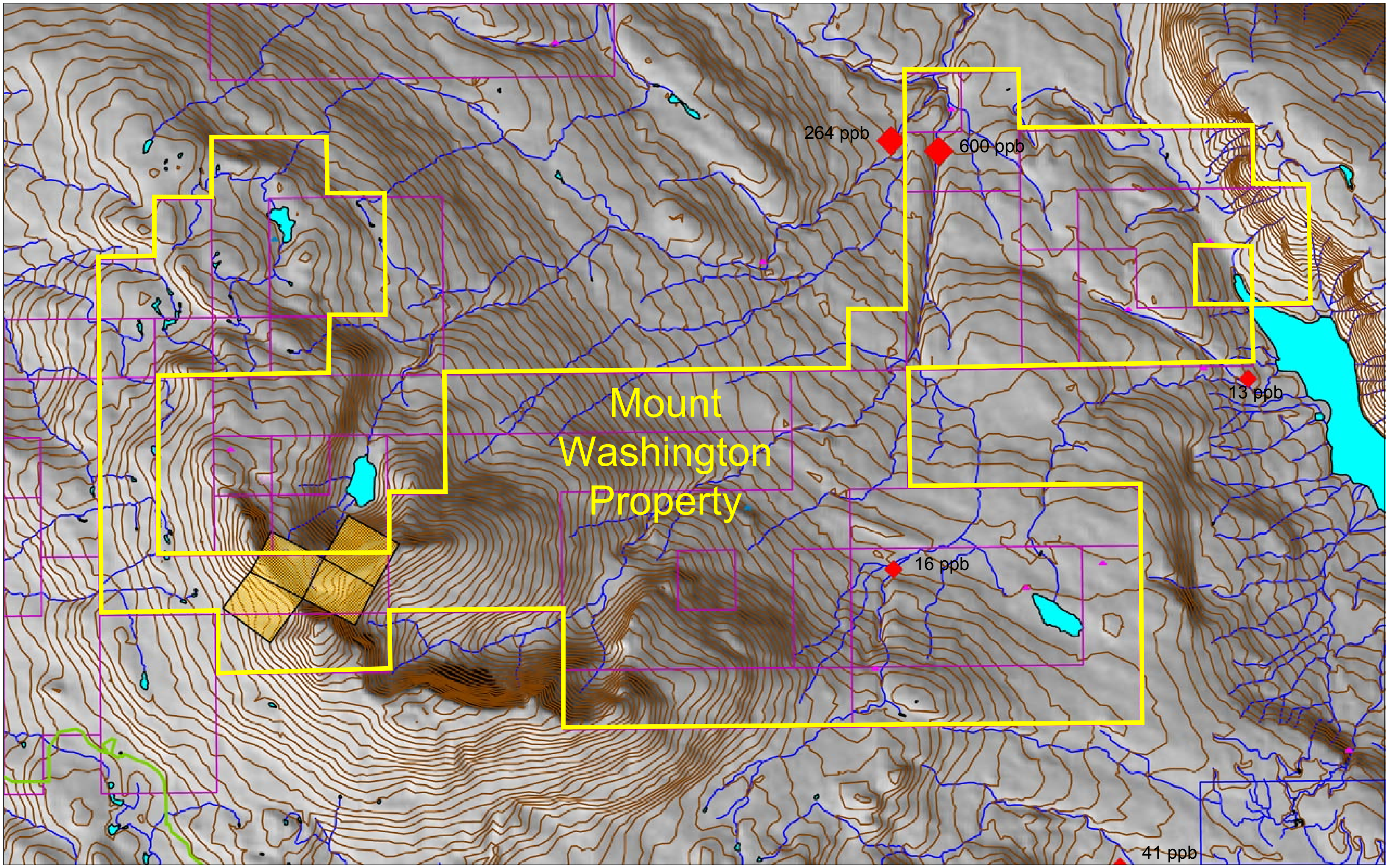
Figure 2e
Mount Washington
Copper Geochemistry



for Map Legend
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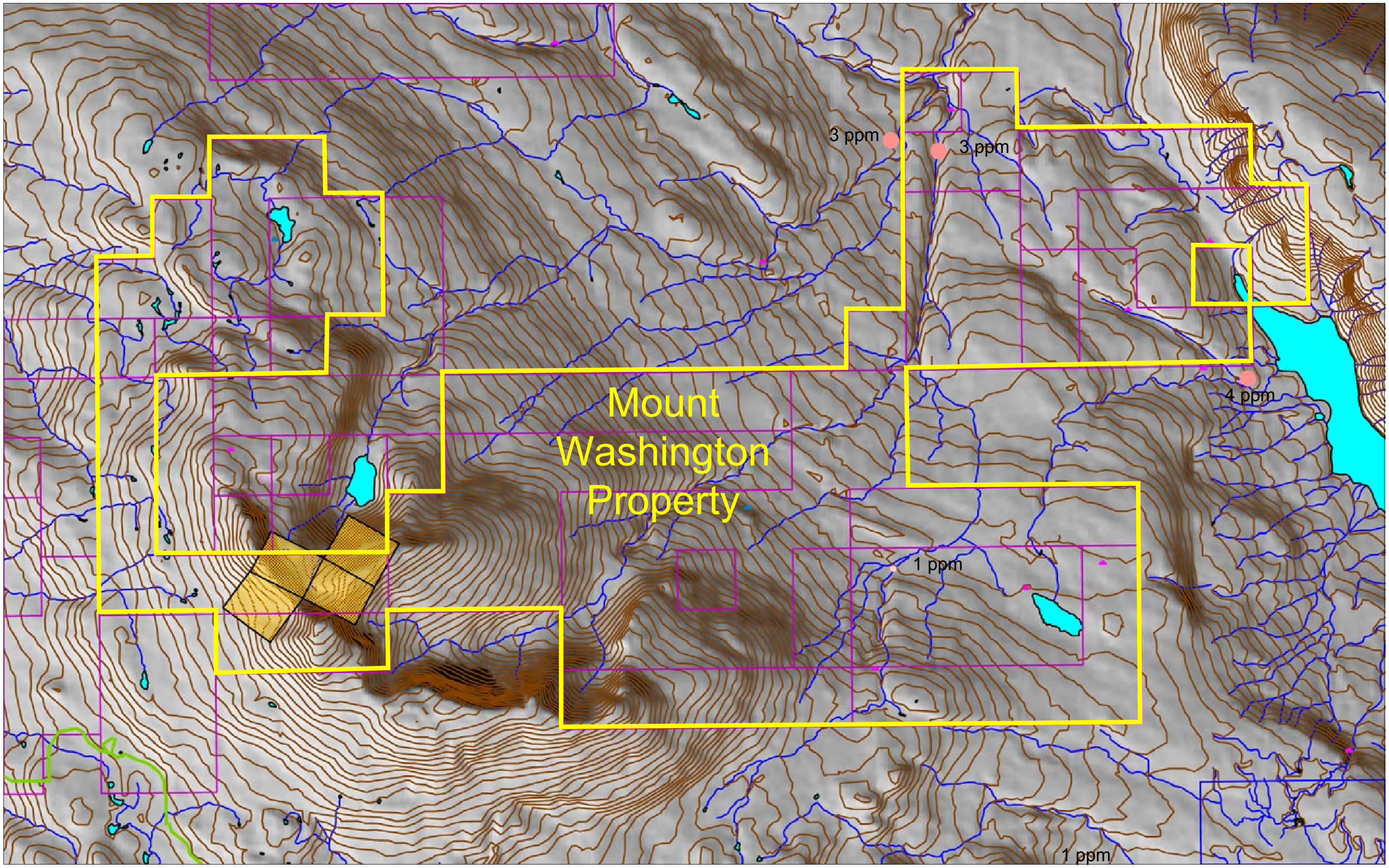
KILOMETERS

N

Figure 2f
Mount Washington
Gold Geochemistry



for Map Legend see BC MapPlace

SCALE 1 : 50,000

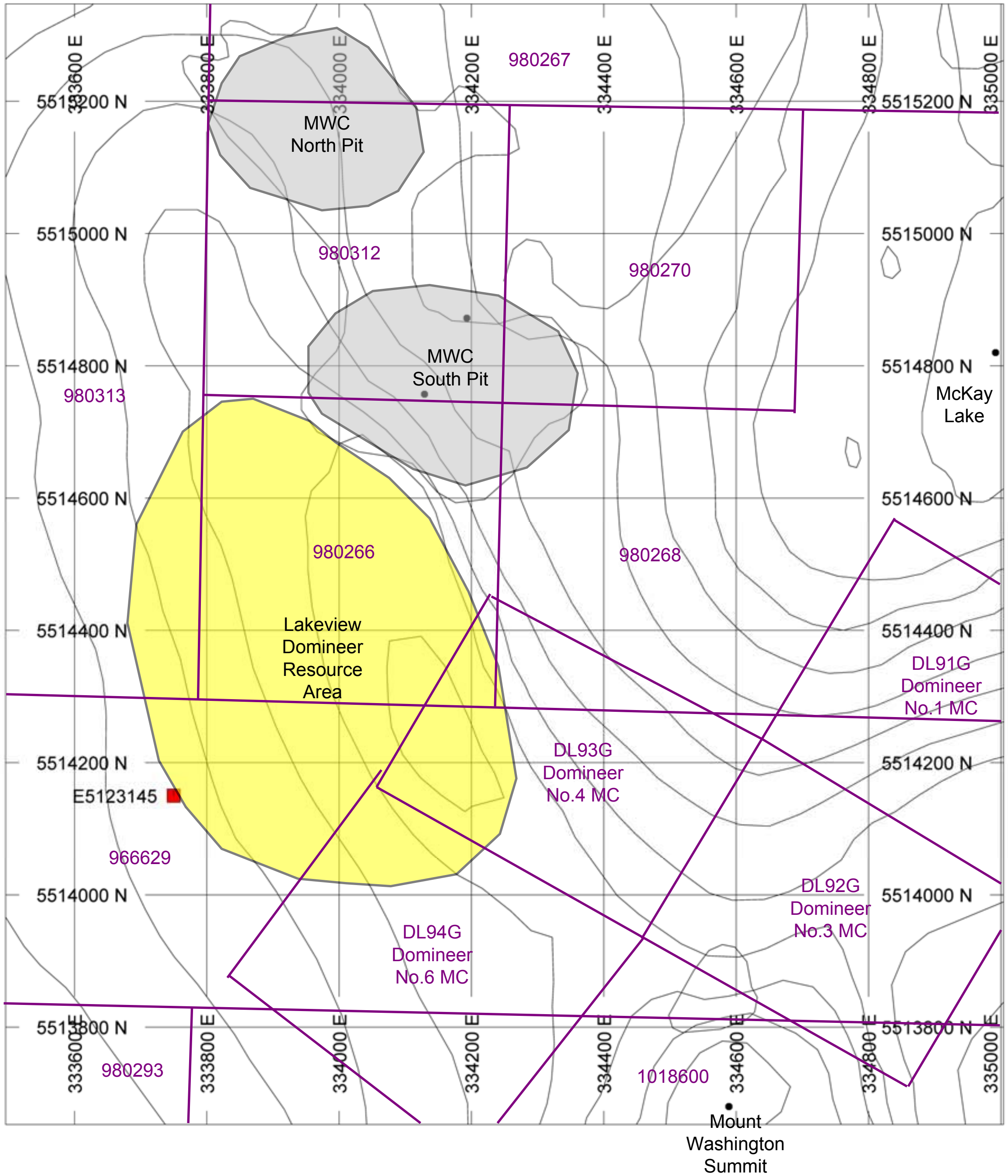
1 0 1 2 3

KILOMETERS

N

Figure 2g

Mount Washington Molybdenum Geochemistry



HOLES PLOTTED

TOTAL 0

Figure 3a

PLAN SPECS:

REF. PT. E, N	334300 m	5515000 m
EXTENTS	1508 m	1694 m

SCALE 1 : 10000

(m)

-50 0 50 100 150 200 250 300

NAD83 / UTM zone 10N

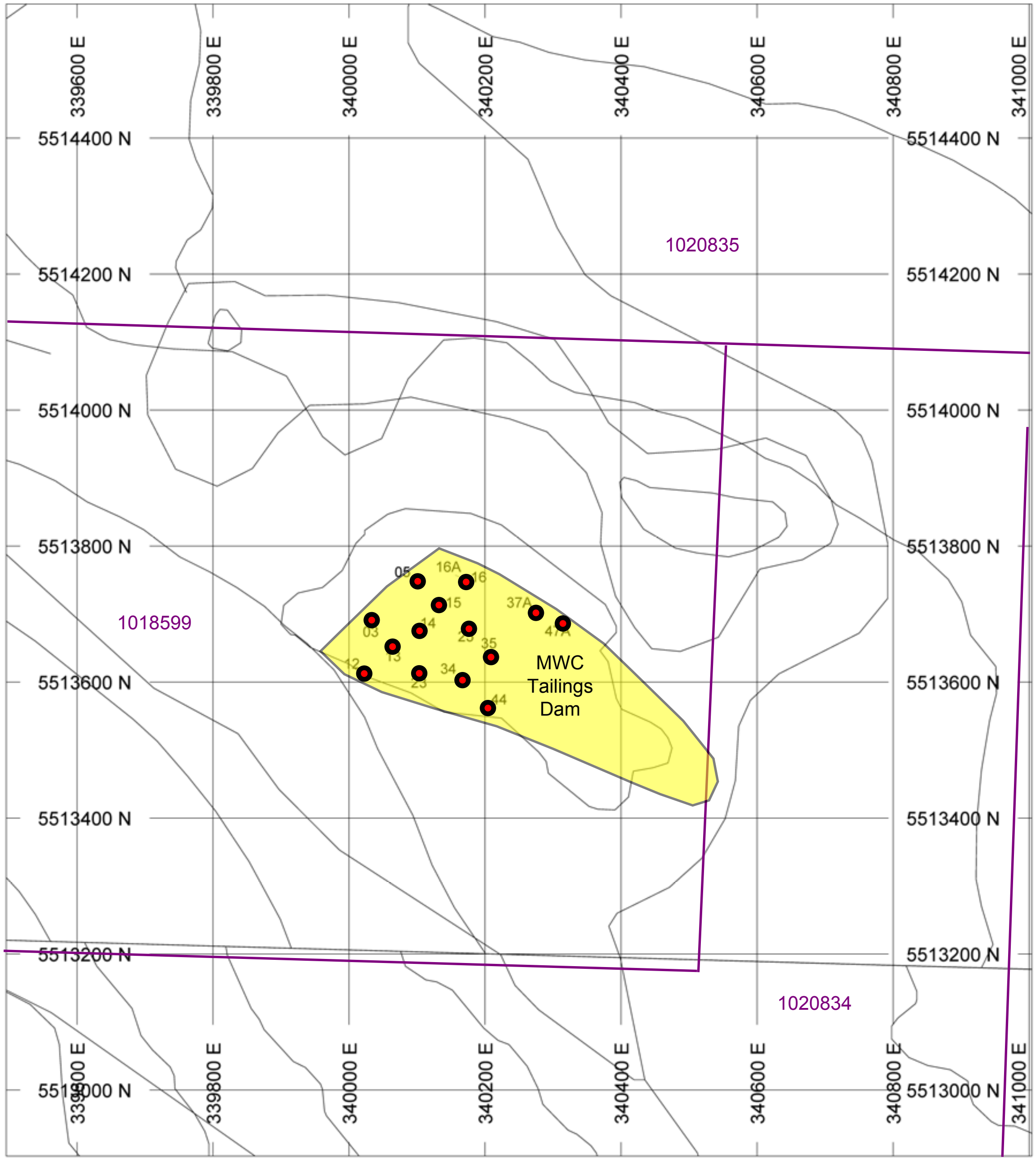
N
W E
S

North Bay Resources Inc.

Mount Washington Property

Lakeview/Domineer Area

2009 Bulk Sample Location



HOLES PLOTTED

TOTAL 15

03	05	12	13	14	15	16
16A	23	25	34	35	37A	44
47A						

Figure 3b

PLAN SPECS:

REF. PT. E, N	340300 m	5514000 m
EXTENTS	1508 m	1694 m

SCALE 1 : 10000

(m)

-50 0 50 100 150 200 250 300

NAD83 / UTM zone 10N

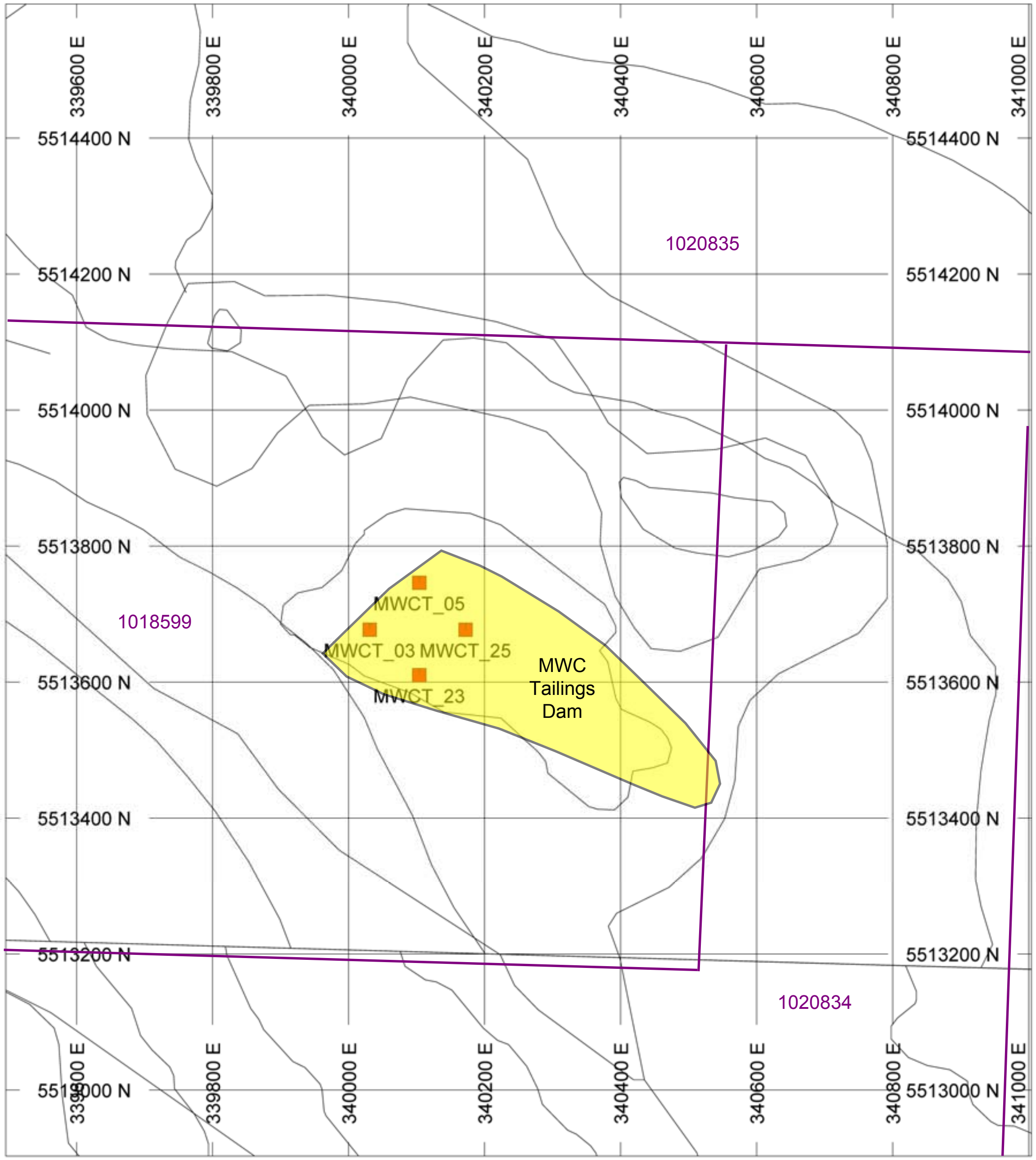
N W E S

North Bay Resources Inc.

Mount Washington Property

MWC Tailings Dam

2011 Drilling Locations



HOLES PLOTTED

TOTAL 0

Figure 3c

PLAN SPECS:

REF. PT. E, N	340300 m	5514000 m
EXTENTS	1508 m	1694 m

SCALE 1 : 10000

(m)

-50 0 50 100 150 200 250 300

NAD83 / UTM zone 10N

N
W E
S

North Bay Resources Inc.

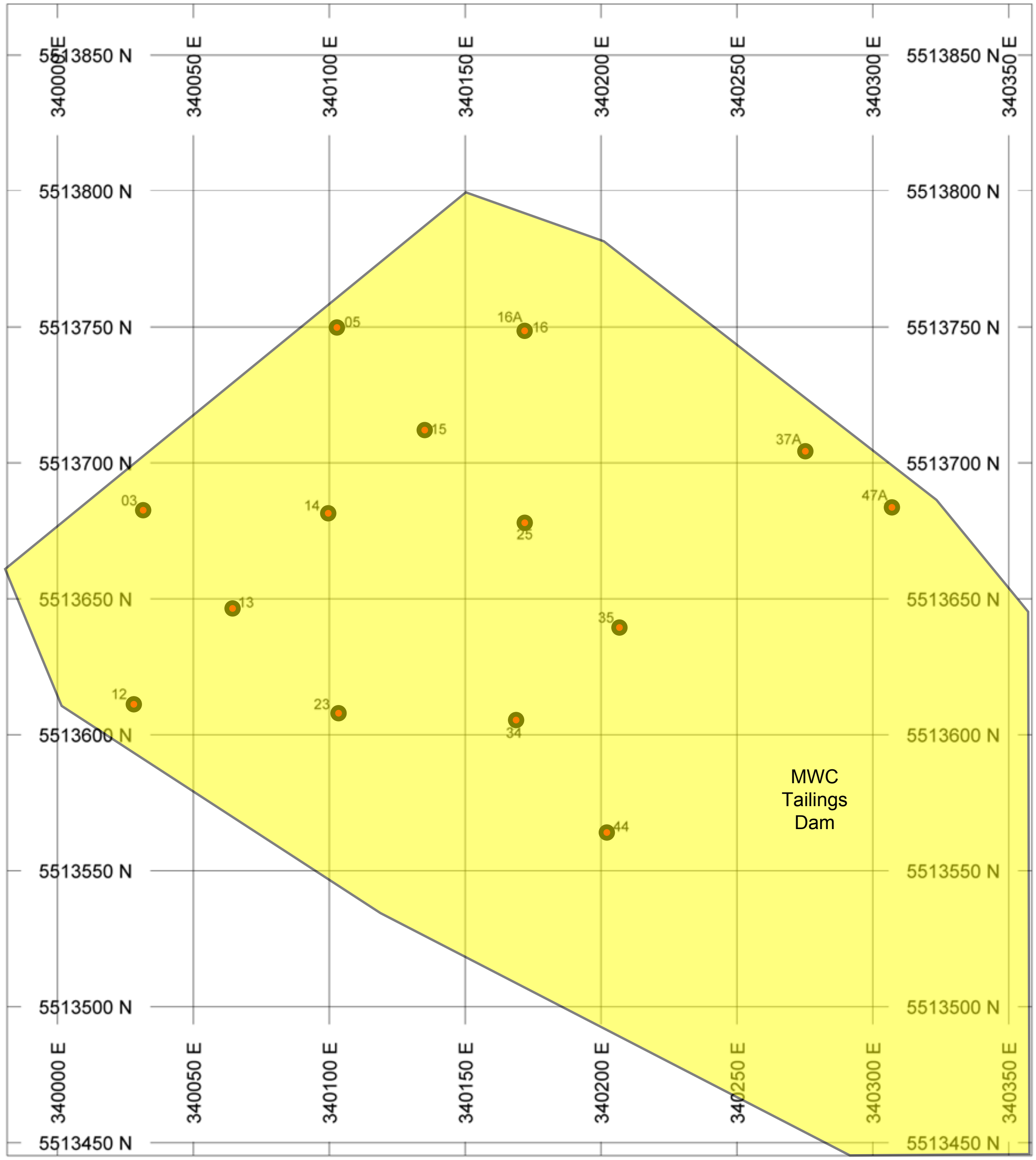
Mount Washington Property

MWC Tailings Area

2014 Met. Sample Locations


Image © 2014 IMTCAN
© SPOT IMAGE
Google earth
Google earth
feet
1000
meters
300

Figure 3d



HOLES PLOTTED

TOTAL 15

03	05	12	13	14	15	16
16A	23	25	34	35	37A	44
47A						

Figure 4a

PLAN SPECS:

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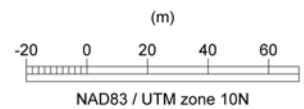
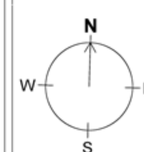
EXTENTS	377 m	423.5 m

SCALE 1 : 2500





North Bay Resources Inc.

Mount Washington Property

Tailings Drilling Program

2011 Drill Hole Locations

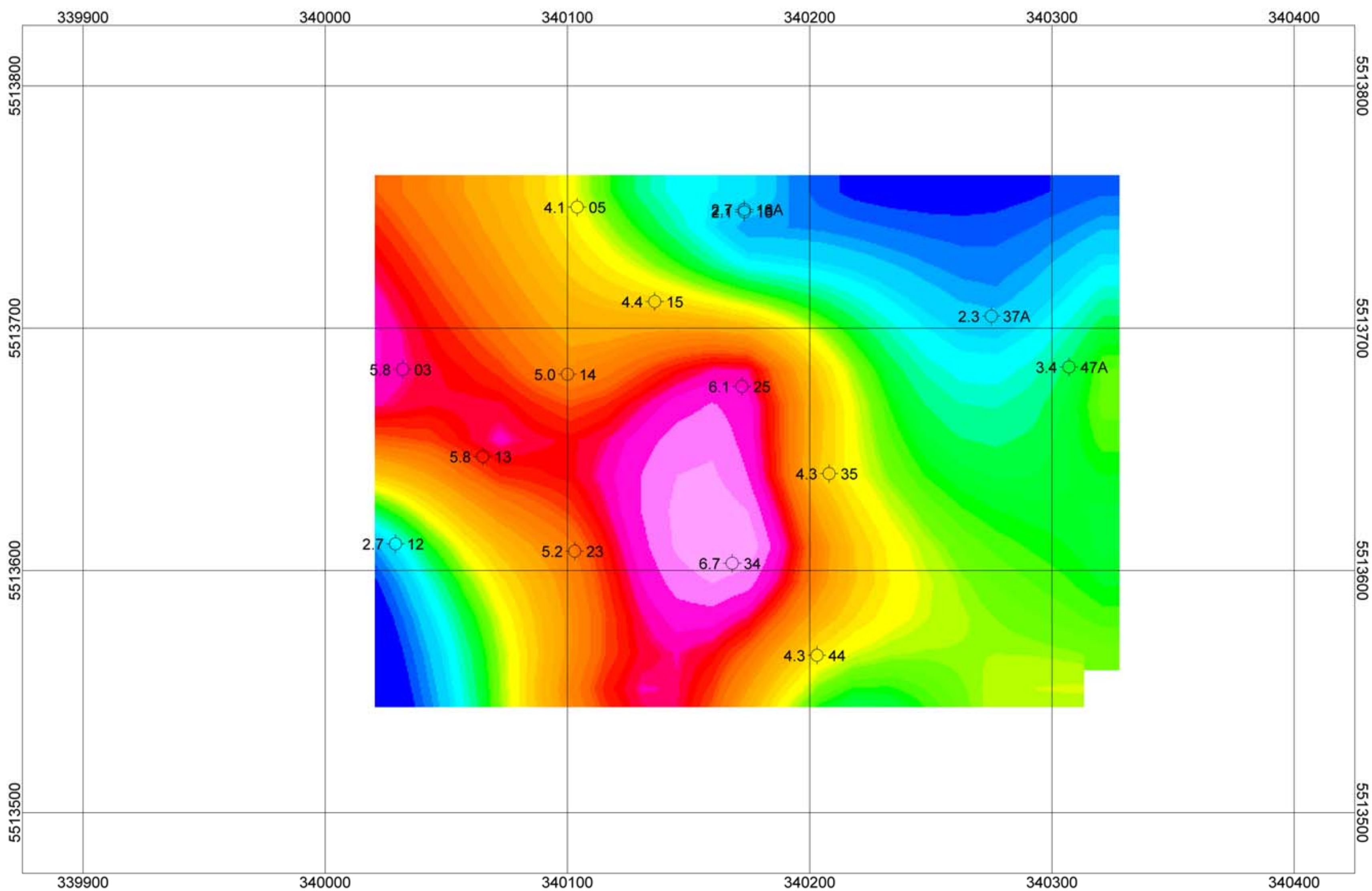


Figure 4b

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Depth of Tailings in Metres

25 0 25 50 75

(meters)

NAD83 / UTM zone 10N

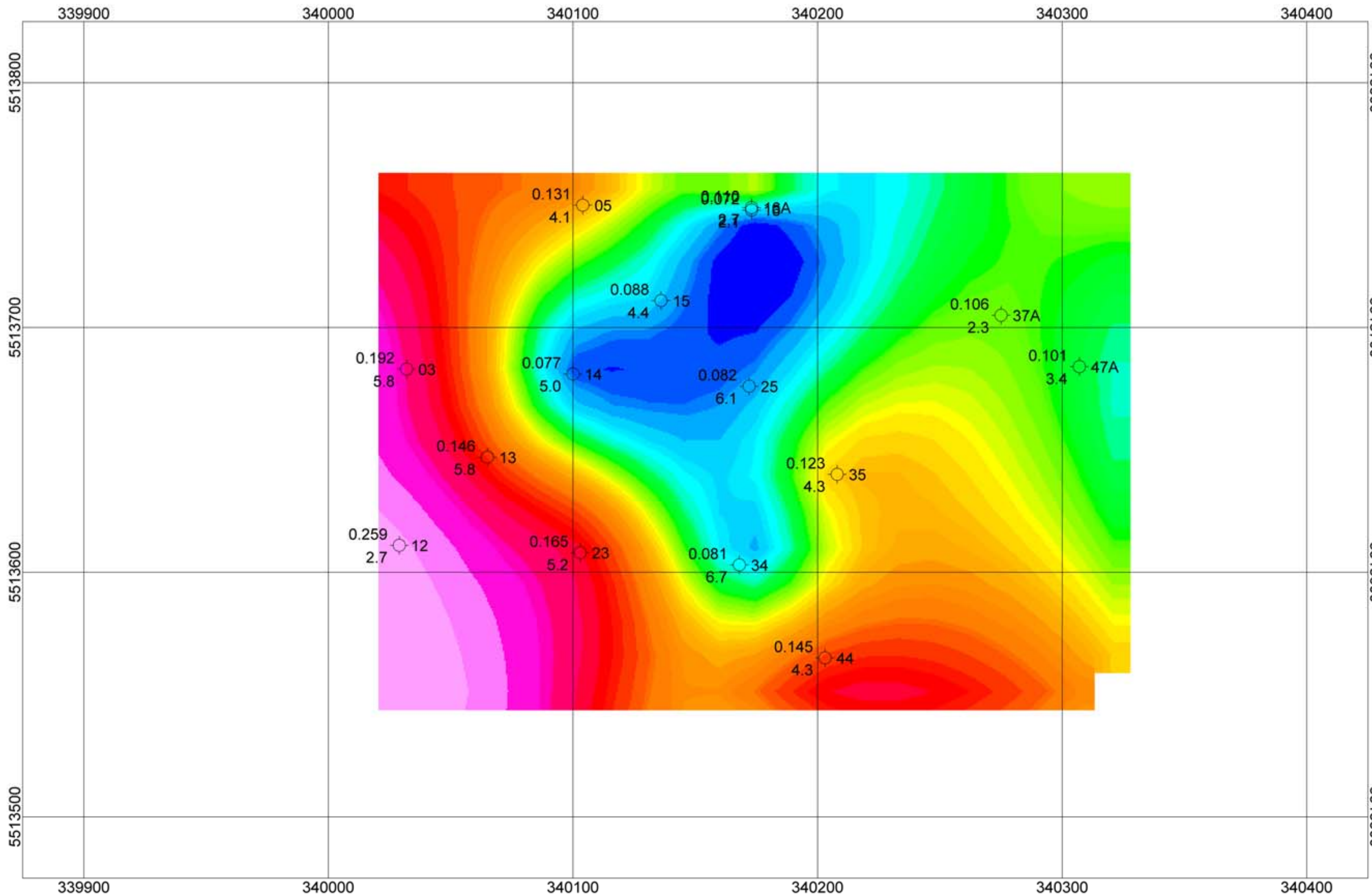


Figure 4c

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Gold ppm in Tailings

25 0 25 50 75

(meters)

NAD83 / UTM zone 10N

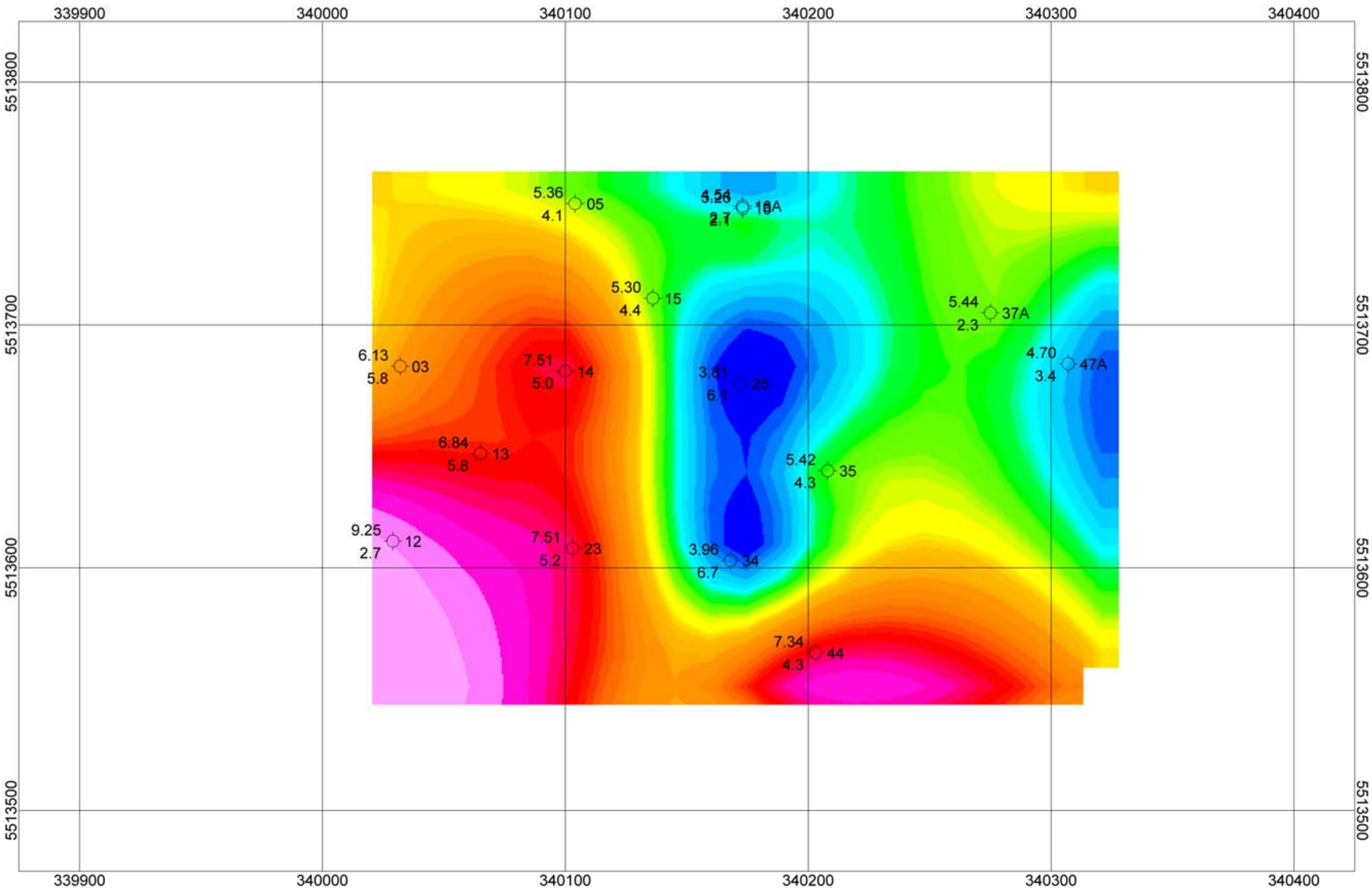
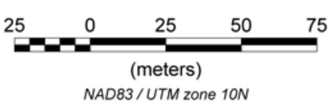


Figure 4d

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Silver ppm in Tailings



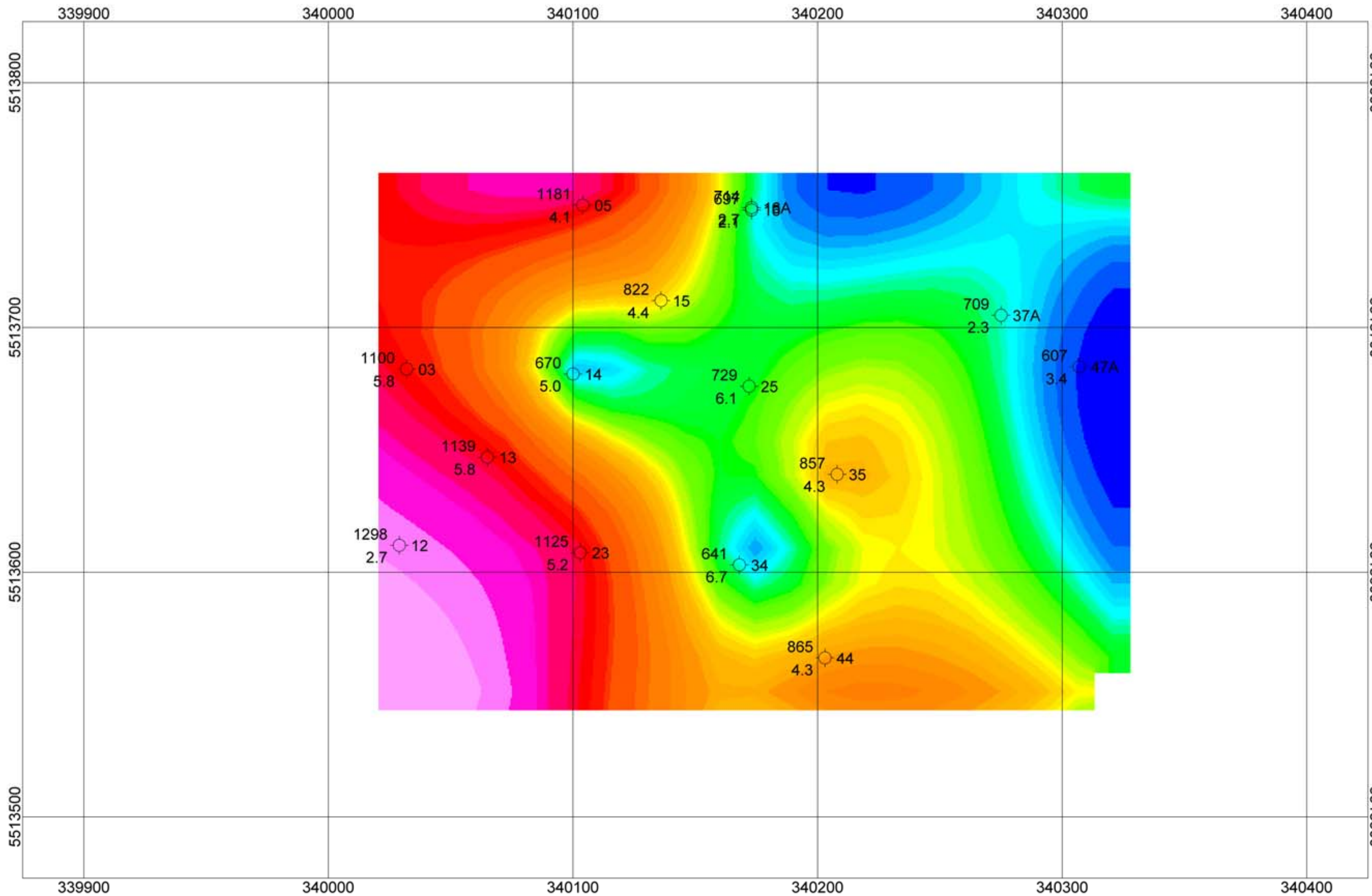


Figure 4e

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Arsenic ppm in Tailings

25 0 25 50 75

(meters)

NAD83 / UTM zone 10N

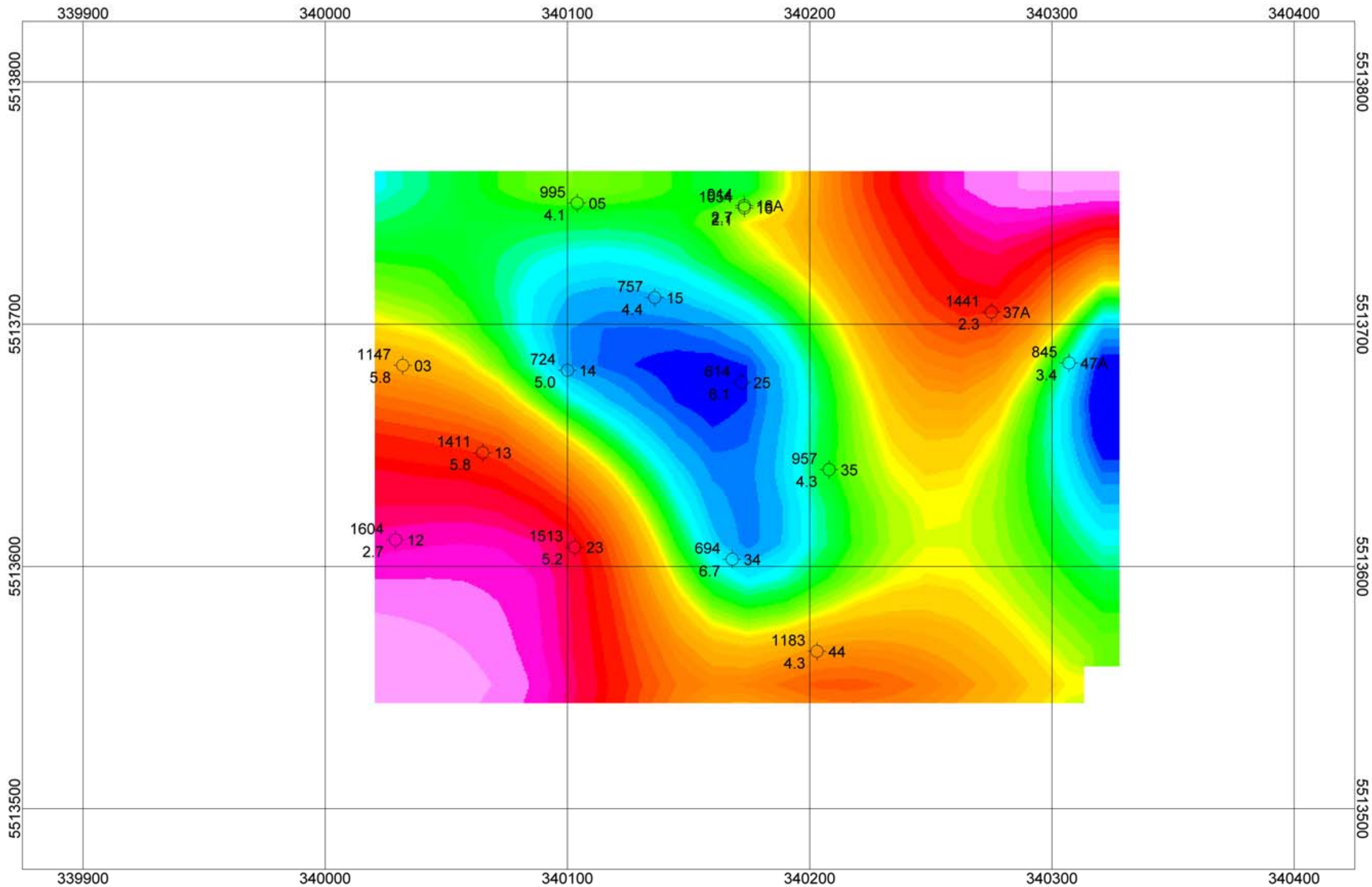


Figure 4f

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Copper ppm in Tailings

25 0 25 50 75

(meters)

NAD83 / UTM zone 10N

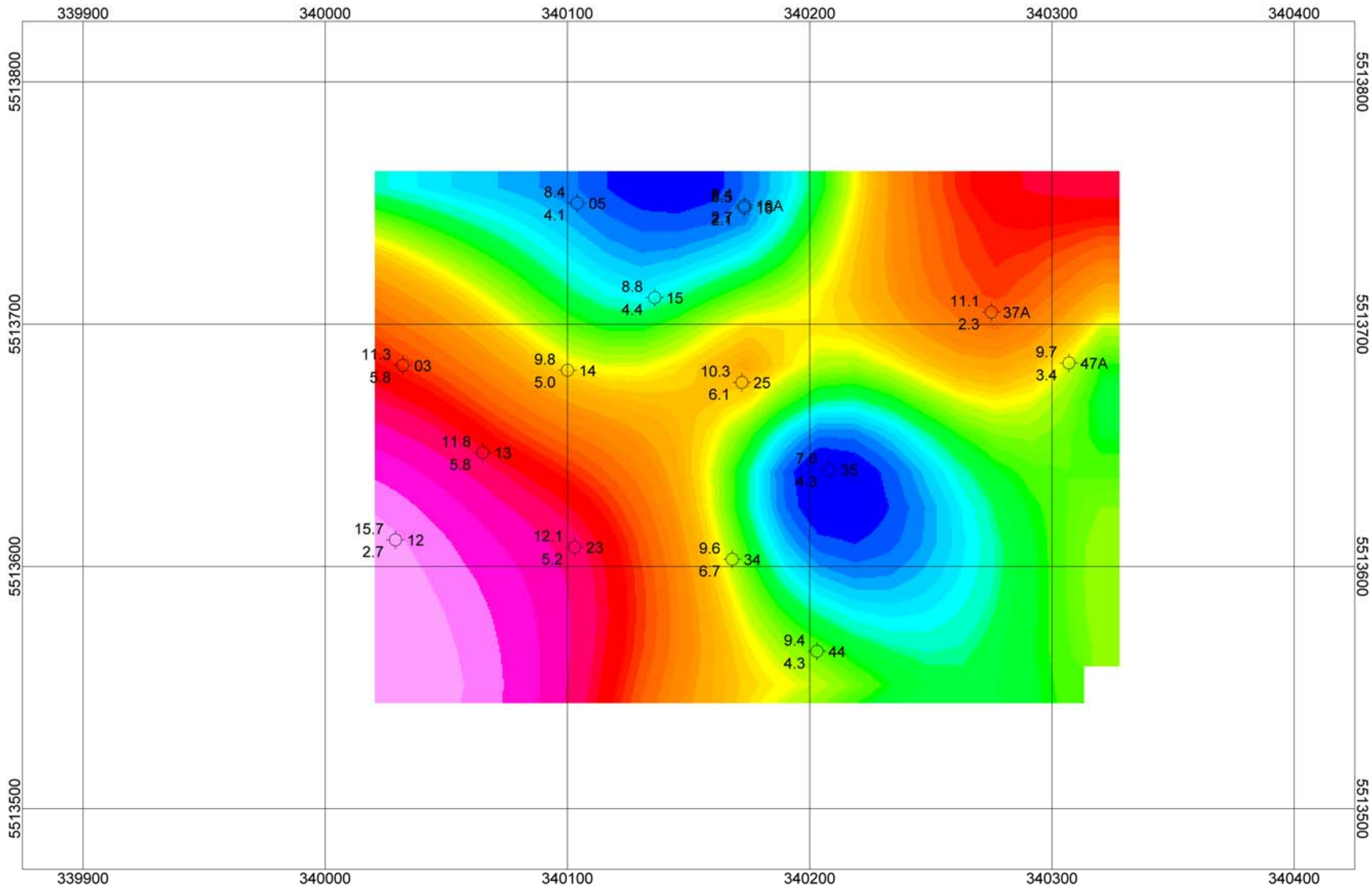
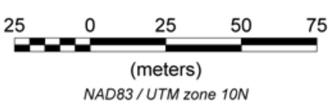


Figure 4g

North Bay Resources Inc.

Mount Washington Property

2011 Drilling - Molybdenum ppm in Tailings



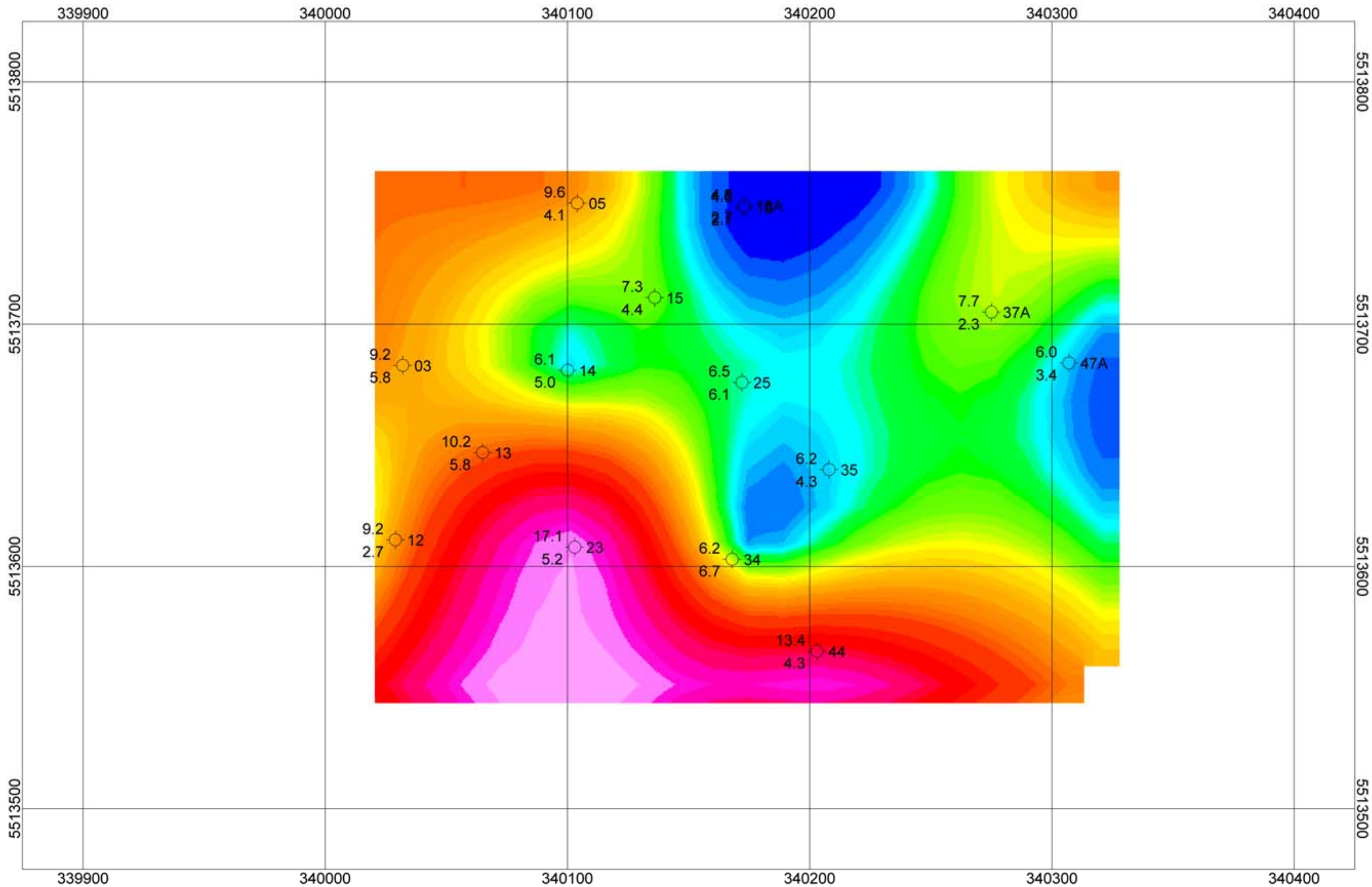


Figure 4h

North Bay Resources Inc.

