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**GEOCHEMICAL ROCK And SEDIMENT SAMPLING REPORT**

**On The**

**TULAMEEN PROJECT MINERAL PROPERTY  
SIMILKAMEEN MINING DIVISION**

**TULAMEEN-PRINCETON DISTRICT  
BRITISH COLUMBIA**

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**BC Geological Survey  
Assessment Report  
32268b**

**for**

**GOLDCLIFF RESOURCE CORPORATION  
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# GEOCHEMICAL ROCK And SEDIMENT SAMPLING REPORT On The TULAMEEN PROJECT PRECIOUS And BASE METALS MINERAL PROPERTY

## 1.0 SUMMARY

A geochemical sediment sampling follow-up survey was carried out by the author, and outcrop sampling by geologist M. DeBriske during the 2010 field exploration season from April to October which resulted in collection of a total of 114 high-quality -40 mesh field-sieved lithic sediment and 144 rock samples taken over the Goldcliff Resource Corp.'s Tulameen Project copper and precious metals property, centered on the Whipsaw Creek drainage, adjacent to the re-opening Copper Mountain alkalic porphyry copper-gold mine near Princeton in southwestern British Columbia.

Recent mapping by the British Columbia Geological Survey geologists in the Whipsaw and Granite Creek valleys and adjacent areas, published in 2009 and 2010 by Massey et al., Ref.s 1-4, has greatly improved geological information for the Tulameen Project area, and assisted the author in interpretation of the rock and silt sampling survey analytical results, as discussed in the report.

The 2010 follow-up outcrop and sediment sampling has produced several moderate to strong geochemical anomalies in copper, gold, silver, and/or their pathfinder elements, along the main ridge in the Bromley-Lamont-Frenchy headwaters area, the diorite/gabbro intrusive centers at Findlay, the Ford area and the Nev show on Whipsaw Creek, and in the iron carbonate-silica alteration zone in the 15 Mile area.

A strongly anomalous gold value of 60ppb Au, present in the South Branch of upper Lamont Creek, centers numerous Cu/Mn ratio outcrop and silt anomalies along the main ridge, including strongly anomalous Ag, Cu values at the WILMAC showing, and anomalous Cu, Mo, As, Sb values above Bromley Creek in the northeast, as well as anomalous silt Ag, Au values in Frenchy Creek headwaters to the southwest, whose source has yet to be discovered.

A very strong epithermal pathfinder multi-trace element signature in both rock and silt samples in Te, S, Mo, Hg, Se, Cu, Cr, Ba, and in Sb, Sc, W in silts, is present above Findlay Creek in the northern sector of the claims.

The strong multi-element correspondence of anomalous values between bedrock and the high quality field-sieved sediment samples indicates that silt sampling along the logging road network on the Tulameen Project copper and gold claims is a very effective geochemical follow-up exploration method in overcoming the effects of thick glacial deposits on the property.

## 2.0 INTRODUCTION & DESCRIPTION

During the 2010 field exploration season from April to October the author collected a total of 114 high-quality -40 mesh field-sieved lithic sediment samples for a follow-up geochemical silt sampling survey over the Goldcliff Resource Corp.'s Tulameen Project precious metals and copper property, centered on the Whipsaw Creek drainage, located 20 kilometers southwest of the town of Princeton and 10 kilometers west of the historic Copper Mountain copper-gold mine, and just west of Hwy. 3 in south-central British Columbia.

The main Whipsaw Creek gravel logging road transects the property.

Included in this report is the author's interpretation of the analytical multi-element results on 120 rock outcrop grab samples collected during the field season by geologist Melvin DeBriske along logging road traverses in the same follow-up areas of the Whipsaw, Lamont, Bromley and Findley creek drainages. In addition, the author and geophysicist Ed Rockel collected 12 and 15 outcrop and float rock samples respectively, for a total of 147 rock samples, as described by DeBriske in Appendix I, the anomalous lithochemical results of which are discussed by the author in conjunction with the anomalous silt samples geochemistry in order to establish lithological background, as well as the level of any anomalous precious elements and base metals values present.

Significant correlations obtained by the author on the nine published elements from 21 rocks recently collected by government geologists from three alteration zones within and adjacent to the property claims are also discussed in the report.