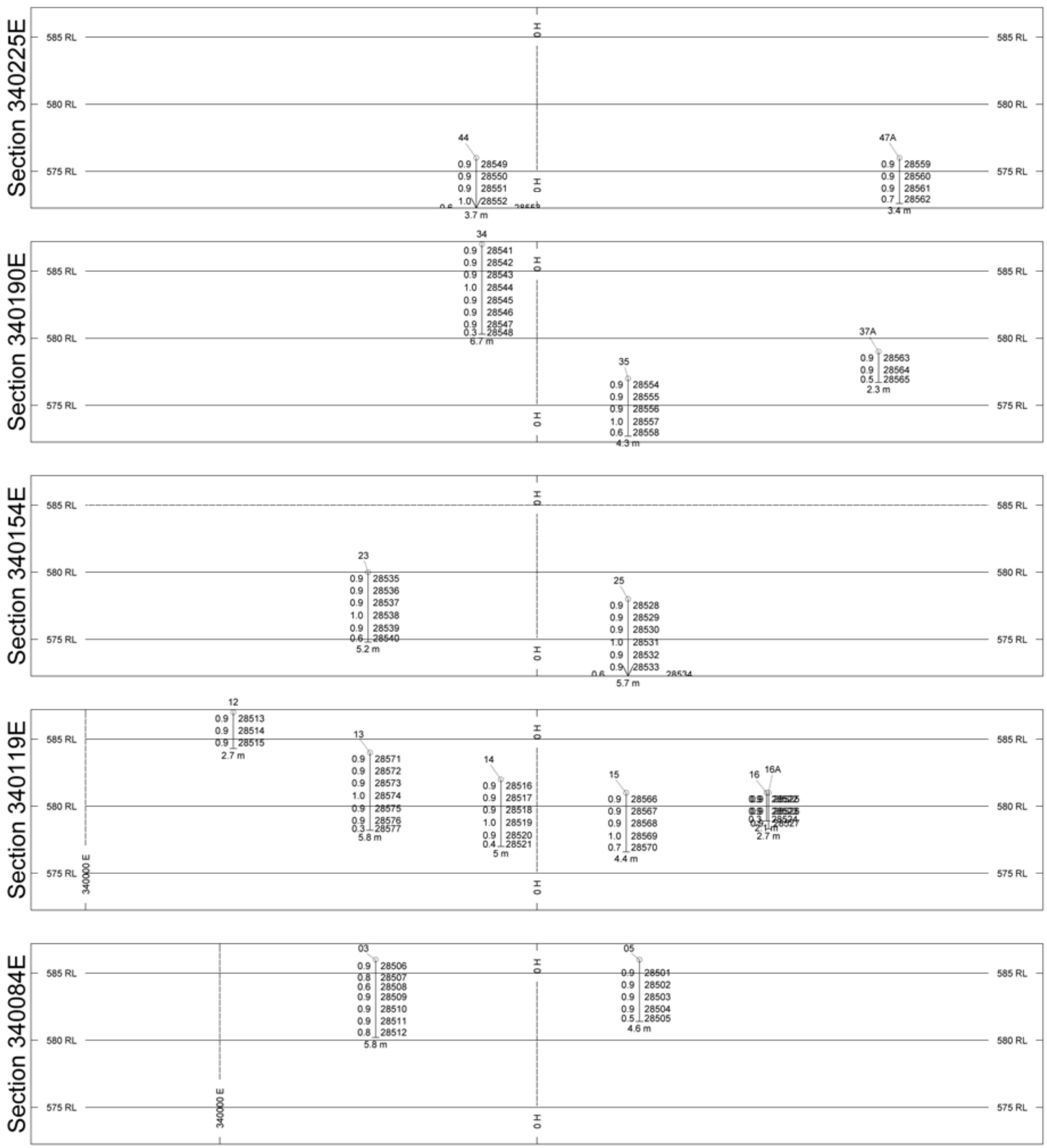
Mount Washington Property

2011 Drilling - Tellurium ppm in Tailings

25 0 25 50 75

(meters)

NAD83 / UTM zone 10N



HOLES PLOTTED

TOTAL 15

44	47A	34	35	37A	23	25
12	13	14	15	16	16A	03
05						

Figure 5a

ASSAYS	L/R	TEXT
Sample	R	-------
Interval_m	L	-------

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

AZIMUTH = 45°

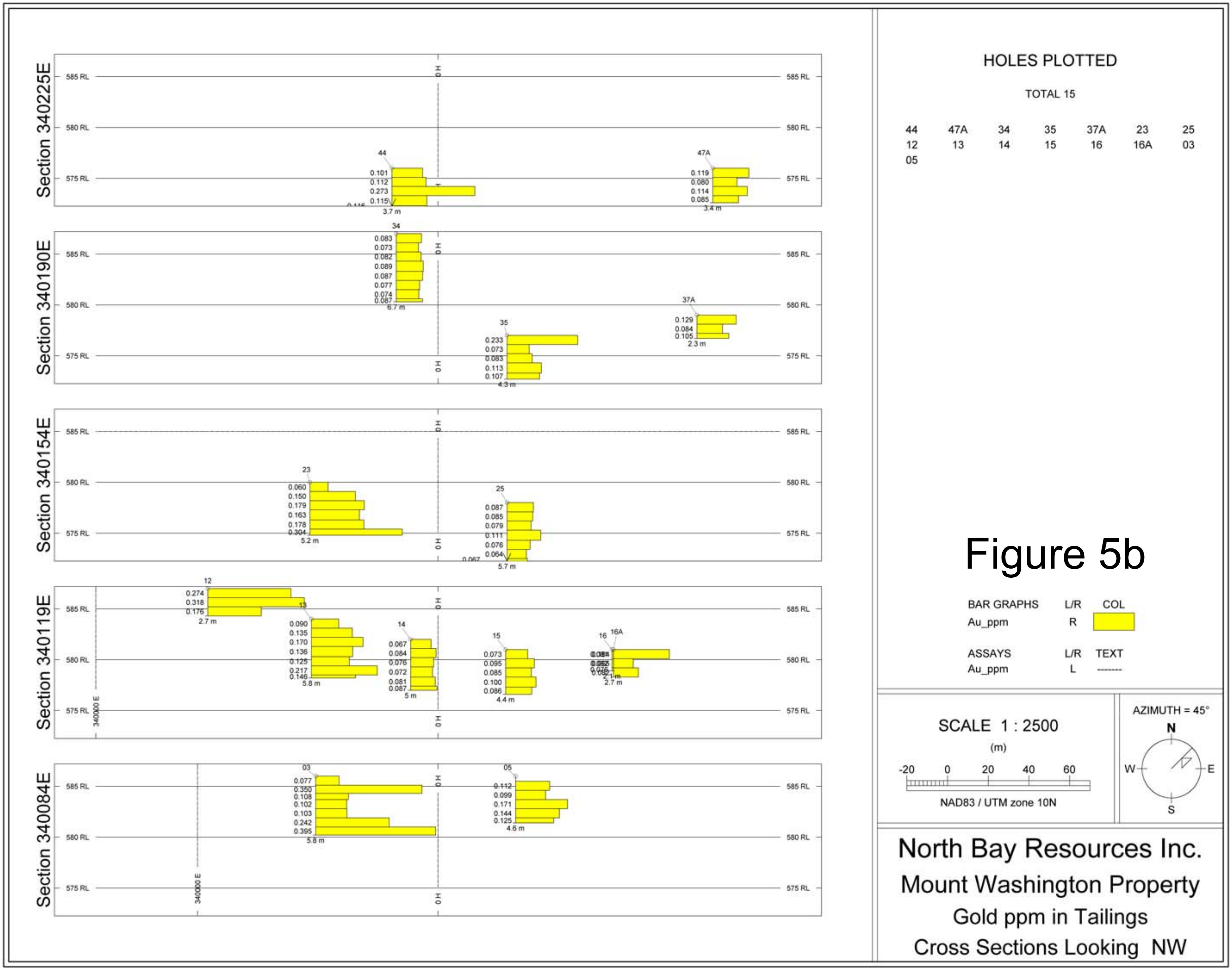
N W E S

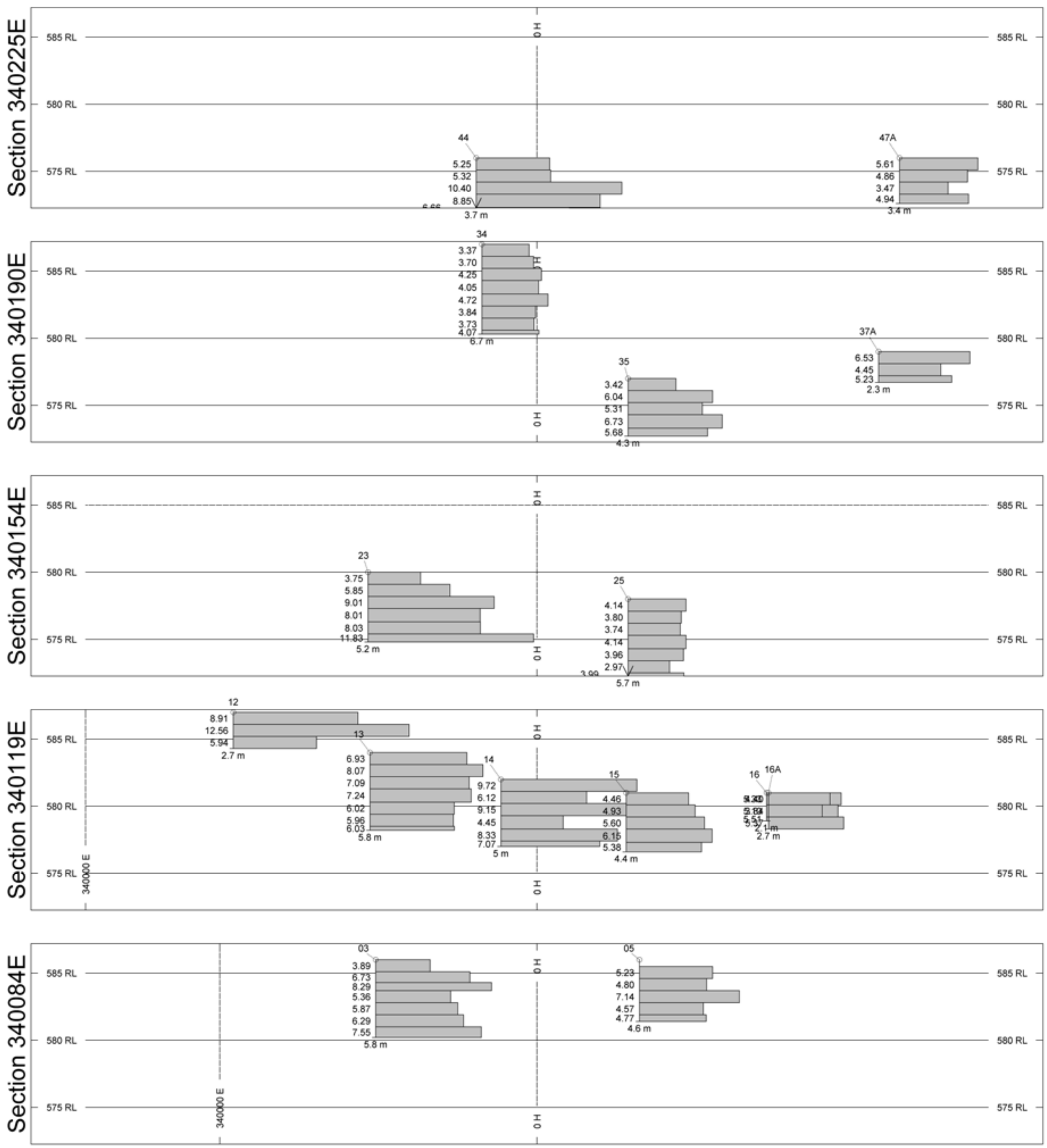
North Bay Resources Inc.

Mount Washington Property

Tailings Drill Core Sampling

Cross Sections Looking NW


Section 340225E
Section 340190E
Section 340154E
Section 340119E
Section 340084E
585 RL
580 RL
575 RL
0 H
HOLES PLOTTED
TOTAL 15
44 47A 34 35 37A 23 25
12 13 14 15 16 16A 03
05
Figure 5b
BAR GRAPHS L/R COL
Au_ppm R
ASSAYS L/R TEXT
Au_ppm L -------
SCALE 1 : 2500
(m)
-20 0 20 40 60
NAD83 / UTM zone 10N
AZIMUTH = 45°
N
W
E
S
North Bay Resources Inc.
Mount Washington Property
Gold ppm in Tailings
Cross Sections Looking NW



HOLES PLOTTED

TOTAL 15

44	47A	34	35	37A	23	25
12	13	14	15	16	16A	03
05						

Figure 5c

BAR GRAPHS	L/R	COL
Ag_ppm	R	

ASSAYS	L/R	TEXT
Ag_ppm	L	-------

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

AZIMUTH = 45°

N

W E

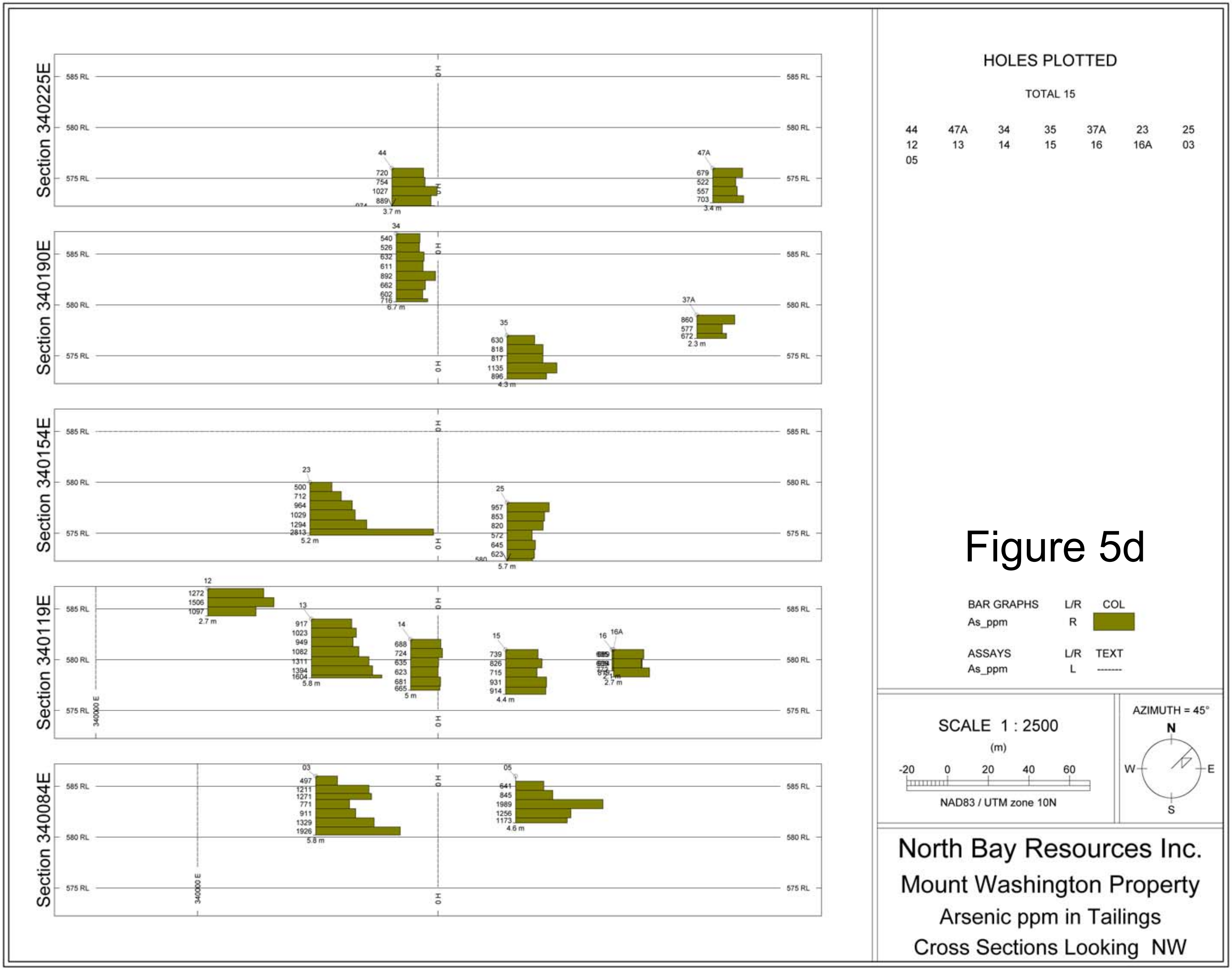
S

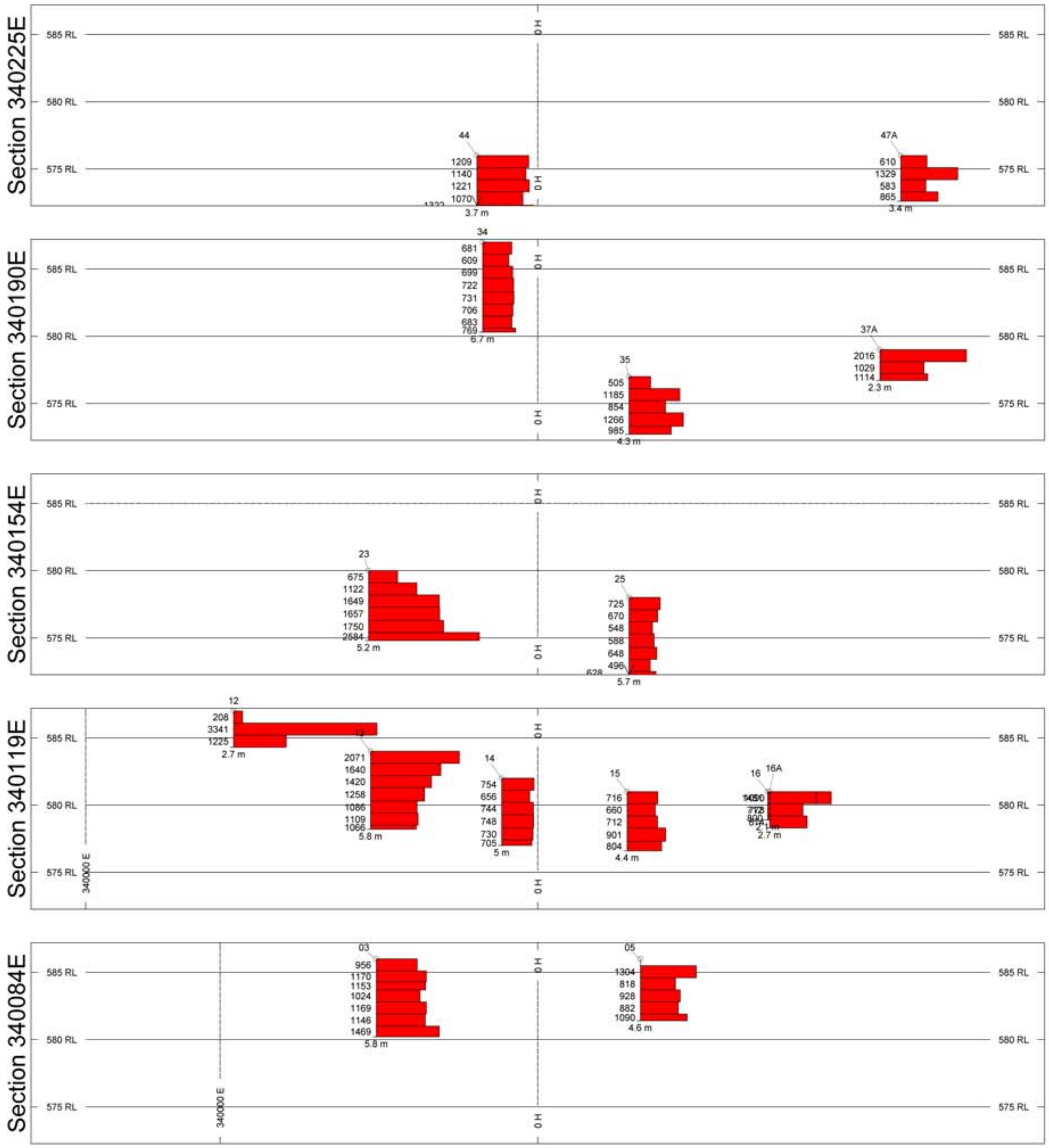
North Bay Resources Inc.

Mount Washington Property

Silver ppm in Tailings

Cross Sections Looking NW


Section 340225E
Section 340190E
Section 340154E
Section 340119E
Section 340084E
585 RL
580 RL
575 RL
0 H
340000 E
HOLES PLOTTED
TOTAL 15
44 47A 34 35 37A 23 25
12 13 14 15 16 16A 03
05
Figure 5d
BAR GRAPHS L/R COL
As_ppm R
ASSAYS L/R TEXT
As_ppm L -------
SCALE 1 : 2500
(m)
-20 0 20 40 60
NAD83 / UTM zone 10N
AZIMUTH = 45°
N
W
E
S
North Bay Resources Inc.
Mount Washington Property
Arsenic ppm in Tailings
Cross Sections Looking NW



HOLES PLOTTED

TOTAL 15

44	47A	34	35	37A	23	25
12	13	14	15	16	16A	03
05						

Figure 5e

BAR GRAPHS	L/R	COL
Cu_ppm	R	

ASSAYS	L/R	TEXT
Cu_ppm	L	-------

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

AZIMUTH = 45°

N

W E

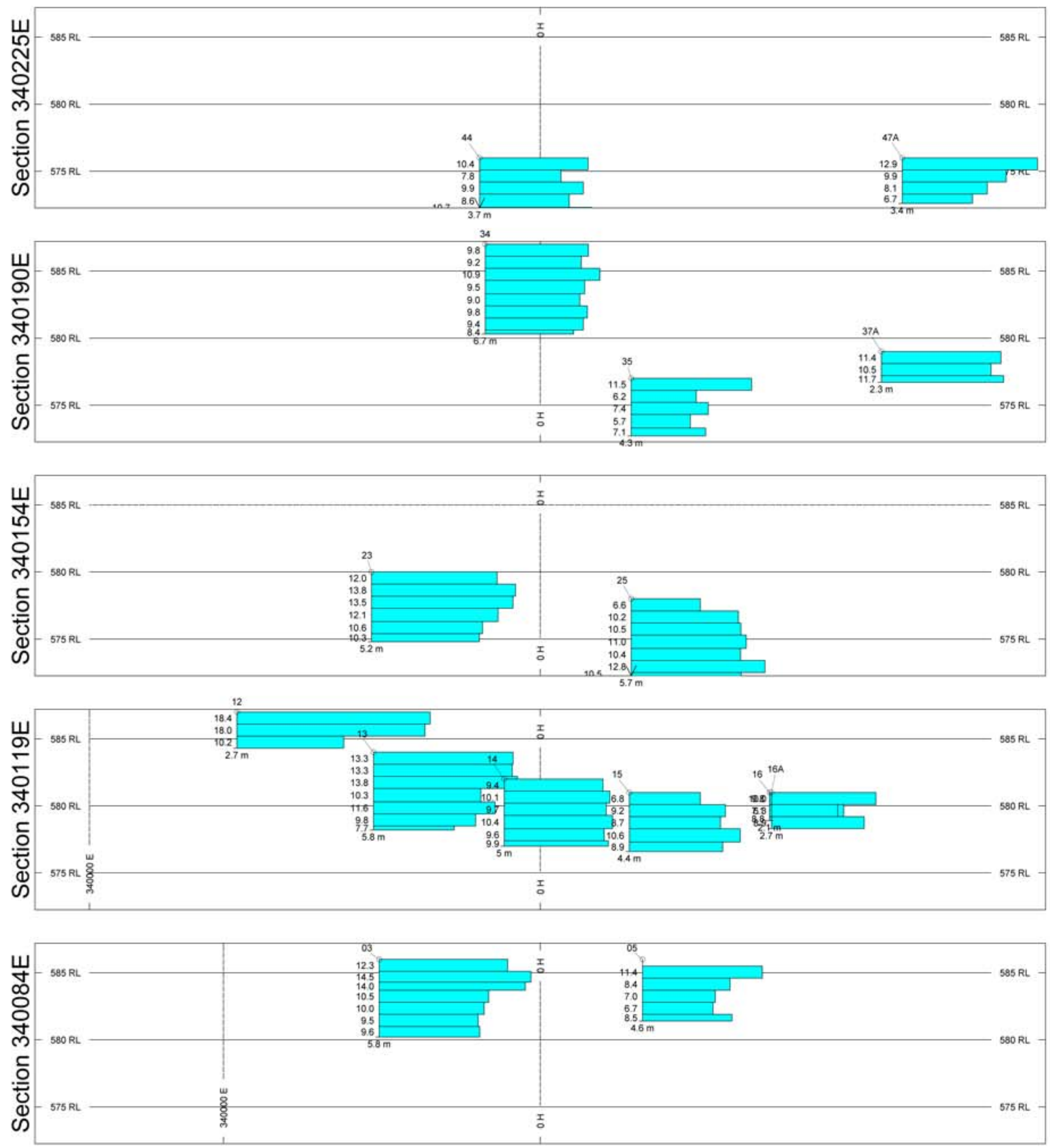
S

North Bay Resources Inc.

Mount Washington Property

Copper ppm in Tailings

Cross Sections Looking NW



HOLES PLOTTED

TOTAL 15

44	47A	34	35	37A	23	25
12	13	14	15	16	16A	03
05						

Figure 5f

BAR GRAPHS	L/R	COL
Mo_ppm	R	

ASSAYS	L/R	TEXT
Mo_ppm	L	-------

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

AZIMUTH = 45°

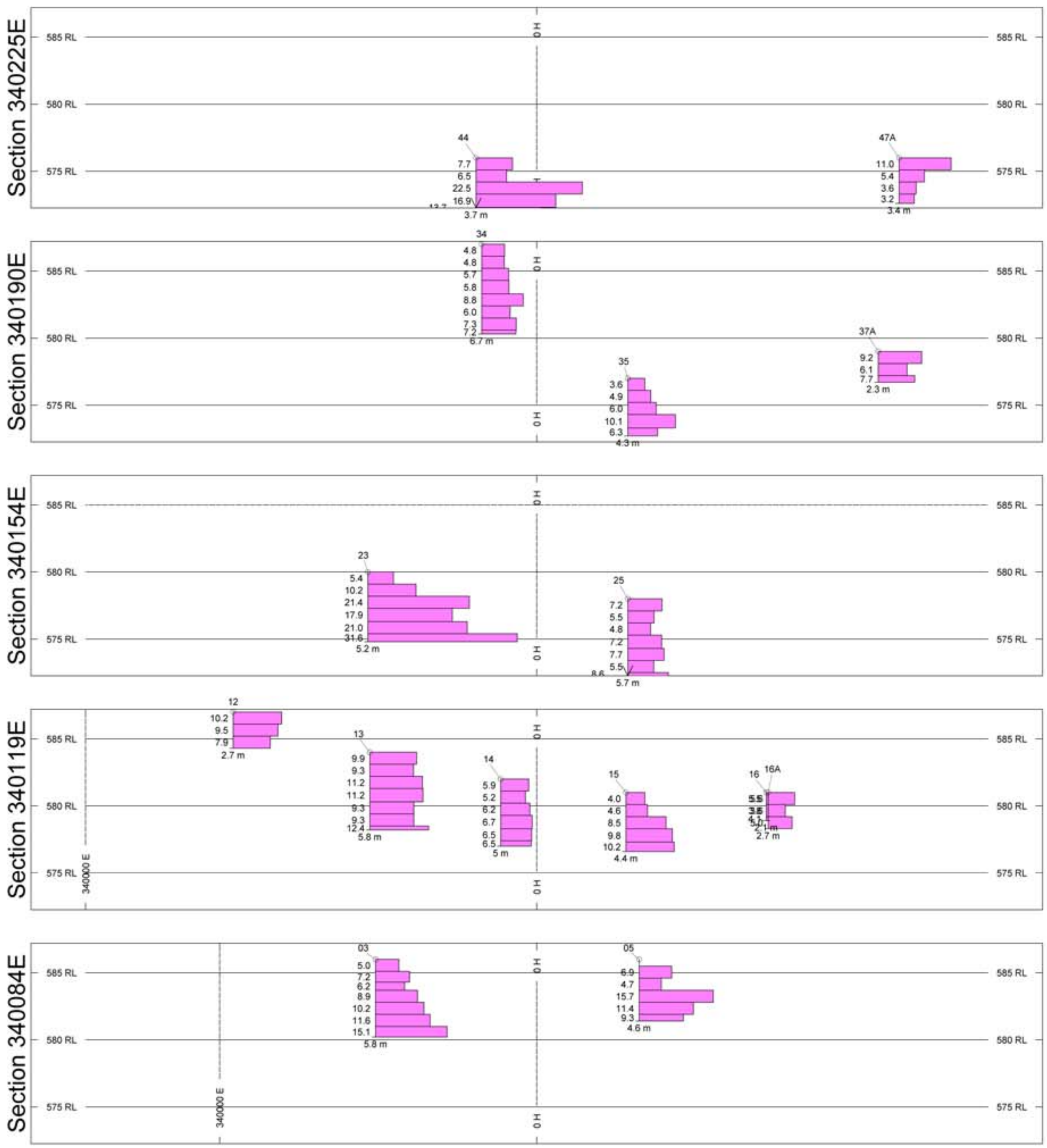
N W E S

North Bay Resources Inc.

Mount Washington Property

Molybdenum ppm in Tailings

Cross Sections Looking NW



HOLES PLOTTED

TOTAL 15

44	47A	34	35	37A	23	25
12	13	14	15	16	16A	03
05						

Figure 5g

BAR GRAPHS	L/R	COL
Te_ppm	R	

ASSAYS	L/R	TEXT
Te_ppm	L	-------

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

AZIMUTH = 45°

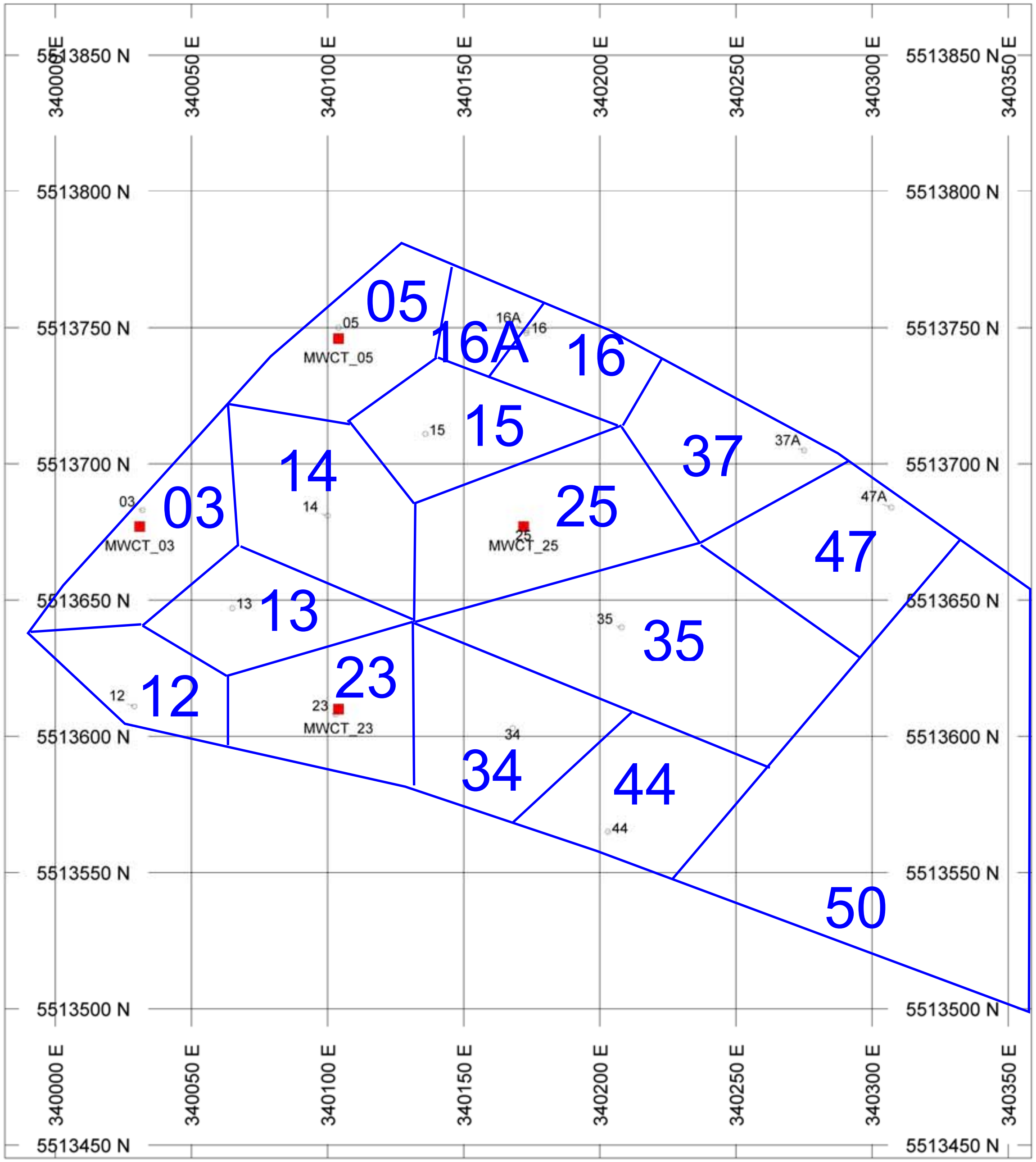
N W E S

North Bay Resources Inc.

Mount Washington Property

Tellurium ppm in Tailings

Cross Sections Looking NW



HOLES PLOTTED

TOTAL 15

03	05	12	13	14	15	16
16A	23	25	34	35	37A	44
47A						

Figure 6

PLAN SPECS:

REF. PT. E, N	340200 m	5514000 m
EXTENTS	377 m	423.5 m

SCALE 1 : 2500

(m)

-20 0 20 40 60

NAD83 / UTM zone 10N

N
W
E
S

North Bay Resources Inc.

Mount Washington Property

MWC Tailings 2014

Mineral Resource Blocks

Appendix 1

2009 Lakeview-Domineer Bulk Sample Physical Work Report

REPORT OF PHYSICAL EXPLORATION AND DEVELOPMENT
Section 15 - Mineral Tenure Act Regulation

1. Event number(s):	2. Tenure number(s):	3. Type of Claim:
4557452	229726,229727,229728,229730,232419,232420,232425,232426,232427,232428,232430,232432,232434,232435,232436,232437,232439,232446,232455,232456,232458,512485,537029,537054,537144,537145,537343,607878	☑ Mineral ☐ Placer

4. Recorded holder

Name: Clibetre Exploration Ltd.		Address: 6079 Headquarters Rd. Courtenay, B.C. V9J 1M7
Phone: 250-338-1258	Email: globedrilling@telus.net	

5. Operator

Name: Clibetre Exploration Ltd.		Address: 6079 Headquarters Rd. Courtenay, B.C. V9J 1M7
Phone: 250-338-1258	Email: globedrilling@telus.net	

6 Report Author

Name: Jacques Houle, P.Eng.		Address: 6552 Peregrine Road Nanaimo, B.C. V9V 1P8
Phone: 250-390-3930	Email: jhoule06@shaw.ca	

7. Qualifications/experience of workers:

C.C. Rennie, P.Eng. (deceased November 2009) over 50 years mining and exploration; M.R. Rennie over 20 years diamond drilling; J.Houle, P.Eng. over 30 years mining and exploration

NEW WORK (as required under Section 15 of the MTA Regulation; see Information Updates 8 and 25 for further details)

8. Actual dates work was done:	9. Tenure number(s) of claim(s) on which this work was done:
September 30 to October 8, 2009	232439

Detailed written description of the work activity: state what was done and how it was done, and the results. Mention equipment, machinery, labourers, as applicable. The cost statement (#18 on page 2) must correspond to what is stated here (*if more space is required, use the supplementary section on page 3 or attach additional sheets*)
***** Attach a 1:10,000 scale map accurately showing the locations of the work sites.*****

What work was done?	Excavation and transport of 168.62 tonnes bulk sample from the Mount Washington Domineer/Lakeview adit area to a secure storage facility located on the property of M.R. Rennie in Courtenay, B.C., including reclamation of the bulk sample site and 1 year advance storage fees for the bulk sample.
How was the work done?	The bulk sample site was selected by the late C.C. Rennie, P.Eng., who supervised the excavation and transport of the bulk sample by Dennis Phye Bulldozing Ltd., the reclamation of the site, and the construction of the secure storage facility by M.R. Rennie.
What were the results?	No technical work has been done to date on the bulk sample. It is planned to extract a representative sample from the bulk sample and to send portions of it to potential buyers of the sample and/or the Mount Washington Property.

11. Dimensions of work done: (Is the work site marked?) No	12. Amount of material excavated and tested or processed: (metric units)
unknown - reclaimed	168.62 tonnes

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REPORT OF PHYSICAL EXPLORATION AND DEVELOPMENT
Section 15 - Mineral Tenure Act Regulation

NEW WORK (*continued*)

13. Geographic location of work sites; GPS coordinates; how would someone get to where the work was done; from the nearest town:

NAD83 UTM Zone 10N 333790 East 5514137N 1411 m. elevation (approximate based on 2005 GPS location of portal dump by author)

From Highway 19 turn west onto Strathcona Parkway west and continue beyond ski resort to Piggott Main, turning north and following branch logging roads east to the area of the Domineer/Lakeview adit.

16. Are photographs of work sites attached? (Y/N)	No		
17. Was Notice of work filed? (Y/N)	Yes	**If YES,** Permit Number:	MX-7-190 Approval #: 09-1610462-0914

COST STATEMENT

18. Expense(s) (complete either hourly rate or daily rate)	Total Hours OR # of days	Hourly Rate	Daily Rate	Total(s) ($)
Labour cost: (specify type)				
C.C. Rennie, P.Eng. - supervision of bulk sample program	7 days		$500.00	$3,500.00
M.R. Rennie - construction of secure storage facility	4 days		$400.00	$1,600.00
J. Houle, P.Eng. - compilation and report by invoice				$825.30
Equipment & Machinery cost: (specify type)				
Excavation and trucking by Dennis Phye Bulldozing Ltd.				$11,106.06
by invoice (excavator, dump truck, lowbed, reclamation)				
Lodging / Food:	**Days**	**Rate(s)**		
Other: (specify)				
Public liability, fire and vehicle insurance premiums				$2,576.00
Materials and 1 year rental for secure storage facility				$3,621.00
	19. Total costs of work from above:			$23,228.36

20. Transportation/travel (specify type)	Days	Rate(s)	Total(s) ($)
travel by pickup truck to/from Mount Washington and Nanaimo by C.C. Rennie	9	$100.00	$900.00
	21. Transportation/travel, maximum 20% of value in 19:		$900.00
	22. Total costs of work (add 19 and 21):		$24,128.36
	23. Amount claimed for assessment credit on claims:		$24,081.61

Signature of Recorded Holder / Agent

April 7, 2010
Date

BRITISH COLUMBIA
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REPORT OF PHYSICAL EXPLORATION AND DEVELOPMENT
Section 15 - Mineral Tenure Act Regulation

SUPPLEMENTARY SECTION (use this section if more space is required)

Event number(s):	4557452

April 7, 2010

Signature of Recorded Holder / Agent **Date**

Important:
This report must be submitted within 30 days of the date the exploration and development work was registered in the Mineral Titles Online system.

This report may be submitted to any Service BC Government Agent or Mineral Titles Branch Office, or you can mail the report directly to:

Mineral Titles Branch
Ministry of Energy, Mines and Petroleum Resources
300 - 865 Hornby Street
Vancouver, BC V6Z 2G3

Appendix 2

2010 Lakeview-Domineer Bulk Sample Technical Report

Bulk Sample From NinaGayle Project

Finley Bakker P.Geo

9/1/2010

Description, Methodology and Recommendations on the Bulk Sample taken from NinaGayle Project – on Mt Washington, Vancouver Island

Introduction

The author was asked to sample and verify the grade of a bulk sample taken from the NinaGayle, Dove Project, gold property. On July 26th 2010 the site of the sample was visited on the owner farm where it was stored. A total of 20 samples were personally taken by the writer. On August 15th 2010 the site from which the bulk sample was taken was examined. The average grade of the bulk sample indicated 168 tons at 51 g/t

This report is intended to validate the bulk sample tonnage and grade and is intended to provide recommendations and suggestions on future work on the property.

This report is not meant to be a 43-101compliant document to be used for assessment reporting, press release etc. and should be accompanied by supporting documentation provided background. For details on the geological setting and infrastructure etc. the reader is referred to "**Summary Report On the Mt. Washington Property Vancouver For Bluerock Resources Ltd, By Jacques Houle, P.Eng. April 30, 2007".**

Method

The bulk sample was located on the property owner's farm in Merville and was reported to have come from his Mt Washington group of claims collectively known as the NinaGayle, Dove Project. The entire pile was subdivided into 12 sub-blocks and each of these blocks was then sampled by the author. The pile in its entirety was then sampled twice and duplicate samples were taken from two of the blocks. Blanks were included. The samples were placed into plastic bags, tags enclosed and zip strapped for security. The samples were then forwarded to Acme Labs for analysis. The method and results are attached in the appendices.

The owners of the occurrence had indicated that a weighed bulk sample of 168 tonnes was taken by them in September 2009. A rough calculation of the pile as being 7 meters x 10 meters x 1.3meters =91 cubic meters. Using an average insitu density of 3.0 and using a swell factor of 33% or one third, this translates into 180 tonnes, essentially the same tonnage.

Figure 1- Bulk Sample covered by tarps

Figure2 – Delineated Sample Blocks

Figure 3- Location of Samples

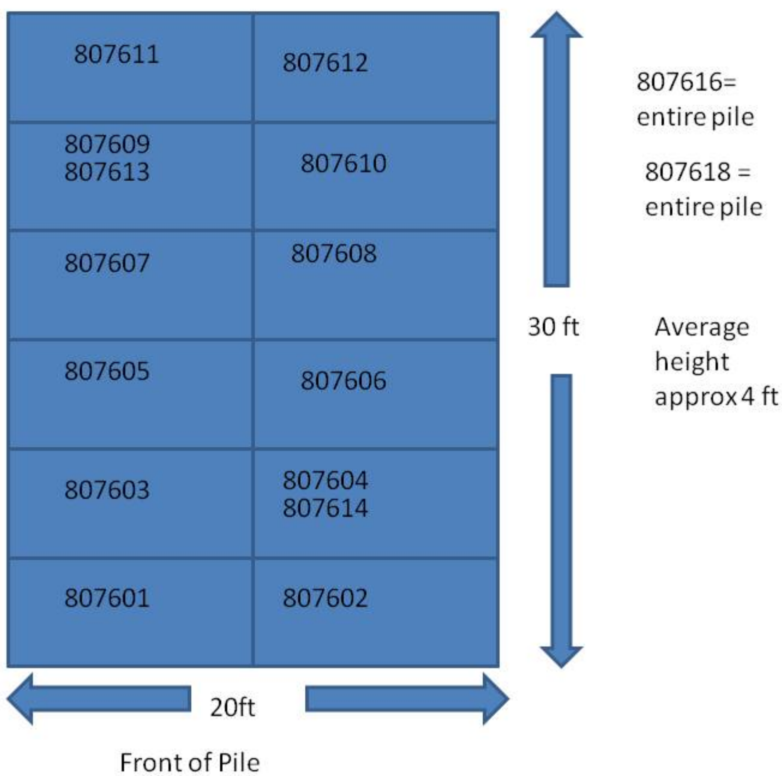

Figure 4- Idealized Location of Samples (see text for metric dimensions)

Figure 5. Samples to be shipped to Acme

Results

The weighted average of all the samples was 51.53 gm/t Au.

sample id	location	description	wt factor	gold g/t	gt/wtfactor
807601	1	90%>30cm	1.00	26.30	26.3
807602	2	80%>30cm	1.00	96.67	96.67
807603	3	50%>30cm	1.00	47.27	47.27
807604	4	40%>30cm	0.50	60.15	30.075
807605	5	70%>30cm	1.00	60.15	60.15
807606	6	80%>30cm	1.00	43.94	43.94
807607	7	50%>30cm	1.00	16.11	16.11
807608	8	40%>30cm	1.00	44.81	44.81
807609	9	30%>30cm	0.50	67.00	33.5
807610	10	30%>30cm	1.00	70.57	70.57
807611	11	5%>30cm	1.00	66.58	66.58
807612	12	10%>30cm	1.00	47.64	47.64
807613	13	duplicate of 9	0.50	45.97	22.985
807614	14	duplicate of 4	0.50	44.33	22.165
			12.00	52.40	628.765
807616	16	entire pile	12.00	50.67	608.04
807618	18	entire pile	12.00	51.51	618.12
	weighted average entire pile			51.53	

Table 1 – Calculation of the Weighted Average Grade

Discussion of Results

The sampled grade of the muck pile was remarkably consistent.

The bulk sample contains at least 168 tonnes of material.

The is also a significant amount of copper present as almost all samples graded more than 10,000ppm copper (1% Cu). Significant amounts of arsenic are also present.

Verification of Location of Bulk Sample

On August 15th the author was accompanied by Joe Paquet, Mike Rennie and Mat Rennie – some of the principles involved to the purported location of the samples

Findings

The actual location of the bulk sample has been covered by fill in order to return site to its “natural state”. It was impossible to verify with absolute certainty that the sample came from here. However there were significant amounts of material that had been mixed in with fill that leads the author to believe that there is no reason not to believe that the sample location is not as stated.

Fig 6 – Location of the Bulk Sample

A larger bulk sample of purported lower grade material in the order of 6000 tonnes was also observed. It had been covered by a thin blanket of shotcrete, approximately 2cm thick to prevent a potential deleterious effect on the environment.

Fig 7 – Bulk Sample covered by shotcrete

The existing portal which literature indicates is approx 300 meters in length could not be observed as it had been back filled with limestone and sealed with shotcrete. However the presence of a drain tower confirms the approximate location of the portal.

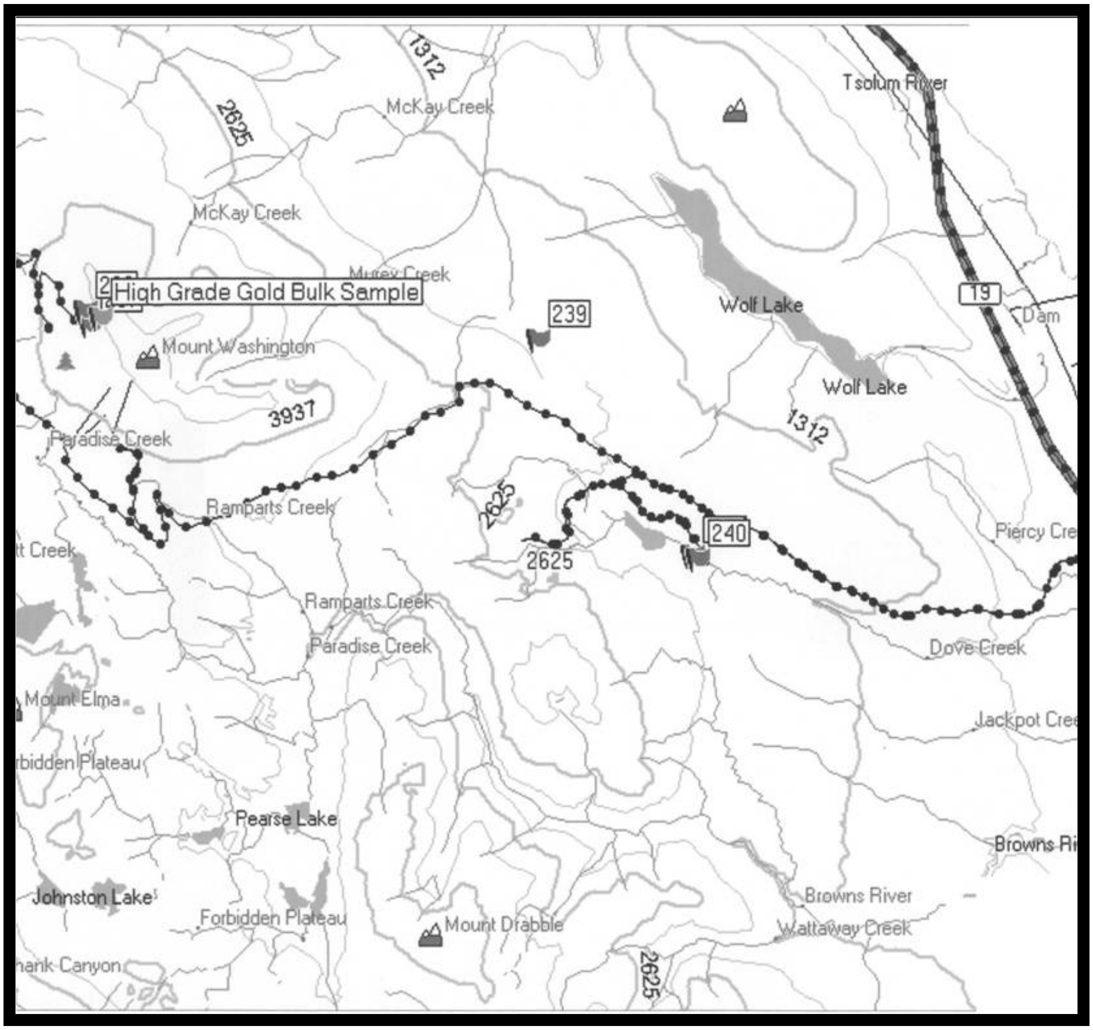

Fig 8– Map Showing location of bulk sample

The location of the this site has historically been referred to as “Mt Washington” but it is important to note that this site is physically and geographically removed from the site of the famous/infamous Mt Washington Copper Mine and should not be confused with the same. Geologically this unit may be related to the old mine but is on the “other side of the mountain”.

This site has been reclaimed in my opinion would be a professional manner and is easily accessible via a 4 wheel drive vehicle or an ATV. Work that was undertaken appears to have been done to “best practices” at the time and I have no reason to believe that it was not.

While I cannot ascertain with absolute certainty that the bulk sample came from this area I have no reason to believe that it did not and the abundance of similar material in the area gives credence to this opinion.

Recommendations

The owners indicate that most of the original diamond drill core is still available for viewing at the owner's farm. Some of this core should be resampled with current QAQC protocols.

According to the owners, approximately $6 million was spent on exploration drilling, drifting, mapping etc., until the time that the property was put on hold in the 1990's. The owners indicate that most of this data is still available for viewing and is on storage on the owner's farm.

1. I would strongly recommend that this data is converted to digital format as much as is practical.
2. A new 43-101 compliant resource should be calculated utilizing current technology.
3. The cost for a small owner/operator would be significant depending on the quality of the data and its overall condition – this could take as little as several months to as much as a year to undertake. In addition to the quality of the data, the availability of software, hardware and personnel to undertake the work could also be an issue.
4. Some of the old diamond drill holes should be found and their co-ordinates checked. The owner indicates that he actually drilled many of the diamond drill holes and is confident that they could be found.

I would strongly recommend that the above work is undertaken inspite of the property apparently having a permit to mine.

The 168 tonne bulk sample can be used for metallurgical work if deemed as being representation (in-spite of the elevated grade, the mineralogy may be similar)

In my opinion this property should be viewed as "an advanced exploration play" and not as a mine that could start in short order. Having said that, there are four distinct sources of potential revenue for the property that could be examined without endangering the systematic exploitation of the potential deposit.

1. The 168 tonne bulk the sample itself contains in the order of $300,000 of contained gold at today's prices.
2. The 600 tonne bulk sample currently capped by shotcrete could excavated
3. There should be more mineable material in the area of the bulk sample utilizing surface equipment
4. Some of the ore may be pitable as shown in Fig 6 which shows the reported extent of mineralization near surface

Fig.9 Potential Source of Pitable Material

Conclusion

With the resurgence of the price of gold and the ability of the owner to put together a bulk sample grading 51 gm/t Au this prospect has all the markings of an advanced exploration play and should be approached as such.

Appendix

- 1992 Report on Mt Washington Project
- Assay certificates

MT. WASHINGTON PROJECT

COPPER GOLD PORPHYRY POTENTIAL

Nanaimo Mining Division
Latitude 49° 46' 30" N   Longitude 125° 18' W
NTS 92F/11W and 92F/14W

March 1992

C.C. Rennie, P.Eng.

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Location, Access and Facilities	1
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Underground Exploration	8
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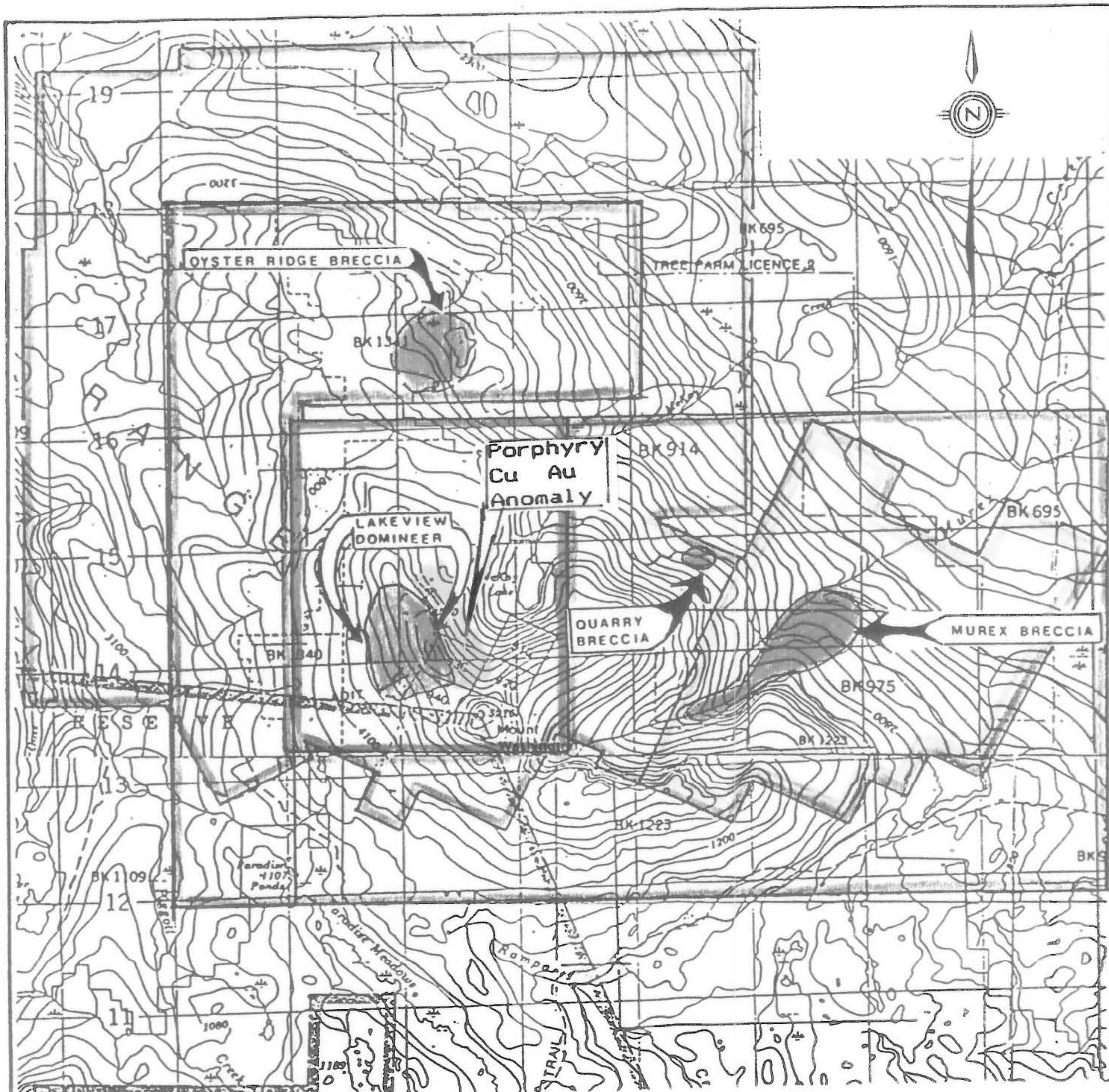
Metallurgical Testing	10
The 1989 Programs	12
Exploration Potential	12
Proposed Program	13

Illustrations

Aerial Photo of Mt. Washington	Frontispiece
Location Plan, Figure 1	preceding page 1
Property Location Map, Figure 2	preceding page 1
Photogeology Map, Figure 3	preceding page 4
Generalized Cross Section	page 7
Mineral Inventory Map	preceding page 9

Appendix 1 - Location of Records and Data



LEGEND

OUTLINE OF BETTER RESOURCES LIMITED MINERAL CLAIMS FOR GOLD AND SILVER

OUTLINE OF FORDING COAL BASE METAL RIGHTS AGREEMENT WITH BETTER RESOURCES

OUTLINE OF FORDING BASE METAL LEASE TO IMPERIAL METALS – PURCHASED BY BETTER

PRIME TARGET AREAS ON FORDING PARCELS

DRAWN BY C. C. R.	BETTER RESOURCES LIMITED	Scale --- 1:50,000
DATE JANUARY 1990	LOCATION MAP MT. WASHINGTON AREA	FIGURE – 2

BETTER RESOURCES LTD.
MT. WASHINGTON PROJECT
SUMMARY REPORT

LOCATION, ACCESS AND FACILITIES

The claims of Better Resources Ltd. on Mt. Washington are centered on Latitude 49° 46' North, Longitude 115° 18' West within map sheets N.T.S. 92F/11W, 92F/14W, in the Nanaimo Mining Division. The claims are located approximately 21.5 kilometres northwest of Courtenay, British Columbia. They straddle the summit of Mt. Washington, the McKay Lake Basin, the north spur of Mt. Washington, and a portion of the area to the north (see Figure 1 and 2).