The high quality field-sieved drainage sampling geochemical follow-up survey was initiated in order to help evaluate the precious and base metals mineralization potential of the project area, most of which is mantled by erratically distributed and compositionally diverse glacial overburden.

All the samples were delivered by the author and DeBriske to Goldcliff's warehouse in Keremeos for direct pick-up by the Kamloops laboratory's personnel.

The -80 mesh fraction of the stream sediments along with the crushed rock samples were analyzed by fire-geochemical gold and 35 element ultra-trace aqua regia digest ICP-MS analysis at Eco Tech (Stewart Group) Laboratories in Kamloops, British Columbia, the results of which are described in this geochemical interpretation report. Geological descriptions and maps are copied from the recent local mapping by BCGS geologists in Massey et al., References 1-4.

Rock and drainage silt sample locations are presented on large scale 1:20,000 topographic maps, together with inscribed Au-Ag-Cu analytical values in pocket. Associated correlation tables and copper, gold, silver, plus pathfinder element page-sized anomaly maps are presented overleaf.

Appendices IA,B, contain rock sample notes by DeBriske and silt sample notes by the author, together with inscribed Cu-Au-Ag values, while Appendices IIA,B contain complete laboratory analytical certificates for rock and silt samples respectively.

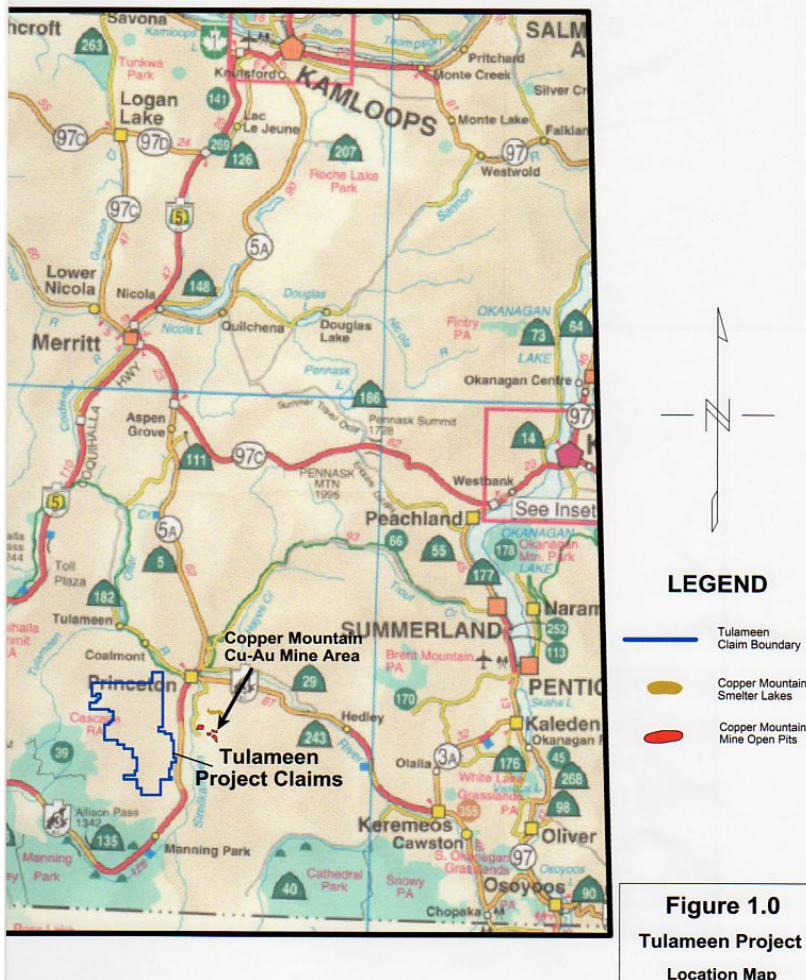


Figure 1. Location Map

### 3.0 GEOLOGY

The general geology is copied from the Copper Mtn. Mining Corp. website, while property geology, with maps, is copied from the recent mapping conducted by BCGS geologists over Goldcliff's Tulameen copper and gold claims area, as listed below:

#### 3.1 General Geology

Geological Setting (From [www.cumtn.com](http://www.cumtn.com) - project geology, Ref.1)

Mineralization areas appear to be occurring where the Nicola Group meets other structures. The Copper Mountain alkalic porphyry copper-gold camp





Figure 1. Location of the Southern Nicola Project. Geology base map derived from Massey et al. (2005). Boxes outline the area mapped in 2008 (Whipsaw Ck.) and in 2009 (Granite Ck and Tulameen River). Rocks of the Nicola Group are labelled uTrJNc. For other units see Massey et al. (2005). British Columbia Geological Survey

### 3.2 Property Geology (Ref.1)

The geology map and description for the Whipsaw Creek property area are copied from the recent mapping by BCGS geologists:

Massey, N.W.D. , Vineham, J.M.S. and Oliver, S.L. (2009a): Southern Nicola Project: Whipsaw Creek-Eastgate-Wolfe Creek area, southern British Columbia, (NTS 92H/01W, 02E, 07E, 08W); in Geological Fieldwork 2008, B.C. Ministry of Energy, Mines and Petroleum Resources, Paper 2009-1, pages 189 – 204, Ref.1; and (2009b): Open File 2009-8: 1:30 000-scale.

*The map (Whipsaw Ck., 2008) covers an area about 15 km to the southwest of Princeton. The map area stretches from the Wolfe Creek area and Copper Mountain southwest to Eastgate and the boundary of Manning Park and west to the Whipsaw Creek and Hudson Flats areas.*

*The map area lies at the western edge of Quesnellia and includes the southernmost exposures of the late Triassic Nicola Group. To the east of the Boundary Fault, rocks of the Nicola group are assigned to the "Eastern Belt" (Preto 1979; Mortimer 1987). Interbedded black argillites, grey siltstones and sandstones are overlain by volcanic and volcanoclastic rocks of the Wolfe Creek Formation, which display an alkalic affinity. They host the important porphyry and skarn deposits of the Copper Mountain area (Preto, 1972).*

*...To the west, the Nicola Group is lithologically similar to that in the east, though differing in details of stratigraphic succession. Here, clastic sedimentary rocks are intercalated with feldspathic tuffs and tuffaceous sediments. These pass westwards, and probably upwards, into typical Nicola pyroxene-feldspar tuffs, lapilli tuffs and breccias. However, in contrast to the eastern part of the map area, most of the exposed volcanic rocks are deformed and schistose. The change from massive to schistose rocks is transitional and gradual from east to west as foliation becomes progressively more penetrative and steeper.*

*In the west of the map area, rocks of the Eastgate-Whipsaw metamorphic belt have been correlated with the Nicola by Rice (1947) and Monger (1989). The belt is bound by the syntectonic Eagle Plutonic Complex to the west and the Similkameen fault to the east. The belt shows significant lithological differences to the immediately adjacent Nicola volcanic rocks. It can be divided into three northwest trending lithological assemblages that show increasing metamorphic grade from greenschist in the east to amphibolite in the west. The belt is host to VMS mineralization (e.g. Red Star and S&M group), as well as porphyry-Cu style mineralization associated with the Eocene Whipsaw porphyry. The belt may be equivalent to the Late Permian to Early Triassic Sitlika-Kutcho sequences, including volcanic rocks and intrusions from the Ashcroft area (Childe et al., 1997), about 150 km to the north-northwest*

*of Princeton. Volcanic and sedimentary rocks of the Eocene Princeton Group occur at higher elevations in the central and eastern parts of the map area. They lie unconformably on the Nicola Group and all older intrusive rocks. Comagmatic minor intrusions occur throughout the map area, particularly to the east of the Boundary fault. They include the bimodal felsic-mafic "Mine Dykes" suite in the area around and to the east of Copper Mountain, as well as ubiquitous intermediate-felsic porphyry dykes.*

**And for the Granite Creek property area, from: Geology and Mineral Deposits of the Granite Creek Area, British Columbia, (parts of NTS 092H/07; 092H/10), 1:30 000 scale BCMEMPR Open File 2010-06 *Mapping and compilation by N.W.D. Massey and S.L. Oliver (with contributions by J.M.S. Vineham and S. Jasechko), (Ref.3)***

The map covers an area about 15 km to the west of Princeton. The map area stretches from the Whipsaw Creek and Hudson Bay Meadows areas in the south to the Tulameen River in the north. It partially overlaps the area covered by O.F.2009-8.