Access to the claims is by a network of well maintained paved and gravel mining and logging roads. Depending on snowfall and runoff conditions, access to within one kilometre of any point on the property is usually possible by four wheel vehicle between July and November. In most areas of the property, a year-round supply of drilling water is located within a radius of 400 metres. An electric power line has been extended to the top of Mt. Washington, well within the claim boundaries. Well-appointed accommodations are available at the Mt. Washington Ski Resort during the summer months. Year-round accommodations are available in Courtenay. Construction supplies, services and labour are readily available in the Campbell River-Courtenay area.

PROPERTY AND OWNERSHIP

The property consists of 240 claims and units inclusive of 4 Crown Grant claims, 2-post claims and modified grid units, covering 12,000 acres, which are 100% owned by Better Resources Ltd. and encompass gold and silver mineral rights previously reserved to the Crown (Figure 2).

Base metal rights over most of the property are held by Fording Coal Ltd., successor to the original E&N Land Grant (see Figure 2). Imperial Metals Corp. Ltd. obtained a lease from Fording Coal on base metal rights over 1,636 acres covering the Lakeview-Domineer Zone, which was purchased by Better in November 1989. Better have an extendable exploration agreement with option to lease on the remaining 8,400 acres of the Fording Coal base metal rights. The Oyster Breccia exploration target and the Murex Breccia lie within this Better-Fording agreement area.

Surface rights over most of the property are owned by Crown Forest, a subsidiary of Fletcher Challenge. Better Resources have agreements with Crown Forest covering access road use and the underground ore stockpile. The main access road to Mt. Washington is owned by Crown Forest but is maintained year-round by the Mt. Washington Ski Development. At sometime in the future it may become a public road.

PREVIOUS EXPLORATION

The Mt. Washington property has been extensively explored since its discovery in 1940 by the McKay brothers. Numerous individuals and companies have undertaken trenching, prospecting, soil sampling, geophysical surveys and diamond drilling on the Domineer and surrounding areas. The following is a brief synopsis on the history of Mt. Washington.

Year	Company	Work Done
1940	McKay Brothers	prospecting
1941	K.J. Springer	prospected Domineer
1944-45	Consolidated Mining and Smelting	exploring Domineer Vein
1951-59	Noranda Exploration	exploring north of Domineer Vein
1956	Mt. Washington Copper Co.	built road along Murex Creek
1957	Noranda & Mt. Washington Copper Co.	explored Murex basin, drilling outlined low grade copper zone
1958	Noranda & Mt. Washington Copper Co.	EM survey, trenching, diamond drilling flat lying zone of 2% copper north of the Domineer
1963-64	Cominco	drilled 12,596 ft.
1965-66	Mt. Washington Copper Co.	milled 392,000 tons of ore grading 1.16% Cu, 0.01 oz/ton Au, 0.5 oz/ton Ag
1969	Marietta Resources	drilled 6,947 ft., airborne magnetic survey
1971	Mt. Washington Copper	5 drill holes
1972-82	Esso Minerals	soil sampling, I.P. survey, geological mapping, drilled 10,489 ft., Lakeview zone pitted and short drill holes
1983	Better Resources	soil sampling, 2 drill holes
1984	Better Resources	soil sampling, water geochemistry, geological mapping, 16 drill holes
1985	Better Resources	Inactive
1986	Better Resources	trenching, 49 drill holes
1987	Better Resources	soil sampling, road and site building, 112 drill holes, 912 ft. of incline
1988	Better Resources	soil sampling, mapping, trenching, prospecting, 65 drill holes

Year	Company	Work Done
1988	Noranda	geophysics, geochem, 9 holes
1989	Better Resources	trenching, 17 drill holes
1989	Noranda	geophysics, geochem, 2 holes
1990	Better Resources	6 drill holes
1991	North Slope Minerals Inc.	6 drill holes on Murex
1991	Better Resources	rock chip geochem McKay basin

In 1983, Heinz Veerman submitted this property to Better Resources Ltd. The property was acquired based on the presence of known gold mineralization, a huge arsenic soil anomaly (greater than 2 km long), the presence of a realgar and a Tertiary age of the intrusives. From 1983 to 1989, Better Resources has drilled approximately 49,411 feet on the Lakeview/Domineer zone, 2,557 feet on the Oyster Breccia, 3,300 feet on Glacier Ridge and 3,175 feet on the Murex zone for a total of 58,433 feet drilled. The Lakeview/Domineer zone, the Oyster Breccia and McKay Lake have been extensively soil sampled with anomalous areas then trenched and finally drilled. An 8 ft. by 8 ft. underground incline was driven 912 ft. in 1987 to provide a metallurgical sample, determine the continuity of mineralization and examine rock stability.

To date $3.0 million dollars have been spent by Better Resources Limited on exploration on the Mt. Washington property with $2.082 million derived from flow-through shares in the 1987 and 1988 seasons.

GENERAL GEOLOGY

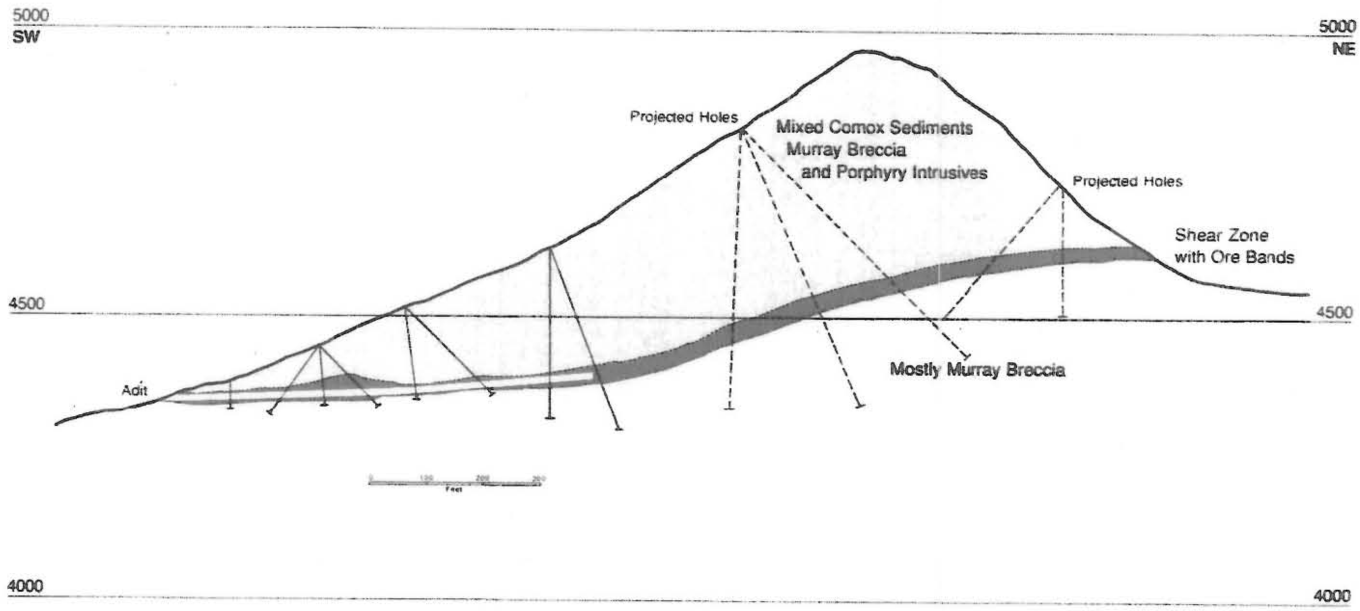
The lowest and oldest rocks on the property (Figure 3) are Karmutsen volcanics of upper Triassic age. These are mainly massive basalts with lesser volcanic tuff and breccia members. Unconformably overlying the Karmutsen formation on part of the property is the upper Cretaceous Comox Formation of the Nanaimo Group, made up of sandstones and shales, with some carbonaceous material. McKay Lake is the center of a Tertiary quartz diorite intrusive with associated feldspar porphyry sills and dykes. Diapiric and collapse breccias may be contemporaneous with or later than the intrusive since many of the breccias contain quartz-diorite and feldspar porphyry fragments as well as Comox and Karmutsen fragments.

Mineralization is widespread on Mt. Washington within the breccias and in crackle zones around the breccias and intrusive contact. Pyrite and pyrrhotite predominate with variable low amounts of chalcopyrite. Most favoured target areas are the breccias, briefly described below.

The Washington breccia, apparently the youngest, appears on surface as a plug between the Domineer vein outcrop and the south copper pit. Large angular clasts of diorite dominate over finely comminuted rock flour matrix, which has been partly replaced by actinolite and magnetite.

The Murray breccia, covering a large area south of the Washington breccia, has a much higher proportion of fine material to clasts. The clasts ranging from 1 to 10 cm in size and averaging 2 cm, are a mixture of quartz diorite, sandstone, siltstone and mafic volcanics. It has been argued that this breccia could be a Tertiary ejectamenta but crosscutting relationships with the Comox formation suggests a diatreme.

The McKay breccia located 2 km to the northeast of the Washington breccia also appears to be a diatreme. Features which suggest this mode of origin include: (1) an apparent pipe shaped morphology, (2) generally subrounded clast shape, (3) highly variable matrix content, (4) variety of clast compositions, (5) the presence



Generalized Section Through Adit

Looking North

Figure – 4

ORE CONTROL AND MINERALIZATION

Better Resources Ltd. has concentrated most of their exploration activity on the Lakeview - Domineer Zone that cuts through the northwest sides of Mt. Washington. The ore controlling structure is a gently west dipping shear zone (Figure 4) that outcrops or sub-outcrops along both sides of the ridge and appears to be the same structure that contained the copper mineralization in the old copper pits at the north end of the ridge. The hanging wall of this shear is marked by a thin fault zone with some imbrications. Mullions on this fault in the underground working indicate the last movement was hanging wall moved from west to east relative to the footwall. Beneath this fault is a variable thickness of intense brecciation (possibly hydrothermal breccia) with strong silicification and clay alteration of the fragments. This structure cuts through the Comox formation approximately 100 m above its contact with the Karmutsen and through the Murray and Washington breccia. Tension cracks extending below the most intense breccia are mineralized. As yet no steep feeder zones for mineralization have been found beneath this structure.

of steeply dipping channels and (6) an increase in the fracture density of the country rock towards the breccia (McGuigan, P.J., 1975). As with the Washington breccia, veins of magnetite and actinolite are found to replace portions of the matrix.

The Murex breccia is both the largest and most complicated. Located at the eastern end of the property, this breccia has been subdivided by McGuigan (1975) into three variants or types. The first two types consist of subrounded to subangular clasts 1 to 10 cm in diameter of the Comox and Karmutsen Formations respectively. Matrix is generally less than 25% consisting entirely of finely comminuted rock fragments. Contact relations between the two mimic the overall trend of the unconformity, suggesting collapse to be the dominant process. The third form of Murex breccia is much more variable. More specifically the clast composition is heterolithic, with the size varying from 1 to 50 cm and the degree of roundness from subangular to spherical. The matrix content is also quite variable (20 to 80%) containing numerous matrix-rich channels. All of these features indicate a fair degree of movement has taken place, suggesting a mode of origin akin to a diatreme.

The Glacier Breccia located immediately east of the Washington Breccia consists of a sill-like body of highly mixed fragments. The Quarry Breccia located on the eastern slope of Mt. Washington is a composite breccia consisting of a core of rotated mixed fragments which is enclosed by a crackle breccia. Collapse appears to be mode of origin for this breccia.

Another collapse breccia is Oyster Breccia located approximately 2 km northwest of the Washington Breccia. Intense sericite alteration has affected the clasts with dolomite and vuggy quartz present in the matrix. Surrounding this breccia is a concentric, inward dipping fault-fracture set (McGuigan, P.J., 1975).

Gold bearing mineralization in the Lakeview Domineer zone is characterized by pyrite, arsenopyrite and some chalcopyrite in a silicified matrix around fine breccia fragments. Minor minerals reported by Carson are covellite, sphalerite, galena, tennantite, bornite, wernerite, hessite, chalcocite, realgar and orpiment. The best grade mineralization is concentrated immediately below the hanging wall of the structure. Higher gold values tend to accompany higher arsenopyrite content with up to 4 oz Au/T in nearly massive arsenopyrite at the adit collar. Higher silver values tend to parallel higher copper content.

In 1987, Better Resources Limited drove a total of 278 m of incline adit which branch into 2 drives, 105 m from the portal to prove continuity of mineralization, rock stability and check mineral grade in the flat-lying zone. The program was generally successful. To comply with our permit the stockpile was resloped and shotcreted and the portal sealed in 1991.

MINERAL RESERVE

Mineral reserves calculated in 1988 for the flat-lying Lakeview-Domineer zone were divided into two areas, a possible pit with a 10:1 strip ratio and cut-off of .05 oz/t Au and underground reserves with a .10 oz/T cut-off as follows:

Drill indicated reserves in short tons at 10 cu.ft./st (3.2 S.G.) are:

Area	Tons	oz/T Au	oz/T Ag	%Cu	%As
Possible Pit	274,500	.184	.74	.49	1.95
Underground	332,100	.208	1.10	.63	2.14
Total	606,600	.197	.94	.57	2.05

No reserves were calculated for the remaining mineralization around the old Mt. Washington pit aras but are estimated to be ±100,000 tons of +1% Cu.

THE MCKAY BASIN COPPER GOLD PORPHYRY AREA

As a result of general interest in copper-gold porphyry deposits in B.C., Better conducted a review of old data in the area south of the Mt. Washington pits and west of McKay Lake in late 1991, culminating with a rock chip geochemistry survey over a 2,000 ft. N-S by 800 ft. E-W grid. Multi-element analysis of these samples showed a broad coincident copper and gold anomaly surrounding two old diamond drill holes, one of which MW-84 contained 450 ft. of .29% Cu with only three assays for gold (.006 oz/T). The other hole C-10, 250 ft. away had three intersections 252 ft. of .195 Cu, 112 ft. of .28% Cu and 145 ft. of .12% Cu. This large area of potential copper-gold porphyry mineralization in altered Comox formation and intercalated porphyry intrusive deserves considerable exploration for economic copper-gold reserves.

Multi-element geochemical plans have been prepared for the area together with cross-sections that show the relativity of these old holes to the flat lying zone previously drilled for gold.

PROPOSED PROGRAM

A definite copper-gold porphyry target has been developed by old drilling and the rock geochemistry grid.

An initial program of six diamond drill holes to 800 ft. depth at 200 ft. spacing along strike is proposed to confirm the zone, to be followed by grid drilling to establish tonnage and grade.

C. C. Rennie

March 1992

C.C. Rennie, P.Eng.

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Project: NinaGayle, Dove Project

Report Date: August 10, 2010

QUALITY CONTROL REPORT VAN10003213.1

	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6	G6Gr
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au	Au
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/mt	gm/mt
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.005	0.17
Pulp Duplicates																					
REP G1	QC	0.089	15	6	0.49	116	0.125	<1	0.82	0.078	0.47	<0.1	<0.01	1.9	0.3	<0.05	5	<0.5	<0.2		
807620	Rock	<0.001	<1	<1	<0.01	<1	<0.001	<1	0.02	0.003	0.02	0.1	0.11	<0.1	0.4	>10	<1	41.4	20.2	>10	88.80
REP 807620	QC																				90.21
Reference Materials																					
STD AGPROOF	Standard																				<0.17
STD CDN-ME-3	Standard																				9.50
STD CDN-ME-3	Standard																				10.06
STD DS7	Standard	0.081	13	199	1.15	413	0.131	42	1.09	0.099	0.51	3.9	0.24	2.3	4.3	0.21	5	3.6	0.8		
STD DS7	Standard	0.078	14	200	1.14	430	0.130	35	1.13	0.101	0.48	3.9	0.22	2.5	4.3	0.21	5	3.5	2.2		
STD OXH66	Standard																			1.291	
STD OXH66	Standard																			1.295	
STD OXH66	Standard																			1.242	
STD OXK79	Standard																			3.648	
STD OXK79	Standard																			3.595	
STD OXK79	Standard																			3.473	
STD DS7 Expected		0.08	12	179	1.05	410	0.124	39	0.959	0.089	0.44	3.4	0.2	2.5	4.2	0.19	5	3.5	1.08		
STD OXH66 Expected																				1.285	
STD OXK79 Expected																				3.532	
STD AGPROOF Expected																					0
STD CDN-ME-3 Expected																					9.97
BLK	Blank	<0.001	<1	<1	<0.01	<1	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.01	<0.1	<0.1	<0.05	<1	<0.5	<0.2		
BLK	Blank																			<0.005	
BLK	Blank																			<0.005	
BLK	Blank																			<0.005	
BLK	Blank																			<0.005	
BLK	Blank																			<0.005	
BLK	Blank																			<0.005	
BLK	Blank																				<0.17

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QUALITY CONTROL REPORT VAN10003213.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
Pulp Duplicates																					
REP G1	QC		0.2	4.6	4.9	58	<0.1	1.8	3.9	599	2.01	10.9	1.8	37.3	6.3	59	0.1	<0.1	<0.1	39	0.54
807620	Rock	2.61	1.0	>10000	78.3	62	70.7	9.2	383.1	11	33.54	>10000	<0.1	>100000	<0.1	<1	0.4	176.1	494.6	21	<0.01
REP 807620	QC																				
Reference Materials																					
STD AGPROOF	Standard																				
STD CDN-ME-3	Standard																				
STD CDN-ME-3	Standard																				
STD DS7	Standard		22.5	117.6	73.2	420	1.0	61.0	10.0	652	2.50	56.5	5.0	63.4	4.8	79	6.9	6.2	4.7	86	1.03
STD DS7	Standard		21.7	125.9	71.6	411	1.0	59.3	10.1	659	2.54	144.8	4.8	102.4	4.9	77	6.5	6.5	4.7	88	1.05
STD OXH66	Standard																				
STD OXH66	Standard																				
STD OXH66	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD DS7 Expected			20.5	109	70.6	411	0.9	56	9.7	627	2.39	48.2	4.9	70	4.4	69	6.4	4.6	4.5	84	0.93
STD OXH66 Expected																					
STD OXK79 Expected																					
STD AGPROOF Expected																					
STD CDN-ME-3 Expected																					
BLK	Blank		<0.1	2.8	<0.1	<1	<0.1	<0.1	<0.1	<1	<0.01	25.9	<0.1	7.2	<0.1	<1	<0.1	<0.1	<0.1	<2	<0.01
BLK	Blank																				
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	Method	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6	G6Gr
	Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au	Au
	Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/mt	gm/mt
	MDL	0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.005	0.17
807601	Rock	<0.001	2	4	<0.01	22	0.002	2	0.24	0.005	0.21	0.3	0.15	0.4	0.1	>10	<1	21.8	4.8	>10	26.30
807602	Rock	<0.001	3	2	0.01	25	0.002	<1	0.23	0.007	0.17	0.2	0.13	0.5	<0.1	9.12	<1	35.4	11.6	>10	96.67
807603	Rock	0.017	6	18	0.46	43	0.061	<1	1.03	0.033	0.63	0.3	0.15	2.4	0.6	6.98	4	21.0	7.7	>10	47.27
807604	Rock	0.002	12	4	0.02	32	0.003	2	0.31	0.004	0.24	1.4	0.16	0.9	0.1	6.97	1	27.4	11.3	>10	60.15
807605	Rock	0.002	16	5	0.02	32	0.003	<1	0.31	0.004	0.22	1.1	0.15	0.4	0.1	7.42	1	19.5	6.9	>10	60.15
807606	Rock	0.002	5	3	0.02	28	0.003	<1	0.26	0.005	0.18	0.2	0.08	0.3	0.2	>10	1	23.6	11.0	>10	43.94
807607	Rock	0.004	5	5	0.02	31	0.002	2	0.28	0.004	0.22	0.2	0.04	0.6	0.1	7.85	1	10.3	6.2	>10	16.11
807608	Rock	0.005	7	7	0.03	32	0.002	<1	0.30	0.004	0.20	0.3	0.16	0.6	0.2	6.63	<1	21.4	4.9	>10	44.81
807609	Rock	0.003	6	3	0.02	25	0.004	<1	0.29	0.004	0.19	0.3	0.13	0.4	<0.1	8.73	<1	28.6	10.4	>10	67.00
807610	Rock	0.001	9	4	0.01	27	0.002	<1	0.27	0.004	0.20	0.3	0.21	0.5	<0.1	9.78	2	23.3	6.0	>10	70.57
807611	Rock	0.001	3	6	0.06	24	0.004	<1	0.38	0.004	0.19	0.3	0.14	0.6	0.2	9.63	2	35.9	15.0	>10	66.58
807612	Rock	0.004	6	7	0.03	31	0.005	<1	0.32	0.005	0.22	0.2	0.07	0.7	0.3	9.42	1	19.9	7.7	>10	47.64
807613	Rock	0.004	6	6	0.05	25	0.008	<1	0.36	0.005	0.20	0.3	0.14	1.0	0.2	8.60	1	27.6	12.3	>10	45.97
807614	Rock	0.005	5	7	0.07	38	0.006	<1	0.54	0.024	0.25	0.4	0.18	1.3	0.2	6.35	2	21.0	4.1	>10	44.33
807615	Rock	0.076	4	47	0.49	85	0.204	2	3.84	0.177	0.03	<0.1	<0.01	8.7	<0.1	<0.05	12	1.7	<0.2		
807616	Rock	0.001	5	4	0.02	27	0.004	<1	0.25	0.005	0.17	0.2	0.16	0.6	0.1	8.87	<1	29.0	11.4	>10	50.67
807617	Rock	0.067	4	13	1.27	20	0.178	<1	1.79	0.216	0.03	<0.1	<0.01	3.4	<0.1	0.07	7	<0.5	<0.2		
807618	Rock	0.004	3	6	0.02	35	0.003	<1	0.32	0.004	0.24	0.3	0.14	1.0	0.1	7.57	<1	16.5	7.7	>10	51.51
807619	Rock	0.001	<1	<1	0.01	4	0.001	<1	0.04	0.004	<0.01	0.3	0.54	0.2	<0.1	>10	<1	59.0	2.0	>10	115.42
807620	Rock	<0.001	<1	<1	<0.01	<1	<0.001	<1	0.02	0.003	0.02	0.1	0.11	<0.1	0.4	>10	<1	41.4	20.2	>10	88.80

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Report Date: August 10, 2010

CERTIFICATE OF ANALYSIS VAN10003213.1

	Method	WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
	Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
	Unit	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
	MDL	0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
807601	Rock	1.49	7.9	>10000	68.9	97	87.9	23.5	181.4	12	22.22	>10000	0.2	32870	0.8	<1	0.7	94.1	168.8	14	<0.01
807602	Rock	2.53	4.0	>10000	80.4	55	71.9	17.2	438.1	30	25.07	>10000	0.2	>100000	0.4	2	0.7	126.6	556.3	15	<0.01
807603	Rock	1.66	12.1	>10000	75.5	54	76.6	27.6	134.8	104	16.40	>10000	0.3	55129	0.5	28	0.3	99.4	260.1	47	0.14
807604	Rock	2.46	29.7	>10000	65.8	48	86.8	51.5	290.4	52	19.20	>10000	0.7	70030	0.9	7	0.6	119.0	370.6	13	0.01
807605	Rock	1.64	63.7	>10000	78.1	56	>100	16.4	191.8	44	14.94	>10000	0.5	66388	0.6	9	0.7	64.5	322.6	9	0.01
807606	Rock	2.36	10.1	>10000	105.8	97	>100	23.0	324.5	35	25.84	>10000	0.4	55328	0.5	7	1.1	108.5	268.4	17	0.01
807607	Rock	1.80	8.9	8794	41.7	32	41.8	11.9	121.3	21	12.96	>10000	0.2	18988	0.6	5	0.2	46.9	111.1	6	0.01
807608	Rock	2.08	10.8	>10000	64.7	76	>100	13.5	173.7	71	12.96	>10000	0.6	52127	0.7	9	0.5	57.9	259.7	9	0.02
807609	Rock	2.15	9.5	>10000	84.8	74	93.2	20.7	356.1	30	22.40	>10000	0.3	76753	0.5	9	0.7	108.4	378.5	15	0.01
807610	Rock	2.44	25.3	>10000	116.6	119	>100	13.1	233.7	46	21.95	>10000	0.2	85531	0.6	7	0.7	90.6	482.0	15	<0.01
807611	Rock	2.87	9.4	>10000	126.3	116	98.3	13.9	281.7	61	25.04	>10000	0.3	81496	0.5	8	0.8	106.7	429.3	25	0.01
807612	Rock	1.87	10.3	>10000	78.4	61	85.9	28.1	324.2	44	18.88	>10000	0.4	53178	0.7	9	0.5	74.3	284.4	13	0.02
807613	Rock	1.69	10.4	>10000	73.4	68	90.0	17.1	217.0	51	21.48	>10000	0.5	57486	0.5	9	0.6	117.7	299.4	21	0.03
807614	Rock	2.23	23.8	>10000	104.8	69	>100	22.4	142.1	79	12.95	>10000	0.3	49392	0.9	35	0.7	83.4	311.8	12	1.19
807615	Rock	2.05	1.1	212.3	1.5	36	0.7	25.2	13.5	309	2.63	593.2	0.3	382.6	0.4	95	0.3	0.6	1.4	112	4.61
807616	Rock	6.92	10.2	>10000	68.4	90	96.6	14.0	219.2	43	19.69	>10000	0.2	59229	0.5	5	1.3	93.3	301.9	11	0.01
807617	Rock	0.78	0.3	446.0	1.4	83	0.4	34.6	20.0	305	4.60	263.0	<0.1	147.5	0.3	50	0.1	0.3	0.2	171	1.12
807618	Rock	4.76	6.6	>10000	75.7	44	76.7	13.6	188.9	50	15.92	>10000	0.3	56673	0.7	6	0.4	86.7	308.6	9	0.02
807619	Rock	2.70	0.2	>10000	115.2	157	>100	4.2	110.5	13	32.71	>10000	<0.1	>100000	0.4	<1	2.0	217.5	860.7	21	0.02
807620	Rock	2.61	1.0	>10000	78.3	62	70.7	9.2	383.1	11	33.54	>10000	<0.1	>100000	<0.1	<1	0.4	176.1	494.6	21	<0.01

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Submitted By:	Joe Paquet
Receiving Lab:	Canada-Vancouver
Received:	July 12, 2010
Report Date:	August 10, 2010
Page:	1 of 2

CERTIFICATE OF ANALYSIS VAN10003213.1

CLIENT JOB INFORMATION

Project:	NinaGayle, Dove Project
Shipment ID:	
P.O. Number	
Number of Samples:	20

SAMPLE DISPOSAL

STOR-PLP	Store After 90 days Invoice for Storage
DISP-RJT	Dispose of Reject After 90 days

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	20	Crush, split and pulverize 250 g rock to 200 mesh			VAN
1DX2	20	1:1:1 Aqua Regia digestion ICP-MS analysis	15	Completed	VAN
G601	18	Fire Assay fusion Au by ICP-ES	30	Completed	VAN
G6	18	Lead collection fire assay fusion - Grav finish	30	Completed	VAN

ADDITIONAL COMMENTS

Invoice To: Paquet, Joe
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Canada

CC:

BRITISH COLUMBIA CERTIFIED ASSAYER
C. Leong
CLARENCE LEONG
GENERAL MANAGER

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Client: **Paquet, Joe**
47 - 1160 Shelborne Blvd.
Campbell River BC V9W 5G5 Canada

Project: NinaGayle, Dove Project
Report Date: August 10, 2010

QUALITY CONTROL REPORT VAN10003213.1

		1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	G6	G6Gr
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au	Au
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/mt	gm/mt
		0.001	1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.1	0.05	1	0.5	0.2	0.005	0.17
BLK	Blank																				<0.17
BLK	Blank																				<0.17
Prep Wash																					
G1	Prep Blank																				
G1	Prep Blank	0.079	16	5	0.46	116	0.128	<1	0.83	0.088	0.44	<0.1	<0.01	1.8	0.3	<0.05	5	<0.5	<0.2		
G1	Prep Blank	0.086	15	5	0.49	117	0.128	<1	0.81	0.077	0.46	<0.1	<0.01	1.8	0.4	<0.05	5	<0.5	<0.2		

AcmeLabs Acme Analytical Laboratories (Vancouver) Ltd.
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		WGHT	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15	1DX15
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
		kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%
		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	2	0.01
BLK	Blank																				
BLK	Blank																				
Prep Wash																					
G1	Prep Blank	<0.01																			
G1	Prep Blank	<0.01	0.4	4.6	18.5	60	<0.1	2.1	3.7	615	2.01	9.6	1.8	4.5	6.4	63	0.2	<0.1	<0.1	38	0.57
G1	Prep Blank		0.2	4.7	4.8	59	<0.1	1.8	3.9	596	2.02	9.4	1.9	9.8	6.4	59	0.1	<0.1	<0.1	39	0.53

Appendix 3

2011 Mt. Washington Copper Tailings Drill Logs

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 12, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	<u>03</u>
Location:	**340032E 5513683N 586 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**19' = 5.8 m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28506	0.0	0.9	0.9	0.077	3.89	497.1	956.1	12.28	4.97	0.91	3.35	0.422
0.8			28507	0.9	1.7	0.8	0.35	6.73	1210.5	1169.8	14.5	7.17	1.1	4.69	1.689
0.6			28508	1.7	2.3	0.6	0.108	8.29	1271.3	1153.2	13.96	6.15	1.01	3.92	1.447
0.9			28509	2.3	3.2	0.9	0.102	5.36	771.1	1024.2	10.46	8.87	0.96	4.22	1.321
0.9			28510	3.2	4.1	0.9	0.103	5.87	910.7	1168.5	10.03	10.23	0.98	4.24	1.348
0.9			28511	4.1	5.0	0.9	0.242	6.29	1329	1145.7	9.46	11.55	1.07	4.62	1.315
0.8			28512	5.0	5.8	0.8	0.395	7.55	1925.8	1469	9.61	15.14	1.09	5.21	1.544
	Averages over depth of hole					5.8	0.192132	6.132105	1100.371	1146.679	11.30974	9.207105	1.013421	4.309474	1.273395

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28506	0.077	3.89	6.99	497.1	512	0.64	6.67	0.91	0.43	12.18	20.5	219	2.11	956.1	3.35	13.11
28507	0.35	6.73	6.55	1211	462	0.56	8.64	1.1	0.62	13.8	105.5	218	2.2	1170	4.69	12.67
28508	0.108	8.29	6.13	1271	374	0.53	7.94	1.01	0.57	13.85	92.6	219	2.18	1153	3.92	11.88
28509	0.102	5.36	6.7	771.1	460	0.68	11.27	0.96	0.49	13.11	61.6	184	1.86	1024	4.22	12.62
28510	0.103	5.87	6.53	910.7	438	0.55	13.19	0.98	0.62	14.62	60.6	213	1.57	1169	4.24	13.45
28511	0.242	6.29	6.45	1329	420	0.56	14.15	1.07	0.58	13.81	62.1	208	1.47	1146	4.62	13.37
28512	0.395	7.55	6.42	1926	421	0.62	21.52	1.09	0.72	13.71	70.4	191	1.41	1469	5.21	12.34

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28506	2.01	0.4	0.17	2.42	5.5	14.8	0.55	227	12.28	0.68	3	21.5	537	6.2	49.7	0.007
28507	2.13	0.2	0.25	2.21	6.4	15.5	0.59	611	14.5	0.65	2.9	83.5	500	5.7	49	0.015
28508	2.55	0.1	0.26	2.15	6.7	17	0.49	602	13.96	0.58	2.7	52.6	470	6.6	46.7	0.013
28509	1.7	0.2	0.19	2.34	6.1	13.4	0.56	622	10.46	0.5	2.2	47	537	6	47.8	0.008
28510	1.83	0.3	0.2	2.11	6.8	13.4	0.54	494	10.03	0.5	2.5	47.2	526	7.7	46.1	0.011
28511	1.79	0.4	0.2	2.06	6.5	12.2	0.54	445	9.46	0.51	2.5	52.6	504	6.3	44.1	0.005
28512	1.65	0.4	0.23	2.08	6.5	11.4	0.53	466	9.61	0.47	2.1	54	489	118	43.9	0.011

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28506	0.422	22.87	8.9	2.6	1.9	115.3	0.28	4.97	1.1	0.184	0.34	0.6	109	21.3	4.4	50	12.5
28507	1.689	26.42	9.3	4.1	1.4	111.6	0.26	7.17	1.2	0.172	0.44	0.8	115	27.3	4.8	109	5.2
28508	1.447	38.32	7.1	3.6	1.2	105.2	0.24	6.15	1	0.147	0.42	0.7	91	18.4	4	88	3.7
28509	1.321	14.36	8.7	3.7	1.4	92	0.25	8.87	1.2	0.143	0.34	0.9	107	13.5	5.8	77	14
28510	1.348	15.74	9.3	5.5	1.6	104.4	0.21	10.23	1.1	0.15	0.28	0.7	111	11.3	4.6	83	8.5
28511	1.315	15.46	7.9	4.7	1.7	106.3	0.21	11.55	1.6	0.139	0.24	0.7	102	10.5	4.2	80	17.5
28512	1.544	14.37	7.7	4.4	1.7	98.4	0.25	15.14	1	0.132	0.26	0.6	99	9.5	4.2	94	9.4

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 12, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**05**
Location:	**340104E 5513750N 586 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**15' = 4.6 m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.5	top portion of hole not recovered			0.0	0.5	0.5									
0.9			28501	0.5	1.4	0.9	0.112	5.23	640.5	1304.1	11.43	6.87	1.04	3.93	1.216
0.9			28502	1.4	2.3	0.9	0.099	4.8	844.5	817.6	8.36	4.68	1.07	3.77	1.093
0.9			28503	2.3	3.2	0.9	0.171	7.14	1988.6	928.2	6.95	15.66	1.2	5.2	1.537
0.9			28504	3.2	4.1	0.9	0.144	4.57	1255.9	882	6.73	11.45	1.33	4.99	1.167
0.5			28505	4.1	4.6	0.5	0.125	4.77	1173.3	1089.6	8.53	9.34	1.27	4.98	1.259
	Averages over depth of hole					4.1	0.130778	5.361111	1181.367	994.8222	8.385556	9.628889	1.172222	4.528889	1.253889

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28501	0.112	5.23	6.49	640.5	517	0.7	8.58	1.04	1.29	13.34	72.3	177	2.13	1304
28502	0.099	4.8	6.6	844.5	428	0.68	5.43	1.07	0.71	12.67	55.1	163	2.36	817.6
28503	0.171	7.14	6.54	1989	433	0.57	19.15	1.2	0.64	13.7	56.9	185	1.51	928.2
28504	0.144	4.57	6.91	1256	444	0.56	14.74	1.33	0.88	11.75	47.1	167	1.32	882
28505	0.125	4.77	6.62	1173	435	0.64	13.83	1.27	0.52	13.02	51.7	184	1.5	1090

Sample	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
Designation	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28501	3.93	11.91	<0.05	1.8	0.22	2.31	5.7	16.8	0.54	624	11.43	0.7	3.3	38
28502	3.77	12.81	1.93	0.3	0.2	2.43	6.1	15.8	0.54	716	8.36	0.48	2.3	38.1
28503	5.2	12.39	0.26	0.4	0.18	2.2	6.5	11.1	0.57	451	6.95	0.51	2.1	47.2
28504	4.99	13.59	1.28	0.3	0.18	2.26	5.6	11.3	0.63	422	6.73	0.54	2.3	50.3
28505	4.98	13.55	1.05	0.3	0.19	2.22	6.4	12.2	0.59	509	8.53	0.48	2.4	74.3

Sample	P	Pb	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta
Designation	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28501	522	28.4	48	0.01	1.216	22.88	8	3.5	1.3	120.6	0.41
28502	544	21	53.7	0.009	1.093	17.11	7.5	3.1	1.6	93.1	0.27
28503	532	8.6	42.8	0.01	1.537	9.65	7.3	4.8	1.8	108.2	0.21
28504	520	17.1	44.2	0.008	1.167	6.92	7.2	5	2	115.6	0.24
28505	539	7.2	47.6	0.007	1.259	8.85	8	6.1	1.7	108.1	0.23

Sample	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28501	6.87	1.7	0.152	0.37	0.6	91	46.2	5.3	142	3
28502	4.68	0.9	0.128	0.32	0.7	94	13.3	4.4	87	2.9
28503	15.66	0.9	0.127	0.22	0.6	87	9.5	4.5	87	7.5
28504	11.45	0.7	0.127	0.21	0.5	93	7.3	4.2	86	6.2
28505	9.34	0.9	0.137	0.23	0.7	94	11.5	4.7	83	8

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 12, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**12**	
Location:	**340029E 5513611N 587 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**		
Total Length:	**8.7' = 2.7 m.**					**Collar Dip:**	**-90**	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28513	0.0	0.9	0.9	0.274	8.91	1272.2	207.6	18.45	10.24	0.62	3.88	0.391
0.9			28514	0.9	1.8	0.9	0.318	12.56	1505.6	3341.3	17.96	9.47	0.78	3.88	1.603
0.8	Wood in bottom of hole		28515	1.8	2.7	0.8	0.176	5.94	1096.7	1225.2	10.19	7.86	0.84	3.9	1.329
	Averages over depth of hole					2.7	0.258759	9.246897	1298.217	1603.993	15.71759	9.235862	0.743448	3.886207	1.100034

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28513	0.274	8.91	7.05	1272	578	0.56	13.13	0.62	0.09	10.81	5	177	1.98	207.6	3.88	13.49	2.06
28514	0.318	12.56	6.7	1506	405	0.62	12.15	0.78	1	12.28	65.3	225	2.4	3341	3.88	12.37	2.4
28515	0.176	5.94	6.38	1097	426	0.75	10.62	0.84	0.57	12.07	72.9	254	1.75	1225	3.9	12.25	1.73

Sample	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb
Designation	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28513	0.1	0.28	2.52	5.1	12.9	0.42	85	18.45	0.61	2.9	7.8	484	10.7	53.3	0.012	0.391	27.79
28514	0.1	0.44	2.35	5.6	14.4	0.44	272	17.96	0.56	2.9	35.6	507	6.4	50.9	0.012	1.603	31.03
28515	0.5	0.21	2.15	5.7	13.4	0.49	462	10.19	0.42	2.9	43	825	6.3	47.9	0.007	1.329	12.75

Sample	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28513	7.2	4.9	1.7	110.1	0.26	10.24	0.8	0.165	0.43	0.4	101	38.7	2.3	26	6.3
28514	8.8	5.2	1.4	102.4	0.26	9.47	1.2	0.164	0.57	0.8	98	30.5	3.9	114	7
28515	9.2	5.6	1.7	86.2	0.27	7.86	1.1	0.172	0.31	0.9	110	13.7	5.1	112	13.8

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 14, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**13**
Location:	**340065E 5513647N 584 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**19' = 5.8 m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28571	0.0	0.9	0.9	0.09	6.93	916.6	2070.7	13.33	9.9	1.03	4.69	0.828
0.9			28572	0.9	1.8	0.9	0.135	8.07	1023.2	1640.2	13.25	9.26	1.42	5.06	1.907
0.9			28573	1.8	2.7	0.9	0.17	7.09	949.4	1419.8	13.76	11.16	1.1	4.46	1.556
0.9	black sand		28574	2.7	3.7	0.9	0.136	7.24	1081.8	1258.3	10.26	11.24	0.98	4.74	1.773
0.9			28575	3.7	4.6	0.9	0.125	6.02	1311	1085.7	11.62	9.32	1.05	4.72	1.593
0.9	caving		28576	4.6	5.5	0.9	0.217	5.96	1394.3	1109.4	9.76	9.32	1.11	4.94	1.513
0.3	moss at bottom of hole		28577	5.5	5.8	0.3	0.146	6.03	1603.9	1065.7	7.72	12.43	1.32	5.55	1.711
	Averages over depth of hole					5.8	0.145526	6.84	1138.568	1411.474	11.77158	10.15947	1.125789	4.809474	1.537947

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga	Ge
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28571	0.09	6.93	7.81	916.6	654	0.67	13.99	1.03	0.29	11.33	36.1	204	2.13	2071	4.69	14.67	<0.05
28572	0.135	8.07	7.53	1023	532	0.65	14.16	1.42	0.56	15.39	84.6	227	2.2	1640	5.06	13.96	<0.05
28573	0.17	7.09	6.65	949.4	468	0.58	15.22	1.1	0.48	13.26	66.3	233	1.86	1420	4.46	12.92	<0.05
28574	0.136	7.24	6.63	1082	349	0.48	16.55	0.98	0.4	11.62	63.2	216	1.55	1258	4.74	12.71	0.14
28575	0.125	6.02	6.27	1311	428	0.52	13.35	1.05	0.41	12.61	60.4	197	1.45	1086	4.72	12.41	0.2
28576	0.217	5.96	6.59	1394	463	0.47	13.79	1.11	0.38	11.97	56.1	204	1.42	1109	4.94	12.49	<0.05
28577	0.146	6.03	6.65	1604	430	0.48	18.65	1.32	0.43	10.93	56.6	222	1.11	1066	5.55	12.92	0.13

Sample	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S	Sb
Designation	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28571	0.2	0.24	2.48	5.3	16.1	0.54	224	13.33	0.78	3.1	19.4	573	7.6	57.1	0.01	0.828	23.47
28572	<0.1	0.25	2.14	7.1	15.2	0.61	714	13.25	0.65	2.8	34.3	574	5.8	47.2	0.012	1.907	24.51
28573	0.2	0.2	2.22	6.3	12.4	0.54	552	13.76	0.54	2.3	35.4	488	5.3	47.6	0.009	1.556	18.84
28574	0.2	0.19	2.18	5.2	11.1	0.52	439	10.26	0.54	2.2	33	494	5.2	45.8	0.007	1.773	14.34
28575	0.2	0.17	2.06	5.8	10.9	0.52	437	11.62	0.48	2.1	32.2	499	5.2	43.4	0.009	1.593	14.35
28576	0.2	0.17	2.08	5.5	10.2	0.53	397	9.76	0.51	2.1	43.3	481	4.8	43.7	0.009	1.513	13.5
28577	0.2	0.16	2.03	5	8.8	0.6	394	7.72	0.51	1.9	42.3	488	5.6	41.9	0.006	1.711	7.96

Sample	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28571	8.6	3.5	1.5	152.8	0.27	9.9	1	0.183	0.39	0.6	98	30.4	3.9	69	6.2
28572	8.5	4	1.4	123.9	0.24	9.26	1.1	0.172	0.44	0.8	89	29.9	5	105	3.5
28573	8.1	4	1.4	104.3	0.17	11.16	1	0.145	0.33	1	86	19.9	4.7	85	11.2
28574	7.2	4.2	1.6	101.5	0.19	11.24	0.9	0.128	0.29	0.7	84	15.3	3.7	79	9.2
28575	6.8	3.8	1.6	102.2	0.17	9.32	0.8	0.127	0.27	0.5	84	14.7	4	79	5
28576	6.9	3.6	1.6	103.9	0.17	9.32	0.7	0.135	0.26	0.5	79	15.2	3.5	76	14.1
28577	7	4.6	1.7	111.9	0.18	12.43	0.7	0.128	0.21	0.4	82	8.7	3.6	82	6.3

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 12, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**14**
Location:	**340100E 5513681N 582 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**16.5' = 5.0m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28516	0.0	0.9	0.9	0.067	9.72	687.9	754.1	9.43	5.91	1.29	3.83	0.924
0.9	very wet		28517	0.9	1.8	0.9	0.084	6.12	723.5	655.9	10.08	5.23	1.36	3.76	0.99
0.9	wet		28518	1.8	2.7	0.9	0.076	9.15	635.4	744.2	9.74	6.16	1.32	3.81	0.981
0.9	wet		28519	2.7	3.7	0.9	0.072	4.45	623.1	747.8	10.35	6.66	1.36	3.87	0.982
0.9	wet		28520	3.7	4.6	0.9	0.081	8.33	680.7	729.7	9.55	6.54	1.38	4.06	1.01
0.9	wet, moss and wood at bottom of hole		28521	4.6	5.0	0.5	0.087	7.07	665.4	705.3	9.95	6.45	1.42	3.96	1.02
	Averages over depth of hole					5.0	0.077	7.51	669.6909	724.4273	9.840909	6.131818	1.349091	3.874545	0.981273

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28516	0.067	9.72	6.57	687.9	481	0.57	7.02	1.29	0.67	12.84	55.7	183	2.24	754.1
28517	0.084	6.12	6.4	723.5	467	0.54	6.83	1.36	0.49	11.46	53.8	203	2.04	655.9
28518	0.076	9.15	6.4	635.4	453	0.67	8.06	1.32	0.46	12.52	53.8	184	1.92	744.2
28519	0.072	4.45	6.47	623.1	460	0.63	8.55	1.36	0.5	12.59	57.5	191	1.96	747.8
28520	0.081	8.33	6.49	680.7	440	0.51	8.56	1.38	0.46	12.83	52.5	222	1.78	729.7
28521	0.087	7.07	6.37	665.4	435	0.64	8.04	1.42	0.41	11.31	54.8	210	1.86	705.3

Sample	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb
Designation	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28516	3.83	12.95	2.15	<0.1	0.2	2.24	5.7	15.2	0.56	559	9.43	0.67	2.7	39.6	525	6.1	52.5
28517	3.76	12.41	2.04	0.1	0.2	2.28	5.3	14.3	0.55	568	10.08	0.6	3	51.9	522	5.9	47.8
28518	3.81	12.25	2.02	0.1	0.19	2.22	5.9	13.6	0.56	656	9.74	0.62	2.9	45	536	5.9	46.9
28519	3.87	12.43	2.06	0.1	0.19	2.25	5.9	14.6	0.56	672	10.35	0.63	2.6	54.5	538	5.7	46.5
28520	4.06	11.9	1.85	0.4	0.17	2.17	5.9	12.8	0.57	630	9.55	0.58	3	46.8	547	5.3	44.9
28521	3.96	12.24	1.86	0.1	0.17	2.12	5.3	13	0.56	634	9.95	0.64	2.6	64.8	523	5.4	45.5

Sample	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28516	0.008	0.924	23.41	7.6	3.2	1.5	132.9	0.23	5.91	0.9	0.143	0.35	0.6	102	31.3	5.2	71	3.2
28517	0.006	0.99	20.13	7.7	3.2	1.4	125.5	0.23	5.23	0.9	0.151	0.34	0.6	98	28.6	4.5	70	13.2
28518	0.011	0.981	19.92	7.1	3.8	1.3	117.9	0.22	6.16	0.9	0.149	0.31	0.6	91	27.4	4.6	77	11.6
28519	0.008	0.982	20.98	7.7	2.8	1.4	121	0.22	6.66	0.9	0.148	0.33	0.6	93	26.4	4.5	75	4.8
28520	0.009	1.01	16.58	7.5	2.6	1.3	109.4	0.24	6.54	1	0.151	0.32	0.7	96	20.5	4.5	71	8
28521	0.007	1.02	20.85	7.3	3.1	1.3	123.8	0.19	6.45	0.8	0.142	0.32	0.5	95	24.4	6.4	70	5.1

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 14, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**15**	
Location:	**340136E 5513711N 581 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**		
Total Length:	**14.5' = 4.4 m.**					**Collar Dip:**	**-90**	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28566	0.0	0.9	0.9	0.073	4.46	738.5	715.8	6.78	4	1.35	3.81	0.839
0.9			28567	0.9	1.8	0.9	0.095	4.93	826.2	659.8	9.18	4.58	1.42	3.82	1.061
0.9			28568	1.8	2.7	0.9	0.085	5.6	714.7	711.7	8.7	8.49	1.33	4.05	1.05
0.9			28569	2.7	3.7	0.9	0.1	6.15	931.4	900.5	10.6	9.83	1.77	5.28	1.505
0.8			28570	3.7	4.4	0.8	0.086	5.38	914.1	803.8	8.92	10.23	1.6	4.73	1.295
	Averages over depth of hole					4.4	0.087862	5.301379	821.9069	756.7517	8.833103	7.32931	1.490345	4.324483	1.145

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28566	0.073	4.46	7.07	738.5	493	0.55	5.97	1.35	0.31	10.9	37.8	166	2.37	715.8	3.81
28567	0.095	4.93	6.61	826.2	490	0.45	6.23	1.42	0.46	11.95	63.6	194	2.12	659.8	3.82
28568	0.085	5.6	6.56	714.7	446	0.64	12.06	1.33	0.44	13.29	54	148	1.77	711.7	4.05
28569	0.1	6.15	8.37	931.4	583	0.74	14.16	1.77	0.56	16.82	64.9	186	2.23	900.5	5.28
28570	0.086	5.38	7.6	914.1	540	0.6	14.53	1.6	0.48	14.78	57.4	209	2.14	803.8	4.73

Sample	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
Designation	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28566	12.89	1.72	<0.1	0.18	2.37	4.9	14	0.63	478	6.78	0.63	2.6	27.4	536	6.5
28567	11.61	0.48	<0.1	0.21	2.23	5.5	13.7	0.59	565	9.18	0.69	2.6	31.6	506	6.7
28568	12.82	0.68	0.2	0.18	2.17	6.3	12.2	0.6	556	8.7	0.53	2.3	31.1	536	6
28569	16.42	0.43	1.3	0.23	2.72	7.6	15.7	0.77	727	10.6	0.67	3.6	44.7	726	6.1
28570	15.39	0.1	0.2	0.22	2.4	6.8	15.4	0.7	608	8.92	0.64	2.6	44.8	664	5.4

Sample	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28566	47.8	0.009	0.839	26.53	8.1	3.6	1.3	106.8	0.23	4	1.1	0.17	0.38	0.7	94	26	4.2	64	3.7
28567	46.8	0.003	1.061	27.03	7.3	3.1	1.3	120.1	0.18	4.58	1	0.148	0.35	0.8	84	32.7	4.1	81	8.5
28568	47.2	0.006	1.05	13.02	8.4	3.3	1.5	105.6	0.17	8.49	1	0.151	0.29	0.8	102	15.8	4.8	76	7
28569	59.4	0.009	1.505	17.82	11	4.7	2	135.6	0.46	9.83	2.3	0.187	0.37	0.8	120	21	5.9	90	4.5
28570	54.5	0.006	1.295	18.22	10.3	4.3	1.8	130.3	0.26	10.23	1.3	0.161	0.35	1	115	19.8	5.2	80	3.4

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 13, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**16**										
Location:	**340173E 5513748N 581 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**											
Total Length:	**7' = 2.1 m.**					**Collar Dip:**	**-90**										
Interval (m)	**Description**	**Rx**	**Sample No**	**From (m)**	**To (m)**	**Length (m)**	**Au g/t**	**Ag g/t**	**As ppm**	**Cu ppm**	**Mo ppm**	**Te ppm**	**Ca %**	**Fe %**	**S %**		
0.9			28522	0.0	0.9	0.9	0.081	5.33	684.7	1480.9	9.8	5.54	0.85	3.15	0.384		
0.9	soft ground		28523	0.9	1.8	0.9	0.062	5.1	684.5	711.5	7.1	3.76	1.24	4.02	0.88		
0.9	stopped in grey mud		28524	1.8	2.1	0.3	0.076	5.51	772.4	799.9	8.82	4.1	1.2	4.35	0.959		
	Averages over depth of hole					2.1	0.072143	5.257143	697.1429	1053.871	8.502857	4.571429	1.067143	3.694286	0.678714		

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28522	0.081	5.33	6.53	684.7	455	0.61	6.85	0.85	1.23	12.14	29.1	210	2.06	1481	3.15	12.09
28523	0.062	5.1	7.21	684.5	510	0.72	4.53	1.24	0.43	13.38	70.8	177	2.83	711.5	4.02	13.71
28524	0.076	5.51	7.78	772.4	550	0.7	5.19	1.2	0.54	13.21	73.5	179	3.42	799.9	4.35	14.83

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28522	1.59	<0.1	0.2	2.17	5.4	13.5	0.44	256	9.8	0.68	2.9	25.9	554	4.5	48.2	0.008
28523	0.95	0.2	0.22	2.57	6.1	15.9	0.64	811	7.1	0.62	2.7	47.1	562	7.1	55	0.006
28524	1.77	0.2	0.26	2.86	6.4	17.1	0.7	828	8.82	0.61	2.9	46.5	541	7.5	63.1	0.01

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28522	0.384	39.15	7.9	3.4	1.3	122.7	0.2	5.54	1	0.162	0.35	0.7	93	20.1	5.7	66	5.5
28523	0.88	27.47	8.4	2.5	1.6	113	0.19	3.76	1	0.161	0.36	0.7	98	25.2	4.8	80	12.1
28524	0.959	32.1	9.2	3.4	1.7	116.5	0.21	4.1	1.1	0.168	0.43	0.7	112	30.9	4.9	91	12.1

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 13, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**16A**
Location:	**340173E 5513749N 581 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**9' = 2.7 m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28525	0.0	0.9	0.9	0.184	4.4	689.2	1090.3	9.97	5.62	0.84	3.02	0.291
0.9			28526	0.9	1.8	0.9	0.065	3.84	633.5	777.8	6.33	3.62	1.2	4.17	0.822
0.9	black mud and organic material at end of hole		28527	1.8	2.7	0.9	0.082	5.37	819.3	873.8	8.87	5.04	1.21	3.84	1.005
	Averages over depth of hole					2.7	0.110333	4.536667	714	913.9667	8.39	4.76	1.083333	3.676667	0.706

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28525	0.184	4.4	6.65	689.2	474	0.62	7.31	0.84	0.24	10.58	18.2	268	2.03	1090	3.02	12.02
28526	0.065	3.84	7.63	633.5	572	0.71	4.65	1.2	0.37	13.35	69.8	194	3.05	777.8	4.17	14.47
28527	0.082	5.37	7.14	819.3	481	0.52	6.54	1.21	0.48	12.8	53	200	2.86	873.8	3.84	13.53

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28525	2.23	<0.1	0.2	2.29	4.8	13.3	0.42	181	9.97	0.69	2.8	17.2	532	5	47.8	0.008
28526	2.13	0.3	0.21	2.67	6.2	15.8	0.71	851	6.33	0.61	2.9	52.8	558	5.3	57.8	0.006
28527	2.07	0.3	0.24	2.59	5.9	16.3	0.62	700	8.87	0.49	2.9	33.7	504	5.9	55.5	0.006

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28525	0.291	40.98	7.5	2.9	1.4	118.3	0.22	5.62	1	0.171	0.35	0.6	94	20.3	3.9	51	9.4
28526	0.822	24.2	9.6	2.7	1.8	117.8	0.23	3.62	1.1	0.176	0.37	0.7	121	24.5	4.9	79	8.3
28527	1.005	26.02	8.8	3.4	1.7	97.6	0.21	5.04	1	0.171	0.37	0.8	101	24.7	4.5	75	5.9

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 13, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	23	
Location:	**340103E 5513608N 580 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**		
Total Length:	**17' = 5.2m.**					**Collar Dip:**	-90	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28535	0.0	0.9	0.9	0.06	3.75	499.8	675.1	11.99	5.4	0.89	3.51	0.496
0.9	some water		28536	0.9	1.8	0.9	0.15	5.85	712.4	1122.2	13.76	10.17	1.19	4.07	1.185
0.9			28537	1.8	2.7	0.9	0.179	9.01	963.7	1649.1	13.5	21.44	1.03	4.83	1.838
0.9			28538	2.7	3.7	0.9	0.163	8.01	1029.2	1656.7	12.08	17.86	1.16	4.77	1.701
0.9	black sand		28539	3.7	4.6	0.9	0.178	8.03	1293.5	1749.5	10.61	21	1.15	5.28	1.803
0.6	black sand		28540	4.6	5.2	0.6	0.304	11.83	2812.7	2583.6	10.29	31.56	1.1	6	2.229
	Averages over depth of hole					5.2	0.164588	7.506471	1124.776	1513.235	12.14118	17.10176	1.085882	4.669412	1.501588

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28535	0.06	3.75	6.53	499.8	518	0.5	8.43	0.89	0.19	11.79	30.3	184	1.87	675.1
28536	0.15	5.85	6.59	712.4	551	0.46	15.3	1.19	0.44	13.14	72.5	186	2.06	1122
28537	0.179	9.01	6.67	963.7	384	0.48	33.67	1.03	0.54	13.75	83	187	1.74	1649
28538	0.163	8.01	6.82	1029	481	0.52	25.84	1.16	0.52	14.13	75.6	185	1.71	1657
28539	0.178	8.03	6.67	1294	421	0.52	31.57	1.15	0.54	13.26	75.8	186	1.34	1750
28540	0.304	11.83	6.58	2813	376	0.48	46.69	1.1	0.76	12.42	88.7	184	1.36	2584

Sample	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
Designation	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28535	3.51	11.07	1.63	3.6	0.16	2.3	4.5	10	0.45	295	11.99	0.71	4.3	21.8	476	7.4
28536	4.07	11.6	1.81	0.8	0.19	2.21	6	11	0.55	670	13.76	0.75	3.1	45.5	491	6.4
28537	4.83	12.29	0.59	0.4	0.21	2.26	6.6	9.3	0.55	585	13.5	0.61	2.4	44.1	495	6.2
28538	4.77	12.76	1.75	0.4	0.21	2.32	6.8	9.7	0.58	543	12.08	0.65	2.6	42.4	518	5.4
28539	5.28	12.23	1.22	0.3	0.21	2.19	6.4	8.4	0.57	430	10.61	0.61	2.3	52.7	492	5.9
28540	6	12.14	1.42	0.2	0.27	2.17	5.8	7.9	0.56	421	10.29	0.58	2.2	49.3	469	7.6

Sample	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28535	46.6	0.011	0.496	37.03	7	3	1.4	121.3	0.61	5.4	3.2	0.146	0.36	0.4	77	34.5	4.7	74	6.4
28536	48	0.01	1.185	23.89	7.5	4.1	1.3	123.3	0.4	10.17	1.5	0.153	0.37	0.7	89	33.3	5.1	97	5
28537	44.7	0.012	1.838	18.99	8.2	4.2	1.3	106.2	0.27	21.44	1.2	0.146	0.37	0.7	92	24	4.9	104	6.5
28538	45.2	0.01	1.701	15.54	8.2	4.8	1.5	113.6	0.29	17.86	1.1	0.153	0.32	0.6	100	18.9	4.9	101	6.9
28539	43.2	0.009	1.803	12.28	7.4	5.9	1.5	119.1	0.25	21	0.9	0.138	0.31	0.6	92	17.4	5	101	6.3
28540	42.2	0.009	2.229	13.4	6.6	6.8	1.6	113.7	0.23	31.56	0.8	0.122	0.27	0.5	86	13.2	4.3	123	3.9

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	July 13, 2011 / Mt. Washington Tailings Dam	Acid Test:		Hole Number:	25	
Location:	340172E 5513676N 578 m. (elevation corrected to surface from belt level by subtracting 1 m.)	none		Collar Azimuth:		
Total Length:	20' = 6.1 m.			Collar Dip:	-90	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9	compressed to 2' length		28528	0.0	0.9	0.9	0.087	4.14	957.4	725.3	6.6	7.23	1.32	4.19	0.926
0.9	compressed to 2' length		28529	0.9	1.8	0.9	0.085	3.8	853.3	669.7	10.24	5.55	1.3	4.04	0.735
0.9			28530	1.8	2.7	0.9	0.079	3.74	820.3	548.3	10.48	4.82	1.3	4	0.702
0.9			28531	2.7	3.7	0.9	0.111	4.14	571.6	588.1	10.99	7.15	1.36	3.96	0.663
0.9			28532	3.7	4.6	0.9	0.076	3.96	644.8	648.3	10.44	7.7	1.21	3.88	0.737
0.9	hit wood		28533	4.6	5.5	0.9	0.064	2.97	623.3	496.2	12.77	5.49	1.09	3.64	0.429
0.6	very wet, hit rock, dinged bit		28534	5.5	6.1	0.6	0.067	3.99	580.4	628.4	10.51	8.55	1.25	3.86	0.779
	Averages over depth of hole					6.1	0.082	3.8115	728.645	614.225	10.279	6.546	1.262	3.9425	0.7067

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28528	0.087	4.14	6.94	957.4	496	0.73	9.12	1.32	0.44	12.43	45.8	193	2.13	725.3	4.19
28529	0.085	3.8	6.97	853.3	503	0.57	7.41	1.3	0.35	12.19	39.2	209	2.16	669.7	4.04
28530	0.079	3.74	6.93	820.3	508	0.57	6.41	1.3	0.37	12.24	44.2	201	2.1	548.3	4
28531	0.111	4.14	6.73	571.6	455	0.45	9.53	1.36	0.26	13.99	30.7	202	1.63	588.1	3.96
28532	0.076	3.96	6.8	644.8	477	0.55	10.55	1.21	0.28	12.71	32.5	217	1.62	648.3	3.88
28533	0.064	2.97	6.73	623.3	507	0.47	7.41	1.09	0.2	12.45	23.5	216	1.63	496.2	3.64
28534	0.067	3.99	6.68	580.4	470	0.62	10.93	1.25	0.33	13.59	35.1	217	1.7	628.4	3.86

Sample	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28528	13.37	1.86	0.2	0.22	2.39	5.8	12.8	0.61	469	6.6	0.6	2.6	25.1	567	6.1	50.7	0.005
28529	13.55	1.8	0.3	0.19	2.41	5.7	13.1	0.63	442	10.24	0.63	2.7	34.5	546	9.4	50.7	0.008
28530	12.84	1.23	0.1	0.19	2.43	5.6	13.2	0.61	448	10.48	0.68	2.9	35.6	539	7.3	50.5	0.005
28531	12.96	1.43	0.4	0.16	2.2	6.5	12.1	0.61	405	10.99	0.62	2.7	45.7	541	5.2	44	0.008
28532	13.06	1.29	0.3	0.16	2.32	5.9	12.6	0.58	374	10.44	0.57	2.8	43.4	554	5.3	47.2	0.006
28533	12.72	1.59	0.2	0.15	2.31	5.8	12.8	0.56	281	12.77	0.62	2.7	40.8	516	5.6	45.9	0.008
28534	13.47	1.71	0.2	0.17	2.28	6.5	12.4	0.59	398	10.51	0.57	2.7	51.1	530	5.9	46.8	0.008

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28528	0.926	20.58	8.2	2.9	1.8	119.1	0.2	7.23	0.9	0.16	0.29	0.7	101	20.3	4.6	70	10.9
28529	0.735	22.78	8.8	2.8	1.6	122.2	0.23	5.55	1	0.172	0.31	0.5	107	22.5	4.6	60	4.5
28530	0.702	20.93	8.4	2.8	1.4	125.9	0.22	4.82	1	0.172	0.32	0.6	102	29.7	4.6	63	10.8
28531	0.663	12.75	9	3	1.6	119	0.22	7.15	1.1	0.178	0.26	0.7	109	17.5	6.2	50	9.2
28532	0.737	12.89	9.3	3	1.6	113	0.21	7.7	1.1	0.173	0.28	0.7	109	15.3	4.2	50	14.9
28533	0.429	14.95	9	2.2	1.4	115.7	0.23	5.49	1.1	0.187	0.31	0.7	109	22.5	4.1	44	10.5
28534	0.779	12.91	9.2	3.2	1.6	118.4	0.21	8.55	1.1	0.177	0.29	0.7	111	15.7	4.5	52	7.4

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	July 13, 2011 / Mt. Washington Tailings Dam	Acid Test:		Hole Number:	34	
Location:	340168E 5513603N 578 m. (elevation corrected to surface from belt level by subtracting 1 m.)	none		Collar Azimuth:		
Total Length:	22' = 6.7 m.			Collar Dip:	-90	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28541	0.0	0.9	0.9	0.083	3.37	540.4	681.4	9.85	4.84	1.44	3.65	0.67
0.9			28542	0.9	1.8	0.9	0.073	3.7	526.4	608.8	9.17	4.76	1.56	3.75	0.809
0.9	wet		28543	1.8	2.7	0.9	0.082	4.25	632.1	699	10.95	5.7	1.54	3.65	0.84
0.9			28544	2.7	3.7	0.9	0.089	4.05	610.5	722	9.5	5.76	1.4	3.58	0.793
0.9			28545	3.7	4.6	0.9	0.087	4.72	891.7	730.7	9.03	8.78	1.43	3.96	0.951
0.9	wet		28546	4.6	5.5	0.9	0.077	3.84	662.2	705.7	9.76	6	1.48	3.87	0.909
0.6			28547	5.5	6.4	0.9	0.074	3.73	602.1	682.8	9.36	7.29	1.5	3.87	0.872
0.6			28548	6.4	6.7	0.3	0.087	4.07	716.2	769.3	8.44	7.23	1.41	3.77	0.907
	Averages over depth of hole					6.7	0.081	3.956818	641.4727	693.6591	9.604545	6.21	1.475455	3.761818	0.838136

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28541	0.083	3.37	6.68	540.4	482	0.47	6.95	1.44	0.33	10.29	33.2	198	1.91	681.4
28542	0.073	3.7	6.42	526.4	487	0.5	6.7	1.56	0.39	10.53	40.1	229	1.85	608.8
28543	0.082	4.25	6.42	632.1	471	0.51	8.83	1.54	0.38	11.31	43.1	182	1.92	699
28544	0.089	4.05	6.56	610.5	473	0.52	8.87	1.4	0.35	11.52	38.5	182	1.81	722
28545	0.087	4.72	6.44	891.7	431	0.55	13.42	1.43	0.36	11.74	44.8	181	1.6	730.7
28546	0.077	3.84	6.42	662.2	453	0.46	9.71	1.48	0.36	11.73	40.4	189	1.69	705.7
28547	0.074	3.73	6.61	602.1	441	0.5	10.19	1.5	0.34	11.44	43.8	176	1.71	682.8
28548	0.087	4.07	6.52	716.2	450	0.53	10.7	1.41	0.34	11.77	40.4	180	1.69	769.3

Sample	Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
Designation	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28541	3.65	11.95	1.25	0.2	0.15	2.25	4.7	10.4	0.6	423	9.85	0.71	2.7	34.6	541	4.4
28542	3.75	11.36	1.64	<0.1	0.16	2.12	4.8	10.7	0.62	498	9.17	0.75	2.7	30.4	520	4
28543	3.65	11.68	1.38	<0.1	0.17	2.14	5.1	10.7	0.6	524	10.95	0.68	2.6	32.3	524	6
28544	3.58	11.73	1.74	0.1	0.17	2.25	5.4	10.3	0.6	477	9.5	0.68	2.7	33.5	529	3.8
28545	3.96	12.32	1.55	0.2	0.16	2.19	5.5	9.8	0.58	446	9.03	0.65	2.4	32.5	519	3.9
28546	3.87	11.59	1.5	0.3	0.15	2.15	5.4	9.6	0.59	484	9.76	0.63	3	34.5	519	4
28547	3.87	11.92	0.69	0.2	0.15	2.2	5.3	10	0.61	448	9.36	0.74	2.6	37.2	524	3.8
28548	3.77	11.67	0.64	0.2	0.15	2.23	5.3	10.7	0.59	441	8.44	0.68	2.3	39.6	530	3.9

Sample	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28541	46.7	0.009	0.67	33.2	7.5	3.3	1.4	127.7	0.24	4.84	1	0.161	0.32	0.5	93	24	4.1	60	4.1
28542	43.9	0.007	0.809	21.39	7.8	2.4	1.2	128	0.24	4.76	1	0.165	0.32	0.6	98	32.9	4.2	66	9.8
28543	44.5	0.009	0.84	21.03	7.6	2.8	1.3	124.5	0.22	5.7	1	0.161	0.31	0.6	95	25	4.5	69	4.7
28544	46.8	0.007	0.793	20.73	7.9	2.6	1.4	119.9	0.22	5.76	1.1	0.16	0.32	0.8	100	22.8	4.4	66	6
28545	44.1	0.005	0.951	17.16	7.3	3.5	1.4	124.1	0.2	8.78	0.9	0.153	0.27	0.6	95	17.3	4.3	70	5
28546	43.9	0.009	0.909	20.49	7.3	3.5	1.3	114.6	0.26	6	1	0.158	0.3	0.6	89	21.5	4.2	65	5
28547	44.6	0.009	0.872	21.28	7.4	4.3	1.3	136.6	0.23	7.29	0.9	0.149	0.29	0.5	92	21.8	4.4	67	4.1
28548	43.3	0.011	0.907	19.5	7.4	3.7	1.4	121.5	0.2	7.23	0.9	0.147	0.27	0.6	94	19.1	4.1	66	5.3

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 14, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**35**
Location:	**340208E 5513640N 577 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**	
Total Length:	**14' = 4.3 m.**					**Collar Dip:**	**-90**

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28554	0.0	0.9	0.9	0.233	3.42	630	505.3	11.5	3.59	1.48	4.19	0.184
0.9			28555	0.9	1.8	0.9	0.073	6.04	818.1	1184.5	6.22	4.86	1.37	4.3	0.886
0.9			28556	1.8	2.7	0.9	0.083	5.31	817.2	853.5	7.36	6	1.5	4.2	0.863
0.9			28557	2.7	3.7	0.9	0.113	6.73	1134.8	1266.3	5.65	10.09	1.29	4.46	1.029
0.9	hit rock with bit - small ding		28558	3.7	4.3	0.6	0.107	5.68	896.4	984.9	7.11	6.31	1.48	4.35	0.871
	Averages over depth of hole					4.3	0.122857	5.418571	856.65	957.0429	7.600714	6.16	1.42	4.296429	0.759143

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28554	0.233	3.42	6.69	630	417	0.59	4.81	1.48	0.15	13.07	17.8	232	1.59	505.3	4.19	13.02
28555	0.073	6.04	9.07	818.1	653	0.63	6.78	1.37	0.44	11.32	40.9	147	4.12	1185	4.3	17.69
28556	0.083	5.31	7.47	817.2	498	0.51	9.33	1.5	0.41	12.73	48.1	182	2.48	853.5	4.2	14.51
28557	0.113	6.73	8.67	1135	619	0.66	15.53	1.29	0.59	12.83	50.6	149	2.84	1266	4.46	17.15
28558	0.107	5.68	8.13	896.4	521	0.63	9.68	1.48	0.48	12.83	46.9	177	3.32	984.9	4.35	16.24

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re	S
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28554	0.7	0.4	0.14	1.84	6.1	11.3	0.75	240	11.5	0.86	3.2	28.2	509	7.3	40.6	0.007	0.184
28555	1.89	0.2	0.25	3.38	5.2	15.1	0.85	574	6.22	0.56	3	43.8	520	7.1	71.2	0.006	0.886
28556	0.89	0.2	0.21	2.47	6	12.9	0.74	550	7.36	0.62	2.7	32.8	499	6.9	54.1	0.006	0.863
28557	0.22	0.2	0.28	3.05	6	12.7	0.77	562	5.65	0.49	2.5	23.1	501	10	61.5	0.004	1.029
28558	0.19	0.3	0.24	2.71	5.7	14.6	0.8	574	7.11	0.6	2.8	37.9	496	8.7	62.1	0.009	0.871

Sample	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28554	16.36	10.2	2.6	1.6	154.9	0.23	3.59	1	0.23	0.26	0.5	115	13.4	5.2	49	9.2
28555	34.62	11.9	2.5	2	109.4	0.3	4.86	1.1	0.187	0.49	0.7	123	22.7	4.6	81	4.8
28556	20.09	9.9	3.7	1.9	123.9	0.24	6	1.1	0.18	0.34	0.7	111	17.1	5	75	7.6
28557	17.64	10.9	4.2	2.2	101.9	0.21	10.09	1	0.175	0.35	0.7	116	14.6	4.9	97	6.9
28558	28.54	10.9	3.9	1.9	120	0.22	6.31	1	0.19	0.41	0.7	115	21.1	4.9	83	16

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	July 14, 2011 / Mt. Washington Tailings Dam		Acid Test:			Hole Number:	37A	
Location:	340275E 5513705N 578 m. (elevation corrected to surface from belt level by subtracting 1 m.)		none			Collar Azimuth:		
Total Length:	7.5' = 2.3 m.					Collar Dip:	-90	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28563	0.0	0.9	0.9	0.129	6.53	860.1	2016.3	11.43	9.18	0.81	3.83	0.814
0.9			28564	0.9	1.8	0.9	0.084	4.45	576.8	1029.2	10.48	6.09	1.21	4.5	1.128
0.9			28565	1.8	2.3	0.5	0.105	5.23	671.7	1113.6	11.68	7.73	1.2	4.24	0.992
	Averages over depth of hole					2.3	0.1062	5.438	709.1	1440.92	11.1	7.654	1.048	4.18	0.9752

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28563	0.129	6.53	6.92	860.1	490	0.64	12.89	0.81	0.35	10.24	24	182	1.97	2016	3.83	12.85
28564	0.084	4.45	6.8	576.8	512	0.62	9.24	1.21	0.79	12.29	75.2	200	2.05	1029	4.5	12.59
28565	0.105	5.23	6.54	671.7	439	0.59	10.25	1.2	0.44	12.4	81.5	198	2.26	1114	4.24	12.66

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28563	1.75	<0.1	0.23	2.31	4.6	10.8	0.42	95	11.43	0.67	2.4	15.3	511	6.5	46	0.007
28564	0.65	<0.1	0.18	2.2	7	12.9	0.69	646	10.48	0.75	2.8	56.4	545	7	46.6	0.01
28565	1.83	<0.1	0.2	2.11	5.6	14.5	0.65	699	11.68	0.65	2.9	63.7	532	8.3	48.2	0.007

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28563	0.814	39.29	7.5	5.4	1.5	116.2	0.24	9.18	0.9	0.144	0.39	0.6	88	26.7	3.4	48	9.7
28564	1.128	19	9.4	3.9	1.3	124	0.23	6.09	1	0.178	0.41	0.6	105	34.3	6.5	130	2.4
28565	0.992	24.78	8.5	3	1.3	121.7	0.24	7.73	1	0.167	0.35	0.7	96	36	4.8	85	3.9

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	July 14, 2011 / Mt. Washington Tailings Dam		Acid Test:			Hole Number:	44	
Location:	340203E 5513565N 576 m. (elevation corrected to surface from belt level by subtracting 1 m.)		none			Collar Azimuth:		
Total Length:	14' = 4.3 m.					Collar Dip:	-90	

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28549	0.0	0.9	0.9	0.101	5.25	719.9	1209.3	10.37	7.72	1.36	3.9	0.92
0.9			28550	0.9	1.8	0.9	0.112	5.32	753.7	1139.9	7.78	6.47	1.47	4.18	0.986
0.9			28551	1.8	2.7	0.9	0.273	10.4	1027.1	1221.1	9.9	22.48	1.3	4.38	1.343
0.9			28552	2.7	3.7	0.9	0.115	8.85	888.5	1070.3	8.57	16.88	1.3	4.37	1.297
0.6	moss at end of hole		28553	3.7	4.3	0.6	0.116	6.66	973.7	1322.4	10.71	13.72	1.29	4.23	1.182
	Averages over depth of hole					4.3	0.145357	7.341429	865.3571	1183.329	9.377143	13.435	1.347857	4.210714	1.143

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28549	0.101	5.25	6.52	719.9	434	0.5	11.24	1.36	0.48	11.27	41.6	186	1.99	1209	3.9
28550	0.112	5.32	7.61	753.7	514	0.61	8.99	1.47	0.48	11.56	49.1	170	3	1140	4.18
28551	0.273	10.4	6.91	1027	462	0.66	31.82	1.3	0.49	13.98	55.4	187	2.19	1221	4.38
28552	0.115	8.85	6.82	888.5	468	0.56	23.29	1.3	0.54	13.24	51	201	2.01	1070	4.37
28553	0.116	6.66	7.11	973.7	484	0.68	19.77	1.29	0.57	13.23	52.8	194	2.42	1322	4.23

Sample	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb
Designation	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28549	11.84	0.3	<0.1	0.19	2.13	5.1	11.6	0.52	360	10.37	0.72	2.7	35.6	503	5.1
28550	14.62	0.93	0.1	0.22	2.61	5.3	12.7	0.69	517	7.78	0.63	2.8	43.5	522	4.6
28551	13.3	1.17	0.2	0.2	2.42	6.5	10.9	0.6	476	9.9	0.55	2.5	35.2	506	12.2
28552	13.06	1.33	0.3	0.2	2.38	6.2	11.1	0.61	503	8.57	0.52	2.5	34.2	539	6.1
28553	14.23	1.83	0.3	0.21	2.41	6.1	12.3	0.62	446	10.71	0.56	2.7	35.8	504	5.8

Sample	Rb	Re	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28549	44.5	0.006	0.92	42.84	7.3	4	1.3	131.9	0.22	7.72	0.9	0.158	0.39	0.5	91	23.2	7.4	76	8.3
28550	57.6	0.011	0.986	31.99	9.8	3.3	1.7	121.5	0.24	6.47	1.1	0.171	0.44	0.6	109	25.3	5	84	5.4
28551	49	0.011	1.343	23.8	9.1	5.2	1.7	106.8	0.21	22.48	1.1	0.156	0.36	0.6	107	18.3	4.8	86	16.6
28552	47.3	0.009	1.297	19.98	8.9	4.2	1.7	104.6	0.2	16.88	1.1	0.159	0.32	0.8	105	15.7	4.9	82	8.6
28553	52.4	0.016	1.182	27.15	9.6	4.7	1.8	115.7	0.25	13.72	1	0.161	0.36	0.7	108	19.1	5.4	82	5.7

Mount Washington Tailings Drill Log and Sample Record

Date/Target:	**July 13, 2011 / Mt. Washington Tailings Dam**		**Acid Test:**			**Hole Number:**	**47A**		
Location:	**340307E 5513684N 576 m. (elevation corrected to surface from belt level by subtracting 1 m.)**		none			**Collar Azimuth:**			
Total Length:	**11' = 3.4 m.**					**Collar Dip:**	**-90**		

Interval (m)	Description	Rx	Sample No	From (m)	To (m)	Length (m)	Au g/t	Ag g/t	As ppm	Cu ppm	Mo ppm	Te ppm	Ca %	Fe %	S %
0.9			28559	0.0	0.9	0.9	0.119	5.61	678.8	609.8	12.93	10.99	0.96	3.51	0.372
0.9			28560	0.9	1.8	0.9	0.08	4.86	521.9	1328.7	9.94	5.36	1.05	3.7	0.756
0.9			28561	1.8	2.7	0.9	0.114	3.47	556.9	583.2	8.12	3.62	1.34	3.91	0.869
0.6	wood at end of hole		28562	2.7	3.4	0.6	0.085	4.94	702.6	865.4	6.71	3.21	1.26	4.1	1.078
	Averages over depth of hole					3.4	0.100818	4.7	607.0909	845.0818	9.671818	6.03	1.142727	3.778182	0.740636

Final Report - Job No: 11-360-05850-01

Sample	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu	Fe	Ga
Designation	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm
	Au-1AT	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28559	0.119	5.61	6.86	678.8	483	0.52	15.92	0.96	0.08	10.07	10.1	202	1.87	609.8	3.51	12.78
28560	0.08	4.86	6.37	521.9	486	0.59	6.87	1.05	0.62	12.65	64.2	198	2.01	1329	3.7	12.39
28561	0.114	3.47	7.27	556.9	510	0.54	4.95	1.34	0.35	12.26	46.9	189	2.69	583.2	3.91	13.67
28562	0.085	4.94	8.58	702.6	515	0.63	4.72	1.26	0.42	10.41	50.7	176	3.64	865.4	4.1	15.77

Sample	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni	P	Pb	Rb	Re
Designation	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U
28559	<0.05	0.1	0.2	2.11	4.6	10.8	0.47	99	12.93	0.79	2.7	11.1	493	9.7	44.8	0.01
28560	1.22	0.2	0.21	2.2	5.8	11.2	0.54	592	9.94	0.67	2.7	50.7	517	4.8	47.2	0.008
28561	<0.05	0.1	0.15	2.47	5.6	13.3	0.64	644	8.12	0.7	2.7	34.8	522	7.3	52.6	0.004
28562	1.94	<0.1	0.2	3.07	4.8	14.5	0.69	709	6.71	0.56	2.4	32.1	437	6.5	64.7	<0.002

Sample	S	Sb	Sc	Se	Sn	Sr	Ta	Te	Th	Ti	Tl	U	V	W	Y	Zn	Zr
Designation	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-U	50-4A-UT
28559	0.372	24.74	7.5	3.5	1.3	135	0.18	10.99	0.9	0.167	0.33	0.3	84	29	3.4	35	3.8
28560	0.756	13.8	8.6	3.8	1.4	106.6	0.21	5.36	1.2	0.172	0.36	0.7	104	13	5.2	113	4.8
28561	0.869	20.98	8.8	3.4	1.5	114.9	0.18	3.62	1.1	0.164	0.35	0.6	94	15	4.5	67	3
28562	1.078	27.45	9.5	3.3	1.7	97.5	0.27	3.21	1	0.152	0.44	0.6	108	16.7	4.2	85	2.8

Appendix 4

2011 Mt. Washington Copper Tailings Sample Geochemistry Report

Certificate of Analysis

11-360-05850-01

Inspectorate Exploration & Mining Services Ltd.
#200 - 11620 Horseshoe Way
Richmond, British Columbia V7A 4V5 Canada
Phone: 604-272-7818

Distribution List

Attention: Jacques Houle
6552 Peregrine Road,
Nanaimo, BC V9V 1P8
Phone: 250-390-3930
EMail: jhoule06@shaw.ca

Attention: Amd Burgert
EMail: amd.burgert@telus.net

Submitted By: **Mineral Exploration Consulting**
6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Date Received: 07/18/2011
Date Completed: 08/26/2011
Invoice:

Attention: **Jacques Houle**

Description:

Location	Samples	Type	Preparation Description
Vancouver, BC	77	Rock	SP-RX-2K/Rock/Chips/Drill Core

Location	Method	Description
Vancouver, BC	50-4A-UT	50 Element, 4 Acid, ICPMS, Ultra Trace Level
Vancouver, BC	Au-1AT-AA	Au, 1AT Fire Assay, AAS

By ____________________
Mike Caron, Lab Manager

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Certificate of Analysis

11-360-05850-01

Mineral Exploration Consulting
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Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
		Au-1AT-AA	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
		0.005	0.01	0.01	0.2	5	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
28501	Rock	0.112	5.23	6.49	640.5	517	0.70	8.58	1.04	1.29	13.34	72.3	177	2.13	1304.1
28502	Rock	0.099	4.80	6.60	844.5	428	0.68	5.43	1.07	0.71	12.67	55.1	163	2.36	817.6
28503	Rock	0.171	7.14	6.54	1988.6	433	0.57	19.15	1.20	0.64	13.70	56.9	185	1.51	928.2
28504	Rock	0.144	4.57	6.91	1255.9	444	0.56	14.74	1.33	0.88	11.75	47.1	167	1.32	882.0
28505	Rock	0.125	4.77	6.62	1173.3	435	0.64	13.83	1.27	0.52	13.02	51.7	184	1.50	1089.6
28506	Rock	0.077	3.89	6.99	497.1	512	0.64	6.67	0.91	0.43	12.18	20.5	219	2.11	956.1
28507	Rock	0.350	6.73	6.55	1210.5	462	0.56	8.64	1.10	0.62	13.80	105.5	218	2.20	1169.8
28508	Rock	0.108	8.29	6.13	1271.3	374	0.53	7.94	1.01	0.57	13.85	92.6	219	2.18	1153.2
28509	Rock	0.102	5.36	6.70	771.1	460	0.68	11.27	0.96	0.49	13.11	61.6	184	1.86	1024.2
28510	Rock	0.103	5.87	6.53	910.7	438	0.55	13.19	0.98	0.62	14.62	60.6	213	1.57	1168.5
28511	Rock	0.242	6.29	6.45	1329.0	420	0.56	14.15	1.07	0.58	13.81	62.1	208	1.47	1145.7
28512	Rock	0.395	7.55	6.42	1925.8	421	0.62	21.52	1.09	0.72	13.71	70.4	191	1.41	1469.0
28513	Rock	0.274	8.91	7.05	1272.2	578	0.56	13.13	0.62	0.09	10.81	5.0	177	1.98	207.6
28514	Rock	0.318	12.56	6.70	1505.6	405	0.62	12.15	0.78	1.00	12.28	65.3	225	2.40	3341.3
28515	Rock	0.176	5.94	6.38	1096.7	426	0.75	10.62	0.84	0.57	12.07	72.9	254	1.75	1225.2
28516	Rock	0.067	9.72	6.57	687.9	481	0.57	7.02	1.29	0.67	12.84	55.7	183	2.24	754.1
28517	Rock	0.084	6.12	6.40	723.5	467	0.54	6.83	1.36	0.49	11.46	53.8	203	2.04	655.9
28518	Rock	0.076	9.15	6.40	635.4	453	0.67	8.06	1.32	0.46	12.52	53.8	184	1.92	744.2
28519	Rock	0.072	4.45	6.47	623.1	460	0.63	8.55	1.36	0.50	12.59	57.5	191	1.96	747.8
28520	Rock	0.081	8.33	6.49	680.7	440	0.51	8.56	1.38	0.46	12.83	52.5	222	1.78	729.7
28521	Rock	0.087	7.07	6.37	665.4	435	0.64	8.04	1.42	0.41	11.31	54.8	210	1.86	705.3
28522	Rock	0.081	5.33	6.53	684.7	455	0.61	6.85	0.85	1.23	12.14	29.1	210	2.06	1480.9
28523	Rock	0.062	5.10	7.21	684.5	510	0.72	4.53	1.24	0.43	13.38	70.8	177	2.83	711.5
28524	Rock	0.076	5.51	7.78	772.4	550	0.70	5.19	1.20	0.54	13.21	73.5	179	3.42	799.9
28525	Rock	0.184	4.40	6.65	689.2	474	0.62	7.31	0.84	0.24	10.58	18.2	268	2.03	1090.3
28526	Rock	0.065	3.84	7.63	633.5	572	0.71	4.65	1.20	0.37	13.35	69.8	194	3.05	777.8
28527	Rock	0.082	5.37	7.14	819.3	481	0.52	6.54	1.21	0.48	12.80	53.0	200	2.86	873.8
28528	Rock	0.087	4.14	6.94	957.4	496	0.73	9.12	1.32	0.44	12.43	45.8	193	2.13	725.3
28529	Rock	0.085	3.80	6.97	853.3	503	0.57	7.41	1.30	0.35	12.19	39.2	209	2.16	669.7
28530	Rock	0.079	3.74	6.93	820.3	508	0.57	6.41	1.30	0.37	12.24	44.2	201	2.10	548.3
28531	Rock	0.111	4.14	6.73	571.6	455	0.45	9.53	1.36	0.26	13.99	30.7	202	1.63	588.1
28532	Rock	0.076	3.96	6.80	644.8	477	0.55	10.55	1.21	0.28	12.71	32.5	217	1.62	648.3
28533	Rock	0.064	2.97	6.73	623.3	507	0.47	7.41	1.09	0.20	12.45	23.5	216	1.63	496.2
28534	Rock	0.067	3.99	6.68	580.4	470	0.62	10.93	1.25	0.33	13.59	35.1	217	1.70	628.4
28535	Rock	0.060	3.75	6.53	499.8	518	0.50	8.43	0.89	0.19	11.79	30.3	184	1.87	675.1
28536	Rock	0.150	5.85	6.59	712.4	551	0.46	15.30	1.19	0.44	13.14	72.5	186	2.06	1122.2
28537	Rock	0.179	9.01	6.67	963.7	384	0.48	33.67	1.03	0.54	13.75	83.0	187	1.74	1649.1
28538	Rock	0.163	8.01	6.82	1029.2	481	0.52	25.84	1.16	0.52	14.13	75.6	185	1.71	1656.7
28539	Rock	0.178	8.03	6.67	1293.5	421	0.52	31.57	1.15	0.54	13.26	75.8	186	1.34	1749.5
28540	Rock	0.304	11.83	6.58	2812.7	376	0.48	46.69	1.10	0.76	12.42	88.7	184	1.36	2583.6

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Mineral Exploration Consulting
6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Au	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Ce	Co	Cr	Cs	Cu
		Au-1AT-AA	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT
		ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
		0.005	0.01	0.01	0.2	5	0.05	0.01	0.01	0.02	0.01	0.1	1	0.05	0.2
28541	Rock	0.083	3.37	6.68	540.4	482	0.47	6.95	1.44	0.33	10.29	33.2	198	1.91	681.4
28542	Rock	0.073	3.70	6.42	526.4	487	0.50	6.70	1.56	0.39	10.53	40.1	229	1.85	608.8
28543	Rock	0.082	4.25	6.42	632.1	471	0.51	8.83	1.54	0.38	11.31	43.1	182	1.92	699.0
28544	Rock	0.089	4.05	6.56	610.5	473	0.52	8.87	1.40	0.35	11.52	38.5	182	1.81	722.0
28545	Rock	0.087	4.72	6.44	891.7	431	0.55	13.42	1.43	0.36	11.74	44.8	181	1.60	730.7
28546	Rock	0.077	3.84	6.42	662.2	453	0.46	9.71	1.48	0.36	11.73	40.4	189	1.69	705.7
28547	Rock	0.074	3.73	6.61	602.1	441	0.50	10.19	1.50	0.34	11.44	43.8	176	1.71	682.8
28548	Rock	0.087	4.07	6.52	716.2	450	0.53	10.70	1.41	0.34	11.77	40.4	180	1.69	769.3
28549	Rock	0.101	5.25	6.52	719.9	434	0.50	11.24	1.36	0.48	11.27	41.6	186	1.99	1209.3
28550	Rock	0.112	5.32	7.61	753.7	514	0.61	8.99	1.47	0.48	11.56	49.1	170	3.00	1139.9
28551	Rock	0.273	10.40	6.91	1027.1	462	0.66	31.82	1.30	0.49	13.98	55.4	187	2.19	1221.1
28552	Rock	0.115	8.85	6.82	888.5	468	0.56	23.29	1.30	0.54	13.24	51.0	201	2.01	1070.3
28553	Rock	0.116	6.66	7.11	973.7	484	0.68	19.77	1.29	0.57	13.23	52.8	194	2.42	1322.4
28554	Rock	0.233	3.42	6.69	630.0	417	0.59	4.81	1.48	0.15	13.07	17.8	232	1.59	505.3
28555	Rock	0.073	6.04	9.07	818.1	653	0.63	6.78	1.37	0.44	11.32	40.9	147	4.12	1184.5
28556	Rock	0.083	5.31	7.47	817.2	498	0.51	9.33	1.50	0.41	12.73	48.1	182	2.48	853.5
28557	Rock	0.113	6.73	8.67	1134.8	619	0.66	15.53	1.29	0.59	12.83	50.6	149	2.84	1266.3
28558	Rock	0.107	5.68	8.13	896.4	521	0.63	9.68	1.48	0.48	12.83	46.9	177	3.32	984.9
28559	Rock	0.119	5.61	6.86	678.8	483	0.52	15.92	0.96	0.08	10.07	10.1	202	1.87	609.8
28560	Rock	0.080	4.86	6.37	521.9	486	0.59	6.87	1.05	0.62	12.65	64.2	198	2.01	1328.7
28561	Rock	0.114	3.47	7.27	556.9	510	0.54	4.95	1.34	0.35	12.26	46.9	189	2.69	583.2
28562	Rock	0.085	4.94	8.58	702.6	515	0.63	4.72	1.26	0.42	10.41	50.7	176	3.64	865.4
28563	Rock	0.129	6.53	6.92	860.1	490	0.64	12.89	0.81	0.35	10.24	24.0	182	1.97	2016.3
28564	Rock	0.084	4.45	6.80	576.8	512	0.62	9.24	1.21	0.79	12.29	75.2	200	2.05	1029.2
28565	Rock	0.105	5.23	6.54	671.7	439	0.59	10.25	1.20	0.44	12.40	81.5	198	2.26	1113.6
28566	Rock	0.073	4.46	7.07	738.5	493	0.55	5.97	1.35	0.31	10.90	37.8	166	2.37	715.8
28567	Rock	0.095	4.93	6.61	826.2	490	0.45	6.23	1.42	0.46	11.95	63.6	194	2.12	659.8
28568	Rock	0.085	5.60	6.56	714.7	446	0.64	12.06	1.33	0.44	13.29	54.0	148	1.77	711.7
28569	Rock	0.100	6.15	8.37	931.4	583	0.74	14.16	1.77	0.56	16.82	64.9	186	2.23	900.5
28570	Rock	0.086	5.38	7.60	914.1	540	0.60	14.53	1.60	0.48	14.78	57.4	209	2.14	803.8
28571	Rock	0.090	6.93	7.81	916.6	654	0.67	13.99	1.03	0.29	11.33	36.1	204	2.13	2070.7
28572	Rock	0.135	8.07	7.53	1023.2	532	0.65	14.16	1.42	0.56	15.39	84.6	227	2.20	1640.2
28573	Rock	0.170	7.09	6.65	949.4	468	0.58	15.22	1.10	0.48	13.26	66.3	233	1.86	1419.8
28574	Rock	0.136	7.24	6.63	1081.8	349	0.48	16.55	0.98	0.40	11.62	63.2	216	1.55	1258.3
28575	Rock	0.125	6.02	6.27	1311.0	428	0.52	13.35	1.05	0.41	12.61	60.4	197	1.45	1085.7
28576	Rock	0.217	5.96	6.59	1394.3	463	0.47	13.79	1.11	0.38	11.97	56.1	204	1.42	1109.4
28577	Rock	0.146	6.03	6.65	1603.9	430	0.48	18.65	1.32	0.43	10.93	56.6	222	1.11	1065.7

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6552 Peregrine Road,
Nanaimo, BC V9V 1P8

		Fe	Ga	Ge	Hf	In	K	La	Li	Mg	Mn	Mo	Na	Nb	Ni
		50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT	50-4A-UT
Sample	Sample	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Description	Type	0.01	0.05	0.05	0.1	0.01	0.01	0.5	0.2	0.01	5	0.05	0.01	0.1	0.2
28501	Rock	3.93	11.91	<0.05	1.8	0.22	2.31	5.7	16.8	0.54	624	11.43	0.70	3.3	38.0
28502	Rock	3.77	12.81	1.93	0.3	0.20	2.43	6.1	15.8	0.54	716	8.36	0.48	2.3	38.1
28503	Rock	5.20	12.39	0.26	0.4	0.18	2.20	6.5	11.1	0.57	451	6.95	0.51	2.1	47.2
28504	Rock	4.99	13.59	1.28	0.3	0.18	2.26	5.6	11.3	0.63	422	6.73	0.54	2.3	50.3
28505	Rock	4.98	13.55	1.05	0.3	0.19	2.22	6.4	12.2	0.59	509	8.53	0.48	2.4	74.3
28506	Rock	3.35	13.11	2.01	0.4	0.17	2.42	5.5	14.8	0.55	227	12.28	0.68	3.0	21.5
28507	Rock	4.69	12.67	2.13	0.2	0.25	2.21	6.4	15.5	0.59	611	14.50	0.65	2.9	83.5
28508	Rock	3.92	11.88	2.55	0.1	0.26	2.15	6.7	17.0	0.49	602	13.96	0.58	2.7	52.6
28509	Rock	4.22	12.62	1.70	0.2	0.19	2.34	6.1	13.4	0.56	622	10.46	0.50	2.2	47.0
28510	Rock	4.24	13.45	1.83	0.3	0.20	2.11	6.8	13.4	0.54	494	10.03	0.50	2.5	47.2
28511	Rock	4.62	13.37	1.79	0.4	0.20	2.06	6.5	12.2	0.54	445	9.46	0.51	2.5	52.6
28512	Rock	5.21	12.34	1.65	0.4	0.23	2.08	6.5	11.4	0.53	466	9.61	0.47	2.1	54.0
28513	Rock	3.88	13.49	2.06	0.1	0.28	2.52	5.1	12.9	0.42	85	18.45	0.61	2.9	7.8
28514	Rock	3.88	12.37	2.40	0.1	0.44	2.35	5.6	14.4	0.44	272	17.96	0.56	2.9	35.6
28515	Rock	3.90	12.25	1.73	0.5	0.21	2.15	5.7	13.4	0.49	462	10.19	0.42	2.9	43.0
28516	Rock	3.83	12.95	2.15	<0.1	0.20	2.24	5.7	15.2	0.56	559	9.43	0.67	2.7	39.6
28517	Rock	3.76	12.41	2.04	0.1	0.20	2.28	5.3	14.3	0.55	568	10.08	0.60	3.0	51.9
28518	Rock	3.81	12.25	2.02	0.1	0.19	2.22	5.9	13.6	0.56	656	9.74	0.62	2.9	45.0
28519	Rock	3.87	12.43	2.06	0.1	0.19	2.25	5.9	14.6	0.56	672	10.35	0.63	2.6	54.5
28520	Rock	4.06	11.90	1.85	0.4	0.17	2.17	5.9	12.8	0.57	630	9.55	0.58	3.0	46.8
28521	Rock	3.96	12.24	1.86	0.1	0.17	2.12	5.3	13.0	0.56	634	9.95	0.64	2.6	64.8
28522	Rock	3.15	12.09	1.59	<0.1	0.20	2.17	5.4	13.5	0.44	256	9.80	0.68	2.9	25.9
28523	Rock	4.02	13.71	0.95	0.2	0.22	2.57	6.1	15.9	0.64	811	7.10	0.62	2.7	47.1
28524	Rock	4.35	14.83	1.77	0.2	0.26	2.86	6.4	17.1	0.70	828	8.82	0.61	2.9	46.5
28525	Rock	3.02	12.02	2.23	<0.1	0.20	2.29	4.8	13.3	0.42	181	9.97	0.69	2.8	17.2
28526	Rock	4.17	14.47	2.13	0.3	0.21	2.67	6.2	15.8	0.71	851	6.33	0.61	2.9	52.8
28527	Rock	3.84	13.53	2.07	0.3	0.24	2.59	5.9	16.3	0.62	700	8.87	0.49	2.9	33.7
28528	Rock	4.19	13.37	1.86	0.2	0.22	2.39	5.8	12.8	0.61	469	6.60	0.60	2.6	25.1
28529	Rock	4.04	13.55	1.80	0.3	0.19	2.41	5.7	13.1	0.63	442	10.24	0.63	2.7	34.5
28530	Rock	4.00	12.84	1.23	0.1	0.19	2.43	5.6	13.2	0.61	448	10.48	0.68	2.9	35.6
28531	Rock	3.96	12.96	1.43	0.4	0.16	2.20	6.5	12.1	0.61	405	10.99	0.62	2.7	45.7
28532	Rock	3.88	13.06	1.29	0.3	0.16	2.32	5.9	12.6	0.58	374	10.44	0.57	2.8	43.4
28533	Rock	3.64	12.72	1.59	0.2	0.15	2.31	5.8	12.8	0.56	281	12.77	0.62	2.7	40.8
28534	Rock	3.86	13.47	1.71	0.2	0.17	2.28	6.5	12.4	0.59	398	10.51	0.57	2.7	51.1
28535	Rock	3.51	11.07	1.63	3.6	0.16	2.30	4.5	10.0	0.45	295	11.99	0.71	4.3	21.8
28536	Rock	4.07	11.60	1.81	0.8	0.19	2.21	6.0	11.0	0.55	670	13.76	0.75	3.1	45.5
28537	Rock	4.83	12.29	0.59	0.4	0.21	2.26	6.6	9.3	0.55	585	13.50	0.61	2.4	44.1
28538	Rock	4.77	12.76	1.75	0.4	0.21	2.32	6.8	9.7	0.58	543	12.08	0.65	2.6	42.4
28539	Rock	5.28	12.23	1.22	0.3	0.21	2.19	6.4	8.4	0.57	430	10.61	0.61	2.3	52.7
28540	Rock	6.00	12.14	1.42	0.2	0.27	2.17	5.8	7.9	0.56	421	10.29	0.58	2.2	49.3

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6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Fe 50-4A-UT % 0.01	Ga 50-4A-UT ppm 0.05	Ge 50-4A-UT ppm 0.05	Hf 50-4A-UT ppm 0.1	In 50-4A-UT ppm 0.01	K 50-4A-UT % 0.01	La 50-4A-UT ppm 0.5	Li 50-4A-UT ppm 0.2	Mg 50-4A-UT % 0.01	Mn 50-4A-UT ppm 5	Mo 50-4A-UT ppm 0.05	Na 50-4A-UT % 0.01	Nb 50-4A-UT ppm 0.1	Ni 50-4A-UT ppm 0.2
28541	Rock	3.65	11.95	1.25	0.2	0.15	2.25	4.7	10.4	0.60	423	9.85	0.71	2.7	34.6
28542	Rock	3.75	11.36	1.64	<0.1	0.16	2.12	4.8	10.7	0.62	498	9.17	0.75	2.7	30.4
28543	Rock	3.65	11.68	1.38	<0.1	0.17	2.14	5.1	10.7	0.60	524	10.95	0.68	2.6	32.3
28544	Rock	3.58	11.73	1.74	0.1	0.17	2.25	5.4	10.3	0.60	477	9.50	0.68	2.7	33.5
28545	Rock	3.96	12.32	1.55	0.2	0.16	2.19	5.5	9.8	0.58	446	9.03	0.65	2.4	32.5
28546	Rock	3.87	11.59	1.50	0.3	0.15	2.15	5.4	9.6	0.59	484	9.76	0.63	3.0	34.5
28547	Rock	3.87	11.92	0.69	0.2	0.15	2.20	5.3	10.0	0.61	448	9.36	0.74	2.6	37.2
28548	Rock	3.77	11.67	0.64	0.2	0.15	2.23	5.3	10.7	0.59	441	8.44	0.68	2.3	39.6
28549	Rock	3.90	11.84	0.30	<0.1	0.19	2.13	5.1	11.6	0.52	360	10.37	0.72	2.7	35.6
28550	Rock	4.18	14.62	0.93	0.1	0.22	2.61	5.3	12.7	0.69	517	7.78	0.63	2.8	43.5
28551	Rock	4.38	13.30	1.17	0.2	0.20	2.42	6.5	10.9	0.60	476	9.90	0.55	2.5	35.2
28552	Rock	4.37	13.06	1.33	0.3	0.20	2.38	6.2	11.1	0.61	503	8.57	0.52	2.5	34.2
28553	Rock	4.23	14.23	1.83	0.3	0.21	2.41	6.1	12.3	0.62	446	10.71	0.56	2.7	35.8
28554	Rock	4.19	13.02	0.70	0.4	0.14	1.84	6.1	11.3	0.75	240	11.50	0.86	3.2	28.2
28555	Rock	4.30	17.69	1.89	0.2	0.25	3.38	5.2	15.1	0.85	574	6.22	0.56	3.0	43.8
28556	Rock	4.20	14.51	0.89	0.2	0.21	2.47	6.0	12.9	0.74	550	7.36	0.62	2.7	32.8
28557	Rock	4.46	17.15	0.22	0.2	0.28	3.05	6.0	12.7	0.77	562	5.65	0.49	2.5	23.1
28558	Rock	4.35	16.24	0.19	0.3	0.24	2.71	5.7	14.6	0.80	574	7.11	0.60	2.8	37.9
28559	Rock	3.51	12.78	<0.05	0.1	0.20	2.11	4.6	10.8	0.47	99	12.93	0.79	2.7	11.1
28560	Rock	3.70	12.39	1.22	0.2	0.21	2.20	5.8	11.2	0.54	592	9.94	0.67	2.7	50.7
28561	Rock	3.91	13.67	<0.05	0.1	0.15	2.47	5.6	13.3	0.64	644	8.12	0.70	2.7	34.8
28562	Rock	4.10	15.77	1.94	<0.1	0.20	3.07	4.8	14.5	0.69	709	6.71	0.56	2.4	32.1
28563	Rock	3.83	12.85	1.75	<0.1	0.23	2.31	4.6	10.8	0.42	95	11.43	0.67	2.4	15.3
28564	Rock	4.50	12.59	0.65	<0.1	0.18	2.20	7.0	12.9	0.69	646	10.48	0.75	2.8	56.4
28565	Rock	4.24	12.66	1.83	<0.1	0.20	2.11	5.6	14.5	0.65	699	11.68	0.65	2.9	63.7
28566	Rock	3.81	12.89	1.72	<0.1	0.18	2.37	4.9	14.0	0.63	478	6.78	0.63	2.6	27.4
28567	Rock	3.82	11.61	0.48	<0.1	0.21	2.23	5.5	13.7	0.59	565	9.18	0.69	2.6	31.6
28568	Rock	4.05	12.82	0.68	0.2	0.18	2.17	6.3	12.2	0.60	556	8.70	0.53	2.3	31.1
28569	Rock	5.28	16.42	0.43	1.3	0.23	2.72	7.6	15.7	0.77	727	10.60	0.67	3.6	44.7
28570	Rock	4.73	15.39	0.10	0.2	0.22	2.40	6.8	15.4	0.70	608	8.92	0.64	2.6	44.8
28571	Rock	4.69	14.67	<0.05	0.2	0.24	2.48	5.3	16.1	0.54	224	13.33	0.78	3.1	19.4
28572	Rock	5.06	13.96	<0.05	<0.1	0.25	2.14	7.1	15.2	0.61	714	13.25	0.65	2.8	34.3
28573	Rock	4.46	12.92	<0.05	0.2	0.20	2.22	6.3	12.4	0.54	552	13.76	0.54	2.3	35.4
28574	Rock	4.74	12.71	0.14	0.2	0.19	2.18	5.2	11.1	0.52	439	10.26	0.54	2.2	33.0
28575	Rock	4.72	12.41	0.20	0.2	0.17	2.06	5.8	10.9	0.52	437	11.62	0.48	2.1	32.2
28576	Rock	4.94	12.49	<0.05	0.2	0.17	2.08	5.5	10.2	0.53	397	9.76	0.51	2.1	43.3
28577	Rock	5.55	12.92	0.13	0.2	0.16	2.03	5.0	8.8	0.60	394	7.72	0.51	1.9	42.3