The map area lies at the western edge of Quesnellia and includes some of the southernmost exposures of the late Triassic Nicola Group. These lie to the west of the Boundary Fault and were included in the calc-alkaline "western belt" by Mortimer (1987). Clastic sedimentary rocks, dominated by black argillites, are intercalated with feldspathic tuffs and tuffaceous sediments. These pass westwards, and probably upwards, into typical Nicola pyroxene-feldspar tuffs, lapilli tuffs and breccias. A sequence of massive feldspar basalt and greenstone flows occurs in the area southeast of the Granite Creek campsite. The volcanic rocks become more deformed to the west, the change from massive to schistose rocks being transitional and gradual from east to west as foliation becomes progressively more penetrative and steeper. Both schistose metasedimentary and metavolcanic rocks occur in the aureole of the Eagle Plutonic Complex along the western margin of the map area. The Tulameen Ultramafic-Gabbro Complex is structurally emplaced into, though probably coeval with, the Nicola Group. Several smaller bodies of diorite-gabbro or pyroxenite also occur in the map area.

In the west of the map area, rocks of the Eastgate-Whipsaw metamorphic belt have been correlated with the Nicola by Rice (1947) and Monger (1989). The belt is bound by the syntectonic Eagle Plutonic Complex to the west and the Similkameen fault to the east. The belt shows significant lithological differences to the immediately adjacent Nicola volcanic rocks. It has been divided into three northwest trending lithological assemblages to the south (Massey et al., 2009), that show increasing metamorphic grade from greenschist in the east to amphibolite in the west. Only the amphibolite unit continues north into the present map area. The belt may be equivalent to the Late Permian to Early Triassic Sitlika-Kutcho sequences, although preliminary zircon geochronology suggests an Early Permian age (Oliver, pers. comm.). Volcanic and sedimentary rocks of the Eocene Princeton Group occur in the northern (Tulameen coal basin) and eastern (Princeton basin) parts of the map



area. They lie unconformably on the Nicola Group and related intrusive rocks. Comagmatic minor intrusions occur throughout the map area as ubiquitous intermediate-felsic porphyry dikes.