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Nanaimo, BC V9V 1P8

Sample Description	Sample Type	P 50-4A-UT ppm 10	Pb 50-4A-UT ppm 0.5	Rb 50-4A-UT ppm 0.1	Re 50-4A-UT ppm 0.002	S 50-4A-UT % 0.01	Sb 50-4A-UT ppm 0.05	Sc 50-4A-UT ppm 0.1	Se 50-4A-UT ppm 1.0	Sn 50-4A-UT ppm 0.2	Sr 50-4A-UT ppm 0.2	Ta 50-4A-UT ppm 0.05	Te 50-4A-UT ppm 0.05	Th 50-4A-UT ppm 0.2	Ti 50-4A-UT % 0.005
28501	Rock	522	28.4	48.0	0.010	1.216	22.88	8.0	3.5	1.3	120.6	0.41	6.87	1.7	0.152
28502	Rock	544	21.0	53.7	0.009	1.093	17.11	7.5	3.1	1.6	93.1	0.27	4.68	0.9	0.128
28503	Rock	532	8.6	42.8	0.010	1.537	9.65	7.3	4.8	1.8	108.2	0.21	15.66	0.9	0.127
28504	Rock	520	17.1	44.2	0.008	1.167	6.92	7.2	5.0	2.0	115.6	0.24	11.45	0.7	0.127
28505	Rock	539	7.2	47.6	0.007	1.259	8.85	8.0	6.1	1.7	108.1	0.23	9.34	0.9	0.137
28506	Rock	537	6.2	49.7	0.007	0.422	22.87	8.9	2.6	1.9	115.3	0.28	4.97	1.1	0.184
28507	Rock	500	5.7	49.0	0.015	1.689	26.42	9.3	4.1	1.4	111.6	0.26	7.17	1.2	0.172
28508	Rock	470	6.6	46.7	0.013	1.447	38.32	7.1	3.6	1.2	105.2	0.24	6.15	1.0	0.147
28509	Rock	537	6.0	47.8	0.008	1.321	14.36	8.7	3.7	1.4	92.0	0.25	8.87	1.2	0.143
28510	Rock	526	7.7	46.1	0.011	1.348	15.74	9.3	5.5	1.6	104.4	0.21	10.23	1.1	0.150
28511	Rock	504	6.3	44.1	0.005	1.315	15.46	7.9	4.7	1.7	106.3	0.21	11.55	1.6	0.139
28512	Rock	489	118.0	43.9	0.011	1.544	14.37	7.7	4.4	1.7	98.4	0.25	15.14	1.0	0.132
28513	Rock	484	10.7	53.3	0.012	0.391	27.79	7.2	4.9	1.7	110.1	0.26	10.24	0.8	0.165
28514	Rock	507	6.4	50.9	0.012	1.603	31.03	8.8	5.2	1.4	102.4	0.26	9.47	1.2	0.164
28515	Rock	825	6.3	47.9	0.007	1.329	12.75	9.2	5.6	1.7	86.2	0.27	7.86	1.1	0.172
28516	Rock	525	6.1	52.5	0.008	0.924	23.41	7.6	3.2	1.5	132.9	0.23	5.91	0.9	0.143
28517	Rock	522	5.9	47.8	0.006	0.990	20.13	7.7	3.2	1.4	125.5	0.23	5.23	0.9	0.151
28518	Rock	536	5.9	46.9	0.011	0.981	19.92	7.1	3.8	1.3	117.9	0.22	6.16	0.9	0.149
28519	Rock	538	5.7	46.5	0.008	0.982	20.98	7.7	2.8	1.4	121.0	0.22	6.66	0.9	0.148
28520	Rock	547	5.3	44.9	0.009	1.010	16.58	7.5	2.6	1.3	109.4	0.24	6.54	1.0	0.151
28521	Rock	523	5.4	45.5	0.007	1.020	20.85	7.3	3.1	1.3	123.8	0.19	6.45	0.8	0.142
28522	Rock	554	4.5	48.2	0.008	0.384	39.15	7.9	3.4	1.3	122.7	0.20	5.54	1.0	0.162
28523	Rock	562	7.1	55.0	0.006	0.880	27.47	8.4	2.5	1.6	113.0	0.19	3.76	1.0	0.161
28524	Rock	541	7.5	63.1	0.010	0.959	32.10	9.2	3.4	1.7	116.5	0.21	4.10	1.1	0.168
28525	Rock	532	5.0	47.8	0.008	0.291	40.98	7.5	2.9	1.4	118.3	0.22	5.62	1.0	0.171
28526	Rock	558	5.3	57.8	0.006	0.822	24.20	9.6	2.7	1.8	117.8	0.23	3.62	1.1	0.176
28527	Rock	504	5.9	55.5	0.006	1.005	26.02	8.8	3.4	1.7	97.6	0.21	5.04	1.0	0.171
28528	Rock	567	6.1	50.7	0.005	0.926	20.58	8.2	2.9	1.8	119.1	0.20	7.23	0.9	0.160
28529	Rock	546	9.4	50.7	0.008	0.735	22.78	8.8	2.8	1.6	122.2	0.23	5.55	1.0	0.172
28530	Rock	539	7.3	50.5	0.005	0.702	20.93	8.4	2.8	1.4	125.9	0.22	4.82	1.0	0.172
28531	Rock	541	5.2	44.0	0.008	0.663	12.75	9.0	3.0	1.6	119.0	0.22	7.15	1.1	0.178
28532	Rock	554	5.3	47.2	0.006	0.737	12.89	9.3	3.0	1.6	113.0	0.21	7.70	1.1	0.173
28533	Rock	516	5.6	45.9	0.008	0.429	14.95	9.0	2.2	1.4	115.7	0.23	5.49	1.1	0.187
28534	Rock	530	5.9	46.8	0.008	0.779	12.91	9.2	3.2	1.6	118.4	0.21	8.55	1.1	0.177
28535	Rock	476	7.4	46.6	0.011	0.496	37.03	7.0	3.0	1.4	121.3	0.61	5.40	3.2	0.146
28536	Rock	491	6.4	48.0	0.010	1.185	23.89	7.5	4.1	1.3	123.3	0.40	10.17	1.5	0.153
28537	Rock	495	6.2	44.7	0.012	1.838	18.99	8.2	4.2	1.3	106.2	0.27	21.44	1.2	0.146
28538	Rock	518	5.4	45.2	0.010	1.701	15.54	8.2	4.8	1.5	113.6	0.29	17.86	1.1	0.153
28539	Rock	492	5.9	43.2	0.009	1.803	12.28	7.4	5.9	1.5	119.1	0.25	21.00	0.9	0.138
28540	Rock	469	7.6	42.2	0.009	2.229	13.40	6.6	6.8	1.6	113.7	0.23	31.56	0.8	0.122

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Nanaimo, BC V9V 1P8

Sample Description	Sample Type	P 50-4A-UT ppm 10	Pb 50-4A-UT ppm 0.5	Rb 50-4A-UT ppm 0.1	Re 50-4A-UT ppm 0.002	S 50-4A-UT % 0.01	Sb 50-4A-UT ppm 0.05	Sc 50-4A-UT ppm 0.1	Se 50-4A-UT ppm 1.0	Sn 50-4A-UT ppm 0.2	Sr 50-4A-UT ppm 0.2	Ta 50-4A-UT ppm 0.05	Te 50-4A-UT ppm 0.05	Th 50-4A-UT ppm 0.2	Ti 50-4A-UT % 0.005
28541	Rock	541	4.4	46.7	0.009	0.670	33.20	7.5	3.3	1.4	127.7	0.24	4.84	1.0	0.161
28542	Rock	520	4.0	43.9	0.007	0.809	21.39	7.8	2.4	1.2	128.0	0.24	4.76	1.0	0.165
28543	Rock	524	6.0	44.5	0.009	0.840	21.03	7.6	2.8	1.3	124.5	0.22	5.70	1.0	0.161
28544	Rock	529	3.8	46.8	0.007	0.793	20.73	7.9	2.6	1.4	119.9	0.22	5.76	1.1	0.160
28545	Rock	519	3.9	44.1	0.005	0.951	17.16	7.3	3.5	1.4	124.1	0.20	8.78	0.9	0.153
28546	Rock	519	4.0	43.9	0.009	0.909	20.49	7.3	3.5	1.3	114.6	0.26	6.00	1.0	0.158
28547	Rock	524	3.8	44.6	0.009	0.872	21.28	7.4	4.3	1.3	136.6	0.23	7.29	0.9	0.149
28548	Rock	530	3.9	43.3	0.011	0.907	19.50	7.4	3.7	1.4	121.5	0.20	7.23	0.9	0.147
28549	Rock	503	5.1	44.5	0.006	0.920	42.84	7.3	4.0	1.3	131.9	0.22	7.72	0.9	0.158
28550	Rock	522	4.6	57.6	0.011	0.986	31.99	9.8	3.3	1.7	121.5	0.24	6.47	1.1	0.171
28551	Rock	506	12.2	49.0	0.011	1.343	23.80	9.1	5.2	1.7	106.8	0.21	22.48	1.1	0.156
28552	Rock	539	6.1	47.3	0.009	1.297	19.98	8.9	4.2	1.7	104.6	0.20	16.88	1.1	0.159
28553	Rock	504	5.8	52.4	0.016	1.182	27.15	9.6	4.7	1.8	115.7	0.25	13.72	1.0	0.161
28554	Rock	509	7.3	40.6	0.007	0.184	16.36	10.2	2.6	1.6	154.9	0.23	3.59	1.0	0.230
28555	Rock	520	7.1	71.2	0.006	0.886	34.62	11.9	2.5	2.0	109.4	0.30	4.86	1.1	0.187
28556	Rock	499	6.9	54.1	0.006	0.863	20.09	9.9	3.7	1.9	123.9	0.24	6.00	1.1	0.180
28557	Rock	501	10.0	61.5	0.004	1.029	17.64	10.9	4.2	2.2	101.9	0.21	10.09	1.0	0.175
28558	Rock	496	8.7	62.1	0.009	0.871	28.54	10.9	3.9	1.9	120.0	0.22	6.31	1.0	0.190
28559	Rock	493	9.7	44.8	0.010	0.372	24.74	7.5	3.5	1.3	135.0	0.18	10.99	0.9	0.167
28560	Rock	517	4.8	47.2	0.008	0.756	13.80	8.6	3.8	1.4	106.6	0.21	5.36	1.2	0.172
28561	Rock	522	7.3	52.6	0.004	0.869	20.98	8.8	3.4	1.5	114.9	0.18	3.62	1.1	0.164
28562	Rock	437	6.5	64.7	<0.002	1.078	27.45	9.5	3.3	1.7	97.5	0.27	3.21	1.0	0.152
28563	Rock	511	6.5	46.0	0.007	0.814	39.29	7.5	5.4	1.5	116.2	0.24	9.18	0.9	0.144
28564	Rock	545	7.0	46.6	0.010	1.128	19.00	9.4	3.9	1.3	124.0	0.23	6.09	1.0	0.178
28565	Rock	532	8.3	48.2	0.007	0.992	24.78	8.5	3.0	1.3	121.7	0.24	7.73	1.0	0.167
28566	Rock	536	6.5	47.8	0.009	0.839	26.53	8.1	3.6	1.3	106.8	0.23	4.00	1.1	0.170
28567	Rock	506	6.7	46.8	0.003	1.061	27.03	7.3	3.1	1.3	120.1	0.18	4.58	1.0	0.148
28568	Rock	536	6.0	47.2	0.006	1.050	13.02	8.4	3.3	1.5	105.6	0.17	8.49	1.0	0.151
28569	Rock	726	6.1	59.4	0.009	1.505	17.82	11.0	4.7	2.0	135.6	0.46	9.83	2.3	0.187
28570	Rock	664	5.4	54.5	0.006	1.295	18.22	10.3	4.3	1.8	130.3	0.26	10.23	1.3	0.161
28571	Rock	573	7.6	57.1	0.010	0.828	23.47	8.6	3.5	1.5	152.8	0.27	9.90	1.0	0.183
28572	Rock	574	5.8	47.2	0.012	1.907	24.51	8.5	4.0	1.4	123.9	0.24	9.26	1.1	0.172
28573	Rock	488	5.3	47.6	0.009	1.556	18.84	8.1	4.0	1.4	104.3	0.17	11.16	1.0	0.145
28574	Rock	494	5.2	45.8	0.007	1.773	14.34	7.2	4.2	1.6	101.5	0.19	11.24	0.9	0.128
28575	Rock	499	5.2	43.4	0.009	1.593	14.35	6.8	3.8	1.6	102.2	0.17	9.32	0.8	0.127
28576	Rock	481	4.8	43.7	0.009	1.513	13.50	6.9	3.6	1.6	103.9	0.17	9.32	0.7	0.135
28577	Rock	488	5.6	41.9	0.006	1.711	7.96	7.0	4.6	1.7	111.9	0.18	12.43	0.7	0.128

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11-360-05850-01

Mineral Exploration Consulting
6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Tl 50-4A-UT ppm 0.02	U 50-4A-UT ppm 0.1	V 50-4A-UT ppm 1	W 50-4A-UT ppm 0.1	Y 50-4A-UT ppm 0.1	Zn 50-4A-UT ppm 2	Zr 50-4A-UT ppm 0.5
28501	Rock	0.37	0.6	91	46.2	5.3	142	3.0
28502	Rock	0.32	0.7	94	13.3	4.4	87	2.9
28503	Rock	0.22	0.6	87	9.5	4.5	87	7.5
28504	Rock	0.21	0.5	93	7.3	4.2	86	6.2
28505	Rock	0.23	0.7	94	11.5	4.7	83	8.0
28506	Rock	0.34	0.6	109	21.3	4.4	50	12.5
28507	Rock	0.44	0.8	115	27.3	4.8	109	5.2
28508	Rock	0.42	0.7	91	18.4	4.0	88	3.7
28509	Rock	0.34	0.9	107	13.5	5.8	77	14.0
28510	Rock	0.28	0.7	111	11.3	4.6	83	8.5
28511	Rock	0.24	0.7	102	10.5	4.2	80	17.5
28512	Rock	0.26	0.6	99	9.5	4.2	94	9.4
28513	Rock	0.43	0.4	101	38.7	2.3	26	6.3
28514	Rock	0.57	0.8	98	30.5	3.9	114	7.0
28515	Rock	0.31	0.9	110	13.7	5.1	112	13.8
28516	Rock	0.35	0.6	102	31.3	5.2	71	3.2
28517	Rock	0.34	0.6	98	28.6	4.5	70	13.2
28518	Rock	0.31	0.6	91	27.4	4.6	77	11.6
28519	Rock	0.33	0.6	93	26.4	4.5	75	4.8
28520	Rock	0.32	0.7	96	20.5	4.5	71	8.0
28521	Rock	0.32	0.5	95	24.4	6.4	70	5.1
28522	Rock	0.35	0.7	93	20.1	5.7	66	5.5
28523	Rock	0.36	0.7	98	25.2	4.8	80	12.1
28524	Rock	0.43	0.7	112	30.9	4.9	91	12.1
28525	Rock	0.35	0.6	94	20.3	3.9	51	9.4
28526	Rock	0.37	0.7	121	24.5	4.9	79	8.3
28527	Rock	0.37	0.8	101	24.7	4.5	75	5.9
28528	Rock	0.29	0.7	101	20.3	4.6	70	10.9
28529	Rock	0.31	0.5	107	22.5	4.6	60	4.5
28530	Rock	0.32	0.6	102	29.7	4.6	63	10.8
28531	Rock	0.26	0.7	109	17.5	6.2	50	9.2
28532	Rock	0.28	0.7	109	15.3	4.2	50	14.9
28533	Rock	0.31	0.7	109	22.5	4.1	44	10.5
28534	Rock	0.29	0.7	111	15.7	4.5	52	7.4
28535	Rock	0.36	0.4	77	34.5	4.7	74	6.4
28536	Rock	0.37	0.7	89	33.3	5.1	97	5.0
28537	Rock	0.37	0.7	92	24.0	4.9	104	6.5
28538	Rock	0.32	0.6	100	18.9	4.9	101	6.9
28539	Rock	0.31	0.6	92	17.4	5.0	101	6.3
28540	Rock	0.27	0.5	86	13.2	4.3	123	3.9

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6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Tl 50-4A-UT ppm 0.02	U 50-4A-UT ppm 0.1	V 50-4A-UT ppm 1	W 50-4A-UT ppm 0.1	Y 50-4A-UT ppm 0.1	Zn 50-4A-UT ppm 2	Zr 50-4A-UT ppm 0.5
28541	Rock	0.32	0.5	93	24.0	4.1	60	4.1
28542	Rock	0.32	0.6	98	32.9	4.2	66	9.8
28543	Rock	0.31	0.6	95	25.0	4.5	69	4.7
28544	Rock	0.32	0.8	100	22.8	4.4	66	6.0
28545	Rock	0.27	0.6	95	17.3	4.3	70	5.0
28546	Rock	0.30	0.6	89	21.5	4.2	65	5.0
28547	Rock	0.29	0.5	92	21.8	4.4	67	4.1
28548	Rock	0.27	0.6	94	19.1	4.1	66	5.3
28549	Rock	0.39	0.5	91	23.2	7.4	76	8.3
28550	Rock	0.44	0.6	109	25.3	5.0	84	5.4
28551	Rock	0.36	0.6	107	18.3	4.8	86	16.6
28552	Rock	0.32	0.8	105	15.7	4.9	82	8.6
28553	Rock	0.36	0.7	108	19.1	5.4	82	5.7
28554	Rock	0.26	0.5	115	13.4	5.2	49	9.2
28555	Rock	0.49	0.7	123	22.7	4.6	81	4.8
28556	Rock	0.34	0.7	111	17.1	5.0	75	7.6
28557	Rock	0.35	0.7	116	14.6	4.9	97	6.9
28558	Rock	0.41	0.7	115	21.1	4.9	83	16.0
28559	Rock	0.33	0.3	84	29.0	3.4	35	3.8
28560	Rock	0.36	0.7	104	13.0	5.2	113	4.8
28561	Rock	0.35	0.6	94	15.0	4.5	67	3.0
28562	Rock	0.44	0.6	108	16.7	4.2	85	2.8
28563	Rock	0.39	0.6	88	26.7	3.4	48	9.7
28564	Rock	0.41	0.6	105	34.3	6.5	130	2.4
28565	Rock	0.35	0.7	96	36.0	4.8	85	3.9
28566	Rock	0.38	0.7	94	26.0	4.2	64	3.7
28567	Rock	0.35	0.8	84	32.7	4.1	81	8.5
28568	Rock	0.29	0.8	102	15.8	4.8	76	7.0
28569	Rock	0.37	0.8	120	21.0	5.9	90	4.5
28570	Rock	0.35	1.0	115	19.8	5.2	80	3.4
28571	Rock	0.39	0.6	98	30.4	3.9	69	6.2
28572	Rock	0.44	0.8	89	29.9	5.0	105	3.5
28573	Rock	0.33	1.0	86	19.9	4.7	85	11.2
28574	Rock	0.29	0.7	84	15.3	3.7	79	9.2
28575	Rock	0.27	0.5	84	14.7	4.0	79	5.0
28576	Rock	0.26	0.5	79	15.2	3.5	76	14.1
28577	Rock	0.21	0.4	82	8.7	3.6	82	6.3

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Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Au Au-1AT-AA ppm 0.005	Ag 50-4A-UT ppm 0.01	Al 50-4A-UT % 0.01	As 50-4A-UT ppm 0.2	Ba 50-4A-UT ppm 5	Be 50-4A-UT ppm 0.05	Bi 50-4A-UT ppm 0.01	Ca 50-4A-UT % 0.01	Cd 50-4A-UT ppm 0.02	Ce 50-4A-UT ppm 0.01	Co 50-4A-UT ppm 0.1	Cr 50-4A-UT ppm 1	Cs 50-4A-UT ppm 0.05	Cu 50-4A-UT ppm 0.2
28501	Rock		5.23	6.49	640.5	517	0.70	8.58	1.04	1.29	13.34	72.3	177	2.13	1304.1
28501 Dup			5.66	6.53	635.1	507	0.65	8.51	1.08	1.25	11.94	73.3	186	2.08	1320.3
QCV1108-00225-0002-BLK			<0.01	<0.01	<0.2	<5	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2
STD-CDN-ME-8 expected			61.70												1030.0
STD-CDN-ME-8 result			62.46												1010.2
28519	Rock		4.45	6.47	623.1	460	0.63	8.55	1.36	0.50	12.59	57.5	191	1.96	747.8
28519 Dup			4.67	6.41	651.1	459	0.52	8.59	1.33	0.41	12.78	56.1	184	1.95	746.9
QCV1108-00225-0005-BLK			<0.01	<0.01	<0.2	<5	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2
STD-OREAS94-4A expected			3.37					8.02				23.1			11400
STD-OREAS94-4A result			3.41		9.6	409	2.74	8.04		0.18	85.26	23.1		7.00	>10000
28537	Rock		9.01	6.67	963.7	384	0.48	33.67	1.03	0.54	13.75	83.0	187	1.74	1649.1
28537 Dup			8.40	6.70	982.0	392	0.57	31.24	1.01	0.55	15.36	85.8	186	1.88	1651.0
QCV1108-00225-0008-BLK			<0.01	<0.01	<0.2	<5	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2
STD-CDN-ME-8 expected			61.70												1030.0
STD-CDN-ME-8 result			62.33												990.4
28555	Rock		6.04	9.07	818.1	653	0.63	6.78	1.37	0.44	11.32	40.9	147	4.12	1184.5
28555 Dup			6.30	9.10	811.6	640	0.65	7.01	1.37	0.44	11.66	42.6	141	4.18	1152.1
QCV1108-00225-0011-BLK			<0.01	<0.01	<0.2	<5	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2
STD-CDN-ME-8 expected			61.70												1030.0
STD-CDN-ME-8 result			61.38												1008.1
28573	Rock		7.09	6.65	949.4	468	0.58	15.22	1.10	0.48	13.26	66.3	233	1.86	1419.8
28573 Dup			6.71	6.48	916.4	438	0.60	14.29	1.08	0.45	13.05	64.8	240	1.73	1390.3
QCV1108-00225-0014-BLK			<0.01	<0.01	<0.2	<5	<0.05	<0.01	<0.01	<0.02	<0.01	<0.1	<1	<0.05	<0.2
STD-OREAS94-4A expected			3.37					8.02				23.1			11400
STD-OREAS94-4A result			3.78		10.6	410	2.74	8.09		0.15	84.45	23.8		6.95	>10000
STD-OxG84 expected		0.922													
STD-OxG84 result		0.918													
QCV1108-00226-0004-BLK		0.006													
STD-OxJ80 expected		2.331													
STD-OxJ80 result		2.334													
28555	Rock	0.073													
28555 Dup		0.072													
QCV1108-00226-0008-BLK		0.009													
28573	Rock	0.170													
28573 Dup		0.152													
STD-OxD87 expected		0.417													
STD-OxD87 result		0.403													

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6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Fe 50-4A-UT % 0.01	Ga 50-4A-UT ppm 0.05	Ge 50-4A-UT ppm 0.05	Hf 50-4A-UT ppm 0.1	In 50-4A-UT ppm 0.01	K 50-4A-UT % 0.01	La 50-4A-UT ppm 0.5	Li 50-4A-UT ppm 0.2	Mg 50-4A-UT % 0.01	Mn 50-4A-UT ppm 5	Mo 50-4A-UT ppm 0.05	Na 50-4A-UT % 0.01	Nb 50-4A-UT ppm 0.1	Ni 50-4A-UT ppm 0.2
28501	Rock	3.93	11.91	<0.05	1.8	0.22	2.31	5.7	16.8	0.54	624	11.43	0.70	3.3	38.0
28501 Dup		4.07	12.23	<0.05	0.2	0.22	2.21	5.8	16.1	0.55	645	11.69	0.69	2.8	38.1
QCV1108-00225-0002-BLK		<0.01	<0.05	<0.05	<0.1	<0.01	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2
28519	Rock	3.87	12.43	2.06	0.1	0.19	2.25	5.9	14.6	0.56	672	10.35	0.63	2.6	54.5
28519 Dup		3.79	12.35	1.98	0.2	0.18	2.27	6.1	13.7	0.56	644	10.22	0.62	2.7	51.8
QCV1108-00225-0005-BLK		<0.01	<0.05	<0.05	<0.1	<0.01	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2
STD-OREAS94-4A expected															
STD-OREAS94-4A result			17.32		3.6	1.17		40.7	26.3			0.93		14.1	41.6
28537	Rock	4.83	12.29	0.59	0.4	0.21	2.26	6.6	9.3	0.55	585	13.50	0.61	2.4	44.1
28537 Dup		4.73	12.61	0.69	0.4	0.22	2.33	7.1	10.2	0.56	574	15.01	0.64	2.5	44.4
QCV1108-00225-0008-BLK		<0.01	<0.05	<0.05	<0.1	<0.01	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2
28555	Rock	4.30	17.69	1.89	0.2	0.25	3.38	5.2	15.1	0.85	574	6.22	0.56	3.0	43.8
28555 Dup		4.32	17.99	2.01	0.2	0.27	3.35	5.3	15.9	0.85	576	5.93	0.59	2.9	44.9
QCV1108-00225-0011-BLK		<0.01	<0.05	<0.05	<0.1	<0.01	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2
28573	Rock	4.46	12.92	<0.05	0.2	0.20	2.22	6.3	12.4	0.54	552	13.76	0.54	2.3	35.4
28573 Dup		4.42	12.23	<0.05	0.2	0.20	2.11	6.1	12.3	0.53	544	11.09	0.52	2.1	34.1
QCV1108-00225-0014-BLK		<0.01	<0.05	<0.05	<0.1	<0.01	<0.01	<0.5	<0.2	<0.01	<5	<0.05	<0.01	<0.1	<0.2
STD-OREAS94-4A expected															
STD-OREAS94-4A result			18.56		3.8	1.17		40.9	27.1			0.96		13.9	43.9

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Nanaimo, BC V9V 1P8

Sample Description	Sample Type	P 50-4A-UT ppm 10	Pb 50-4A-UT ppm 0.5	Rb 50-4A-UT ppm 0.1	Re 50-4A-UT ppm 0.002	S 50-4A-UT % 0.01	Sb 50-4A-UT ppm 0.05	Sc 50-4A-UT ppm 0.1	Se 50-4A-UT ppm 1.0	Sn 50-4A-UT ppm 0.2	Sr 50-4A-UT ppm 0.2	Ta 50-4A-UT ppm 0.05	Te 50-4A-UT ppm 0.05	Th 50-4A-UT ppm 0.2	Ti 50-4A-UT % 0.005
28501	Rock	522	28.4	48.0	0.010	1.216	22.88	8.0	3.5	1.3	120.6	0.41	6.87	1.7	0.152
28501 Dup		529	27.9	49.9	0.010	1.218	23.57	7.8	3.5	1.3	122.1	0.23	6.60	1.1	0.158
QCV1108-00225-0002-BLK		<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1.0	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
STD-CDN-ME-8 expected			19400												
STD-CDN-ME-8 result			>10000												
28519	Rock	538	5.7	46.5	0.008	0.982	20.98	7.7	2.8	1.4	121.0	0.22	6.66	0.9	0.148
28519 Dup		539	5.2	48.4	0.006	0.983	21.23	7.4	3.6	1.4	122.0	0.21	6.97	0.9	0.149
QCV1108-00225-0005-BLK		<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1.0	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
STD-OREAS94-4A expected			30.9			1.380	2.36		12.9	22.6					
STD-OREAS94-4A result			30.3	189.3	<0.002	1.281	2.73	12.0	13.9	23.0	34.4	1.27	<0.05	17.5	
28537	Rock	495	6.2	44.7	0.012	1.838	18.99	8.2	4.2	1.3	106.2	0.27	21.44	1.2	0.146
28537 Dup		490	5.9	45.9	0.015	1.792	19.67	8.4	4.8	1.5	108.4	0.28	20.80	1.3	0.142
QCV1108-00225-0008-BLK		<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1.0	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
STD-CDN-ME-8 expected			19400												
STD-CDN-ME-8 result			>10000												
28555	Rock	520	7.1	71.2	0.006	0.886	34.62	11.9	2.5	2.0	109.4	0.30	4.86	1.1	0.187
28555 Dup		505	10.9	73.5	0.005	0.834	35.27	12.0	4.5	2.1	109.1	0.34	4.84	1.1	0.183
QCV1108-00225-0011-BLK		<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1.0	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
STD-CDN-ME-8 expected			19400												
STD-CDN-ME-8 result			>10000												
28573	Rock	488	5.3	47.6	0.009	1.556	18.84	8.1	4.0	1.4	104.3	0.17	11.16	1.0	0.145
28573 Dup		502	4.9	47.8	0.006	1.601	18.38	7.8	4.0	1.3	100.5	0.16	10.07	0.9	0.137
QCV1108-00225-0014-BLK		<10	<0.5	<0.1	<0.002	<0.01	<0.05	<0.1	<1.0	<0.2	<0.2	<0.05	<0.05	<0.2	<0.005
STD-OREAS94-4A expected			30.9			1.380	2.36		12.9	22.6					
STD-OREAS94-4A result			31.0	207.4	0.006	1.353	2.74	12.6	16.0	23.1	34.6	1.28	0.11	17.0	

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6552 Peregrine Road,
Nanaimo, BC V9V 1P8

Sample Description	Sample Type	Tl 50-4A-UT ppm 0.02	U 50-4A-UT ppm 0.1	V 50-4A-UT ppm 1	W 50-4A-UT ppm 0.1	Y 50-4A-UT ppm 0.1	Zn 50-4A-UT ppm 2	Zr 50-4A-UT ppm 0.5
28501	Rock	0.37	0.6	91	46.2	5.3	142	3.0
28501 Dup		0.38	0.7	87	48.5	7.5	145	2.3
QCV1108-00225-0002-BLK		<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
STD-CDN-ME-8 expected							19200	
STD-CDN-ME-8 result							>10000	
28519	Rock	0.33	0.6	93	26.4	4.5	75	4.8
28519 Dup		0.32	0.7	93	26.4	6.4	73	7.1
QCV1108-00225-0005-BLK		<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
STD-OREAS94-4A expected							171	
STD-OREAS94-4A result		0.86	3.3			22.9	179	117.5
28537	Rock	0.37	0.7	92	24.0	4.9	104	6.5
28537 Dup		0.37	0.7	98	23.6	4.8	102	7.8
QCV1108-00225-0008-BLK		<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
STD-CDN-ME-8 expected							19200	
STD-CDN-ME-8 result							>10000	
28555	Rock	0.49	0.7	123	22.7	4.6	81	4.8
28555 Dup		0.48	0.7	130	23.4	4.8	78	13.2
QCV1108-00225-0011-BLK		<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
STD-CDN-ME-8 expected							19200	
STD-CDN-ME-8 result							>10000	
28573	Rock	0.33	1.0	86	19.9	4.7	85	11.2
28573 Dup		0.31	0.6	85	17.3	4.3	84	7.3
QCV1108-00225-0014-BLK		<0.02	<0.1	<1	<0.1	<0.1	<2	<0.5
STD-OREAS94-4A expected							171	
STD-OREAS94-4A result		0.82	3.0			24.6	183	118.1

Appendix 5

2014 Mt. Washington Copper Tailings Metallurgical Test Work Report

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PJ5154 – North Bay Resources

Mount Washington Copper Metallurgical Testwork Report

NORTH BAY RESOURCES INC.

Prepared for: Perry Leopold

Skippack, PA

Date: 11 July 2014

Authors: David Middleditch

Experimental Testwork: Keith Jellis, Cole McIvor

DISCLAIMER

The data provided in this report and the associated interpretations offered are based on the samples made available to Blue Coast Research Ltd. No assurances can be made by Blue Coast Research Ltd. on the representivity of the samples tested.

EXECUTIVE SUMMARY

Blue Coast Research Ltd. ("BCR") has been contracted by Mr. Perry Leopold of North Bay Resources ("NBR") to perform a preliminary metallurgical testwork programme on samples collected from the Mount Washington Tailings deposit by NBR's consulting geologist Jacques Houle and BCR's David Middleditch. Located on mid Vancouver Island, approximately 100km North of Parksville, BC the tailings pond is a product of the historical Mount Washington Copper Mine.

BCR were contracted to conduct a series of preliminary metallurgical tests to determine whether any economical extraction of the metals present in the historical tailings pond could be achieved. This program included:

- Sampling of the tailings pond
- SG determination of 4 samples
- Particle size distribution of 4 samples
- Head assay of a blended Master Composite
- Rougher flotation testing on the blended Master Composite
- Gravity concentration of potential gold values on the blended Master Composite

The MWCT Master Composite as prepared by BCR graded 0.15% Cu, 3.43% Fe, 0.13g/t Au and 1.03% S. Rougher flotation testwork produced a bulk concentrate with copper and gold recoveries to a low grade bulk sulphide rougher concentrate of 60% and 67% respectively. Gravity concentration testwork produced a moderately high grade concentrate grading 43g/t Au at a recovery of 10% Au, suggesting the presence of some fine grained gold remaining in the tailings pond.

SG determination of four samples resulted in an average solids density of 2.7 and the average particle size distribution of the in situ samples was measured to be 80% passing 234µm.

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1. INTRODUCTION

The Mount Washington Copper project is located on mid Vancouver Island, approximately 100km North of Parksville, BC the tailings pond is a product of the historical Mount Washington Copper Mine. The mine was in production in the 1960s and it is believed that the head grade averaged ~2% copper over the life of the mine. A BC Assessment report (*BCAR 32514, J. Houle 2011*) measured the average tailings grade to be 0.11% copper suggesting that the historic MWC mill achieved well over 90% copper recovery to concentrate. North Bay Resources Inc. currently owns the tailings deposit as well as the nearby Murex, Oyster, Wolf Lake and Domineer Vein properties.

BCR were contracted to conduct a series of preliminary metallurgical tests to determine whether any economical extraction of the metals present in the historical tailings pond could be achieved. This program included:

- Sampling of the tailings pond
- SG determination of 4 samples
- Particle size distribution of 4 samples
- Head assay of a blended Master Composite
- Rougher flotation testing on the blended Master Composite
- Gold gravity concentration on the blended Master Composite

All testwork was undertaken in house at the Blue Coast Research metallurgical testwork facility in Parksville, BC. All assays were conducted in house unless otherwise stated. The details of the testwork conducted are included in this testwork report.

2. SAMPLE SELECTION & PREPARATION

Mr. Jacques Houle P.Eng. and David Middleditch, VP of Operations Blue Coast Research visited the Mount Washington Copper Tailings deposit on the 28th May 2014 in order to collect samples for metallurgical testwork and sample characterisation.

Four (4) sample locations were selected in order to provide reasonable spatial representivity across the deposit. The samples' GPS coordinates as well as sample IDs were as follows:

- **MWCT-03**: 340031E, 5513677N, 568m elevation.
- **MWCT-05**: 340104E, 5513746N, 578m elevation.
- **MWCT-23**: 340104E, 5513610N, 576m elevation.
- **MWCT-25**: 340172E, 5513677N, 578m elevation.

The four samples were collected via hand auger and sufficient quantities of wet tailings were collected to provide between 7 and 10kg dry weight (approximately) of each sample for downstream testing:

Table 1 – Summary of Sample Weights Collected

Sample ID	Wet Weight (Kg)	Dry Estimate (Kg)
MWCT - 03	9.2	7.8
MWCT - 05	7.8	6.7
MWCT - 23	9.7	7.8
MWCT - 25	10.1	8.1
Total	**36.8**	**30.3**

The samples were not oven dried prior to estimating the dry weight due to concerns over further oxidising of mineral surfaces prior to flotation testwork. The estimated dry weight was calculated by weighing the filtered cake and assuming 85% moisture content, which is a typical value for sulphide mineral filter cakes.

In the laboratory, all sample preparation, sub sampling and blending was conducted wet to avoid any oven drying of the samples. Each sample filter cake was homogenised by hand in a large metal tray and subsampled for SG measured and particle size distribution analysis. A Master Composite was created by taking approximately equal portions of each sample and blending them thoroughly in an agitated tank.

3. SAMPLE CHARACTERISATION

3.1. Specific Gravity (SG) Determination

The Specific Gravity (SG) of each of the four samples was measured via volumetric flask method. A known mass of sample is added to a volumetric flask, the flask is filled to the 100ml meniscus line and placed in an ultrasonic bath for 3 minutes to remove any air bubbles. The SG (g/cc) for each samples was measured as follows:

Table 2 – Sample SG Measurement Data

Sample ID	SG (g/cc)
MWCT - 03	2.69
MWCT - 05	2.71
MWCT - 23	2.68
MWCT - 25	2.74
Total	**2.71**

As the above table suggests, the SG values for the four samples are relatively consistent and yield and average SG of 2.71. The full SG determination test data sheets are included in the Appendix of this report.

3.2. Particle Size Distribution

Each of the four samples was submitted for a particle size distribution analysis to determine the p80 (80% passing size) of the in situ tailings material. This information was expected to provide an insight into the primary grind that the historical Mount Washington Copper was operating at as well as to determine whether finer grinding would be required for any potential tailings reprocessing operation.

Each sample was wet screened at 38 microns prior to dry screening the +38µm fraction on a stack of screens (38, 53, 75, 106, 150, 212, 300, 425µm) in a conventional “root two” series. The results are summarised in the following graphs.

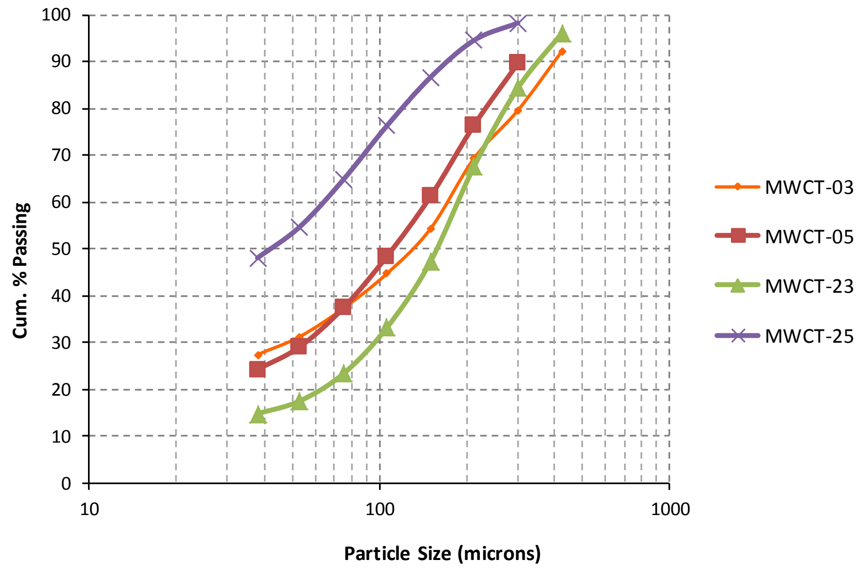


Figure 1 – Summary of MWCT Sample Particle Size Distributions

The sample p80s ranged from 121µm (MWCT-25) to 303µm (MWCT-03) yielding an average p80 of 234µm for all four samples. For the most part, it would seem that the primary grind at the historic Mount Washington Copper mill was relatively coarse though it does seem likely that at some point in time, a finer primary grind was employed, perhaps due to more challenging mineral textures and associations.

3.3. Head Assays

The blended Master Composite, upon which the flotation and gravity testwork was to be conducted on, was subsampled and submitted for head assay (Cu, Fe, Au and S). The singleton head assays are reported in the table below.

Table 3 – Summary of MWCT Head Assays

Sample ID	Cu (%)	Fe (%)	Au (g/t)	S (%)
Master Composite Head	0.15	3.43	0.13	1.03

4. FLOTATION TESTWORK RESULTS

Two rougher flotation tests were conducted on the MWCT Master Composite employing slightly different flotation conditions to produce a bulk sulphide rougher concentrate. Due to the limited scope of this project, no cleaning testwork was conducted so the concentrates produced are relatively low grade and not indicative of potential final concentrate grades, rather they provide basic information with regards to target mineral flotability and potential for producing saleable concentrates. The test conditions are described below:

- **MWCT F-1:** 2 minute "polishing grind" in order to freshen mineral surfaces with 250g/t lime added to the mill. Rougher flotation was conducted over 7 minutes of flotation time at pH 8.5 maintained with lime. 40g/t PAX was added as a collector and 38g/t MIBC as a frother.
- **MWCT F-2:** 10 minute primary grind producing a flotation feed size p80 of ~130µm with 250g/t lime added and 100g/t of NaHS as a sulphidizing agent. Rougher flotation was conducted over 7 minutes of flotation time at natural pH after 500g/t NaHS was added to the conditioning stage ahead of flotation. 40g/t PAX and 23g/t MIBC were added as collector and frother respectively.

The detailed worksheets for these tests can be found in the Appendix of this report and the results are summarised in the tables below.

Table 4 – MWCT F-1 Mass Balance Flotation Results

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Fe	S	Au	Cu	Fe	S	Au
Cu Rougher 1 Conc	**7.8**	0.41	**2.5**	**15.8**	**9.5**	**0.9**	6.6	1.8	3.6	2.8
Cu Rougher 2 Conc	**41.8**	2.18	**1.9**	**22.2**	**16.6**	**2.0**	27.3	13.8	33.7	32.9
Cu Rougher 3 Conc	**65.1**	3.39	**0.9**	**12.9**	**7.9**	**0.7**	20.0	12.5	24.9	19.0
Rougher Tails	**1803.7**	94.02	**0.074**	**2.7**	**0.4**	**0.1**	46.1	71.9	37.7	45.3
Calculated Head	**1918.4**	**100.00**	**0.15**	**3.50**	**1.07**	**0.13**	**100.0**	**100.0**	**100.0**	**100.0**
ERD Head	2000.0	100.00	0.15	3.43	1.03	0.13	-	-	-	-
Call Factor	95.9	-	100.6	102.1	104.1	99.3	-	-	-	-
Cu Rougher 1 Conc	7.8	0.4	2.5	15.8	1.6	0.02	6.6	1.8	3.6	2.8
Cu Rougher 1-2 Conc	49.6	2.6	2.0	21.2	18.3	0.22	33.9	15.6	37.4	35.7
Cu Rougher 1-3 Conc	**114.7**	**6.0**	**1.4**	**16.5**	**19.6**	**0.43**	**53.9**	**28.1**	**62.3**	**54.7**

Table 5 - MWCT F-2 Mass Balance Flotation Results

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Fe	S	Au	Cu	Fe	S	Au
Cu Rougher 1 Conc	**21.7**	1.13	**1.5**	**29.3**	**30.2**	**3.0**	11.4	9.1	28.6	24.7
Cu Rougher 2 Conc	**47.9**	2.50	**2.2**	**22.9**	**17.5**	**1.7**	35.9	15.8	36.6	31.5
Cu Rougher 3 Conc	**55.9**	2.92	**0.7**	**11.2**	**5.3**	**0.5**	12.9	9.0	12.9	10.3
Rougher Tails	**1791.0**	93.45	**0.065**	**2.6**	**0.3**	**0.05**	39.7	66.1	21.9	33.5
Calculated Head	**1916.5**	**100.00**	**0.15**	**3.6**	**1.2**	**0.14**	**100.0**	**100.0**	**100.0**	**100.0**
ERD Head	2000.0	100.00	0.15	3.43	1.03	0.13	-	-	-	-
Call Factor	95.8	-	101.3	105.6	116.0	103.3	-	-	-	-
Cu Rougher 1 Conc	21.7	1.1	1.5	29.25	30.2	3.0	11.4	9.1	28.6	24.7
Cu Rougher 1-2 Conc	69.6	3.6	2.0	24.85	21.5	2.1	47.3	24.9	65.2	56.2
Cu Rougher 1-3 Conc	**125.5**	**6.5**	**1.4**	**18.78**	**14.3**	**1.4**	**60.3**	**33.9**	**78.1**	**66.5**

Both tests produced relatively low rougher concentrate grades with copper grades at 1.4% Cu and gold grade ranging from 0.4g/t (test F-1) to 1.4g/t Au (test F-2). The combination of finer grind and NaHS addition in test F-2 produced higher copper gold and sulphur recoveries of 60%, 78% and 67% respectively versus the coarser grind/no NaHS test.

Copper/Gold recovery versus mass pull curves are shown below and summarise the above results:

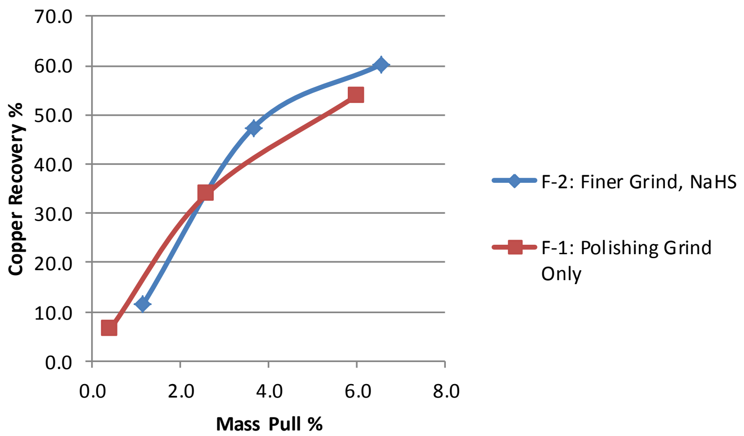


Figure 2 – Flotation Test Copper Recovery vs. mass Pull Curves

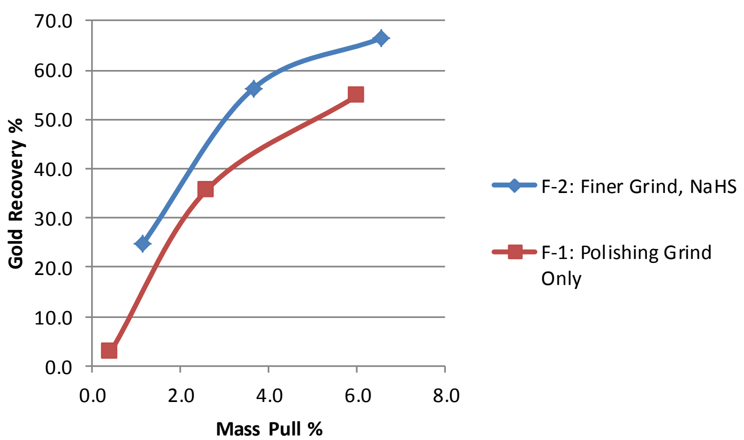


Figure 3 - Flotation Test Gold Recovery vs. mass Pull Curves

Both tests achieved over 6% mass pull with the finer grind/NaHS test (F-2) yielding a slightly higher mass pull to rougher concentrate of 6.5%. The above graphs highlight the higher copper and gold recoveries to rougher concentrate achieved in test F-2.

Visually, very little in the way of sulphide mineralisation was observed during both flotation tests and the rougher concentrate grades confirm that the concentrates produced, although a significant upgrade form the head grade, were low and below saleable grade. Regrinding and cleaning of the rougher concentrate may result in higher concentrate grades and lower collector dosages in the rougher flotation stage may result in more selective flotation conditions and higher concentrate grades. Higher collector dosages were used in these preliminary tests to demonstrate recoverability of the target minerals and due to the potentially oxidised state of the historic tailings material.

5. GRAVITY TESTWORK RESULTS

An ~10kg subsample of the Master Composite was subjected to a gold gravity concentration amenability test to determine whether any free gold could be concentrated into a marketable gold concentrate. The ~10kg of sample was repulped to 60% solids and passed through a laboratory scale MD3 Knelson concentrator at the as is particle size (no additional grinding). The Knelson concentrate, typically a fixed mass of 100g regardless of sample tested was then further upgraded on a MAT gravity table to produce a gravity table concentrate ("tip") and a table tail. The tip was assayed to extinction for gold by fire assay and the Knelson tails and table tails were combined, subsampled and also assayed for gold. The mass balance results are summarised below and details of the test may be found in the Appendix of this report.

Table 6 – Summary of Gravity Concentration Testwork on the MWCT Master Composite

Screen Size µm	Sample Weight g	Weight %	Assay, g/t Au	% Dist. Au
MAT Tip	**2.7**	0.03	**42.71**	9.28
MAT Tails	**9515.4**	99.97	**0.12**	90.72
Total	9518.1	100.00	0.13	100.00

Less than 10% of the gold was recovered to a gravity concentrate grading 43g/t Au. Though the concentrate grade should be sufficiently high enough to be marketable, the recovery is low suggesting that very little of the in situ gold is gravity recoverable. Finer grinding of the tailings material prior to gravity concentration may result in higher gold recoveries due to increased liberation of the gold.

6. CONCLUSIONS & RECOMMENDATIONS

The following salient conclusions are drawn from the preliminary metallurgical testwork undertaken at Blue Coast Research:

- Four discrete samples were collected form the Mount Washington Copper Tailings deposit on Vancouver Island, BC. The average grade of the four composites was 0.15% Cu, 3.43% Fe, 0.13g/t Au and 1.03% S as measured by Blue Coast Research.
- SG measurement of all four composites produced SG values ranging from 2.68g/cc to 2.74g/c.
- Particle Size Distribution measurement of all four composites produced p80 values of 303µm, 235µm, 277µm and 121µm for composites MWCT-03, 05, 23 and 25 respectively. This data suggests a relatively coarse grind size was employed at the historic Mount Washington Copper operation though finer grinds were employed at some point during the operation's life.
- From historic data, we believe the head grade of the MWCT operation averaged ~2% Cu and given the average tailings grade reported in an earlier study, the historic operation achieved copper recoveries to concentrate of well above 90%. This was achieved at relatively coarse grinds suggesting that the historic feed material was readily flotable.
- Two rougher flotation tests were conducted on the MWCT Master Composite grading 0.15% Cu and 0.13g/t. Test F-2 employed a primary grind of ~130µm with NaHS as a sulphidizing agent to resulphidize the potentially oxidised sulphide mineral surfaces. This test produced the best result with copper and gold recoveries to a bulk rougher concentrate of 60% and 67% respectively.
- The bulk rougher concentrate produced was relatively low grade at 1.4% Cu and 14% S but further flotation testwork may improve this result with the assessment of finer primary grind and more selective reagent strategies. The production of a salable final product would however be dependent on sufficient upgrading of the rougher concentrate to produce at least a 20% Cu grade and based on the preliminary results obtained to date this would be difficult to achieve at economic metal recoveries.

APPENDIX A – TESTWORK DATA

Sample Density Calculation

Sample Tracking	
Sample ID:	MWCT - 03
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tailings
Date:	June 13th, 2014
Technician:	KJ
Comments:	

Sample Weight (g)	59.9
Wt1 (g)	68.59
Wt2 (g)	128.51
Wt3 (g)	206.22
Density (g/cc)	2.69

Sample Weight (g)	
Wt1 (g)	
Wt2 (g)	
Wt3 (g)	
Density (g/cc)	0.00

Density Calculation

$$\frac{(Wt2 - Wt1)}{(100mL - (Wt3 - Wt2))}$$

Where:

Wt1 = Weight of flask

Wt2 = Weight of flask and sample

Wt3 = Weight of flask, sample and water

Sample Density Calculation

Sample Tracking	
Sample ID:	MWCT - 05
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tailings
Date:	June 13th, 2014
Technician:	KJ
Comments:	

Sample Weight (g)	51.4
Wt1 (g)	68.47
Wt2 (g)	119.82
Wt3 (g)	200.88
Density (g/cc)	2.71

Sample Weight (g)	
Wt1 (g)	
Wt2 (g)	
Wt3 (g)	
Density (g/cc)	0.00

Density Calculation

$$\frac{(Wt2 - Wt1)}{(100mL - (Wt3 - Wt2))}$$

Where:

Wt1 = Weight of flask

Wt2 = Weight of flask and sample

Wt3 = Weight of flask, sample and water

Sample Density Calculation

Sample Tracking	
Sample ID:	MWCT - 23
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tailings
Date:	June 13th, 2014
Technician:	KJ
Comments:	

Sample Weight (g)	51.3
Wt1 (g)	57.25
Wt2 (g)	108.50
Wt3 (g)	189.40
Density (g/cc)	2.68

Sample Weight (g)	
Wt1 (g)	
Wt2 (g)	
Wt3 (g)	
Density (g/cc)	0.00

Density Calculation

$$\frac{(Wt2 - Wt1)}{(100mL - (Wt3 - Wt2))}$$

Where:

Wt1 = Weight of flask

Wt2 = Weight of flask and sample

Wt3 = Weight of flask, sample and water

Sample Density Calculation

Sample Tracking	
Sample ID:	MWCT - 25
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tailings
Date:	June 14th, 2014
Technician:	KJ
Comments:	

Sample Weight (g)	65.7
Wt1 (g)	59.42
Wt2 (g)	134.96
Wt3 (g)	211.07
Density (g/cc)	3.16

Sample Weight (g)	81.8
Wt1 (g)	70.25
Wt2 (g)	151.78
Wt3 (g)	222.04
Density (g/cc)	2.74

Density Calculation

$$\frac{(Wt2 - Wt1)}{(100mL - (Wt3 - Wt2))}$$

Where:

Wt1 = Weight of flask

Wt2 = Weight of flask and sample

Wt3 = Weight of flask, sample and water

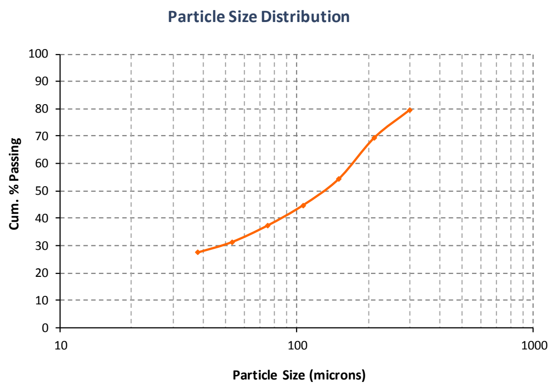
Size Distribution Determination Worksheet

Sample Tracking	
Sample ID:	MWCT - 03
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tails
Date:	June 12th, 2014
Technician:	Cole
Objective:	Determine Feed PSD

Screen Size (µm)	Sample Dry Wt (g)	Weight (%)	Cum. Weight (%)	Cum. Weight (%) Passing
425	**22.1**	7.77	7.77	92.23
300	**35.8**	12.59	20.36	79.64
212	**51.2**	18.00	30.59	69.41
150	**42.8**	15.05	45.64	54.36
106	**27.3**	9.60	55.24	44.76
75	**21.1**	7.42	62.66	37.34
53	**17.2**	6.05	68.71	31.29
38	**10.8**	3.80	72.50	27.50
-38 pan	**8.2**	2.88		
-38 Total	78.2	27.50	100.00	0.00
Total	284.4	100.00		

Mass Accountability	
Start Mass	**306.8**
+38µm wet screen	**236.8**
-38µm wet screen	**70.0**
Mass Rec. (%)	92.70

p 80	303 µm



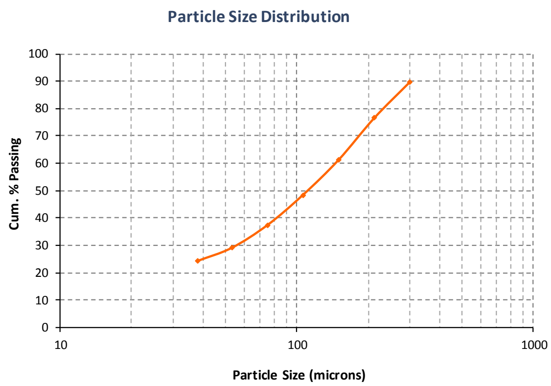
Size Distribution Determination Worksheet

Sample Tracking	
Sample ID:	MWCT - 05
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tails
Date:	June 12th, 2014
Technician:	Cole
Objective:	Determine Feed PSD

Screen Size (µm)	Sample Dry Wt (g)	Weight (%)	Cum. Weight (%)	Cum. Weight (%) Passing
425		0.00	0.00	100.00
300	**22.5**	10.33	10.33	89.67
212	**28.7**	13.18	23.51	76.49
150	**33.2**	15.24	38.75	61.25
106	**27.9**	12.81	51.56	48.44
75	**24.0**	11.02	62.58	37.42
53	**18.1**	8.31	70.89	29.11
38	**10.4**	4.78	75.67	24.33
-38 pan	**5.4**	2.48		
-38 Total	53.0	24.33	100.00	0.00
Total	217.8	100.00		

Mass Accountability	
Start Mass	**218.1**
+38µm wet screen	**170.5**
-38µm wet screen	**47.6**
Mass Rec. (%)	99.86

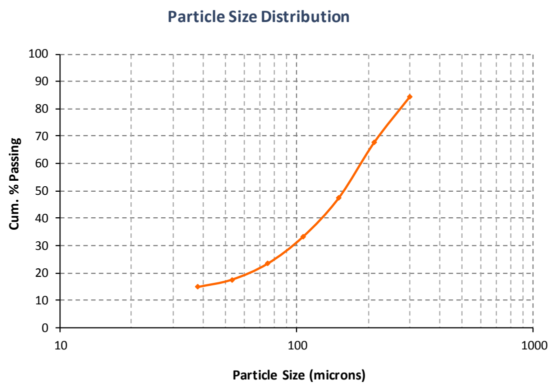
p 80	235 µm



Size Distribution Determination Worksheet

Sample Tracking	
Sample ID:	MWCT - 23
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tails
Date:	June 12th, 2014
Technician:	Cole
Objective:	Determine Feed PSD

p 80 277 µm



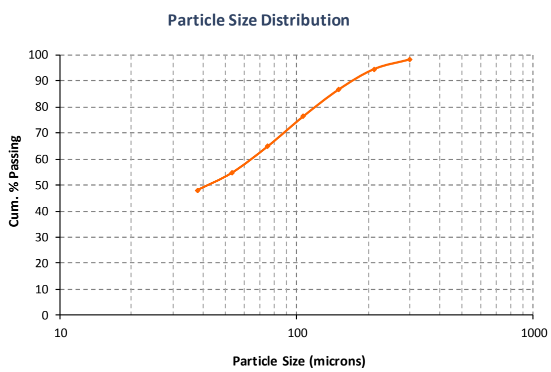
Screen Size (µm)	Sample Dry Wt (g)	Weight (%)	Cum. Weight (%)	Cum. Weight (%) Passing
425	**8.4**	3.88	3.88	96.12
300	**25.4**	11.73	15.61	84.39
212	**44.6**	20.60	32.33	67.67
150	**44.0**	20.32	52.66	47.34
106	**30.6**	14.13	66.79	33.21
75	**21.3**	9.84	76.63	23.37
53	**12.6**	5.82	82.45	17.55
38	**5.8**	2.68	85.13	14.87
-38 pan	**3.3**	1.52		
-38 Total	32.2	14.87	100.00	0.00
Total	**216.5**	**100.00**		

Mass Accountability	
Start Mass	**224.9**
+38µm wet screen	**196.0**
-38µm wet screen	**28.9**
Mass Rec. (%)	96.27

Size Distribution Determination Worksheet

Sample Tracking	
Sample ID:	MWCT - 25
Project No.:	PJ5154
Project Name:	Mt. Washington Cu Tails
Date:	June 12th, 2014
Technician:	Cole
Objective:	Determine Feed PSD

p 80 121 µm



Screen Size (µm)	Sample Dry Wt (g)	Weight (%)	Cum. Weight (%)	Cum. Weight (%) Passing
300	**3.8**	1.68	1.68	98.32
212	**8.4**	3.70	5.38	94.62
150	**17.9**	7.89	13.27	86.73
106	**23.6**	10.41	23.68	76.32
75	**26.1**	11.51	35.19	64.81
53	**22.9**	10.10	45.28	54.72
38	**14.9**	6.57	51.85	48.15
-38 pan	**10.5**	4.63		
-38 Total	109.2	48.15	100.00	0.00
Total	**226.8**	**100.00**		

Mass Accountability	
Start Mass	**217.3**
+38µm wet screen	**118.6**
-38µm wet screen	**98.7**
Mass Rec. (%)	104.37

Test Description:

Test #:	MWCT F-1
Project #:	PJ5154 - Mount Washington Copper Tailings
Operator:	Keith Jellis
Date:	
Purpose:	Baseline Rougher Test - No NaHS
Procedure:	Rougher Kinetics
Feed:	~2kg of blended MWCT Master Composite
Grind:	p80 = TBD microns **2.0** kg @ 60% solids in a laboratory rod mill.
Comments:	

BLUE COAST RESEARCH
PASSION • CREATIVITY • EXPERIENCE

NORTH BAY RESOURCES INC.

Flotation Schedule:

Copper Rougher	Reagents (g/tonne)			Reagents			Time, minutes			pH		Ep
	Lime	PAX	MIBC	Lime	PAX	MIBC	Grind	Cond.	Froth			
Stage				g	mL	µL				Initial	Final	
Polishing Grind	250			0.50			2'00"				6.8	-6
Cu Rougher 1	390	5	8	0.78	5	15		1	1	8.5	8.2	-70
Cu Rougher 2	85	10	15	0.17	10	30		1	2	8.5	8.3	-76
Cu Rougher 3	55	25	15	0.11	25	30		1	4	8.5	8.3	-76
Total	780	40	38	1.56	40	75		3	7			

Stage	Rougher
Flotation Cell	4 litre cell
Speed: rpm	1400

Reagents:	
Lime	100 %
PAX	0.2 %
MIBC	100 %
Charge	2000 g

Observations:	

Mass Balance:

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Fe	S	Au	Cu	Fe	S	Au
Cu Rougher 1 Conc	**7.8**	0.41	**2.5**	**15.8**	**9.5**	**0.9**	6.6	1.8	3.6	2.8
Cu Rougher 2 Conc	**41.8**	2.18	**1.9**	**22.2**	**16.6**	**2.0**	27.3	13.8	33.7	32.9
Cu Rougher 3 Conc	**65.1**	3.39	**0.9**	**12.9**	**7.9**	**0.7**	20.0	12.5	24.9	19.0
Rougher Tails	**1803.7**	94.02	**0.074**	**2.7**	**0.4**	**0.1**	46.1	71.9	37.7	45.3
Calculated Head	1918.4	100.00	0.15	3.50	1.07	0.13	100.0	100.0	100.0	100.0
ERD Head	2000.0	100.00	0.15	3.43	1.03	0.13	-	-	-	-
Call Factor	95.9	-	100.6	102.1	104.1	99.3	-	-	-	-
Cu Rougher 1 Conc	7.8	0.4	2.5	15.8	1.6	0.02	6.6	1.8	3.6	2.8
Cu Rougher 1-2 Conc	49.6	2.6	2.0	21.2	18.3	0.22	33.9	15.6	37.4	35.7
Cu Rougher 1-3 Conc	**114.7**	**6.0**	**1.4**	**16.5**	**19.6**	**0.43**	**53.9**	**28.1**	**62.3**	**54.7**

Test Description:

Test #:	MWCT F-2
Project #:	PJ5154 - Mount Washington Copper Tailings
Operator:	Keith Jellis
Date:	July 3rd 2014
Purpose:	Baseline Rougher Test - with NaHS and finer grind
Procedure:	Rougher Kinetics
Feed:	~2kg of blended MWCT Master Composite
Grind:	p80 = 128 microns **2.0** kg @ 60% solids in a laboratory rod mill.
Comments:	**NOTE: Must use standard Hydrogen electrode for eH**

Flotation Schedule:

Copper Rougher	Reagents (g/tonne)				Reagents				Time, minutes					
	Lime	NaHS	PAX	MIBC	Lime	NaHS	PAX	MIBC	Grind	Cond.	Froth	pH		Ep
Stage					g	mL	mL	µL				Initial	Final	
Polishing Grind	250	100			0.50	10.0			10'00"			6.9		-150
Cu Rougher 1	0	500	5	8		50.0	5	15		3	1	8.0	7.9	-207
Cu Rougher 2	0		10	8			10	15		1	2	7.9	7.8	-106
Cu Rougher 3	0		25	8			25	15		1	4	7.8	7.7	-63
Total	250	600	40	23.0	0.50	60.0	40	45		5	7			

Stage	Rougher
Flotation Cell	4 litre cell
Speed: rpm	1400

Observations:	

Reagents:

Lime	100 %
PAX	0.2 %
MIBC	100 %
NAHS	2 %
Charge	2000 g

Mass Balance:

Product	Weight		Assays, %, g/t				% Distribution			
	g	%	Cu	Fe	S	Au	Cu	Fe	S	Au
Cu Rougher 1 Conc	**21.7**	1.13	**1.5**	**29.3**	**30.2**	**3.0**	11.4	9.1	28.6	24.7
Cu Rougher 2 Conc	**47.9**	2.50	**2.2**	**22.9**	**17.5**	**1.7**	35.9	15.8	36.6	31.5
Cu Rougher 3 Conc	**55.9**	2.92	**0.7**	**11.2**	**5.3**	**0.5**	12.9	9.0	12.9	10.3
Rougher Tails	**1791.0**	93.45	**0.065**	**2.6**	**0.3**	**0.05**	39.7	66.1	21.9	33.5
Calculated Head	1916.5	100.00	0.15	3.6	1.2	0.14	100.0	100.0	100.0	100.0
ERD Head	2000.0	100.00	0.15	3.43	1.03	0.13	-	-	-	-
Call Factor	95.8	-	101.3	105.6	116.0	103.3	-	-	-	-
Cu Rougher 1 Conc	21.7	1.1	1.5	29.25	30.2	3.0	11.4	9.1	28.6	24.7
Cu Rougher 1-2 Conc	69.6	3.6	2.0	24.85	21.5	2.1	47.3	24.9	65.2	56.2
Cu Rougher 1-3 Conc	**125.5**	**6.5**	**1.4**	**18.78**	**14.3**	**1.4**	**60.3**	**33.9**	**78.1**	**66.5**

MAT Gravity Test Worksheet

Sample Tracking:	
Sample ID:	MWCT Master Comp
Test #	MAT-1
Project No.:	PJ5154
Project Name:	North Bay Resources MWCT
Date:	June 16th 2014
Technician:	Keith Jellis

Test Description:		
Starting Mass	**N/A**	grams
Start Speed	**35**	strokes/min
Start Water	**1.5**	Litres/min
Start Table Angle	**0.5**	Degrees
Finish Speed	**50**	strokes/min
Finish Water	**1.5**	Litres/min
Finish Table Angle	**1**	Degrees

Comments:	V Deck used MAT tails and Knelson tails combined

Screen Size µm	Sample Weight g	Weight %	Assay, g/t Au	% Dist. Au
MAT Tip	**2.7**	0.03	**42.71**	9.28
MAT Tails	**9515.4**	99.97	**0.12**	90.72
Total	9518.1	100.00	0.13	100.00

Appendix 6

2014 Mt. Washington Copper Tailings Mineral Resource Estimate

Mount Washington Copper (MWC) Tailings Dam 2014 Mineral Resource Estimate

Block ID	Category	Area	Depth	Volume	Density	Mass	Mass	Gold	Silver	Arsenic	Copper	Moly	Tellurium	Calcium	Iron	Sulphur
Name	CIM	sq. m.	m.	cu. m.	t/cu.m.	tonnes	percent	p.p.m.	p.p.m.	p.p.m.	p.p.m.	p.p.m.	p.p.m.	percent	percent	percent
03	Indicated	2800	5.8	16240	1.25	20300	6.2%	0.192	6.13	1100	1147	11.31	9.21	1.01	4.31	1.27
05	Indicated	2450	4.1	10045	1.25	12556	3.9%	0.131	5.36	1181	995	8.39	9.63	1.17	4.53	1.25
12	Indicated	1800	2.7	4860	1.25	6075	1.9%	0.259	9.25	1298	1604	15.72	9.24	0.74	3.89	1.10
13	Indicated	2250	5.8	13050	1.25	16313	5.0%	0.146	6.84	1139	1411	11.77	10.16	1.13	4.81	1.54
14	Indicated	3500	5.0	17500	1.25	21875	6.7%	0.077	7.51	670	724	9.84	6.13	1.35	3.87	0.98
15	Indicated	2700	4.4	11880	1.25	14850	4.6%	0.088	5.30	822	757	8.83	7.33	1.49	4.32	1.15
16A	Indicated	900	2.7	2430	1.25	3038	0.9%	0.110	4.54	714	914	8.39	4.76	1.08	3.68	0.71
16	Indicated	1500	2.1	3150	1.25	3938	1.2%	0.072	5.26	697	1054	8.50	4.57	1.07	3.69	0.68
23	Indicated	2700	5.2	14040	1.25	17550	5.4%	0.165	7.51	1125	1513	12.14	17.10	1.09	4.67	1.50
25	Indicated	4050	6.1	24705	1.25	30881	9.5%	0.082	3.81	729	614	10.28	6.55	1.26	3.94	0.71
34	Indicated	3300	6.7	22110	1.25	27638	8.5%	0.081	3.96	641	694	9.60	6.21	1.48	3.76	0.84
35	Indicated	6000	4.3	25800	1.25	32250	9.9%	0.123	5.42	857	957	7.60	6.16	1.42	4.30	0.76
37	Indicated	2400	2.3	5520	1.25	6900	2.1%	0.106	5.44	709	1441	11.10	7.65	1.05	4.18	0.98
44	Indicated	2500	4.3	10750	1.25	13438	4.1%	0.145	7.34	865	1183	9.38	13.44	1.35	4.21	1.14
47	Indicated	3300	3.4	11220	1.25	14025	4.3%	0.101	4.70	607	845	9.67	6.03	1.14	3.78	0.74
Totals	**Indicated**	**42150**	**65**	**193300**	**1.25**	**241625**	74.3%	28818	1372675	208031653	235804693	2407110	1995563	303280	1005737	244948
Averages	Indicated	2810	4.3	12887	1.25	16108	5.0%	0.119	5.68	861	976	9.96	8.26	1.26	4.16	1.01
50	**Inferred**					**83775**	25.7%	0.119	5.68	861	976	9.96	8.26	1.26	4.16	1.01
Total Dam	Historical					325400	100.0%									

Appendix 7

2013 Access Agreement between Timberwest and North Bay Resources Inc.

TimberWest

Direct dial: (250)729-3706
Fax No.: (250)729-3782
E-mail: laud@timberwest.com

#3-4890 Rutherford Road
Nanaimo, British Columbia
Canada V9T 4Z4

Tel 250.729.3700

July 8, 2013

TW File Ref: 99-125.02

Jacques Houle Consultant
c/o North Bay Resources
PO Box 162
Skippack, PA
19474 USA

Dear Mr. Houle:

Re: NOTICE TO PRIVATE LAND OWNER
SECTION 19 OF THE *MINERAL TENURE ACT*

TimberWest Forest Company ("**TimberWest**") has received your notification (the "**Notice**"), dated June 7, 2013 as required under section 19 of the *Mineral Tenure Act* (British Columbia) (the "**Act**"), describing your exploration activities (the "**Work**") on certain mineral claims (the "**Claims**") for which you require access to, or over, lands beneficially owned by TimberWest (the "**Lands**") from August 15, 2013 to October 15, 2013.

Due to the nature of TimberWest's activities on the Lands, TimberWest has a significant interest in ensuring that both access to the Lands and the Work conducted are in accordance with the Act. Nevertheless, TimberWest will not necessarily oppose the Work provided that you make the acknowledgements and agree as provided in Schedule A to this letter. Notwithstanding the foregoing and anything to the contrary contained herein, this letter, including its schedules, does not constitute a license and TimberWest is under no obligation to facilitate or otherwise assist you in accessing the Lands to conduct the Work. TimberWest reserves all of its rights, both under the Act and otherwise, in respect of the Lands.

Please review and confirm that you are in agreement with this letter by signing a copy in the area provided at the end of Schedule A and returning to my attention at your earliest convenience and, in any event, prior to commencing the Work.

Yours truly,
TIMBERWEST FOREST COMPANY
by its Managing Partner,
TimberWest Forest Corp.

D Lau.

Per: Dianna Lau
Paralegal, Real Estate Group

08.07.2013

ISO 14001 REGISTERED KPMG

SAFE CERTIFIED

SCHEDULE A
ACKNOWLEDGEMENT AND AGREEMENT

This is Schedule A to a letter dated July 8, 2013. In the event that the person signing this Schedule A is a corporation or other entity that is not a natural person, this Schedule A shall be interpreted accordingly. Capitalized terms not otherwise defined herein shall have the meanings ascribed to them in such letter.

I, Jacques Houle, on behalf of North Bay Resources, HEREBY ACKNOWLEDGE AND AGREE THAT:

1. My intention is to access the Claims and I require access to or over the Lands for such purpose.

2. Before I use any roads located on the Lands, commence exploration for any minerals on or in the Lands or enter on the Lands, I must provide to TimberWest:

   (a) a current Free Miner Certificate in good standing issued in my name; and

   (b) my plans for exploration of the Lands, such plans to be in a form acceptable to TimberWest and to include my intended exploration methods of and access routes to the Lands.

3. I will be liable to TimberWest (as surface owner) for any damage or loss incurred as a result of the Work and exploration activities on the Lands.

4. **I WILL BE REQUIRED TO ENTER INTO A FORMAL AGREEMENT WITH TIMBERWEST PRIOR TO PRODUCTION AND HAULING OVER THE LANDS.**

5. If there are substantial changes to the activity described in the Notice, or if the dates in which the Work will occur change by more than seven days, I will provide TimberWest with an amended notice.

6. Prior to the commencement of any mechanical work which may disturb the surface of the mineral claims, I am required to serve a Notice of Work to TimberWest and file that Notice of Work with the Chief Gold Commissioner and the District Inspector of Mines, and I must also obtain a permit under the *Mines Act* (British Columbia). The Act and the *Mines Act* stipulate that a Notice of Work must be filed with the District Inspector of Mines before exploration and development can commence.

7. TimberWest has not made, and will not make, any representation or warranty to me as to any matter, including, without limitation, the existence, quality or condition of any minerals on or in the Lands, the suitability of any minerals for any purpose, the condition

of the Lands or any roads, gates or locks located on the Lands, or any other matter in any way related to or connected to any of the foregoing or my intended use thereof.

8. Under no circumstances do mineral rights allow for the construction of a cabin, the right to use the surface for domestic use, or the right to cut timber for any reason. **A MINERAL CLAIM MAY ONLY BE USED FOR THE BUSINESS OF MINING.** Any such construction or use of TimberWest's private lands, without TimberWest's express written permission, will result in TimberWest filing a complaint to the Chief Gold Commissioner in accordance with Section 40 of the Act.

9. TimberWest's authorized representative for the purpose of the subject matter of this letter is Gary Lawson ((250) 286-7307 email: lawsong@timberwest.com) (the "**Authorized Representative**").

10. TimberWest will be actively logging in this area throughout the year, and will be hauling logs on the roads. Due to this activity it may be necessary to restrict my access during certain periods of the term. **I MUST ADVISE THE AUTHORIZED REPRESENTATIVE OF THE DATES AND TIMES I PLAN TO ACCESS THE LANDS AT LEAST TWO (2) DAYS PRIOR TO SUCH ACCESS OR AT THE DISCRETION OF THE AUTHORIZED REPRESENTATIVE. BY SIGNING THIS LETTER I AGREE TO ABIDE BY THE DIRECTIONS OF THE AUTHORIZED REPRESENTATIVE WITH RESPECT TO RESTRICTED ACCESS PERIODS.**

11. **PRIOR TO ENTRY OF THE LANDS I MUST ACCESS WWW.TIMBERWEST.COM/COMMUNITY/ACCESS.ASPX TO OBTAIN INFORMATION CONCERNING POSSIBLE HAZARDOUS WEATHER CONDITIONS AND/OR TEMPORARY CLOSURES OF THE LANDS.**

12. TimberWest may at any time and from time to time prohibit or restrict access to the Lands for such period or periods of time as TimberWest may in its absolute discretion determine should TimberWest consider such prohibition or restriction justified on account of hazardous weather conditions or unreasonable interference with TimberWest operations or for any other reason, and I will at all times observe and conform with such prohibitions or restrictions.

13. I am not permitted to camp on the Lands without the express written consent of the TimberWest, at its sole discretion. Camping is defined as erecting a shelter, or parking a recreation vehicle or other vehicle for the purpose of remaining overnight.

14. I am not permitted to bring on to or operate any single-operator four wheel all-terrain vehicles, dune buggies or other home-built or modified 4x4 vehicles on the Lands.

15. Any individuals travelling within my vehicle shall be entitled to enter the Lands with me provided that I assume all responsibility for the actions of said individual(s).

16. If required, I will attend at TimberWest's Campbell River Office at 4475 NI Highway, Campbell River, British Columbia, and provide all requested information, sign the Key Control Form (attached to this letter as Schedule B) and provide a $500 refundable

deposit per key, in order to obtain keys for TimberWest gates. I must return the gate key to TimberWest within ten (10) days after the expiry of my access date, which is October 25, 2013, failing which the deposit for the use of the gate key(s) will be forfeited to TimberWest.

17. **I MUST KEEP THIS LETTER WITH ME AT ALL TIMES WHEN ON TIMBERWEST LANDS TO CONFIRM THAT I HAVE PROVIDED ADEQUATE NOTIFICATION TO TIMBERWEST AS PER SECTION 19(1) OF THE ACT.**

18. Forest industry vehicles and equipment will have priority of use on the Lands.

19. I agree that I will use the Lands at my own risk and I freely assume all dangers and risks associated with such use, and that TimberWest will not be liable for, and I hereby waive, any claim, action, damage, liability, cost or expense which I may suffer, incur or be put to in connection with any occurrence on the Lands or with the use and occupation of the Lands by myself or by TimberWest, including, without limitation, personal injury, including death, and/or property damage or loss. TimberWest will not be liable to me in connection with access to the Lands, whether based on contract, tort (including negligence and strict liability), under warning or otherwise, for any special, indirect, incidental or consequential loss or damage whatsoever, including loss of use of equipment or facilities and loss of profits or revenues. **TIMBERWEST RESTRICTS, MODIFIES AND EXCLUDES ALL OF ITS DUTIES AS AN OCCUPIER IN RESPECT OF THE LANDS EXCEPT THE DUTIES SET OUT IN SECTION 3(3) OF THE *OCCUPIERS LIABILITY ACT* (BRITISH COLUMBIA), INCLUDING ALL AMENDMENTS THERETO, AND I ACKNOWLEDGE AND ASSUME ALL RISKS ASSOCIATED WITH SUCH RESTRICTION, MODIFICATION AND EXCLUSION.** The waiver set out above will be effective and binding upon my heirs, executors and administrators in the event of my death.

20. Nothing contained in this letter (including this Schedule A) constitutes a license and TimberWest is under no obligation to facilitate or otherwise assist me in accessing the Lands to conduct the Work. I understand that TimberWest reserves all of its rights, both under the Act and otherwise, in respect of the Lands.

21. **BY SIGNING THIS DOCUMENT I WILL HAVE WAIVED CERTAIN LEGAL RIGHTS INCLUDING THE RIGHT TO SUE.**

Acknowledged and agreed to by:

JACQUES HOULE, Consultant
for North Bay Resources

Authorized Signatory

Dated: July 8, 2013

SCHEDULE B
KEY CONTROL FORM

TimberWest
3-4890 Rutherford Road
Nanaimo BC V9T 4Z4
Phone: 250-729-3700
Fax: 250-729-3763

Key Control Form

You must complete each checkbox to confirm you have read each sentence below and agree to the terms and conditions of the Key Control Form.

- ☒ **1** key(s) asll identified below (the "Key") have been received;
- ☐ The attached Schedule "A" has been read and the Key Holder shall abide by all the terms and conditions stated therein;
- ☐ The Key(s) shall be used only for that purpose and use stated below under Authorized Use;
- ☐ The Key Holder will lock the gates at all time immediately after ingress or egress, and shall not allow any person or vehicle access through the gates.
- ☐ The TW contact shall be notified immediately of any emergency relating to its lands, roads, gates, etc.
- ☐ TimberWest shall be notified immediately if the Key is lost, stolen, or misplaced;
- ☐ **If the Key is lost, stolen or misplaced, you will be required to pay TimberWest $500.00 per key or, at TimberWest's discretion, forfeit your key deposit held in trust, or may be held liable for the costs incurred as a result of replacing the current lock system.**
- ☐ The Key Holder shall not assign or transfer the Key without TimberWest's express written approval;

Date Issued: ______________ **Expiry Date:** ____________ **DATE RETURNED:** ____________

☒ **Deposit Required ($500.00)** ☐ **Deposit Not Required**

Gate #		**Key Type**	MULTILOCK	**Key ID**		**Key #**	
Gate #		**Key Type**		**Key ID**		**Key #**	

Authorized Use:	**ACCESS TO TIMBERWEST PROPERTY – FOR MINING PURPOSES ONLY – MT WASHINGTON AREA ONLY**
TW Contact:	**GARY LAWSON**

The "**Key Holder**":

User Type	Contractor, Agency, Third Party or Employee *(circle one)*		
Company	**NORTH BAY RESOURCES**	Key Holder Name	**JACQUES HOULE**
Address		Phone	HOME: CELL:
Key Holder (Authorized Signatory)	**JACQUES HOULE** **x**	TimberWest (Authorized Signatory)	**x**

SCHEDULE A

RELEASE

1. The Key Holder will and does hereby accept all risks associated with its entry to and occupation of TimberWest's lands and of its use of the roads including, without limitation, all risks arising in respect of the use of the roads as private industrial roads for logging and logging-related activities and the passage thereover by oversized loaded and unloaded logging trucks and other forest industry vehicles, as its own risks and, without limiting the generality of anything contained herein, the Key Holder for itself and its directors, employees, agents, contractors, sub-contractors and invitees, and for their respective heirs, executors, administrators and assigns, as applicable, and for any persons acting in concert with any of the foregoing, hereby releases and discharges TimberWest, its related companies and its and their directors, employees, agents, contractors, sub-contractors, and invitees (collectively, the "**Company's Representatives**") from any and all responsibility and liability, whether arising in tort, contract or otherwise, in respect of all loss, damage, personal and property injury and death arising out of or attributable to the state, topography or condition of TimberWest's lands, to the design or layout or condition of the roads and trails thereon and the other lands upon which the roads are situate, or the conduct of TimberWest or the Company's Representatives on such lands or roads whether or not such loss, damage, personal or property injury, or death is attributable to the negligence of TimberWest or the Company's Representatives.

INDEMNITY

2. The Key Holder will indemnify, save harmless and defend TimberWest and the Company's Representatives from and against all loss, expense (including environmental investigation and remediation expenses), claims, demands, actions, suits, proceedings, judgments, damages, penalties, fines, costs and liability including, without limitation, damages for loss or restriction in use of TimberWest's lands, sums paid in settlement of claims, legal fees, consultants' fees and experts' fees which are in any manner based upon, arise out of or are connected with:

(a) any breach by the Key Holder of this terms of this Form;

(b) the Key Holder's occupation or use of TimberWest's lands or use of the roads; or

(c) the presence of any hazardous substance or contamination in, upon, above, under or in the vicinity of TimberWest's lands caused by, contributed to or aggravated by the Key Holder or its employees, agents, contractors, suppliers, customers, invitees or any other person for whom the Key Holder is responsible in law or who is on or about TimberWest's lands as a result of the Key Holder's use or occupation of TimberWest's lands. For greater certainty, costs incurred by TimberWest to remediate any such hazardous substances or contamination even though not required to be carried out by law or pursuant to an order of a governmental authority, are subject to this indemnity.

RIGHTS RESTRICTIONS

3. TimberWest may at any time and from time to time prohibit or restrict the Key Holder's right to make use of the Key for such period or periods of time as TimberWest may in its absolute discretion determine should TimberWest consider such prohibition or restriction justified on account of hazardous weather conditions or unreasonable interference with TimberWest operations or for any other reason and the Key Holder will at all times observe and conform with such prohibitions or restrictions.

RETURN OF KEY

4. TimberWest may require the Key Holder to return the Key at any time and for any reason without advance notice to the Key Holder and the Key Holder's rights under this Form will thereafter be terminated forthwith.

WAIVER

5. No waiver or neglect by TimberWest to enforce any right upon any breach of any covenant, condition or obligation herein will be deemed to be a waiver of such right upon any subsequent breach of the same or any other covenant, condition or obligation herein contained. Nothing contained herein is or should be construed as a waiver by TimberWest of any rights which TimberWest has or which may accrue to TimberWest at law, in equity, or by statute.

TimberWest

PRIME CONTRACTOR

We are currently harvesting in the area you will be accessing. You **must** contact the following Prime Contractors prior to accessing TimberWest private lands:

Wolf Lake Logging – Mr. Andrew Johnson (Safety Rep)
Cell: 250-714-4127 – Work 250-331-9690 - Email: a.kjohnson@shaw.ca

TimberWest

"TimberWest Safe Road Use Procedures"

The following procedures apply to all TimberWest resource roads. All users must be familiar with these procedures to ensure safe traveling conditions for all authorized industrial and recreational road users. In the event these procedures conflict with the user's own policies the TimberWest safe road use procedures will take priority. If a Prime Contractor has been designated to a specific road, they may have additional procedures that supplement Timberwest's, which will be specified during prework discussions (where applicable).

All vehicles:

- All road users (industrial, authorized recreational) must be fully licensed with correct endorsements, adequately insured for the vehicles intended use and follow all applicable driving legislation.

- Check with the local TimberWest office to ensure you have contact information for the designated Prime Contactor, if your vehicle is equipped with a radio you must have the correct communication channel (s) and know the current status of log hauling and other industrial use on the desired roads of travel. Generally all South Island road traffic is on the South Island Road Channel 153.110 tx / rx , Tone 203.5 unless otherwise posted. Similarly, North Island traffic monitors the "Haul Channel" (158.430 tx/rx) and TFL 47 traffic is location specific (contact TimberWest for this information).

- Follow the posted speed limits (Maximum 60 km/hr or less if not posted) with headlights/taillights on at all times.

- Observe and obey all posted signage.

- All traffic must drive on the right-hand side of the road.

- Drive by the road conditions and visibility (sight lines, dust or weather related visibility). Roads are radio assisted not radio controlled. Drive accordingly and expect the unexpected.

- Deactivated roads may or may not be posted. It is suggested that you obtain information regarding road deactivation status from TimberWest before you begin your trip.

- Maintain safe distances when following other vehicles and use extra caution when driving in dusty conditions. Also use extreme caution when overtaking slower vehicles.

- Always give industrial traffic the right-of-way. (Pull over and stop).

- When passing logging trucks, low beds, graders, etc. make sure the operator is aware of your intentions and signals you verbally or visually before proceeding to pass; then pass only when road conditions are favourable.

- Watch out for "sweepers" which are very long logs hauled on logging trucks. They can hang over the back of the trailer up to 6 meters and on a tight corner could sweep a vehicle off the road.

- Do not block the road or stop on the running surface for any reason – logging trucks require a lot of room for safe travel and to safely stop. Do not impede their access at any time. It is essential that logging trucks be able to use the roads without delays. If you must stop, find a turnout or wide spot and park well off the road.

- Be aware that off highway trucks with wide bunks have very little opportunity to move off the center of the road grade, except on wide mainlines. Ensure you find a turnout that enables the logging truck adequate clearance for safe passage.

- Report vandalism or other suspicious activities to a TimberWest representative.

- Report all hazards immediately to Prime Contractor or TimberWest representative.

Industrial:

- All vehicles and drivers must comply with applicable rules and regulations (WorkSafeBC, Department of Transportation, MFLNRO statutes and legislation, National Safety Code, and Motor Vehicle Act, etc) that will ensure proper driving, loading, securing, inspection and maintenance.

- Down/Loaded vehicles have the right-of-way

- TimberWest typically maintains the bridge infrastructure to support L165 tons. For active crossings that support less than L165, TimberWest identifies the load rating with posted signage stating the load rating in the field (i.e. L100, L75, 5 tonnes/pickup, etc). In the event users have concerns, contact TimberWest representative for assistance.

  Note: *Notify TimberWest Contract Manager or designated TimberWest representative prior to walking (point loading) across structures with equipment 75 tonnes or greater so TimberWest can ensure structure can safely support the weight.*

RADIO CALLING:

Known Hazards

1. Losing track of your location	5. Unnecessary radio chatter
2. Losing track of other vehicles location	6. Using the wrong frequency
3. Meeting oncoming vehicles without a radio	7. "Walking over" other calls
4. Not following calling procedures	8. Being distracted (i.e. phones, music, passengers)

Procedures:

1. The terms **"UP"** for increasing numbers and **"DOWN"** for decreasing numbers are the preferred methods for calling, although users may at times hear **"EMPTY"** for increasing and **"LOADED"** for decreasing. North Island's practice is for logging truck traffic to use "LOADED / EMPTY", and all other traffic to use "UP/DOWN" in order to identify direction of travel.
2. Preferred Radio Call: **Road name** followed by the **kilometer** position then **Up** or **Down** (e.g. "Northshore … 2 km … Up").
3. **All vehicles should call their location / direction of travel:**
    - When entering or leaving a road system.
    - Whenever there is a road frequency/channel change.
    - Whenever you are stopping and parking on the road, and again when you resume.
    - When encounter a vehicle without a radio.(Identify the vehicles position and direction of travel).

4. **Radio Calling protocol** - loaded vehicles:
    - Loaded vehicles (i.e. logging trucks, gravel trucks, lowbeds, and fuel trucks) must call at minimum every two km's, preferably every km when traffic is near, regardless of direction of travel.
5. **Radio Calling protocol** - all other vehicles, regardless of direction of travel:
    - Must call every km when within three km's of oncoming radio assisted traffic.
    - As a courtesy, should call every five km's.
    - As a courtesy, identify themselves: pick-up, low-bed, fuel truck, grader, etc. (i.e. "pick-up… Northshore … 2 km… Up")
6. **Convoy calling :**
    - The lead vehicle is responsible for calling for all vehicles within the convoy. (i.e. "Convoy of 4 pickups…Northshore…13km…UP")

Remember, roads are radio assisted – not radio controlled, drive accordingly!

Appendix 8

Selected BC MINFILE Summaries and BC Mineral Deposit Profiles

MINFILE Record Summary
MINFILE No 092F 116

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 05-Dec-13 by Karl A. Flower(KAF)

XML Extract/Inventory Report

SUMMARY

		NMI	092F14 Au1, Cu1
Name	DOMINEER (MOUNT WASHINGTON), MOUNT WASHINGTON (DOMINEER), DOMINEER, LAKEVIEW, MWC, DJV, WEST GRID	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Developed Prospect	**NTS Map**	092F14W
Latitude	49º 45' 30" N	**UTM**	10 (NAD 83)
Longitude	125º 18' 00" W	**Northing**	5514300
		Easting	334348
Commodities	Gold, Silver, Copper, Lead, Zinc, Molybdenum	**Deposit Types**	H04 : Epithermal Au-Ag-Cu: high sulphidation L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Domineer epithermal deposit comprises the Domineer, Lakeview and West Grid zones. The deposit lies 400 metres south of the Mount Washington Copper open pit (see 092F 117). The centre of the Lakeview zone is located 510 metres to the west of the Domineer zone, and the West Grid zone lies about 200 metres northwest of the Lakeview. The zones form a continuous shallow-dipping tabular body of argillic alteration containing discontinuous, en echelon or stacked lenses of mineralization.

A complete exploration history of the area and associated occurrences can be found Assessment Report 30010.

The mineralized zone occurs within a sub-horizontal package of Tertiary pyroclastics and underlying clastic sediments of the Upper Cretaceous Nanaimo Group (Comox Formation), which unconformably overlie mafic volcanic rocks of the Upper Triassic Vancouver Group (Karmutsen Formation). Intruding both formations is a Late Eocene to Early Oligocene quartz diorite stock of the Mount Washington Intrusive Suite (formerly Catface Intrusions - Nick Massey, Personal Communication, May 1990), dated at 35 million years (+/- 6 million years) (Carson, 1960). Several later breccia events are imposed on all other rock types locally.

The Karmutsen Formation comprises basaltic massive and pillow lavas that are commonly porphyritic. The lavas grade into pillow breccias and aquagene tuffs. The overlying Comox Formation comprises fine-grained sandstone and greywacke, with interbedded siltstone, carbonaceous shale and minor coal. A basal conglomerate of rounded clasts separates the formations.

The Tertiary quartz diorite stock is variably porphyritic and is centred on McKay Lake northeast of the summit of Mount Washington. Several sills and dykes of quartz diorite and quartz diorite porphyry are related to the stock.

Late breccia events include the Washington, Murray, Glacier, Murex (092F 206) and Oyster (092F 365) breccias; others may also be present. Of these, the Washington breccia is the youngest and is located near the Domineer zone on a ridge north of Mount Washington. The Murex breccia, located east of the Domineer deposit, is the largest and most complicated of the breccias. Other breccias and diatremes are located 2 kilometres north and 2 kilometres east of Mount Washington.

Contact relationships of the Washington breccia with the Murray breccia, the Glacier breccia and quartz diorite are crosscutting but gradational, and are often characterized by vertically oriented crackle breccia zones. Within the Washington breccia, large angular clasts dominate over a matrix of finely pulverized rock flour, which has locally been replaced by magnetite and actinolite. Slab-like fragments, with length to width ratios of 10:1 are common, and suggest that subvolcanic collapse may have been the operative process.

Capping the west arm of Mount Washington is the tabular Murray breccia which generally contains a much higher matrix component than the other breccias, although considerable variability exists. Clasts are generally subrounded to subangular and range in size from 1 to 10 centimetres, averaging about 2 centimetres. The composition of clasts is mixed and consists of varieties of quartz diorite, sandstone, siltstone and mafic volcanics. Overlying, and in places adjacent to the Murray breccia, is a crackle breccia. The Murray breccia, which is bedded and locally displays shrinkage cracks and slump folds, has recently been identified as a coarse pyroclastic deposit with associated thinner beds of fine-grained tuff (Dahl, 1989).

Mineralization at the Domineer deposit has a defined strike length of 1.5 kilometres and an average width of 61 metres. Diamond drilling indicates that mineralization extends from the Domineer zone to the Lakeview-West Grid area. Mineralization consists of a tabular zone of alteration containing a stockwork of auriferous quartz- pyrite-arsenopyrite veins and lenses. The zone occurs within one of several subhorizontal fractures and breccias which post-date the Tertiary intrusions and volcanic activity, and may represent either thrust faults or decollements (Muller, 1989).

Enveloping the quartz-sulphide veins and lenses, is a zone of pervasive kaolinite alteration. A 2 to 5 metre wide zone of hydrothermal breccia usually lies at the centre of the alteration zone. This breccia consists of angular clasts of altered wallrock in a matrix of quartz and sulphides. Locally, the sulphides envelop these clasts and exhibit a banded appearance. Away from the central alteration zone is a stockwork of smaller quartz-sulphide veins. With increasing distance the veins decrease in size and frequency, alteration becomes limited to vein selvages and chlorite becomes the dominant alteration mineral.

The dominant sulphide minerals within the gold zone are pyrite and arsenopyrite. Chalcopyrite, covellite, sphalerite, galena, bornite, tennantite, wehrlite, hessite, chalcocite, realgar and orpiment are also present in varying amounts. Pyrrhotite, molybdenite and magnetite are present in the general vicinity but appear to be unrelated to the gold-bearing mineralization.

Two high grade pods have been identified. A northern pod, centred on the Domineer showing, averaged 6.99 grams per tonne gold and 58.63 grams per tonne silver over an average thickness of 1.6 metres. The southern pod, centred 180 metres to the south of the northern pod, averaged 7.06 grams per tonne gold and 45.26 grams per tonne silver over an average thickness of 2.56 metres (Assessment Report 18472).

Underground exploration and surface diamond drilling to August 1989 have established drill indicated reserves of 550,298 tonnes grading 6.75 grams per tonne gold and 32.23 grams per tonne silver and 0.57 per cent copper (Open File 1992-1; George Cross News Letter - August 3, 1989).

In 1991, Better Resources completed a program of geochemical sampling and six diamond drill holes, totalling 602 metres, to test the extensions of the mineral zone intersected by Noranda in 1989. In 1992, Better Resources closed the adit in the Lakeview-Domineer Zone and reclaimed the waste dumps outside. In 2008, Blue Rock Resources completed a geological mapping and prospecting program. In 2011, Clibetre Exploration completed a program of geochemical sampling and fifteen holes, totalling 64.8 metres, of overburden drilling on former tailings located 6 kilometres to the east.

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MINFILE Record Summary
MINFILE No 092F 117

XML Extract/Production Report/Inventory Report

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 05-Dec-13 by Karl A. Flower(KAF)

SUMMARY

Summary Help

Name	MOUNT WASHINGTON COPPER, MWC 232, DOMINEER 22, DJV, GOLD	**NMI**	092F14 Cu1,Au1
		Mining Division	Nanaimo
Status	Past Producer	**BCGS Map**	092F074
Latitude	49º 45' 48" N	**NTS Map**	092F14W
Longitude	125º 18' 08" W	**UTM**	10 (NAD 83)
		Northing	5514861
		Easting	334205
Commodities	Copper, Gold, Silver, Arsenic, Molybdenum, Zinc, Lead	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au H04 : Epithermal Au-Ag-Cu: high sulphidation
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Mount Washington Copper deposit is located on a ridge on the north side of Mount Washington, 400 metres north of the Domineer/ Lakeview occurrence (092F 116). A complete exploration history of the area and associated occurrences can be found Assessment Report 30010.

The area of the occurrence is underlain by sediments of the Upper Cretaceous Nanaimo Group, Comox Formation, which unconformably overlie mafic volcanic rocks of the Upper Triassic Vancouver Group, Karmutsen Formation. Intruding both formations is a quartz diorite stock of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions - Massey, N. Personal Communication), dated at 35 million years (+/- 6 Ma) (Carson, 1960). Several later breccias have shattered all other rock types locally. The area is also cut by sub-horizontal thrust faults that control mineralization, and near-vertical faults with a lateral displacement of more than 1.0 kilometre. The Karmutsen Formation comprises basaltic massive and pillow lavas that are commonly porphyritic. The lavas grade into pillow breccias and aquagene tuffs. The overlying Comox Formation comprises fine-grained sandstone and greywacke, with interbedded siltstone. A basal conglomerate of rounded clasts of Karmutsen Formation rocks separates the formations.

The Tertiary quartz diorite stock is variably porphyritic and is centered on McKay Lake northeast of the summit of Mount Washington. Several sills and dykes of diorite, quartz diorite and quartz diorite porphyry are related to the stock.

The Mount Washington Copper deposit is considered to be a porphyry-type deposit with a later superimposed epithermal gold-copper-arsenic event (see 092F 116). Mineralization has been defined over a length of more than 750 metres, and continues further to the south as the auriferous epithermal zone of the Domineer/Lakeview occurrence.

The mineralization is contained in a 1.5 to 7.6 metre wide subhorizontal tabular zone at or near the contact of Comox Formation sediments and the "Pit diorite" sill of the Mount Washington Intrusive Suite. The zone contains a stockwork of chalcopyrite- pyrite-quartz veins, and disseminated chalcopyrite in the sediments and the sill. Low gold and silver values are associated with the veins. Bornite, covellite, realgar, orpiment, pyrrhotite, arsenopyrite, molybdenite, sphalerite and galena are present.

Between 1964 and 1967, 381,773 tonnes of ore was mined from two open pits producing 131 kilograms of gold, 7235 kilograms of silver and 3548 tonnes of copper. An estimated 305,720 tonnes grading 1.07 per cent copper remain adjacent to the open pit (W.G. Stevenson and Associates, 1970).

In 1991, Better Resources completed a program of geochemical sampling and six diamond drill holes, totalling 602 metres, to test the extensions of the mineral zone intersected by Noranda in 1989. In 2008, Blue Rock Resources completed a geological mapping and prospecting program. In 2011, Clibetre Exploration completed a program of geochemical sampling and fifteen holes, totalling 64.8 metres, of overburden drilling on former tailings located 6 kilometres to the east.

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MINFILE Record Summary
MINFILE No 092F 120

XML Extract/Inventory Report

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 09-Dec-13 by Karl A. Flower(KAF)

SUMMARY

Summary Help

Name	CATFACE, CLIFF	**NMI**	092F5 Cu2
		Mining Division	Alberni
		BCGS Map	092F021
Status	Developed Prospect	**NTS Map**	092F05W
Latitude	49º 15' 23" N	**UTM**	10 (NAD 83)
Longitude	125º 58' 51" W	**Northing**	5460234
		Easting	283110
Commodities	Copper, Molybdenum, Silver, Gold, Rhenium	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Catface occurrence is located in the southern Catface Range, approximately 6.5 kilometres south east of the community of Marktosis.

The deposit lies at the contact between mafic volcanics (Sicker(?) or Vancouver(?) groups rocks) and diorite of the Mesozoic and/or Paleozoic Westcoast Complex. The area of the contact has been intruded by the Early to Middle Jurassic Island Plutonic Suite and several phases of the Early to Middle Eocene Tofino Intrusive Suite (formerly Catface Intrusions, Personal Communication, N. Massey, May 1990). See also Irishman Creek (092F 251) and Hecate Bay (092F 231).

The mafic rocks consist of basalt and andesite flows, tuff breccia and agglomerate. It remains unclear as to whether these rocks belong to the Paleozoic Sicker Group or to the Upper Triassic Karmutsen Formation, Vancouver Group. The volcanic rocks have been weakly hornfelsed near the intrusions.

Rocks of the Westcoast Complex are considered to be intrusive and/or dioritized pre-Jurassic rocks that include Sicker Group rocks (Canadian Institute of Mining and Metallurgy Special Volume 15, page 301).

A sill-like quartz monzonite intrusion, containing xenoliths of volcanic rocks, was emplaced along the volcanic-diorite contact. The age of this quartz monzonite is unknown, but is probably related to the Island Intrusions. Propylitic alteration minerals in the quartz monzonite include chlorite, epidote, zoisite, and sericite. Kaolinite, quartz, biotite and magnetite are also recognized as alteration products.

Several phases of the Tertiary intrusions have intruded all other rocks. These include the Hecate Bay quartz diorite, dated at 48 million years, three porphyritic granodiorite phases and a late-stage porphyritic dacite. Their emplacement was, to some extent, controlled by pre-existing structures or contacts. Late (but pre-ore) andesite, dacite and quartz feldspar porphyry dykes trend north to northwest and dip 50 to 70 degrees east. Faults predate mineralization and strike northerly and easterly.

Jointing in the younger intrusive rock trends north to northeast, dipping 50 to 70 degree east. A less persistent joint set in these intrusions trends east to southeast and dips steeply north. Joints in the volcanic rocks trend 156 degrees and dip 51 degrees east.

Copper and molybdenum mineralization occur on dry fractures and in quartz veinlets. Molybdenite also occurs as rosettes in quartz veins, and disseminated copper mineralization is associated with mafic minerals.

Copper minerals include chalcopyrite, bornite and some chalcocite, with significant secondary carbonate and copper oxide minerals occurring on fractures. Other minerals recognized include pyrite, pyrrhotite, covellite, idaite, digenite, native copper, cuprite, valleriite, tenorite, limonite, goethite, magnetite, hematite, cupriferous chalcedony-opal and scheelite.

Mineralization shows distinct zoning, with a core of bornite- pyrite-pyrrhotite surrounded by a zone in which chalcopyrite predominates. The area of 0.2 per cent copper mineralization extends over 650 metres, to a depth of approximately 350 metres. The best mineralization is located in the volcanic rocks and in the younger porphyritic phases, but the grade is not consistent.

The earliest evidence of exploration at Catface is a caved adit driven about 5 metres into a highly fractured and oxidized shear; the main property was evidently not investigated between the turn of the century and 1960. In 1960, a local mine operator, John Jackson, and G. Davis, pilot prospector for Falconbridge Nickel Mines, made a brief visit to a cliff face displaying a conspicuous copper stain. Mineralized and high oxidized samples prompted a more thorough examination by Falconbridge geologist J. McDougall and company helicopter pilot R. Hepworth who then staked the property.

Falconbridge, through Catface Copper Mines Ltd., conducted exploration between 1961 and 1979. This included driving an 857-metre adit and drilling more than 19,000 metres in 127 surface and underground holes. Numerous metallurgical tests were conducted, and a bulk sample was shipped to Falconbridge's Tasu mine (103C 003) on the west coast of the Queen Charlotte Islands for processing. The geology of the property was mapped; soil and silt geochemical surveys were completed. Limited geophysical test surveys including I.P./resistivity, self-potential and magnetic surveys were conducted in selected areas. The claims were also surveyed at this time.

In 1989 and 1990, Falconbridge Limited re-activated the project to increase the resource and to determine gold content of the copper mineralization. The program included detailed adit sampling for copper and gold, geological mapping of selected areas, a 19 line-kilometre I.P./resistivity, VLF and magnetometer survey to cover accessible areas, 150 line-kilometre of combined airborne magnetometer and VLF (EM) surveys covering most of the claim block and metallurgical tests. An environmental base-line survey was also carried out. Four holes (1628 metres) were drilled to test chargeability anomalies.

Between 1960 and 1990, total expenditures by Falconbridge Limited on the Catface project amounted to nearly $10 million (constant $1990). In 1990, Falconbridge Limited planned to take the claims to mining lease status and a drilling program to test the large IP anomalies south of South Peak. Granting of required work permits was delayed by the Clayoquot Land Use dispute; consequently, the Catface project was abruptly cancelled and exploration funding was transferred to other projects. Catface lies within a General Integrated Management Zone designation (multiple use). In 1999, Doublestar Resources Ltd. acquired the property.

Unclassified reserves in 1971 were 181.4 million tonnes grading from 0.45 to 0.50 per cent copper (EMR Mineral Bulletin MR 223 B.C. 95). In 1990, Falconbridge calculated a drill indicated resource of 188 million tonnes of 0.42 per cent copper and 0.0084 per cent molybdenum (0.014 per cent M0S2) at a 0.30 per cent copper cutoff and 1.1:1 stripping ratio (CIM Special Volume 46, page 325). Other calculations are listed in Special Volume 46.

In 1999, Doublestar Resources Ltd. acquired the property from Falconbridge Limited. Doublestar has reported the following resources: 78.2 million tonnes 0.53 per cent copper at 0.4 per cent cutoff or 158.4 million tonnes at 0.44 per cent copper with 0.31 per cent copper cutoff.

In 2007, Doublestar was bought by Selkirk Metals Corp. Selkirk completed a diamond drill program in 2008 comprised of 8 holes totalling 2383 metres of drilling. In 2009 the company released an updated resource estimate for the Cliff Zone based on the 2008 drilling.

Classification	Amount (tonnes)	Grade Cu(%)
Indicated	56,863,000	0.40
Inferred	262,448,000	0.38

Selkirk Metals Corp. News Release September 2, 2009 (www.sedar.com)

In November 2009, Selkirk was bought by Imperial Metals Corporation. In 2010, Imperial completed a diamond drilling program of thirteen holes, totalling 3548.0 metres. Hole CF-10-56 intersected 275.5 metres grading 0.60 per cent Cu and 0.014 Mo within a 755.0 metre mineralized section grading 0.46 per cent Cu and 0.006 per cent Mo (News Release September 8, 2010 - www.imperialmetals.com). Other drill holes yielded intercepts of 0.280 per cent copper over 34.7 metres from 445.5 metres to 480.2 metres depth in CF-10-66 extending the southern extent of the cliff zone (Assessment Report 31894).

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GSC MEM 204
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SUMMARY

Summary Help

		NMI	
Name	GOOD HOPE, WOLF LAKE, WOLF, LUPUS, CLIFF	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 46' 14" N	**UTM**	10 (NAD 83)
Longitude	125º 12' 02" W	**Northing**	5515444
		Easting	341550
Commodities	Copper, Silver, Arsenic	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Good Hope arsenic showing occurs about 800 metres northwest of the north end of Wolf Lake.

The area is underlain primarily by basaltic lavas of the Upper Triassic Karmutsen Formation, Vancouver Group. These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates. These are overlain by sediments of the Upper Cretaceous Nanaimo Group, Comox Formation.

The showing is exposed in a dry creek bed at an elevation of 260 metres. For about 75 metres the creek follows, and has exposed, a breccia zone in andesitic rocks. This zone varies from 0.6 to 3.6 metres in width, strikes 035 degrees and appears to dip steeply to the southeast. It contains lenses and veins of calcite up to 1.8 metres in width, in which numerous shattered and angular fragments of andesite are embedded. These bodies of calcite outcrop at intervals of about 45 metres along the creek bottom and contain occasional lenticular masses of realgar. The largest exposure of this arsenic sulphide measures 1.2 metres in length with a maximum width of 23 centimetres. Tiny veinlets of arsenopyrite occur locally within the andesitic wall rock. In some instances realgar has been replaced by native arsenic. Chalcopyrite has also been observed. In 1985, the best assay from this zone was 4.9 grams per ton silver and 0.1 per cent copper over 2 metres (Assessment Report 14434).

In 1983, Lac Minerals completed a programs of prospecting and geochemical sampling on the area as the Wolf claims. In 1984, Proquest Resources completed a program of geological mapping and rock, soil and silt sampling on the area as the Lupus claims. In 1985, St. James Minerals completed a program of geochemical sampling, geological mapping and ground geophysical surveys on the Wolf claims. In 1986, Homestake Canada and Pan World Ventures completed various programs of geological mapping, rock, silt and soil sampling and a induced polarization survey. In 2005 and 2006 the area was prospected as the Wolf Lake property by Pearl Asian Mining Industries.

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GSC OF 463
GSC P 68-50; 72-44; 80-16

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SUMMARY
Summary Help

		NMI	
Name	LUPUS 6, CREEK SHOWING	**Mining Division**	Nanaimo
		BCGS Map	092F075
Status	Showing	**NTS Map**	092F14E
Latitude	49º 45' 58" N	**UTM**	10 (NAD 83)
Longitude	125º 09' 16" W	**Northing**	5514854
		Easting	344856
Commodities	Gold, Silver, Zinc, Lead, Copper, Arsenic	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Lupus 6 occurrence is located on a ridge over looking the Tsolum River to the east, approximately 2 kilometres east of Wolf Lake.

The area is underlain by the Upper Cretaceous Nanaimo Group, Haslam and Comox Formations consisting of fine to coarse grained detrital sedimentary rocks. These are underlain by basaltic and andesitic lavas of the Upper Triassic Karmutsen Formation, Vancouver Group. A major unconformity separates the Karmutsen Formation from the overlying Nanaimo Group. Diorite and granodiorite of the Tertiary Mount Washington Intrusive Suite (formerly Catface Intrusions) have intruded the above rocks, forming stocks, sills and dykes.

The Creek showing is a zone of mineralization, that extends for 200 metres, occurring in narrow breccia veins up to 10 centimetres wide and on fracture and shear surfaces. Breccia vein material consists of siltstone and sandstone fragments in a matrix of pyrite, arsenopyrite, clay, realgar, and coarse white calcite. Some breccia types and veins also contain black sphalerite. The mineralized veins are irregular in attitude, but trend approximately east-northeast and have steep northerly dips. Following the trend of the zone to the west an orange gossan is encountered adjacent Wolf Lake. Exposures of altered and shattered dacite containing disseminated pyrrhotite occur adjacent the gossan.

In 1984, select grab samples of mineralized vein material yielded values up to 11.9 grams per tonne gold (Assessment Report 13426). In 1986, a 20 centimetre chip sample taken across the zone assayed 4.49 grams per tonne gold, 144.69 grams per tonne silver, 4.94 per cent zinc, 1.61 per cent lead, 2.10 per cent arsenic and 0.54 per cent copper (Assessment Report 15034).

In 1984, Proquest Resources completed a program of geological mapping and rock, soil and silt sampling on the area as the Lupus claims. In 1986, Homestake Canada and Pan World Ventures completed various programs of geological mapping, rock, silt and soil sampling and a induced polarization survey. In 2005 and 2006 the area was prospected as the Wolf Lake property by Pearl Asian Mining Industries.

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EMPR EXPL 1984-168; 1986-C183,C184
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary

MINFILE No 092F 206

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SUMMARY

Name	MUREX, HKR, MWC, MINK	**NMI**	092F14 Cu2
		Mining Division	Nanaimo
		BCGS Map	092F074
Status	Prospect	**NTS Map**	092F14E, 092F14W
Latitude	49º 45' 40" N	**UTM**	10 (NAD 83)
Longitude	125º 15' 00" W	**Northing**	5514500
		Easting	337958
Commodities	Copper, Gold, Silver	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Murex occurrence is located south east of Murex Creek, approximately 2.9 kilometres east- south east of McKay Lake. A complete exploration history of the area and associated occurrences can be found Assessment Report 30010.

The area is underlain primarily by basaltic lavas of the Upper Triassic Karmutsen Formation, Vancouver Group. These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates. A major unconformity separates the Karmutsen Formation from the overlying Upper Cretaceous Nanaimo Group. Haslam and Comox Formations which consist of fine to coarse grained detrital sedimentary rocks. The Benson Member is a pebble-cobble-boulder conglomerate which marks the unconformity in some areas.

Diorite and granodiorite of the Late Eocene to Early Oligocene Mount Washingtone Intrusive Suite (formerly Catface Intrusions) have intruded the above rocks, forming stocks, sills and dykes. The two intrusive types, as well as xenoliths of intrusive found within diorite dykes, indicate that multiple stage intrusions have occurred.

These intrusives have, in some cases, caused the formation of breccias composed of various combinations of basalts, sediments, and diorite fragments in a fine to medium grained siliceous matrix, sometimes with accompanying sulphide mineralization. There are five breccia types recognized in the Murex breccia zone. Subdivided on the basis of their fragment lithology they are:

(1) A Basaltic breccia composed of fragments of Karmutsen basalt, in a rusty, vuggy, fine to coarse grained quartz rich matrix. The fragments are sub-angular to rounded, and range in size from granules to large boulder sized blocks. The quartz rich matrix makes up from 20 to less than 5 per cent of the breccia. This matrix is mineralized with up to 10 per cent sulphides including chalcopyrite, pyrite and pyrrhotite.

(2) The Comox breccia composed of fragments of Comox sandstones, siltstones and argillites in a siliceous matrix. The fragments ranging in size from pebbles to large cobbles, are generally angular to sub-angular and make up 85 per cent of the rock; the matrix makes up 15 per cent. In most cases the sulphide content makes up less than 1 per cent of the rock, chiefly in the form of blebs of pyrite, chalcopyrite and pyrrhotite.

(3) The Intrusive breccia composed of fragments of diorite in a fine grained siliceous matrix containing up to 10 per cent biotite. The fragments are angular to sub-angular and range in size from pebbles to large cobbles. The fragment to matrix ratio is generally 90 per cent to 10 per cent, respectively. Pyrite with minor pyrrhotite and chalcopyrite occur within the matrix but rarely exceed 2 per cent of the whole rock.

(4) The Mixed Lithology breccia consisting of fragments of basaltic, sedimentary and dioritic rocks, in varying proportions, in a siliceous, often biotite bearing matrix. The fragments vary from angular to sub-rounded and range in size from pebbles to large cobbles. Fragment to matrix ratio averages 90 per cent to 10 per cent, respectively.

(5) The Fluidized Milled breccia composed of 80 to 85 per cent fragments consisting of basaltic, sedimentary and dioritic fragments. The fragments are sub-angular to rounded and range in size from granule to cobble. The matrix makes up 15 to 20 per cent of the breccia and is composed of quartz plus or minus minor carbonate and varying amounts of chalcopyrite, pyrrhotite and pyrite.

Epidote also occurs within the interstices, usually at the expense of the sulphides. Chlorite generally accompanies the epidote indicating a form of propylitic alteration has taken place. Also exerting an influence on the amount of sulphides is the percentage of comminuted rock flour within the matrix. In addition, where the rock flour content is low, the clasts tend to be angular and often elongate, suggesting little movement has taken place. In these areas the origin of the Murex breccia is interpreted to be the result of collapse. Within blocks of unbrecciated mafic volcanic adjacent to the breccia a minor amount of sulphide veining is present. However, within the breccia the degree of veining is minimal. Magnetite is also reported to occur within the matrix.

The Murex zone represents an area of roughly 700 by 700 metres. The mineralization is thought to be the result of replacement but also has characteristics in common with porphyry-type deposits.

During 1987 through 1989, Better Resources and Noranda Mining and Exploration completed programs of geological mapping, geochemical sampling, ground geophysical surveys and fifteen diamond drill holes, totalling 1451.8 metres. One hole (Mx-86-7) cut strong breccias with pyrrhotite- chalcopyrite mineralization about 30 metres below the surface and assayed 1.54 per cent copper over 32.43 metres (Assessment Report 17033). Another 4 metre section of core assayed 4.08 per cent copper, 32.91 grams per tonne silver and 6.31 grams per tonne gold (George Cross News Letter #5, January 8, 1990).

In 2008, Blue Rock Resources completed a geological mapping and prospecting program.

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SUMMARY

Summary Help

		NMI	
Name	BLUE JAY, LITCHIE	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F11E
Latitude	49º 43' 17" N	**UTM**	10 (NAD 83)
Longitude	125º 12' 31" W	**Northing**	5509995
		Easting	340809
Commodities	Copper	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Blue Jay occurrence is located approximately 1.3 kilometres south west of Anderson Lake.

The area is underlain by intermediate to mafic basalts, volcanic tuffs and associated breccias, all of the Upper Triassic Karmutsen Formation, Vancouver Group. The basalt is typically fine grained and porphyritic and contains abundant thin quartz stringers.

Locally, small, erratic high-grade occurrences of chalcopyrite lenses are exposed in Karmutsen Formation volcanics in association with steeply dipping shear zones. These volcanics are described as brown to grey, gently dipping rocks cut by porphyry dikes. Pyrite is also present.

In 1966, Crown Zellerback exposed the mineralization during road construction. In 1967 and 1968, Mt. Washington Copper Co. Ltd. completed programs of geological mapping, soil sampling and an induced polarization survey on the area as the Litchie property.

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SUMMARY

Summary Help

		NMI	092F11 Cu1
Name	GEM LAKE, MEG	**Mining Division**	Nanaimo
		BCGS Map	092F063
Status	Prospect	**NTS Map**	092F11W
Latitude	49º 41' 04" N	**UTM**	10 (NAD 83)
Longitude	125º 24' 39" W	**Northing**	5506337
		Easting	326103
Commodities	Copper, Gold, Silver, Molybdenum	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Plutonic Rocks, Wrangell

Capsule Geology

The Gem Lake occurrence is located in the headwaters of Gem Creek, approximately 1.3 kilometres north west of Moat Lake.

The area is underlain by basaltic and andesitic flows of the Upper Triassic Karmutsen Formation, Vancouver Group. These volcanics were intruded by stocks of quartz diorite of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions), as well as several felsite dikes. The rock units were faulted and at about the same time mineralized with several generations of quartz veins. A polymictic intrusive breccia occurs consisting of 30 to 70 per cent clasts of volcanic material, quartz diorite and felsite. The matrix consists of hornblende, feldspar and quartz.

The mineralization at Gem Lake can be divided into 5 types (Assessment Report 17002):

(1) Dilational quartz veins 0.1 to 10 centimetres in width with varying amounts of magnetite are common close to the intrusive breccia. The highest gold and silver assays obtained were 0.5 and 8 grams per tonne respectively.

(2) Disseminations, filled amygdules and fracture coatings of pyrrhotite and chalcopyrite are common. Typical gold and silver values are 0.1 and 4 grams per tonne respectively.

(3) Massive sulphide pods (several) with up to 5 per cent chalcopyrite are found. The largest of these pods outcrops over an area of 2 by 4 metres. Except for one sample assaying 1.1 grams per tonne gold most samples contained less than 0.2 grams per tonne. Silver was generally below 5 grams per tonne and always below 10 grams per tonne.

(4) Quartz veins with 1 to 20 per cent pyrrhotite and chalcopyrite occur throughout the property. The veins are from 0.5 to 15 centimetres in width. The percentage of chalcopyrite is usually greater than that of pyrrhotite. The veins typically contain 0.3 and 10 grams per tonne gold and silver respectively. High values were 7.8 and 40 grams per tonne gold and silver respectively.

(5) A tectonic breccia mineralized with chalcopyrite is exposed over and area of about 15 by 30 metres (Main showing). This breccia is associated with several parallel, steeply dipping, east trending faults. The host rock is mainly the intrusive breccia but a portion of the mineralization also occurs in basalt flows. The chalcopyrite is both disseminated throughout the tectonic breccia and occupies the open spaces between the fragments that resulted from faulting. The host rocks are not pervasively altered except in the areas of intense shearing where fault gouge has formed. Four samples were collected and assays showed that values range from 0.64 to 3.0 grams per tonne gold and from 9.8 to 49 grams per tonne silver.

A 1961 drill hole encountered 1 per cent copper over an interval of 18 metres (McDougall, 1964). Minor molybdenite (0.02 per cent) was found in the deepest intrusive body intersected in 1963. One report also describes pyrite and molybdenite as occurring in fractures and veins. Carson describes the deposit as a porphyry copper type related to forcible intrusion of Tertiary stocks (Geolical Survey of Canada Paper 68-50, page 45).

In 1987, Falconbridge completed a program of geological mapping and rock sampling on the area as the Meg 1-8 claims.

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SUMMARY

		NMI	
Name	FAITH LAKE, RIM	**Mining Division**	Nanaimo
		BCGS Map	092F063
Status	Prospect	**NTS Map**	092F11W
Latitude	49º 38' 57" N	**UTM**	10 (NAD 83)
Longitude	125º 24' 55" W	**Northing**	5502426
		Easting	325656
Commodities	Gold, Silver, Copper, Molybdenum, Lead, Zinc	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Faith Lake occurrences are located over an approximately 500 by 600 metre area south and southeast of Faith Lake.

The area is primarily underlain by basalt of the Upper Triassic Vancouver Group, Karmutsen Formation which consists of flows, pillow breccia, aquagene tuff, and some thin sedimentary layers. This unit was intruded by a hornblende quartz diorite stock of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions), then cut by a felsite sill. The dominant structures are steeply dipping, intersecting north and east trending shears and faults. Bedding is gently warped, with an average strike of 230 degrees and dip of 15 degrees north.

At least 30 veins have been examined within a 1.2 kilometre radius of the intrusive. Within the volcanics the veins fill the north and east trending structures as well as sheared intra-formational contacts. These veins vary in size from 5 to 10 centimetre wide lenses up to 0.6 to 1.2 metre wide veins fully exposed vertically through at least 600 metres. Undulating veins occupying intra-formational contacts, although rarely more than 0.46 metres in width, can be traced for distances measurable in kilometres. Where seen in the plutonic rock the veins parallel a master joint or fracture system which strikes 060 degrees and dips 70 degrees to the south.

The banded veins are generally composed of comb quartz plus occasional ankeritic carbonates, and massive to coarsely crystalline sulphides. The sulphides typically include arsenopyrite, chalcopyrite, pyrite, pyrrhotite, molybdenite, minor secondary chalcocite and possible bornite. In 1987, sampling of the Discovery vein assayed up to 37.71 grams per tonne gold and 274.6 grams per tonne silver over 20 centimetres (sample AD01351; Assessment Report 16866).

The Galena vein, a 30 centimetre thick and 20 metre long pod shaped vein emplaced along a shear between two basalt flows, was the only vein found that contained galena and sphalerite as well as chalcopyrite and arsenopyrite. A 15 centimetre drill interval assayed 24.69 grams per tonne gold, 120.00 gram per tonne silver and 3 per cent copper (McDougall, 1964). In 1987, sampling of the vein yielded up to 3.84 grams per tonne gold and 139.3 grams per tonne silver over 0.2 metres (sample AD01446 ;Assessment Report 16866).

Sampling of other veins, in the area, has yielded values up to 167.45 grams per tonne gold and 72.3 grams per tonne silver over 0.2 metres (sample AD01376; Assessment Report 16866).

In 1969, Falconbridge completed a ground self potential geophysical survey on the Faith and Rim claims. In 1987, Falconbridge completed a program of geological mapping, ground geophysical surveys and rock and soil sampling.

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SUMMARY

Summary Help

		NMI	
Name	SHEV (FAITH LAKE), FAITH LAKE, FAITH COPPER, RIM	**Mining Division**	Nanaimo
		BCGS Map	092F064
Status	Showing	**NTS Map**	092F11W
Latitude	49º 39' 28" N	**UTM**	10 (NAD 83)
Longitude	125º 22' 39" W	**Northing**	5503296
		Easting	328413
Commodities	Copper, Gold, Silver	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Shev occurrence is located on a ridge north of Eric Creek, approximately 2 kilometres north west of Faith Lake.

The area is primarily underlain by basalt of the Upper Triassic Vancouver Group, Karmutsen Formation which consists of flows, pillow breccia, aquagene tuff, and some thin sedimentary layers. This unit is intruded by a hornblende quartz diorite stock of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions), then cut by a felsite sill. The dominant structures are steeply dipping, intersecting north and east trending shears and faults. Bedding is gently warped, with an average strike of 230 degrees and dip of 15 degrees north.

The Shev breccia showing consists of a poorly exposed 20 by 1 metre exposure of highly altered monolithic breccia with clasts of mafic volcanic rock up to 15 centimetres in size. The top of the showing is cut by a white felsic dike, striking roughly east. Carson relates the brecciation of the host rocks to the forcible intrusion of the Tertiary intrusive complex and describes this showing as a porphyry copper type deposit (Geological Survey of Canada Paper 68-50, p. 45).

Pervasive sericitic alteration is characteristic of the zone, varying in intensity from moderate to strong. Silicic and clay alteration are also present but subordinate to the sericitization. The intensity of the mineralization is proportional to the intensity of the alteration. Arsenopyrite, chalcopyrite and pyrrhotite are the dominant sulphides. The percentage of chalcopyrite is never more than 3 per cent. Arsenopyrite can form up to 5 per cent but averages 1 to 2 per cent.

Occasional samples have assayed as high as 12.34 grams per tonne gold and 61.71 grams per tonne silver but are generally much lower (McDougall, 1964). In 1964, three pack sack drill holes yielded values up to 27.4 grams per tonne gold and 43.5 grams per tonne silver over 1.52 metres (Hole 2; Assessment Report 16866).

In 1969, Falconbridge completed a ground self potential geophysical survey on the Faith and Rim claims to the north west of Faith Lake. In 1987, Falconbridge completed a program of geological mapping, ground geophysical surveys and rock and soil sampling.

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SUMMARY

Summary Help

Name	IRISHMAN CREEK, CATFACE, IRISHMAN'S CREEK	**NMI**	092F5 Cu2
		Mining Division	Alberni
		BCGS Map	092F021
Status	Developed Prospect	**NTS Map**	092F05W
Latitude	49º 15' 57" N	**UTM**	10 (NAD 83)
Longitude	125º 59' 13" W	**Northing**	5461302
		Easting	282707
Commodities	Copper, Molybdenum, Silver, Gold, Zinc	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Irishman Creek occurrence lies 0.9 kilometre north of the Catface copper-molybdenum developed prospect (092F 120) and has been explored in conjunction with it and the Hecate Bay (092F 231) occurrence.

The area of the deposit is underlain by andesite and basalt flows, breccia and agglomerate in contact with diorite of the Mesozoic-Paleozoic Westcoast Complex. The age of the volcanics is in doubt and they are thought to belong to either the Upper Triassic Karmutsen Formation (Vancouver Group) or to the Paleozoic Sicker Group. Quartz monzonite of the Early to Middle Jurassic Island Intrusions, has intruded the contact area, followed by several quartz diorite to granodiorite phases of the Early to Middle Eocene Tofino Intrusive Suite (formerly Catface Intrusions), (Personal Communication, Nick Massey, May 1990).

Mineralization at Irishman's Creek consists of disseminated chalcopyrite, pyrite and some pyrrhotite in volcanic rocks and in brecciated quartz monzonite, near Tofino Intrusive Suite quartz diorite. A zone with greater that 0.2 percent copper mineralization measures 100 metres wide and 350 metres long (CIM Special Volume 15, page 308). The best drill intercept was 0.63 per cent copper over 155.4 metres, with silver up to 6.7 grams per tonne. A potential for 20 million tonnes of mineralized rock with unknown grade was estimated in 1970 (CIM Special Volume 46, pages 322-326). In 2010, diamond drilling (CF-10-58) intersected the breccia zone and yielded 0.797 per cent copper over 77.5 metres from 134.0 metres to 211.5 metres depth (Assessment Report 31894).

Also present are sulphide-rich masses containing magnetite, chalcopyrite, pyrite and pyrrhotite that occur over a width of one metre in or near a pyroxenite dyke that follows an east trending fault along Irishman's Creek.

In 1963 and 1964, Catface Copper Mines completed programs of soil sampling and a self potential geophysical survey on the area. This work identified a strong geochemical anomaly in the Irishman Creek area (Assessment Report 540). In 1970, Fort Reliance Minerals completed a program of soil sampling and a ground magnetic survey. In 1999, Doublestar Resources Ltd. acquired the property from Falconbridge Limited. In 2007, Doublestar was bought by Selkirk Metals Corp. In November 2009, Selkirk was bought by Imperial Metals Corporation. In 2010, Imperial completed a diamond drilling program of thirteen holes, totalling 3548.0 metres on the property. One hole, CF-10-58, was completed on the Irishman Creek zone.

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Last Edit:	05-Dec-13	by	Karl A. Flower(KAF)

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SUMMARY

Summary Help

		NMI	
Name	LUPUS 1, LAKE, ROAD	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 46' 46" N	**UTM**	10 (NAD 83)
Longitude	125º 11' 59" W	**Northing**	5516431
		Easting	341639
Commodities	Gold, Silver, Zinc, Copper, Lead	**Deposit Types**	I06 : Cu+/-Ag quartz veins
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Lake (Lupus 1) showing occurs about 800 metres northwest of the north end of Wolf Lake.

The area is underlain primarily by basaltic to andesitic lavas of the Upper Triassic Karmutsen Formation, Vancouver Group. These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates.

The Lake showing was exposed in a rock quarry in 1983. The showing is made up of a vein, up to 9 centimetres wide, that plunges 30 degrees toward 080 degrees. The vein consists of a core of massive sulphides lined with quartz. Sulphides include pyrite, arsenopyrite, sphalerite, minor chalcopyrite and galena. Native gold is reported to occur with the arsenopyrite. The vein is enveloped by a narrow clay zone that contains broken sulphide-quartz material. This zone is enveloped by a dark grey alteration zone which grades into a more bleached zone which in turn grades into unaltered green Karmutsen volcanics.

In 1984, select grab samples of mineralized material yielded values up to 70.1 grams per tonne gold, 114.9 grams per tonne silver, 11.4 per cent zinc, 0.7 per cent copper and 0.09 per cent lead (Assessment Report 13426). In 1986, a sample of the zone material taken across 0.90 metres assayed 4.42 grams per tonne gold, 20.57 grams per tonne silver, 0.60 per cent zinc, 0.15 per cent copper, 1.59 per cent lead and 0.01 per cent arsenic (Assessment Report 15034). Various selected samples and samples taken across narrower widths contained significantly higher grades of all the above elements.

In 1984, Proquest Resources completed a program of geological mapping and rock, soil and silt sampling on the area as the Lupus claims. In 1986, Homestake Canada and Pan World Ventures completed various programs of geological mapping, rock, silt and soil sampling and a induced polarization survey. In 2005 and 2006 the area was prospected as the Wolf Lake property by Pearl Asian Mining Industries.

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MINFILE Record Summary
MINFILE No 092F 329

File Created: 20-Nov-86 by Allan Wilcox(AFW)
Last Edit: 30-Nov-13 by Karl A. Flower(KAF)

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SUMMARY

Summary Help

		NMI	
Name	JO ANNE	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F11W
Latitude	49º 43' 26" N	**UTM**	10 (NAD 83)
Longitude	125º 21' 19" W	**Northing**	5510595
		Easting	330247
Commodities	Copper, Gold, Silver, Zinc	**Deposit Types**	H04 : Epithermal Au-Ag-Cu: high sulphidation
Tectonic Belt	Insular	**Terrane**	Plutonic Rocks, Overlap Assemblage

Capsule Geology

The Jo Anne occurrence is located on the north western slope of Mount Brooks, approximately 500 metres south east of Divers Lake.

Upper Cretaceous Nanaimo Group, Comox Formation sediments unconformably overlie Upper Triassic Vancouver Group, Karmutsen Formation basalt. Diorites of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite have intruded along this contact resulting in some hornfelsing of the sediments and the development of diatreme breccias.

Disseminated to massive pyrrhotite, pyrite and chalcopyrite occur in hornfelsed Comox sandstones and siltstones. Crackled quartz diorite locally contains pyrite, arsenopyrite and chalcopyrite disseminated within the porous matrix of the sill-breccia complex, in association with chlorite, quartz and calcite. This cavity filling mineralization is considered to be epithermal in origin and similar in nature to the gold-bearing mineralization at nearby Mt. Washington (See 092F 116).

In 1984 and 1985, Iron River Resources completed programs of geological mapping, prospecting and rock and silt sampling. Grab samples of mineralized breccia assayed up to 1.0 per cent copper, 12.4 grams per tonne silver and 0.175 grams per tonne gold (sample JA2-849-4; Assessment Report 14595).

In 1986, BP Resources Canada, on the behalf of Iron River Resources, completed a program of geological mapping and rock sampling. A sample (JA2-858-1) of biotite bearing, leucocratic quartz diorite with disseminated, 5 to 10 per cent, chalcopyrite assayed 5.11 per cent copper, 0.116 per cent zinc, 35.9 grams per tonne silver and 0.21 grams per tonne gold (Assessment Report 14889). The location of this sample is unknown.

In 1987, Noranda Mining and Exploration completed a program of airborne electromagnetic and magnetic surveys, geological mapping and rock, silt and soil sampling on the area. A sample of siliceous breccia from the Cliff Breccia zone assayed 1.66 grams per tonne gold and greater than 1 per cent arsenic (Assessment Report 17096).

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MINFILE Record Summary

MINFILE No 092F 365

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 12-Jun-07 by Sarah Meredith-Jones(SMJ)

SUMMARY

Name	OYSTER, PYRRHOTITE CREEK, MWC 226	**NMI**	092F14 Cu3
		Mining Division	Nanaimo
		BCGS Map	092F074
Status	Prospect	**NTS Map**	092F14W
Latitude	49º 46' 49" N	**UTM**	10 (NAD 83)
Longitude	125º 18' 03" W	**Northing**	5516742
		Easting	334363
Commodities	Gold, Silver, Copper, Lead, Molybdenum	**Deposit Types**	H05 : Epithermal Au-Ag: low sulphidation
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Mount Washington area is underlain by sediments of the Upper Cretaceous Nanaimo Group (Comox Formation), which unconformably overlie mafic volcanic rocks of the Upper Triassic Vancouver Group (Karmutsen Formation). Intruding both formations is an Oligocene quartz diorite stock of the Mount Washington Intrusive Suite, dated at 35 million years (+/- 6 million years). Several later breccias zones follow the Karmutsen-Comox unconformity and cut all rock units. They have recently been interpreted as stacked thrust faults or de- collements and have been mineralized by a later Tertiary epithermal gold-copper-arsenic event (see 092F 116).

The Karmutsen Formation comprises basaltic, massive and pillow lavas that are commonly porphyritic. The lavas grade into pillow breccias and aquagene tuffs. The overlying Comox Formation comprises fine-grained sandstone and greywacke, with interbedded siltstone. A basal conglomerate of the Comox Formation known as the Benson member consists of rounded clasts of Karmutsen Formation rocks.

The Tertiary quartz diorite stock is variably porphyritic and forms the core of Mount Washington. Several sills and dykes of quartz diorite and quartz diorite porphyry are related to the stock.

The Oyster breccia is a roughly circular feature that measures in excess of 350 metres in diameter and is thought to be a collapse breccia. The rocks surrounding the breccia "pipe" are mainly massive and/or amygdaloidal Karmutsen basalts. The breccia structure outcrops are composed mainly of Comox quartzite and minor porphyritic diorite. However, the fragment composition changes with depth from sediments to Karmutsen volcanics and intrusives. The matrix is often vuggy, the interstices lined with crystalline quartz and filled with limonite and fine fragments of limonitic quartzite.

A diamond-drill hole was put down on the centre of the zone in 1975 to a depth of 184 metres. This hole was deepened in 1988 to a depth of 542 metres. In the drill hole above 212 metres, the breccia is vuggy, bleached and intensely kaolinized. Below 212 metres, the breccia is very siliceous, glassy over short sections, with all interstices filled with quartz crystals and/or carbonate. The quartz matrix may also be lined with chlorite. The hole intersected small amounts of vein or matrix hosted molybdenite, arsenopyrite, and chalcopyrite, pyrite, realgar and orpiment is indicative of an epithermal overprint. Gold and silver content of core below 184 metres was negligible; assays for core above 184 metres were not reported.

The Pyrrhotite Creek breccia zone is an epithermal-type structure that occurs along a creek near the southern perimeter of the Oyster breccia. The structure consists of a lenticular zone of partially silicified and kaolinized bleached and brecciated basalt, mineralized across a width of about 1 metre and dipping toward the Oyster zone. Sulphide minerals present in decreasing order of abundance are pyrite, arsenopyrite, chalcopyrite, orpiment and realgar. The chalcopyrite sections of drill core were coincident with quartz veining and visible arsenopyrite.

A grab sample of silicified fault breccia assayed 14.50 grams per tonne gold, 31.88 grams per tonne silver, 1.04 per cent lead and 0.05 per cent zinc (Assessment Report 17193). A 43 centimetre section of core assayed 2.78 grams per tonne gold, 6.86 grams per tonne silver, 0.07 per cent copper and 3.67 per cent arsenic (Assessment Report 17193).

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SUMMARY

Summary Help

		NMI	
Name	IDEAL 3, MUREX CREEK, DOVE	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 43' 58" N	**UTM**	10 (NAD 83)
Longitude	125º 12' 41" W	**Northing**	5511267
		Easting	340646
Commodities	Gold, Silver, Zinc, Lead, Copper	**Deposit Types**	I06 : Cu+/-Ag quartz veins
Tectonic Belt	Insular	**Terrane**	Overlap Assemblage, Wrangell

Capsule Geology

The Ideal 3 occurrence area is underlain primarily by basaltic lavas of the Upper Triassic Karmutsen Formation, Vancouver Group. These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates. A major unconformity separates the Karmutsen Formation from the overlying Upper Cretaceous Nanaimo Group. The Nanaimo Group (Comox Formation) consists of fine to coarse-grained detrital sedimentary rocks. The Benson Member is a basaltic pebble-cobble- boulder conglomerate which marks the unconformity in some areas. Diorite and granodiorite of the Tertiary Mount Washington Intrusive Suite have intruded the above rocks, forming stocks, sills and dykes.

The main showing consists of a 1 to 8 centimetre wide, 230 degree striking shear zone, with 10 to 20 degree northwest dips. The zone is hosted within the Benson conglomerate, about 1 metre above the unconformity with the Karmutsen Formation. The shear zone contains quartz and calcite veinlets up to 1.5 centimetres in width and locally up to 4 centimetres in width. The veins and adjacent rocks contain pyrite, sphalerite, galena and chalcopyrite. The wallrock is moderately to strongly iron-carbonate altered.

A composite of grab samples of the veinlets (1 to 3 centimetres wide) assayed 9.87 grams per tonne gold, 24.6 grams per tonne silver, 0.05 per cent copper, 0.8 per cent lead, 1.2 per cent zinc and 0.4 per cent arsenic (Assessment Report 16412).

A quartz-pyrrhotite-chalcopyrite veinlet occurs in a shear zone in basalt, on the east wall of Murex Creek about 1.5 kilometres upstream from the above occurrence. A sample (Sample 49A) assayed 0.42 per cent copper and 2.43 per cent zinc (Assessment Report 16412).

Realgar and arsenopyrite occur as disseminations and lenses in calcite veins. This showing is located about 2 kilometres to the northwest of the main showing on a southern branch of McKay Creek.

History in the Dove property area began in the 1940s. Early exploration concentrated on high-grade gold-bearing quartz veins. For the next three decades, the area underwent intense exploration for low-grade or porphyry-style copper deposits, with little attention given to high-grade veins. This work led eventually to the formation of the Mount Washington Copper Company Ltd., which mined approximately 362 873.9 tonnes (400 000 tons) of ore from two small pits, 4.5 kilometres west of the Dove property. This ore had an average recovered grade of 1.16 per cent copper, 0.283 gram gold per tonne (0.01 ounce per ton), and 14.17 grams silver per tonne (0.5 ounce per ton). In the mid-1970s, Esso Minerals begun work in the Meadows zone, also on Mount Washington, and by 1982 they had outlined 0.45 to 0.91 million tonnes (0.5 to 1 million tons) of material grading 0.5 per cent copper (Assessment Report 22975).

The 1980s saw a return to exploration for epithermal, high-grade precious metal deposits. Better Resources Ltd. approached the Meadows zone as such a target. In 1987, they had outlined approximately 88 859 tonnes drill-indicated at 4.44 grams per tonne gold and 20.9 grams per tonne silver in the Lakeview-West grid and Domineer zones. This project included some underground development consisting of 300 metres of adits and crossdrifts (Assessment Report 22975).

Better Resources also drilled the Upper Murex Creek Breccia, a magnetite-copper body located just west of the Dove property. They drilled one intersection of 15.9 metres of 5.56 grams per tonne gold plus 2.7 metres of 2.5 grams per tonne gold and 3 metres of 3.44 grams per tonne gold (Assessment Report 22975).

The Dove property itself has had sporadic exploration throughout the area's history. Since 1987, Westmin Resources Ltd. has conducted several exploration programs on the property. These programs involved airborne geophysical surveys, systematic geological mapping, linecutting, induced polarization, very low-frequency electromagnetic ground surveys, soil geochemistry and diamond drilling.

In 1993, work consisted of establishing a small grid for an induced polarization survey. A total of 7.65 line kilometres were cut, including an 800-metre baseline. The results of the survey indicated a small chargeability anomaly near the Paquet showing; however, the location of the anomaly and its discontinuous nature suggested the improbability of developing a significant deposit. As a consequence, no further work was recommended for the target (Assessment Report 22975).

Bibliography

EMPR ASS RPT *16412, 17500, *22975
EMPR EXPL 1987-C154, 1988-C91
EMPR PF (Prospectus: Visible Gold Inc., Dec. 3, 1987)
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16
GCNL #186, 1988
NW PROSP Oct/Nov 1988
V STOCKWATCH Dec. 17, 1987

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MINFILE Record Summary

MINFILE No 092F 512

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XML Extract/Inventory Report

SUMMARY

Summary Help

		NMI	
Name	IDEAL 4, DOVE	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 45' 25" N	**UTM**	10 (NAD 83)
Longitude	125º 12' 42" W	**Northing**	5513955
		Easting	340705
Commodities	Copper	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Dove property, consisting of 370 claim units in the Ideal and Harmony claim groups, is located 15 kilometres northwest of Courtenay, Vancouver Island, BC. The property lies on the east and north flanks of Mount Washington, at elevations between 100 and 790 metres.

Regionally, the area is underlain by the Triassic Karmutsen Formation of the Vancouver Group, which is unconformably overlain by the Upper Cretaceous Comox Formation of the Nanaimo Group. Both are intruded by Tertiary subvolcanic igneous rocks and diatreme breccias.

The Karmutsen Formation on the Dove property consists of shallow-dipping massive basalt, pillowed basalt and minor hyaloclastite and pillow breccia.

Previous and current work on Mount Washington, west of the Dove claims, has documented low-grade porphyry copper mineralization and high-grade gold-bearing quartz-sulphide veins of epithermal character, which are shallow dipping and probably fault controlled and lie in close proximity to the Cretaceous unconformity. These veins occur in Comox Formation Tertiary intrusives and diatreme breccia.

Pyrite, pyrrhotite and chalcopyrite are disseminated in sandstone of the Upper Cretaceous Nanaimo Group, Comox Formation. At the Ideal 4 occurrence, two showings occur in zones of sericitized sandstone; one showing over a 2 metre interval. The other showing contains 20 to 30 per cent quartz. A grab sample assayed 0.15 per cent copper and 0.034 grams per tonne gold (Assessment Report 16412).

History in the Dove project area began in the 1940s, with exploration for high-grade gold veins. For the next three decades, the area underwent intensive exploration for low-grade or porphyry-type copper deposits. During this period, little attention appears to have been given to quartz veins or gold assays. The 1980s has seen renewed exploration for high-grade lode gold deposits based on an epithermal model. Such mineralization has been documented both east and west of the Dove property.

In 1987, exploration was quite intensive in the area, involving four projects. Better Resources Ltd. continued evaluating their Lakeview-West grid and Domineer zones on Mount Washington with a diamond drilling program of 8230 metres in 105 holes and an underground exploration program consisting of 300 metres of adit and crossdrifts. This work resulted in an upgraded ore reserve figure of 88 859 tonnes drill-indicated at 4.44 grams per tonne gold and 20.9 grams per tonne silver (Assessment Report 19081A).

Noranda undertook an exploration program on a large block of ground to the west and south of Mount Washington. This work involved geological mapping, prospecting, soil geochemistry and trenching. Late in the season, Noranda optioned the southern block of claims from Better Resources, which cover the Murex breccia gold zone, following up on one hole previously drilled by Better Resources that had returned 15.9 metres of 5.56 grams per tonne gold plus 2.7 metres of 2.5 grams per tonne gold and 3 metres of 3.44 grams per tonne gold (Assessment Report 19081A).

In 1992, a limited lithogeochemical survey and structural mapping program was carried out on the property. The survey identified several significant structures that could represent a major north-south structure, believed to occur in this area based on earlier work. Also, the lithogeochemical sampling (17 samples) identified a significant alteration zone at the north edge of the area of interest, which might be a preserved regolith, or a hydrothermally altered zone (Assessment Report 22807).

In 1993, work consisted of establishing a small grid for an induced polarization survey. A total of 7.65 line kilometres were cut, including an 800-metre baseline. The results of the survey indicated a small chargeability anomaly near the Paquet showing; however, the location of the anomaly and its discontinuous nature suggested the improbability of developing a significant deposit. As a consequence, no further work was recommended for the target (Assessment Report 22975).

Bibliography

EMPR ASS RPT *16412, 17500, *19081A, *22807, *22975
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

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MINFILE Record Summary
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Last Edit:	06-Aug-13	by	Nicole Barlow(NB)

XML Extract/Inventory Report

SUMMARY
Summary Help

		NMI	
Name	IDEAL 4 WEST, DOVE	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F11E, 092F14E
Latitude	49º 44' 59" N	**UTM**	10 (NAD 83)
Longitude	125º 14' 11" W	**Northing**	5513204
		Easting	338901
Commodities	Copper	**Deposit Types**	I06 : Cu+/-Ag quartz veins
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Dove property, consisting of 370 claim units in the Ideal and Harmony claim groups, is located 15 kilometres northwest of Courtenay, Vancouver Island, BC. The property lies on the east and north flanks of Mount Washington, at elevations between 100 and 790 metres.

Regionally, the area is underlain by the Triassic Karmutsen Formation of the Vancouver Group, which is unconformably overlain by the Upper Cretaceous Comox Formation of the Nanaimo Group. Both are intruded by Tertiary subvolcanic igneous rocks and diatreme breccias.

The Karmutsen Formation on the Dove property consists of shallow-dipping massive basalt, pillowed basalt and minor hyaloclastite and pillow breccia.

Previous and current work on Mount Washington, west of the Dove claims, has documented low-grade porphyry copper mineralization and high-grade gold-bearing quartz-sulphide veins of epithermal character, which are shallow dipping and probably fault controlled and lie in close proximity to the Cretaceous unconformity. These veins occur in Comox Formation Tertiary intrusives and diatreme breccia.

At the Ideal 4 West occurrence, two copper bearing quartz veins occur in basalt of the Upper Triassic Karmutsen Formation, Vancouver Group. One vein is 4 to 6 centimetres wide and contains 10 to 15 per cent pyrrhotite and up to 2 per cent chalcopyrite. The vein strikes 235 degrees and dips 80 degrees northwest. The second vein, with similar mineralogy, has only a few per cent pyrrhotite and is found a few hundred metres to the northwest of the first. The vein strikes 245 degrees and dips 50 degrees northwest. An assay of this vein material revealed a content of 0.85 per cent copper and 4.5 grams per tonne silver (Assessment Report 16412).

Twenty-nine metres north of the northerly vein is an exposure of quartz diorite of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions). Pyrrhotite and chalcopyrite occur in patches on the numerous fractures and joints of the intrusive.

History in the Dove project area began in the 1940s, with exploration for high-grade gold veins. For the next three decades, the area underwent intensive exploration for low-grade or porphyry-type copper deposits. During this period, little attention appears to have been given to quartz veins or gold assays. The 1980s has seen renewed exploration for high-grade lode gold deposits based on an epithermal model. Such mineralization has been documented both east and west of the Dove property.

In 1987, exploration was quite intensive in the area, involving four projects. Better Resources Ltd. continued evaluating their Lakeview-West grid and Domineer zones on Mount Washington with a diamond drilling program of 8230 metres in 105 holes and an underground exploration program consisting of 300 metres of adit and crossdrifts. This work resulted in an upgraded ore reserve figure of 88 859 tonnes drill-indicated at 4.44 grams per tonne gold and 20.9 grams per tonne silver (Assessment Report 19081A).

Noranda undertook an exploration program on a large block of ground to the west and south of Mount Washington. This work involved geological mapping, prospecting, soil geochemistry and trenching. Late in the season, Noranda optioned the southern block of claims from Better Resources, which cover the Murex breccia gold zone, following up on one hole previously drilled by Better Resources that had returned 15.9 metres of 5.56 grams per tonne gold plus 2.7 metres of 2.5 grams per tonne gold and 3 metres of 3.44 grams per tonne gold (Assessment Report 19081A).

In 1992, a limited lithogeochemical survey and structural mapping program was carried out on the property. The survey identified several significant structures that could represent a major north-south structure, believed to occur in this area based on earlier work. Also, the lithogeochemical sampling (17 samples) identified a significant alteration zone at the north edge of the area of interest, which might be a preserved regolith, or a hydrothermally altered zone (Assessment Report 22807).

In 1993, work consisted of establishing a small grid for an induced polarization survey. A total of 7.65 line kilometres were cut, including an 800-metre baseline. The results of the survey indicated a small chargeability anomaly near the Paquet showing; however, the location of the anomaly and its discontinuous nature suggested the improbability of developing a significant deposit. As a consequence, no further work was recommended for the target (Assessment Report 22975).

Bibliography

EMPR ASS RPT *16412, 17500, *19081A, *22807, *22975
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44
PERS COMM Massey, N. (May 1990) (with respect to renaming of Tertiary intrusions)

MINFILE Record Summary
MINFILE No 092F 640

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Last Edit: 09-Dec-13 by Karl A. Flower(KAF)

XML Extract/Inventory Report

SUMMARY

Summary Help

		NMI	
Name	MOUNT WASHINGTON COPPER TAILIN, MT WASHINGTON COPPER TAILINGS	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 45' 19" N	**UTM**	10 (NAD 83)
Longitude	125º 13' 12" W	**Northing**	5513787
		Easting	340100
Commodities	Copper, Gold, Silver	**Deposit Types**	T01 : Tailings
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

kilometres northwest of Anderson Lake.

The area is underlain primarily by basaltic lavas of the Upper Triassic Karmutsen Formation (Vancouver Group). These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates. A major unconformity separates the Karmutsen Formation from the overlying Upper Cretaceous Nanaimo Group. Haslam and Comox Formations, which consist of fine- to coarse-grained detrital sedimentary rocks. The Benson Member is a pebble-cobble-boulder conglomerate which marks the unconformity in some areas. Diorite and granodiorite of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions) have intruded the above rocks, forming stocks, sills and dikes.

Locally, the former Mount Washington Copper (MINFILE 092F 117) and Domineer/Lakeview (MINFILE 092F 116) mine tailings dam carries values in base and precious metals.

In 2011, Clibetre Exploration completed a program of geochemical sampling and fifteen holes of overburden drilling, totalling 64.8 metres, on former tailings located 6 kilometres to the east. The average value of all fifteen holes over 64.8 metres yielded 0.124 gram per tonne gold, 5.83 grams per tonne silver and 0.088 per cent copper; while the best 23.7 metres yielded values of 0.174 gram per tonne gold, 7.7 grams per tonne silver and 0.10 per cent copper (Assessment Report 32514).

Bibliography

EMPR ASS RPT *32514
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary

MINFILE No 092F 641

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Last Edit:	09-Dec-13	by	Karl A. Flower(KAF)

SUMMARY

Summary Help

		NMI	
Name	CLIFF, WOLF, LUPUS	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 45' 56" N	**UTM**	10 (NAD 83)
Longitude	125º 18' 21" W	**Northing**	5515116
		Easting	333953
Commodities	Silver, Gold, Arsenic, Copper	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The former Mount Washington Copper tailings dam is located east of Murex Creek, approximately 2.8 The Cliff showing is located approximately 1.3 kilometres west of Wolf Lake, at approximately 430 metres elevation.

The area is underlain primarily by basaltic lavas of the Upper Triassic Karmutsen Formation (Vancouver Group). These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates. These are overlain by sediments of the Upper Cretaceous Nanaimo Group (Comox Formation).

Locally, a 5 centimetre wide pyrite-arsenopyrite-quartz vein is hosted in Nanaimo Group sediments. The vein has a vertical dip and a westerly trend. In 1986, a grab sample (860914) assayed 15.77 grams per tonne silver, 0.10 gram per tonne gold, 0.52 per cent arsenic and 0.13 per cent copper (Assessment Report 15034).

In 1983, Lac Minerals completed programs of prospecting and geochemical sampling on the area as the Wolf claims. In 1984, Proquest Resources completed a program of geological mapping and rock, soil and silt sampling on the area as the Lupus claims. In 1985, St. James Minerals completed a program of geochemical sampling, geological mapping and ground geophysical surveys on the Wolf claims. In 1986, Homestake Canada and Pan World Ventures completed various programs of geological mapping, rock, silt and soil sampling and an induced polarization survey. In 2005 and 2006 the area was prospected by Pearl Asian Mining Industries as the Wolf Lake property.

Bibliography

EMPR ASS RPT 12015, 13426, *14434, 14442, *15034, 27430, 28405
EMPR EXPL 1983-208; 1986-C183,C184
GSC EC GEOL *No.4, p. 36-38
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary
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Last Edit:	09-Dec-13	by	Karl A. Flower(KAF)

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SUMMARY

Summary Help

		NMI	
Name	ROAD, LUPUS 1	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 46' 29" N	**UTM**	10 (NAD 83)
Longitude	125º 12' 31" W	**Northing**	5515924
		Easting	340983
Commodities	Gold, Silver, Copper	**Deposit Types**	I06 : Cu+/-Ag quartz veins
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Road showing is located approximately 1 kilometre west of the north end of Wolf Lake.

The area is underlain primarily by basaltic to andesitic lavas of the Upper Triassic Karmutsen Formation (Vancouver Group). These rocks are mostly massive flows and pillow lavas of partly amygdaloidal basalts, with minor tuffs, volcanic breccias and agglomerates.

Locally, 6 centimetre wide quartz vein contains chalcopyrite and pyrite. In 1986, a grab sample (860918) assayed 21.94 grams per tonne gold, 30.86 grams per tonne silver, and 0.66 per cent copper (Assessment Report 15034).

In 1984, Proquest Resources completed a program of geological mapping and rock, soil and silt sampling on the area as the Lupus claims. In 1986, Homestake Canada and Pan World Ventures completed various programs of geological mapping, rock, silt and soil sampling and an induced polarization survey. In 2005 and 2006 the area was prospected by Pearl Asian Mining Industries as the Wolf Lake.

Bibliography

EMPR ASS RPT 13426, 14442, *15034, 27430, 27824, 28405
EMPR EXPL 1984-168; 1986-C183,C184
EMPR PF (C.J. Westerman, Lupus Gold Property Report, 1986; various maps)
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16
GCNL #42(Mar.2),(Apr.10), #149(Aug.5), 1987

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MINFILE Record Summary
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File Created: 05-Dec-13 by Karl A. Flower(KAF)
Last Edit: 09-Dec-13 by Karl A. Flower(KAF)

SUMMARY

Summary Help

		NMI	
Name	MCKAY CREEK, IDEAL 5	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 46' 42" N	**UTM**	10 (NAD 83)
Longitude	125º 14' 53" W	**Northing**	5516410
		Easting	338156
Commodities	Arsenic, Antimony	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The McKay Creek (Ideal 5) occurrence is located on McKay Creek, approximately 3.8 kilometres west of the north end of Wolf Lake.

The area is underlain by basaltic volcanic rocks of the Triassic Karmutsen Formation (Vancouver Group). Diorite and granodiorite of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions) have intruded the above rocks, forming stocks, sills and dikes.

Locally, two veins of realgar and stibnite (?) bearing calcite occur within an ankeritic- altered shear zone cutting basalt and pillow basalt and breccia. Both the veins and shear zone are oriented 105 degrees and dip 70 degrees south west. Exposure of the rusty weathering carbonate alteration zone is 5 metres thick and contains two parallel veins separated by 2.7 metres of altered basalt.

The south calcite vein is 0.70 metre thick and contains patchy and disseminated realgar and rare patches of a mineral resembling very fine magnetite. The northern 7 centimetres of this vein contains 3 to 4 per cent fine stibnite. In 1989, a chip sample yielded 0.29 per cent arsenic and 1.45 per cent antimony (Assessment Report 19081).

The northerly calcite vein is 18 centimetres thick and contains minor to 2 per cent thin stringers of arsenopyrite, minor pyrite and minor disseminated realgar crystals up to 8 millimetres long.

During 1986 through 1993, Westmin Resources completed programs of prospecting, geological mapping, geochemical sampling and airborne and ground geophysical surveys on the area as the Ideal 1-9 and Harmony claims.

Bibliography

EMPR ASS RPT 16406, 16412, 17500, *19081, 22807, 22975
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary
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Last Edit:	09-Dec-13	by	Karl A. Flower(KAF)

SUMMARY
Summary Help

		NMI	
Name	LOWER MUREX CREEK, IDEAL 9	**Mining Division**	Nanaimo
		BCGS Map	092F074
Status	Showing	**NTS Map**	092F14E
Latitude	49º 47' 20" N	**UTM**	10 (NAD 83)
Longitude	125º 13' 39" W	**Northing**	5517539
		Easting	339670
Commodities	Gold, Silver, Copper, Lead, Zinc	**Deposit Types**	I05 : Polymetallic veins Ag-Pb-Zn+/-Au
Tectonic Belt	Insular	**Terrane**	Wrangell

Capsule Geology

The Lower Murex Creek occurrence is located in Murex Creek, approximately 250 metres south of its junction with McKay Creek.

The area is underlain by basaltic volcanic rocks of the Triassic Karmutsen Formation (Vancouver Group). These have been unconformably overlain by sedimentary rocks of the Upper Cretaceous Comox Formation (Nanaimo Group). Diorite and granodiorite of the Late Eocene to Early Oligocene Mount Washington Intrusive Suite (formerly Catface Intrusions) have intruded the above rocks, forming stocks, sills and dikes.

Locally, flat-lying sulphide-poor quartz vein is exposed in bedrock. The vein is 1 to 4 centimetres thick and lies at the unconformity between the Karmutsen and Comox Formations.

In 1987, a vertical drillhole, located 20 metres to the west of the showing, intersected a 2.5 centimetre thick vein yielding 14.9 grams per tonne gold (Assessment Report 19081). In 1989, a chip sample assayed 8.9 grams per tonne gold, 25.0 grams per tonne silver, 0.05 per cent copper, 0.82 per cent lead and 1.18 per cent zinc (Assessment Report 19081). Float samples, from further down the creek, of pyrite and sphalerite bearing drusy quartz vein material yielded values up to 149.1 grams per tonne gold and 92.6 grams per tonne silver (Assessment Report 19081).

During 1986 through 1993, Westmin Resources completed programs of prospecting, geological mapping, geochemical sampling and airborne and ground geophysical surveys on the area as the Ideal 1-9 and Harmony claims.

Bibliography

EMPR ASS RPT 16406, 16412, 17500, *19081, 22762, 22807, 22975
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary
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Last Edit:	09-Dec-13	by	Karl A. Flower(KAF)

SUMMARY

Summary Help

		NMI	
Name	PAQUET, IDEAL 2	**Mining Division**	Nanaimo
		BCGS Map	092F075
Status	Showing	**NTS Map**	092F11E
Latitude	49º 44' 37" N	**UTM**	10 (NAD 83)
Longitude	125º 11' 07" W	**Northing**	5512417
		Easting	342562
Commodities	Antimony, Gold, Silver, Copper, Lead, Zinc	**Deposit Types**	
Tectonic Belt	Insular	**Terrane**	Wrangell, Plutonic Rocks

Capsule Geology

The Paquet occurrence is located on Paquet Creek, approximately 1.9 kilometres southwest of the creek mouth of Wolf Lake.

The area is underlain by sedimentary rocks of the Comox Formation (Nanaimo Group). These have been intruded by quartz dioritic intrusives of the Eocene to Oligocene Mount Washington Plutonic Suite.

Locally, a prominent fault zone lies on the south west contact of a large dacite porphyry intrusive and Karmutsen basalt. The fault strikes 110 degrees and dips 55 degrees south west. The zone is marked by gouge and sheared rock in a seam, 0.35 metre thick, which is veined with carbonate and realgar veinlets and averages several per cent realgar. The fault zone contains minor disseminated pyrite and local grey quartz lenses containing realgar. Veins of massive coarse crystalline realgar range up to 2 centimetres thick. In 1992, a sample (D92-09) of the zone yielded greater than 1 per cent antimony (Assessment Report 22807).

A small, parallel, pyrite-realgar bearing carbonate-quartz vein, 2 to 5 centimetres thick, is hosted in the footwall of the fault. In 1989, a sample of the vein and footwall yielded 2.35 grams per tonne gold, 18.4 grams per tonne silver, 0.3 per cent copper, 0.2 per cent lead, 0.8 per cent zinc and 0.5 per cent antimony (Assessment Report 19081). In 1992, a 2 metre sample yielded 1.8 grams per tonne silver and 0.58 gram per tonne gold (Assessment Report 22807).

A 1 to 10 centimetre wide calcite-realgar vein is exposed in a cliff face, 100 metres below the main showing and below a landslide. The vein strikes 180 degrees and dips 80 degrees to the south.

During 1986 through 1993, Westmin Resources completed programs of prospecting, geological mapping, geochemical sampling and airborne and ground geophysical surveys on the area as the Ideal 1-9 and Harmony claims.

Bibliography

EMPR ASS RPT 16406, 16412, 17500, *19081, *22807,
EMPR EXPL 1987-C154, 1988-C91
GSC MAP 2-1965; 17-1968; 1386A
GSC OF 463
GSC P 68-50; 72-44; 80-16

MINFILE Record Summary
MINFILE No 092K 008

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Last Edit: 27-Jun-13 by Nicole Barlow(NB)

SUMMARY

Summary Help

Name	OK NORTH, O.K., O.K. NORTH, O.K. SOUTH, IN, DEE, NORTH, OK, NORTH LAKE ZONE	**NMI**	092K2 Cu1
		Mining Division	Vancouver
Status	Developed Prospect	**BCGS Map**	092K007
Latitude	50º 02' 31" N	**NTS Map**	092K02E
Longitude	124º 39' 04" W	**UTM**	10 (NAD 83)
		Northing	5544600
		Easting	381776
Commodities	Copper, Molybdenum, Zinc	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Coast Crystalline	**Terrane**	Plutonic Rocks

Capsule Geology

The OK North deposit is located east of Okeover Inlet and south of Theodosia Inlet in the Bunster Hills. Powell River is located about 25 kilometres to the south. The OK North zone is located near North Lake. The OK South zone (MINFILE 092K 057), lies 2.3 kilometres to the south.

Two phases of intrusions occur within the Jurassic to Cretaceous Coast Plutonic Complex. Granodiorite is intruded by an elliptical, 1.6-kilometre long quartz monzonite body, referred to as the OK Intrusive Complex and assumed to be Tertiary or younger. The dike-like leucocratic feldspar porphyry body is elongated north-northwest, varies from 30 to 600 metres in width, and has been inferred to be the core of the larger, variably altered granodiorite body. At least six phases of intrusions have been noted on the property, characteristic of many porphyry deposits. Later phases include narrow quartz-eye porphyries and postmineral diorites, which occur as north-northeasterly dikes and vary from 1 to 60 metres in width. Discontinuous andesite dikes represent the latest intrusive phase. Rocks in the vicinity of the OK South zone exhibit moderate to strong phyllic and argillic alteration. Elsewhere on the property, alteration is less intense and consists predominantly of propylitic alteration to chlorite and epidote. Post-mineralization, north-northwest–trending faults cut both granitic rocks of the Coast Plutonic Complex and the younger OK Intrusive Complex.

Mineralization occurs in fractures, quartz stringers, irregular veinlets, blebs and some disseminations. Mineralization of economic significance is primarily peripheral to the leucocratic feldspar porphyry in the granodiorite. Sulphide minerals include chalcopyrite, molybdenite and pyrite with minor sphalerite and bornite. Minor magnetite is associated erratically with pyrite and chalcopyrite. Thin veneers of malachite, limonite and azurite are also noted.

In situ reserves/possible resources at a 0.3 per cent copper cutoff grade are 68 million tonnes grading 0.39 per cent copper and 0.02 per cent molybdenum (N.C. Carter, personal communication, 1991).

A geostatistical study in 1982 of all drillhole data, which included seven mineralized zones (over a distance of 5 kilometres) for which sufficient data were available, estimated that combined drill-indicated and geological potential resources were 408 000 000 tonnes of greater than 0.24 per cent copper and 0.009 per cent molybdenum (CanQuest website). An independent report prepared in 1989 for CanQuest Resource Corporation further refined the 1982 geostatistical analysis to provide a "proven plus probable resource, recoverable by a selective open pit mining operation" of 104 900 000 tonnes of 0.46 per cent copper and 0.028 per cent molybdenum at a 0.4 per cent copper equivalent cut-off (CanQuest website).

Since its discovery in 1965, the OK property has been explored by a number of geological, geochemical and geophysical surveys and by more than 14 000 metres of percussion and diamond drilling. This work outlined several copper-molybdenum mineralized zones over a northerly trend 5 kilometres in length. Between 1966 and 1985, several companies (Asrco Exploration Company of Canada Limited, Falconbridge, Granite Mountain Mines, Western Mines, Aquarius Resources Limited) carried out the exploration work.

In 1994, CanQuest Resource Corporation optioned the property from Robert Edward Mickle of Likely, BC, and conducted geological, geophysical and geochemical surveys and drilling.

In 1995, CanQuest Resource Corp. completed an IP geophysical survey that located an area of higher chargeability, which was drilled with a single drillhole in 1996.

In 1997, CanQuest Resource Corp. conducted geological mapping in the area.

In 1998, CanQuest Resource Corp. completed rock chip sampling, soil geochemistry, geological mapping and geophysical surveys.

In early 2003, Eastfield Resources Ltd. optioned the OK property from Robert Edward Mickle of Likely, BC. Later in 2003, Lumina Copper Corp. entered into an option with Eastfield Resources Ltd. for the OK property and conducted an exploration program of geological mapping, prospecting and bedrock sampling.

Lumina Copper Corp. dropped their option in 2004; Goldrush Resources Ltd. then optioned the property from Eastfield Resources Ltd. and conducted a geophysical survey.

In early 2005, Goldrush Resources Ltd. released a NI 43-101 compliant resource estimate which stated an inferred resource of 64 020 000 tonnes grading 0.34 per cent copper and 0.01 per cent molybdenum calculated with a 0.20 per cent copper cut-off grade (Press Release, Goldrush Resources Ltd., March 21, 2005). Later in 2005, Goldrush Resources Ltd. and Eastfield Resources Ltd. completed geochemical sample analyses and diamond drilling. Highlights include drillhole 05-OK-DH-03, which returned 185.5 metres grading 0.21 per cent copper (Assessment Report 28035).

In 2006, Goldrush Resources Ltd. assigned its option of the OK property to Prophecy Resources Ltd., and Eastfield Resources Ltd. and Prophecy Resource Corp. released updated resource estimates for the OK North zone of inferred resources of 86.80 million tonnes grading 0.31 per cent copper and 0.014 per cent molybdenum, calculated using a 0.20 per cent copper cut-off (Technical Report on the OK Copper Property for Prophecy Resources Corp. dated October 5, 2006 - www.prophecyresource.com).

In 2007, Prophecy Resource Corp. and Eastfield Resources Ltd. conducted soil sampling and diamond drilling. Highlights of the diamond drilling include drillhole 07-04, which returned 75 metres grading 0.34 per cent copper and 0.012 per cent molybdenum (Assessment Report 29477).

In 2008, Prophecy Resource Corp. and Eastfield Resources Ltd. completed six diamond drillholes on the OK property.

In 2010, Prophecy Resource Corp. was renamed Prophecy Coal Corp., and completed soil and rock sampling with Eastfield Resources Ltd. Highlights include sample 726869, which assayed 0.398 per cent molybdenum (Assessment Report 32091).

In 2011, Prophecy Coal Corp. and Eastfield Resources Ltd. completed IP and magnetometer geophysical surveys.

In 2012, Prophecy Coal Corp. and Eastfield Resources Ltd. conducted soil sampling.

Bibliography

EMPR AR 1967-58; 1968-73
EMPR ASS RPT 1573, 2594, 2595, 5026, 6846, *8748, *9520, *10577, *11162, *23511, 24038, 24553, 25068, 25594, 27342, 27660, 28035, 29260, *29477, 30301, *32091, 32697
EMPR EXPL 1975-G53; 1977-E172; 1980-264; 1982-220,221; 2002-29-40
EMPR FIELDWORK 1975, p. 44
EMPR GEM 1970-229; 1971-313; 1972-284; 1974-201
EMPR MAP 65 (1989)
EMPR OF 1992-1
EMPR PF (Randall, A.W. (1974): Report on the Diamond Drill Project on the OK Property; Meyer, W., Gale, R.E.and Randall, A.W.: The O.K. Property, undated Report, probably 1974; OK Project, Explore B.C. Application, May 25, 1996; Canquest Resource Corporation Website (Mar.,Nov. 1999): OK Property, 3 p.; Canquest Resource Corporation Corporate Profile handout from PDAC 2000, 9 p.; Canquest Resource Corporation, Prospectus 1995; Photos, 1996)
EMR MIN BULL MR 223 B.C. 165
CIM Special Volume *15, pp. 311-316
GCNL #135,#175, 1968; #240, 1973; #241, 1974; #15, 1975; #109, #168, 1976; #121,#181, 1977; #177, 1979; #76, 1980; #150, 1981; #26, 1983; #212, 1984
N MINER Sept.12,27, 1979; Aug.20, 1981; Feb.17,24, 1983
PR REL CanQuest Resource Corporation, February 1, April 14, 1999; June 8, 1999; Eastfield Resources Ltd., Mar.6, 2003; May 3, 2013; Goldrush Resources Ltd., *Mar. 21, 2005
WWW http://www.canquest.bc.ca/ok.htm; http://www.infomine.com/index/properties/OK_PROPERTY_(POWELL_RIVER).html; http://www.eastfieldresources.com; * http://www.prophecyresource.com
Falconbridge File

MINFILE Record Summary

MINFILE No 092K 057

XML Extract/Inventory Report

File Created: 24-Jul-85 by BC Geological Survey (BCGS)
Last Edit: 27-Jun-13 by Nicole Barlow(NB)

SUMMARY

Name	OK SOUTH, O.K., IN, DEE, O.K. SOUTH, OK	**NMI**	092K2 Cu1
		Mining Division	Vancouver
		BCGS Map	092K007
Status	Prospect	**NTS Map**	092K02E
Latitude	50º 01' 17" N	**UTM**	10 (NAD 83)
Longitude	124º 38' 26" W	**Northing**	5542298
		Easting	382481
Commodities	Copper, Molybdenum, Silver, Gold, Zinc, Rhenium	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Coast Crystalline	**Terrane**	Plutonic Rocks

Capsule Geology

The OK South deposit is located east of Okeover Inlet and south of Theodosia Inlet in the Bunster Hills. Powell River is located about 25 kilometres to the south. The OK North zone (092K 008) is located 2.3 kilometres to the north, near North Lake.

Two phases of intrusions occur within the Jurassic to Cretaceous Coast Plutonic Complex. Granodiorite is intruded by an elliptical, 1.6 kilometre long, leucocratic feldspar porphyry body, referred to as the OK Intrusive Complex and assumed to be Tertiary or younger. The dike-like leucocratic feldspar porphyry body is elongated north-northwest, varies from 30 to 600 metres in width, and has been inferred to be the core of the larger, variably altered granodiorite body. At least six phases of intrusions have been noted on the property, characteristic of many porphyry deposits. Later phases include narrow quartz-eye porphyries and postmineral diorites, which occur as north-northeasterly dikes and vary from 1 to 60 metres in width. Discontinuous andesite dikes represent the latest intrusive phase. Rocks in the vicinity of the OK South zone exhibit moderate to strong phyllic and argillic alteration. Elsewhere on the property, alteration is less intense and consists predominantly of propylitic alteration to chlorite and epidote. Post mineralization, north-northwest–trending faults cut both granitic rocks of the Coast Plutonic Complex and the younger OK Intrusive Complex.

Mineralization occurs in fractures, as quartz stringers, irregular veinlets, blebs and some disseminations. Intrusive breccias peripheral to the granodiorite host the higher grade copper mineralization. Trenching and limited diamond drilling suggest a north-northwest trend to the breccia zone, which consists of rounded 2 to 5 centimetre clasts of varying lithologies within a fine-grained matrix containing a high percentage of sulphide minerals.

Sulphide minerals include chalcopyrite, molybdenite and pyrite, with minor sphalerite and bornite. Minor magnetite is associated erratically with pyrite and chalcopyrite. Thin veneers of malachite, limonite and azurite are also present.

Since its discovery in 1965, the OK property has been explored by a number of geological, geochemical and geophysical surveys and by more than 14 000 metres of percussion and diamond drilling. This work outlined several copper-molybdenum mineralized zones over a northerly trend 5 kilometres in length. Between 1966 and 1985, several companies (Asrco Exploration Company of Canada Limited, Falconbridge, Granite Mountain Mines, Western Mines, Aquarius Resources Limited) carried out the exploration work.

In 1979, a 9-metre channel sample in the OK South zone assayed 0.24 per cent copper, 0.48 per cent molybdenum and 4.1136 grams per tonne silver (Assessment Report 8748).

In 2003, Lumina Copper Corp. and Eastfield Resources Ltd. conducted an exploration program of geological mapping, prospecting and bedrock sampling. Highlights include sample P-03-OK-21, which assayed 0.35 per cent copper (Assessment Report 27342).

In 2005, Goldrush Resources Ltd. and Eastfield Resources completed geochemical sample analyses and diamond drilling. Highlights include drillhole 05-OK-DH-06, which returned 96.9 metres grading 0.15 per cent copper (Assessment Report 28035).

For complete property history, see OK North (MINFILE 092K 008).

Bibliography

EMPR AR 1967-58; 1968-73
EMPR ASS RPT 1573, 2594, 2595, 5026, 6846, *8748, *9520, *10577, *11162, *23511, 24038, 24553, 25068, 25594, *27342, *28035
EMPR EXPL 1975-G53; 1977-E172; 1980-264; 1982-220,221; 2002-29-40
EMPR FIELDWORK 1975, p. 44
EMPR GEM 1970-229; 1971-313; 1972-284; 1974-201
EMPR PF (Randall, A.W. (1974): Report on the Diamond Drill Project on the OK property; Canquest Resource Corporation (Nov. 1999): OK property, 2 p.)
CIM *Special Volume 15, pp. 311-316
GCNL #135,#175, 1968; #240, 1973; #241, 1974; #15, 1975; #109,#168, 1976; #121,#181, 1977; #177, 1979; #76, 1980; #150, 1981; #26, 1983; #212, 1984
N MINER Sept.12,27, 1979; Aug.20, 1981; Feb.17,24, 1983
PR REL CanQuest Resource Corporation, February 1, April 14, 1999
WWW http://www.canquest.bc.ca/ok.htm
Falconbridge File
Placer Dome File

MINFILE Record Summary

MINFILE No 092K 168

XML Extract/Inventory Report

File Created: 26-Jun-13 by Nicole Barlow(NB)
Last Edit: 27-Jun-13 by Nicole Barlow(NB)

SUMMARY

Summary Help

Name	OK BRECCIA, O.K. BRECCIA, OK, O.K., OK C	**NMI**	
		Mining Division	Vancouver
		BCGS Map	092K007
Status	Showing	**NTS Map**	092K02E
Latitude	50º 01' 05" N	**UTM**	10 (NAD 83)
Longitude	124º 37' 53" W	**Northing**	5541927
		Easting	383123
Commodities	Molybdenum, Copper, Gold, Silver	**Deposit Types**	L04 : Porphyry Cu +/- Mo +/- Au
Tectonic Belt	Coast Crystalline	**Terrane**	Plutonic Rocks

Capsule Geology

The OK Breccia zone is located east of Okeover Inlet and south of Theodosia Inlet in the Bunster Hills. Powell River is located about 25 kilometres to the south. The OK North zone (092K 008) is located 3 kilometres to the north, near North Lake.

Mineralization occurs in fractures, as quartz stringers, irregular veinlets, blebs and some disseminations. Intrusive breccias peripheral to the granodiorite host the higher grade copper mineralization. Trenching and limited diamond drilling suggest a north-northwest trend to the breccia zone, which consists of rounded 2 to 5 centimetre clasts of varying lithologies within a fine-grained matrix containing a high percentage of sulphide minerals.

Sulphide minerals include chalcopyrite, molybdenite and pyrite with minor sphalerite and bornite. Minor magnetite is associated erratically with pyrite and chalcopyrite. Thin veneers of malachite, limonite and azurite are also present.

In 1979, Aquarius Resources Inc. completed trenching and diamond drilling on the OK property. Highlights included drillhole k-79-2, which returned 9.4 metres grading 1.5 per cent copper and 8.93 grams per tonne silver (Assessment Report 8748).

Sampling in 1993 by CanQuest Resource Corp. yielded values as high as 0.15 per cent molybdenum, 4.69 per cent copper, 32.9 grams per tonne silver and 0.48 gram per tonne gold (Assessment Report 23511). Rhenium occurs in grab samples in the area.

In 1994, CanQuest Resource Corp. optioned the property and conducted geological, geophysical and geochemical surveys and drilling.

In 1995, CanQuest Resource Corp. completed an IP geophysical survey that located an area of higher chargeability, which was drilled with a single drillhole in 1996. The single drillhole returned 1.95 metres grading 0.202 per cent copper (Assessment Report 24553).

In 1998, CanQuest Resource Corp. completed rock chip sampling, soil geochemistry, geological mapping and geophysical surveys. Highlights of the chip sampling include sample 157207, which assayed 3.025 per cent copper over 2 metres (Assessment Report 25594).

In 2003, Lumina Copper Corp. and Eastfield Resources Ltd. conducted an exploration program of geological mapping, prospecting and bedrock sampling. Highlights include sample LB-03-OK-18, which assayed 2.06 per cent copper (Assessment Report 27342).

In 2007, Prophecy Resource Corp. and Eastfield Resources Ltd. conducted diamond drilling on the OK property. Highlights include drillhole OK07-09, which returned 30 metres grading 0.36 per cent copper (Press Release, Eastfield Resources Ltd., April 7, 2008).

In 2008, Prophecy Resource Corp. and Eastfield Resources Ltd. conducted diamond drilling on the OK property. Highlights include drillhole OK08-06, which returned 3 metres grading 0.24 per cent copper (Assessment Report 30301).

For complete property history and regional geology, see OK North (MINFILE 092K 008).

Bibliography

EMPR ASS RPT *8748, *23511, 24038, *24553, *27342, *30301
PR REL Eastfield Resources Ltd., Apr. 7, 2008

EPITHERMAL Au-Ag: LOW SULPHIDATION

H05
by A. Panteleyev
British Columbia Geological Survey

Panteleyev, A. (1996): Epithermal Au-Ag: Low Sulphidation, in Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D.V. and Hõy, T., Editors, British Columbia Ministry of Employment and Investment, Open File 1996-13, pages 41-44.

IDENTIFICATION

SYNONYMS: (Epithermal) adularia-sericite; quartz-adularia, Comstock, Sado-type; bonanza Au-Ag; alkali chloride (hydrothermal).

COMMODITIES (*BYPRODUCTS*): Au, Ag (Pb, Zn, Cu).

EXAMPLES (British Columbia (MINFILE #) - *International*): Toodoggone district deposits - Lawyers (094E 066), Baker (094E 026), Shas (094E 050); Blackdome (092O 050, 092O 051, 092O 052, 092O 053); Premier Gold (Silbak Premier), (104B 054); Cinola (103F 034); *Comstock, Aurora (Nevada, USA), Bodie (California, USA), Creede (Colorado, USA), Republic (Washington, USA), El Bronce (Chile), Guanajuato (Mexico), Sado, Hishikari (Japan), Colqui (Peru), Baguio (Philippines) Ladolam (Lihir, Papua- New Guinea).*

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Quartz veins, stockworks and breccias carrying gold, silver, electrum, argentite and pyrite with lesser and variable amounts of sphalerite, chalcopyrite, galena, rare tetrahedrite and sulphosalt minerals form in high-level (epizonal) to near-surface environments. The ore commonly exhibits open- space filling textures and is associated with volcanic-related hydrothermal to geothermal systems.

TECTONIC SETTING: Volcanic island and continent-margin magmatic arcs and continental volcanic fields with extensional structures.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: High-level hydrothermal systems from depths of ~1 km to surficial hotspring settings. Regional-scale fracture systems related to grabens, (resurgent) calderas, flow-dome complexes and rarely, maar diatremes. Extensional structures in volcanic fields (normal faults, fault splays, ladder veins and cymoid loops, etc.) are common; locally graben or caldera-fill clastic rocks are present. High-level (subvolcanic) stocks and/or dikes and pebble breccia diatremes occur in some areas. Locally resurgent or domal structures are related to underlying intrusive bodies.

AGE OF MINERALIZATION: Any age. Tertiary deposits are most abundant; in B.C. Jurassic deposits are important. Deposits of Paleozoic age are described in Australia. Closely related to the host volcanic rocks but invariably slightly younger in age (0.5 to 1 Ma, more or less).

HOST/ASSOCIATED ROCK TYPES: Most types of volcanic rocks; calcalkaline andesitic compositions predominate. Some deposits occur in areas with bimodal volcanism and extensive subaerial ashflow deposits. A less common association is with alkalic intrusive rocks and shoshonitic volcanics. Clastic and epiclastic sediments in intra-volcanic basins and structural depressions.

DEPOSIT FORM: Ore zones are typically localized in structures, but may occur in permeable lithologies. Upward-flaring ore zones centred on structurally controlled hydrothermal conduits are typical. Large (> 1 m wide and hundreds of metres in strike length) to small veins and stockworks are common with lesser disseminations and replacements. Vein systems can be laterally extensive but ore shoots have relatively restricted vertical extent. High-grade ores are commonly found in dilational zones in faults at flexures, splays and in cymoid loops.

TEXTURE/STRUCTURE: Open-space filling, symmetrical and other layering, crustification, comb structure, colloform banding and multiple brecciation.

ORE MINERALOGY (Principal and *subordinate*): Pyrite, electrum, gold, silver, argentite; chalcopyrite, sphalerite, galena, tetrahedrite, silver sulphosalt and/or selenide minerals. Deposits can be strongly zoned along strike and vertically. Deposits are commonly zoned vertically over 250 to 350 m from a base metal poor, Au-Ag-rich top to a relatively Ag-rich base metal zone and an underlying base metal rich zone grading at depth into a sparse base metal, pyritic zone. From surface to depth, metal zones contain: Au-Ag-As-Sb-Hg, Au-Ag-Pb-Zn-Cu, Ag- Pb-Zn. In alkalic hostrocks tellurides, V mica (roscoelite) and fluorite may be abundant, with lesser molybdenite.

GANGUE MINERALOGY (Principal and *subordinate*): Quartz, amethyst, chalcedony, quartz pseudomorphs after calcite, calcite; adularia, sericite, barite, fluorite, Ca- Mg-Mn-Fe carbonate minerals such as rhodochrosite, hematite and chlorite.

ALTERATION MINERALOGY: Silicification is extensive in ores as multiple generations of quartz and chalcedony are commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite-kaolinite assemblages. Intermediate argillic alteration [kaolinite-illite- montmorillonite (smectite)] formed adjacent to some veins; advanced argillic alteration (kaolinite-alunite) may form along the tops of mineralized zones. Propylitic alteration dominates at depth and peripherally.

WEATHERING: Weathered outcrops are often characterized by resistant quartz ± alunite 'ledges' and extensive flanking bleached, clay-altered zones with supergene alunite, jarosite and other limonite minerals.

ORE CONTROLS: In some districts the epithermal mineralization is tied to a specific metallogenetic event, either structural, magmatic, or both. The veins are emplaced within a restricted stratigraphic interval generally within 1 km of the paleosurface. Mineralization near surface takes place in hotspring systems, or the deeper underlying hydrothermal conduits. At greater depth it can be postulated to occur above, or peripheral to, porphyry and possibly skarn mineralization. Normal faults, margins of grabens, coarse clastic caldera moat-fill units, radial and ring dike fracture sets and both hydrothermal and tectonic breccias are all ore fluid channeling structures. Through-going, branching, bifurcating, anastamosing and intersecting fracture systems are commonly mineralized. Ore shoots form where dilational openings and cymoid loops develop, typically where the strike or dip of veins change. Hangingwall fractures in mineralized structures are particularly favourable for high-grade ore.

GENETIC MODEL: These deposits form in both subaerial, predominantly felsic, volcanic fields in extensional and strike-slip structural regimes and island arc or continental andesitic stratovolcanoes above active subduction zones. Near- surface hydrothermal systems, ranging from hotspring at surface to deeper, structurally and permeability focused fluid flow zones are the sites of mineralization. The ore fluids are relatively dilute and cool solutions that are mixtures of magmatic and meteoric fluids. Mineral deposition takes place as the solutions undergo cooling and degassing by fluid mixing, boiling and decompression.

ASSOCIATED DEPOSIT TYPES: Epithermal Au-Ag: high sulphidation (H04); hotspring Au-Ag (H03); porphyry Cu±Mo±Au (L04) and related polymetallic veins (I05); placer gold (C01, C02).

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Elevated values in rocks of Au, Ag, Zn, Pb, Cu and As, Sb, Ba, F, Mn; locally Te, Se and Hg.

GEOPHYSICAL SIGNATURE: VLF has been used to trace structures; radiometric surveys may outline strong potassic alteration of wallrocks. Detailed gravity surveys may delineate boundaries of structural blocks with large density contrasts.

OTHER EXPLORATION GUIDES: Silver deposits generally have higher base metal contents than Au and Au-Ag deposits. Drilling feeder zones to hotsprings and siliceous sinters may lead to identification of buried deposits. Prospecting for mineralized siliceous and silica-carbonate float or vein material with diagnostic open-space textures is effective.

ECONOMIC FACTORS

TYPICAL GRADE AND TONNAGE: The following data describe the median deposits based on worldwide mines and U.S.A. models:

Au-Ag deposits (41 Comstock-type 'bonanza' deposits) - 0.77 Mt with 7.5 g/t Au, 110 g/t Ag and minor Cu, Zn and Pb. The highest base metal contents in the top decile of deposits all contain <0.1% Cu, Zn and 0.1% Pb

Au-Cu deposits (20 Sado-type deposits) - 0.3 Mt with 1.3% g/t Au, 38 g/t Ag and >0.3% Cu; 10 % of the deposits contain, on average, about 0.75% Cu with one having >3.2% Cu.

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EPITHERMAL Au-Ag-Cu: HIGH SULPHIDATION

H04
by A. Panteleyev
British Columbia Geological Survey

Panteleyev, A. (1996): Epithermal Au-Ag-Cu: High Sulphidation, in Selected British Columbia Mineral Deposit Profiles, Volume 2 - Metallic Deposits, Lefebure, D.V. and Hõy, T., Editors, British Columbia Ministry of Employment and Investment, Open File 1996-13, pages 37-39.

IDENTIFICATION

SYNONYMS: (Epithermal) acid-sulphate, quartz-alunite Au, alunite-kaolinite ± pyrophyllite, advanced argillic, Nansatsu-type, enargite gold. The deposits are commonly referred to as acid-sulphate type after the chemistry of the hydrothermal fluids, quartz-alunite or kaolinite-alunite type after their alteration mineralogy, or high-sulphidation type in reference to the oxidation state of the acid fluids responsible for alteration and mineralization.

COMMODITIES (BYPRODUCTS): Au, Ag, Cu (As, Sb).

EXAMPLES (British Columbia (MINFILE #) - *International*): Mt. McIntosh/Hushamu (EXPO, 092L 240), Taseko River deposits - Westpine (Empress) (092O 033), Taylor-Windfall (092O 028) and Battlement Creek (092O 005); *Goldfield and Paradise Peak (Nevada, USA), Summitville (Colorado, USA); Nansatsu (Japan), El Indio (Chile); Temora (New South Wales, Australia), Pueblo Viejo (Dominica), Chinkuashih (Taiwan), Rodalquilar (Spain), Lepanto and Nalesbitan (Philippines)*.

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Veins, vuggy breccias and sulphide replacements ranging from pods to massive lenses occur in volcanic sequences associated with high level hydrothermal systems marked by acid-leached, advanced argillic, siliceous alteration.

TECTONIC SETTING: Extensional and transtensional settings, commonly in volcano-plutonic continent-margin and oceanic arcs and back-arcs. In zones with high-level magmatic emplacements where stratovolcanoes and other volcanic edifices are constructed above plutons.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: Subvolcanic to volcanic in calderas, flow-dome complexes, rarely maars and other volcanic structures; often associated with subvolcanic stocks and dikes, breccias. Postulated to overlie, and be genetically related to, porphyry copper systems in deeper mineralized intrusions that undelie the stratovolcanoes.

AGE OF MINERALIZATION: Tertiary to Quaternary; less commonly Mesozoic and rarely Paleozoic volcanic belts. The rare preservation of older deposits reflects rapid rates of erosion before burial of subaerial volcanoes in tectonically active arcs.

HOST/ASSOCIATED ROCK TYPES: Volcanic pyroclastic and flow rocks, commonly subaerial andesite to dacite and rhyodacite, and their subvolcanic intrusive equivalents. Permeable sedimentary intervolcanic units can be sites of mineralization.

DEPOSIT FORM: Veins and massive sulphide replacement pods and lenses, stockworks and breccias. Commonly irregular deposit shapes are determined by hostrock permeability and the geometry of ore-controlling structures. Multiple, crosscutting composite veins are common.

TEXTURE/STRUCTURE: Vuggy 'slaggy' silica derived as a residual product of acid leaching is characteristic. Drusy cavities, banded veins, hydrothermal breccias, massive wallrock replacements with fine-grained quartz.

ORE MINERALOGY (Principal and *subordinate*): pyrite, enargite/luzonite, chalcocite, covellite, bornite, gold, electrum; chalcopyrite, sphalerite, tetrahedrite/tennantite, galena, marcasite, arsenopyrite, silver sulphosalts, tellurides including goldfieldite. Two types of ore are commonly present: massive enargite-pyrite and/or quartz-alunite-gold.

GANGUE MINERALOGY (Principal and *subordinate*): Pyrite and quartz predominate. Barite may also occur; carbonate minerals are absent.

ALTERATION MINERALOGY (Principal and *subordinate*): Quartz, kaolinite/dickite, alunite, barite, hematite; sericite/illite, amorphous clays and silica, pyrophyllite, andalusite, diaspore, corundum, tourmaline, dumortierite, topaz, zunyite, jarosite, Al-P sulphates (hinsdalite, woodhouseite, crandalite, etc.) and native sulphur. Advanced argillic alteration is characteristic and can be areally extensive and visually prominent. Quartz occurs as fine-grained replacements and, characteristically, as vuggy, residual silica in acid-leached rocks.

WEATHERING: Weathered rocks may contain abundant limonite (jarosite-goethite-hematite), generally in a groundmass of kaolinite and quartz. Fine-grained supergene alunite veins and nodules are common.

ORE CONTROLS: In volcanic edifices - caldera ring and radial fractures; fracture sets in resurgent domes and flow-dome complexes, hydrothermal breccia pipes and diatremes. Faults and breccias in and around intrusive centres. Permeable lithologies, in some cases with less permeable cappings of hydrothermally altered or other cap rocks. The deposits occur over considerable depths, ranging from high-temperature solfataras at paleosurface down into cupolas of intrusive bodies at depth.

GENETIC MODEL: Recent research, mainly in the southwest Pacific and Andes, has shown that these deposits form in subaerial volcanic complexes or composite island arc volcanoes above degassing magma chambers. The deposits can commonly be genetically related to high-level intrusions. Multiple stages of mineralization are common, presumably related to periodic tectonism with associated intrusive activity and magmatic hydrothermal fluid generation.

ASSOCIATED DEPOSIT TYPES: Porphyry Cu±Mo±Au deposits (L04), subvolcanic Cu-Ag-Au (As- Sb) (L01), epithermal Au-Ag deposits: low sulphidation type (H05), silica-clay-pyrophyllite deposits (Roseki deposits) (H09), hotspring Au-Ag (H03), placer Au deposits (C01, C02).

COMMENTS: High-sulphidation epithermal Au-Ag deposits are much less common in the Canadian Cordillera than low-sulphidation epithermal veins. However, they are the dominant type of epithermal deposit in the Andes.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Au, Cu, As dominate; also Ag, Zn, Pb, Sb, Mo, Bi, Sn, Te, W, B and Hg.

GEOPHYSICAL SIGNATURE: Magnetic lows in hydrothermally altered (acid-leached) rocks; gravity contrasts may mark boundaries of structural blocks.

OTHER EXPLORATION GUIDES: These deposits are found in second order structures adjacent to crustal-scale fault zones, both normal and strike-slip, as well as local structures associated with subvolcanic intrusions. The deposits tend to overlie and flank porphyry copper-gold deposits and underlie acid-leached siliceous, clay and alunite-bearing 'lithocaps'.

ECONOMIC FACTORS

TYPICAL GRADE AND TONNAGE: There is wide variation in deposit types ranging from bulk- mineable, low-grade to selectively mined, high-grade deposits. Underground mines range in size from 2 to 25 Mt with grades from 178 g/t Au, 109 g/t Ag and 3.87% Cu in direct smelting ores (El Indio) to 2.8 g/t Au and 11.3 g/t Ag and 1.8% Cu (Lepanto). Open pit mines with reserves of <100 Mt to >200 Mt range from Au-Ag mines with 3.8 g/t Au and 20 g/t Ag (Pueblo Viejo, Dominica) to orebodies such as the Nansatsu deposits, Japan that contain a few million tonnes ore grading between 3 and 6 g/t Au. Porphyry Au (Cu) deposits can be overprinted with late-stage acid sulphate alteration zones which can contain in the order of ~1.5 g/t Au with 0.05 to 0.1% Cu in stockworks (Marte and Lobo) or high-grade Cu-Ag-Au veins (La Grande veins, Collahausi). More typically these late stage alteration zones carry <0.4 to 0.9 g/t Au and >0.4 to 2% Cu (Butte, Montana; Dizon, Philippines).

ECONOMIC LIMITATIONS: Oxidation of primary ores is commonly neccessary for desireable metallurgy; primary ores may be refractory and can render low-grade mineralization noneconomic.

IMPORTANCE: This class of deposits has recently become a focus for exploration throughout the circum-Pacific region because of the very attractive Au and Cu grades in some deposits. Silica-rich gold ores (3-4 g/t Au) from the Nansatsu deposits in Japan are used as flux in copper smelters.

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PORPHYRY Cu+/-Mo+/-Au

L04
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Panteleyev, A. (1995): Porphyry Cu+/-Mo+/-Au, in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pages 87-92.

IDENTIFICATION

SYNONYM: Calcalkaline porphyry Cu, Cu-Mo, Cu-Au.

COMMODITIES (*BYPRODUCTS*): Cu, Mo and Au are generally present but quantities range from insufficient for economic recovery to major ore constituents. Minor Ag in most deposits; rare recovery of Re from Island Copper mine.

EXAMPLES (British Columbia - *Canada/International*):
Volcanic type deposits (Cu + Au * Mo) - Fish Lake (092O 041), Kemess (094E 021,094), Hushamu (EXPO, 092L 240), Red Dog (092L 200), Poison Mountain (092O 046), Bell (093M 001), Morrison (093M 007), Island Copper (092L 158); *Dos Pobres (USA); Far Southeast (Lepanto/Mankayan), Dizon, Guianaong, Taysan and Santo Thomas II (Philippines), Frieda River and Panguna (Papua New Guinea).*
Classic deposits (Cu + Mo * Au) - Brenda (092HNE047), Berg (093E 046), Huckleberrry (093E 037), Schaft Creek (104G 015); *Casino (Yukon, Canada), Inspiration, Morenci, Ray, Sierrita-Experanza, Twin Buttes, Kalamazoo and Santa Rita (Arizona, USA), Bingham (Utah, USA),El Salvador, (Chile), Bajo de la Alumbrera (Argentina).*
Plutonic deposits (Cu * Mo) - Highland Valley Copper (092ISE001,011,012,045), Gibraltar (093B 012,007), Catface (092F 120); *Chuquicamata, La Escondida and Quebrada Blanca (Chile).*

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Stockworks of quartz veinlets, quartz veins, closely spaced fractures and breccias containing pyrite and chalcopyrite with lesser molybdenite, bornite and magnetite occur in large zones of economically bulk-mineable mineralization in or adjoining porphyritic intrusions and related breccia bodies. Disseminated sulphide minerals are present, generally in subordinate amounts. The mineralization is spatially, temporally and genetically associated with hydrothermal alteration of the hostrock intrusions and wallrocks.

TECTONIC SETTINGS: In orogenic belts at convergent plate boundaries, commonly linked to subduction-related magmatism. Also in association with emplacement of high-level stocks during extensional tectonism related to strike-slip faulting and back-arc spreading following continent margin accretion.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: High-level (epizonal) stock emplacement levels in volcano-plutonic arcs, commonly oceanic volcanic island and continent-margin arcs. Virtually any type of country rock can be mineralized, but commonly the high-level stocks and related dikes intrude their coeval and cogenetic volcanic piles.

AGE OF MINERALIZATION: Two main periods in the Canadian Cordillera: the Triassic/Jurassic (210-180 Ma) and Cretaceous/Tertiary (85-45 Ma). Elsewhere deposits are mainly Tertiary, but range from Archean to Quaternary.

HOST/ASSOCIATED ROCK TYPES: Intrusions range from coarse-grained phaneritic to porphyritic stocks, batholiths and dike swarms; rarely pegmatitic. Compositions range from calcalkaline quartz diorite to granodiorite and quartz monzonite. Commonly there is multiple emplacement of successive intrusive phases and a wide variety of breccias. Alkalic porphyry Cu-Au deposits are associated with syenitic and other alkalic rocks and are considered to be a a distinct deposit type (see model L03).

DEPOSIT FORM: Large zones of hydrothermally altered rock contain quartz veins and stockworks, sulphide-bearing veinlets; fractures and lesser disseminations in areas up to 10 km2 in size, commonly coincident wholly or in part with hydrothermal or intrusion breccias and dike swarms. Deposit boundaries are determined by economic factors that outline ore zones within larger areas of low-grade, concentrically zoned mineralization. Cordilleran deposits are commonly subdivided according to their morphology into three classes - classic, volcanic and plutonic (see Sutherland Brown, 1976; McMillan and Panteleyev, 1988):

* Volcanic type deposits (e.g. Island Copper) are associated with multiple intrusions in subvolcanic settings of small stocks, sills, dikes and diverse types of intrusive breccias. Reconstruction of volcanic landforms, structures, vent-proximal extrusive deposits and subvolcanic intrusive centres is possible in many cases, or can be inferred. Mineralization at depths of 1 km, or less, is mainly associated with breccia development or as lithologically controlled preferential replacement in hostrocks with high primary permeability. Propylitic alteration is widespread and generally flanks early, centrally located potassic alteration; the latter is commonly well mineralized. Younger mineralized phyllic alteration commonly overprints the early mineralization. Barren advanced argillic alteration is rarely present as a late, high-level hydrothermal carapace.
* Classic deposits (e.g., Berg) are stock related with multiple emplacements at shallow depth (1 to 2 km) of generally equant, cylindrical porphyritic intrusions. Numerous dikes and breccias of pre, intra, and post-mineralization age modify the stock geometry. Orebodies occur along margins and adjacent to intrusions as annular ore shells. Lateral outward zoning of alteration and sulphide minerals from a weakly mineralized potassic/propylitic core is usual. Surrounding ore zones with potassic (commonly biotite-rich) or phyllic alteration contain molybdenite * chalcopyrite, then chalcopyrite and a generally widespread propylitic, barren pyritic aureole or 'halo'.
* Plutonic deposits (e.g., the Highland Valley deposits) are found in large plutonic to batholithic intrusions immobilized at relatively deep levels, say 2 to 4 km. Related dikes and intrusive breccia bodies can be emplaced at shallower levels. Hostrocks are phaneritic coarse grained to porphyritic. The intrusions can display internal compositional differences as a result of differentiation with gradational to sharp boundaries between the different phases of magma emplacement. Local swarms of dikes, many with associated breccias, and fault zones are sites of mineralization. Orebodies around silicified alteration zones tend to occur as diffuse vein stockworks carrying chalcopyrite, bornite and minor pyrite in intensely fractured rocks but, overall, sulphide minerals are sparse. Much of the early potassic and phyllic alteration in central parts of orebodies is restricted to the margins of mineralized fractures as selvages. Later phyllic-argillic alteration forms envelopes on the veins and fractures and is more pervasive and widespread. Propylitic alteration is widespread but unobtrusive and is indicated by the presence of rare pyrite with chloritized mafic minerals, saussuritized plagioclase and small amounts of epidote.

TEXTURE/STRUCTURE: Quartz, quartz-sulphide and sulphide veinlets and stockworks; sulphide grains in fractures and fracture selvages. Minor disseminated sulphides commonly replacing primary mafic minerals. Quartz phenocrysts can be partially resorbed and overgrown by silica.

ORE MINERALOGY (Principal and *subordinate*): Pyrite is the predominant sulphide mineral; in some deposits the Fe oxide minerals magnetite, and rarely hematite, are abundant. Ore minerals are chalcopyrite; molybdenite, lesser bornite and rare (primary) chalcocite. Subordinate minerals are tetrahedrite/tennantite, enargite and minor gold , electrum and arsenopyrite. In many deposits late veins commonly contain galena and sphalerite in a gangue of quartz, calcite and barite.

GANGUE MINERALOGY (Principal and *subordinate*): Gangue minerals in mineralized veins are mainly quartz with lesser biotite, sericite, K-feldspar, magnetite, chlorite, calcite, epidote, anhydrite and tourmaline. Many of these minerals are also pervasive alteration products of primary igneous mineral grains.

ALTERATION MINERALOGY: Quartz, sericite, biotite, K-feldspar, albite, anhydrite/gypsum, magnetite, actinolite, chlorite, epidote, calcite, clay minerals, tourmaline. Early formed alteration can be overprinted by younger assemblages. Central and early formed potassic zones (K-feldspar and biotite) commonly coincide with ore. This alteration can be flanked in volcanic hostrocks by biotite-rich rocks that grade outward into propylitic rocks. The biotite is a fine-grained, 'shreddy' looking secondary mineral that is commonly referred to as an early developed biotite (EDB) or a 'biotite hornfels'. These older alteration assemblages in cupriferous zones can be partially to completely overprinted by later biotite and K-feldspar and then phyllic (quartz-sericite-pyrite) alteration, less commonly argillic, and rarely, in the uppermost parts of some ore deposits, advanced argillic alteration (kaolinite-pyrophyllite).

WEATHERING: Secondary (supergene) zones carry chalcocite, covellite and other Cu*2S minerals (digenite, djurleite, etc.), chrysocolla, native copper and copper oxide, carbonate and sulphate minerals. Oxidized and leached zones at surface are marked by ferruginous 'cappings' with supergene clay minerals, limonite (goethite, hematite and jarosite) and residual quartz.

ORE CONTROLS: Igneous contacts, both internal between intrusive phases and external with wallrocks; cupolas and the uppermost, bifurcating parts of stocks, dike swarms. Breccias, mainly early formed intrusive and hydrothermal types. Zones of most intensely developed fracturing give rise to ore-grade vein stockworks, notably where there are coincident or intersecting multiple mineralized fracture sets.

ASSOCIATED DEPOSIT TYPES: Skarn Cu (K01), porphyry Au (K02), epithermal Au-Ag in low sulphidation type (H05) or epithermal Cu-Au-Ag as high-sulphidation type enargite-bearing veins (L01), replacements and stockworks; auriferous and polymetallic base metal quartz and quartz-carbonate veins (I01, I05), Au-Ag and base metal sulphide mantos and replacements in carbonate and non- carbonate rocks (M01, M04), placer Au (C01, C02).

COMMENTS: Subdivision of porphyry copper deposits can be made on the basis of metal content, mainly ratios between

Cu, Mo and Au. This is a purely arbitrary, economically based criterion, an artifact of mainly metal prices and metallurgy. There are few differences in the style of mineralization between deposits although the morphology of calcalkaline deposits does provide a basis for subdivision into three distinct subtypes - the 'volcanic, classic, and plutonic' types. A fundamental contrast can be made on the compositional differences between calcalkaline quartz-bearing porphyry copper deposits and the alkalic (silica undersaturated) class. The alkalic porphyry copper deposits are described in a separate model - L03.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Calcalkalic systems can be zoned with a cupriferous (* Mo) ore zone having a 'barren', low-grade pyritic core and surrounded by a pyritic halo with peripheral base and precious metal-bearing veins. Central zones with Cu commonly have coincident Mo, Au and Ag with possibly Bi, W, B and Sr. Peripheral enrichment in Pb, Zn, Mn, V, Sb, As, Se, Te, Co, Ba, Rb and possibly Hg is documented. Overall the deposits are large-scale repositories of sulphur, mainly in the form of metal sulphides, chiefly pyrite.

GEOPHYSICAL SIGNATURE: Ore zones, particularly those with higher Au content, can be associated with magnetite-rich rocks and are indicated by magnetic surveys. Alternatively the more intensely hydrothermally altered rocks, particularly those with quartz-pyrite-sericite (phyllic) alteration produce magnetic and resistivity lows. Pyritic haloes surrounding cupriferous rocks respond well to induced polarization (I.P.) surveys but in sulphide-poor systems the ore itself provides the only significant IP response.

OTHER EXPLORATION GUIDES: Porphyry deposits are marked by large-scale, zoned metal and alteration assemblages. Ore zones can form within certain intrusive phases and breccias or are present as vertical 'shells' or mineralized cupolas around particular intrusive bodies. Weathering can produce a pronounced vertical zonation with an oxidized, limonitic leached zone at surface (leached capping), an underlying zone with copper enrichment (supergene zone with secondary copper minerals) and at depth a zone of primary mineralization (the hypogene zone).

ECONOMIC FACTORS

TYPICAL GRADE AND TONNAGE:

Worldwide according Cox and Singer (1988) based on their subdivision of 55 deposits into subtypes according to metal ratios, typical porphyry Cu deposits contain (median values): Porphyry Cu-Au: 160 Mt with 0.55 % Cu, 0.003 % Mo, 0.38 g/t Au and 1.7 g/t Ag. Porphyry Cu-Au-Mo: 390 Mt with 0.48 % Cu, 0.015 % Mo, 0.15 g/t Au and 1.6 g/t Ag. Porphyry Cu-Mo: 500 Mt with 0.41 % Cu, 0.016 % Mo, 0.012 g/t Au and 1.22 g/t Ag.

A similar subdivision by Cox (1986) using a larger data base results in: Porphyry Cu: 140 Mt with 0.54 %Cu, <0.002 % Mo, <0.02g/t Au and <1 g/t Ag. Porphyry Cu-Au: 100 Mt with 0.5 %Cu, <0.002 % Mo, 0.38g/t Au and 1g/t Ag. (This includes deposits from the British Columbia alkalic porphyry class, B.C. model L03.) Porphyry Cu-Mo: 500 Mt with 0.42 % Cu, 0.016 % Mo, 0.012 g/t Au and 1.2 g/t Ag.

British Columbia porphyry Cu * Mo ± Au deposits range from <50 to >900 Mt with commonly 0.2 to 0.5 % Cu, <0.1 to 0.6 g/t Au, and 1 to 3 g/t Ag. Mo contents are variable from negligible to 0.04 % Mo. Median values for 40 B.C. deposits with reported reserves are: 115 Mt with 0.37 % Cu, *0.01 % Mo, 0.3g /t Au and 1.3 g/t Ag.

ECONOMIC LIMITATIONS: Mine production in British Columbia is from primary (hypogene) ores. Rare exceptions are Afton mine where native copper was recovered from an oxide zone, and Gibraltar and Bell mines where incipient supergene enrichment has provided some economic benefits.

END USES: Porphyry copper deposits produce Cu and Mo concentrates, mainly for international export.

IMPORTANCE: Porphyry deposits contain the largest reserves of Cu, significant Mo resources and close to 50 % of Au reserves in British Columbia.

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SUBVOLCANIC Cu-Au-Ag (As-Sb)

L01
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Panteleyev, A. (1995): Subvolcanic Cu-Au-Ag (As-Sb), in Selected British Columbia Mineral Deposit Profiles, Volume 1 - Metallics and Coal, Lefebure, D.V. and Ray, G.E., Editors, British Columbia Ministry of Employment and Investment, Open File 1995-20, pages 79-82.

IDENTIFICATION

SYNONYMS: Transitional, intrusion-related (polymetallic) stockwork and vein.

COMMODITIES (*BYPRODUCTS*): Cu, Au, Ag (As, Sb).

EXAMPLES (British Columbia - *Canada / International*): Equity Silver (093L 001); Thorn prospect (104K031, 116); *Rochester District (Nevada, USA), Kori Kollo (Bolivia), the 'epithermal gold' zones at Lepanto (Philippines), parts of Recsk (Hungary) and Bor (Serbia).*

GEOLOGICAL CHARACTERISTICS

CAPSULE DESCRIPTION: Pyritic veins, stockworks and breccias in subvolcanic intrusive bodies with stratabound to discordant massive pyritic replacements, veins, stockworks, disseminations and related hydrothermal breccias in country rocks. These deposits are located near or above porphyry Cu hydrothermal systems and commonly contain pyritic auriferous polymetallic mineralization with Ag sulphosalt and other As and Sb-bearing minerals.

TECTONIC SETTINGS: Volcano-plutonic belts in island arcs and continental margins; continental volcanic arcs. Subvolcanic intrusions are abundant. Extensional tectonic regimes allow high-level emplacement of the intrusions, but compressive regimes are also permissive.

DEPOSITIONAL ENVIRONMENT / GEOLOGICAL SETTING: Uppermost levels of intrusive systems and their adjoining fractured and permeable country rocks, commonly in volcanic terrains with eroded stratovolcanoes. Subvolcanic domes and flow-dome complexes can also be mineralized; their uppermost parts are exposed without much erosion.

AGE OF MINERALIZATION: Mainly Tertiary, a number of older deposits have been identified.

HOST / ASSOCIATED ROCK TYPES: Subvolcanic (hypabyssal) stocks, rhyodacite and dacite flow-dome complexes with fine to coarse-grained quartz-phyric intrusions are common. Dike swarms and other small subvolcanic intrusions are likely to be present. Country rocks range widely in character and age. Where coeval volcanic rocks are present, they range from andesite to rhyolite in composition and occur as flows, breccias and pyroclastic rocks with related erosion products (epiclastic rocks).

DEPOSIT FORM: Stockworks and closely-spaced to sheeted sets of sulphide-bearing veins in zones within intrusions and as structurally controlled and stratabound or bedding plane replacements along permeable units and horizons in hostrocks. Veins and stockworks form in transgressive hydrothermal fluid conduits that can pass into pipe-like and planar breccias. Breccia bodies are commonly tens of metres and, rarely, a few hundred metres in size. Massive sulphide zones can pass outward into auriferous pyrite-quartz-sericite veins and replacements.

TEXTURE / STRUCTURE: Sulphide and sulphide-quartz veins and stockworks. Open space filling and replacement of matrix in breccia units. Bedding and lithic clast replacements by massive sulphide, disseminations and veins. Multiple generations of veins and hydrothermal breccias are common. Pyrite is dominant and quartz is minor to absent in veins.

ORE MINERALOGY (Principal and *subordinate*): Pyrite, commonly as auriferous pyrite, chalcopyrite, terahedrite/tennantite; enargite/luzonite, covellite, chalcocite, bornite, sphalerite, galena, arsenopyrite, argentite, sulphosalts, gold, stibnite, molybdenite, wolframite or scheelite, pyrrhotite, marcasite, realgar,hematite, tin and bismuth minerals. Depth zoning is commonly evident with pyrite-rich deposits containing enargite near surface, passing downwards into tetrahedrite/tennantite + chalcopyrite and then chalcopyrite in porphyry intrusions at depth.

GANGUE MINERALOGY (Principal and *subordinate*): Pyrite, sericite, quartz; kaolinite, alunite, jarosite (mainly in supergene zone).

ALTERATION MINERALOGY (Principal and *subordinate*): Pyrite, sericite, quartz; kaolinite, dickite, pyrophyllite, andalusite, diaspore, corundum, tourmaline, alunite, anhydrite, barite, chalcedony, dumortierite, lazulite (variety scorzalite), rutile and chlorite. Tourmaline as schorlite (a black Fe-rich variety) can be present locally; it is commonly present in breccias with quartz and variable amounts of clay minerals. Late quartz-alunite veins may occur.

WEATHERING: Weathering of pyritic zones can produce limonitic blankets containing abundant jarosite, goethite and, locally, alunite.

GENETIC MODEL: These deposits represent a transition from porphyry copper to epithermal conditions with a blending and blurring of porphyry and epithermal characteristics. Mineralization is related to robust, evolving hydrothermal systems derived from porphyritic, subvolcanic intrusions. Vertical zoning and superimposition of different types of ores is typical due, in large part, to overlapping stages of mineralizations. Ore fluids with varying amounts of magmatic-source fluids have temperatures generally greater than those of epithermal systems, commonly in the order of 300* C and higher. Fluid salinities are also relatively high, commonly more than 10 weight per cent NaCl-equivalent and rarely in the order of 50 %, and greater.

ORE CONTROLS: Strongly fractured to crackled zones in cupolas and internal parts of intrusions and flow-dome complexes; along faulted margins of high-level intrusive bodies. Permeable lithologies, both primary and secondary in origin, in the country rocks. Primary controls are structural features such as faults, shearz, fractured and crackled zones and breccias. Secondary controls are porous volcanic units, bedding plane contacts and unconformities. Breccia pipes provide channelways for hydrothermal fluids originating from porphyry Cu systems and commonly carry elevated values of Au and Ag. The vein and replacement style deposits can be separated from the deeper porphyry Cu mineralization by 200 to 700 m.

ASSOCIATED DEPOSIT TYPES: Porphyry Cu-Au±Mo (L04); epithermal Au-Ag commonly both high-sulphidation (H04) and low-sulphidation (H05) pyrite-sericite-bearing types; auriferous quartz-pyrite veins, enargite massive sulphide also known as enargite gold.

COMMENTS: This deposit type is poorly defined and overall, uncommon. It is in large part stockworks and a closely spaced to sheeted sulphide vein system with local massive to disseminated replacement sulphide zones. It forms as a high- temperature, pyrite-rich, commonly tetrahderite, and rarely enargite-bearing, polymetallic affiliate of epithermal Au-Ag mineralization. Both low and high- sulphidation epithermal styles of mineralization can be present. As and Sb enrichments in ores are characteristic. If abundant gas and gas condensates evolve from the hydrothermal fluids there can be extensive acid leaching and widespread, high-level advanced argillic alteration. This type of alteration is rarely mineralized.

EXPLORATION GUIDES

GEOCHEMICAL SIGNATURE: Elevated values of Au, Cu, Ag, As, Sb, Zn, Cd, Pb, Fe and F; at deeper levels Mo, Bi, W and locally Sn. In some deposits there is local strong enrichment in B, Co, Ba, K and depletion of Na. Both depth zoning and lateral zoning are evident.

GEOPHYSICAL SIGNATURE: Induced polarization to delineate pyrite zones. Magnetic surveys are useful in some cases to outline lithologic units and delineate contacts. Electromagnetic surveys can be used effectively where massive sulphide bodies are present.

OTHER EXPLORATION GUIDES: Association with widespread sericite-pyrite and quartz-sericite-pyrite that might be high-level leakage from buried porphyry Cu ± Au ± Mo deposits. Extensive overprinting of sericite/illite by kaolinite; rare alunite. In some deposits, high-temperature aluminous alteration minerals pyrophyllite and andalusite are present but are generally overprinted by abundant sericite and lesser kaolinite. Tourmaline and phosphate minerals can occur. There is commonly marked vertical mineralogical and geochemical depth-zoning.

ECONOMIC FACTORS

GRADE AND TONNAGE: The deposits have pyritic orebodies of various types; vertical stacking and pronounced metal zoning are prevalent. Small, high-grade replacement orebodies containing tetrahedrite/tennantite, and rarely enargite, can form within larger zones of pyritization. The massive sulphide replacement ores have associated smaller peripheral, structurally controlled zones of sericitic alteration that constitute pyritic orebodies grading ~ 4 g/t gold. Similar tetrahedrite-bearing ores with bulk mineable reserves at Equity Silver were in the order of 30 Mt with 0.25% Cu and ~86 g/t Ag and 1 g/t Au. At the Recsk deposit, Hungary, shallow breccia-hosted Cu-Au ores overlie a porphyry deposit containing ~1000 Mt with 0.8 % Cu. The closely spaced pyritic fracture and vein systems at Kori Kollo, La Joya district, Bolivia contained 10 Mt oxide ore with 1.62 g/t Au and 23.6 g/t Ag and had sulphide ore reserves of 64 Mt at 2.26 g/t Au and 13.8 g/t Ag.

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