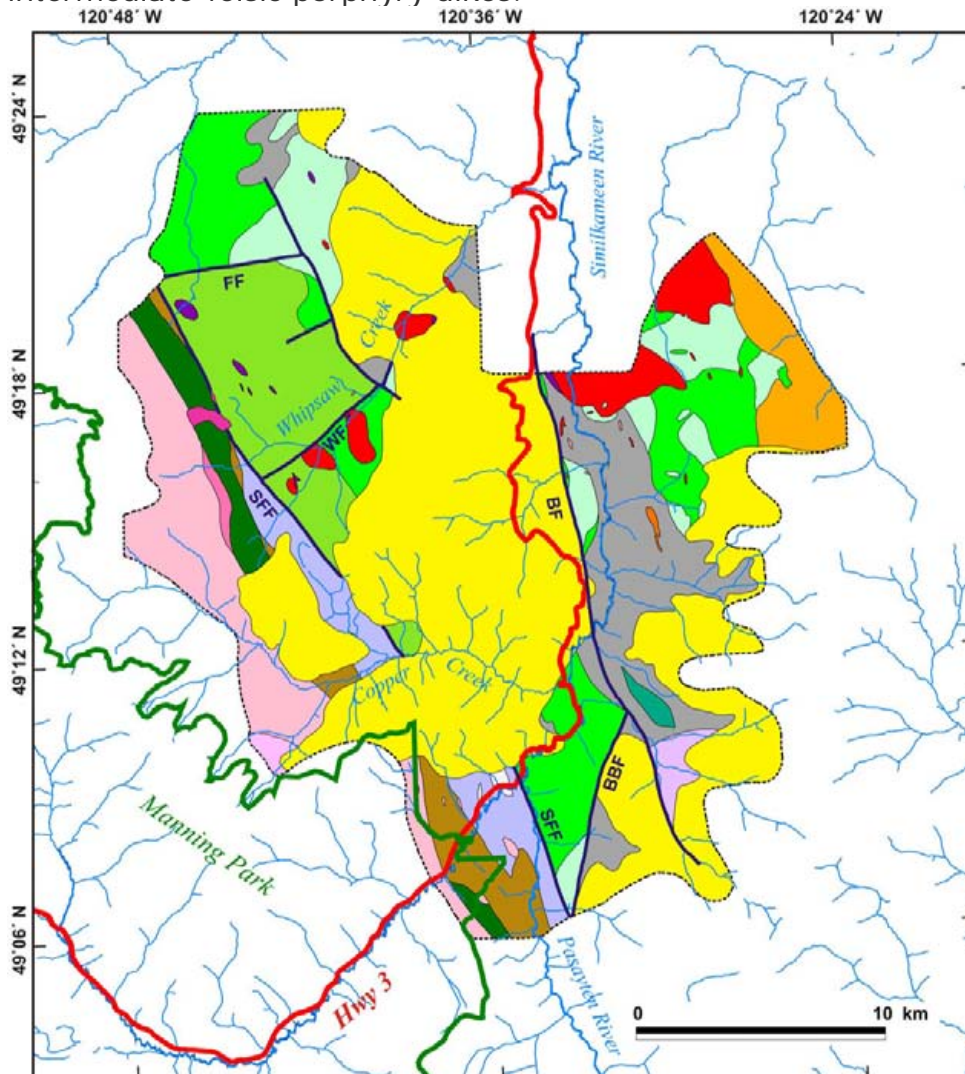


Figure 2A: Local Geology Map (includes Whipsaw Creek Property Area) (Ref.3)

Figure 3. Geology of the 2008 map area. See Figure 2 for key to geological units. Abbreviations: BF, Boundary fault; BBF, Baby Buggy fault; SFF, Similkameen Falls fault; WF, Whipsaw Creek fault; FF, Frenchy Creek fault.

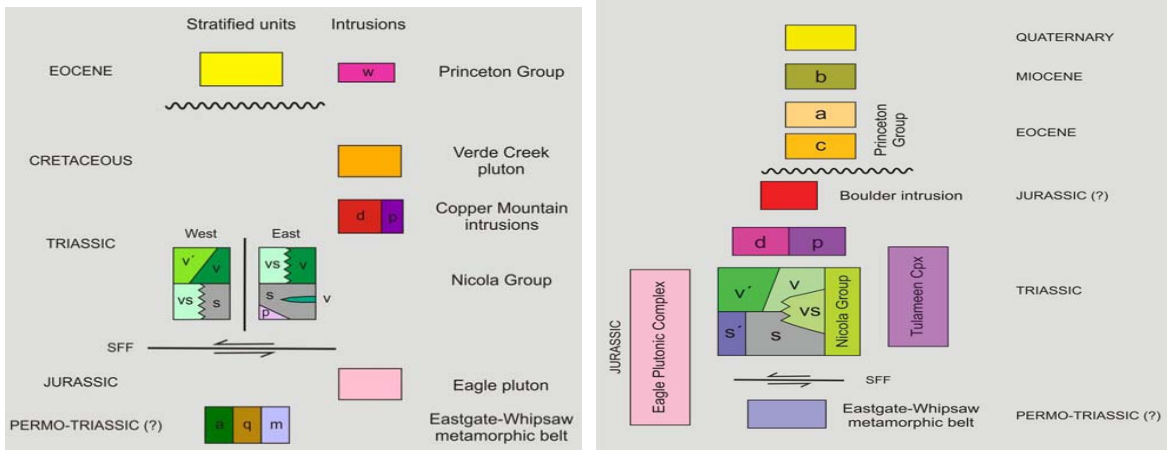


Figure 2A: Figure 2. Geological units in the map area. Nicola Group abbreviations: s, clastic sedimentary rocks; p, phyllite; v, volcanic rocks; vs, volcanoclastic sedimentary rocks; v', schistose volcanic rocks. Eastgate-Whipsaw metamorphic belt abbreviations: a, amphibolite; q, quartzite–biotite-quartz schist; m, mixed metavolcanic-metasedimentary unit. In trusive units abbreviations: w, Whipsaw porphyry; d, diorite; p, pyroxenite; SFF, Similkameen Falls fault.

Figure 2B: Figure 3. Geological units in the Granite Creek map area, southern British Columbia. Abbreviations: b, columnar basalt; SFF, Similkameen Falls fault; Cpx, complex.

Princeton Group abbreviations: c, Ce dar For ma tion; a, Allenby For ma tion.

Nicola Group abbreviations: s, clastic sedimentary rocks; s', schistose metasedimentary rocks; v, volcanic rocks; vs, volcanoclastic sedimentary rocks; v', schistose volcanic rocks. Intrusive units abbreviations: d, diorite; p, pyroxenite.

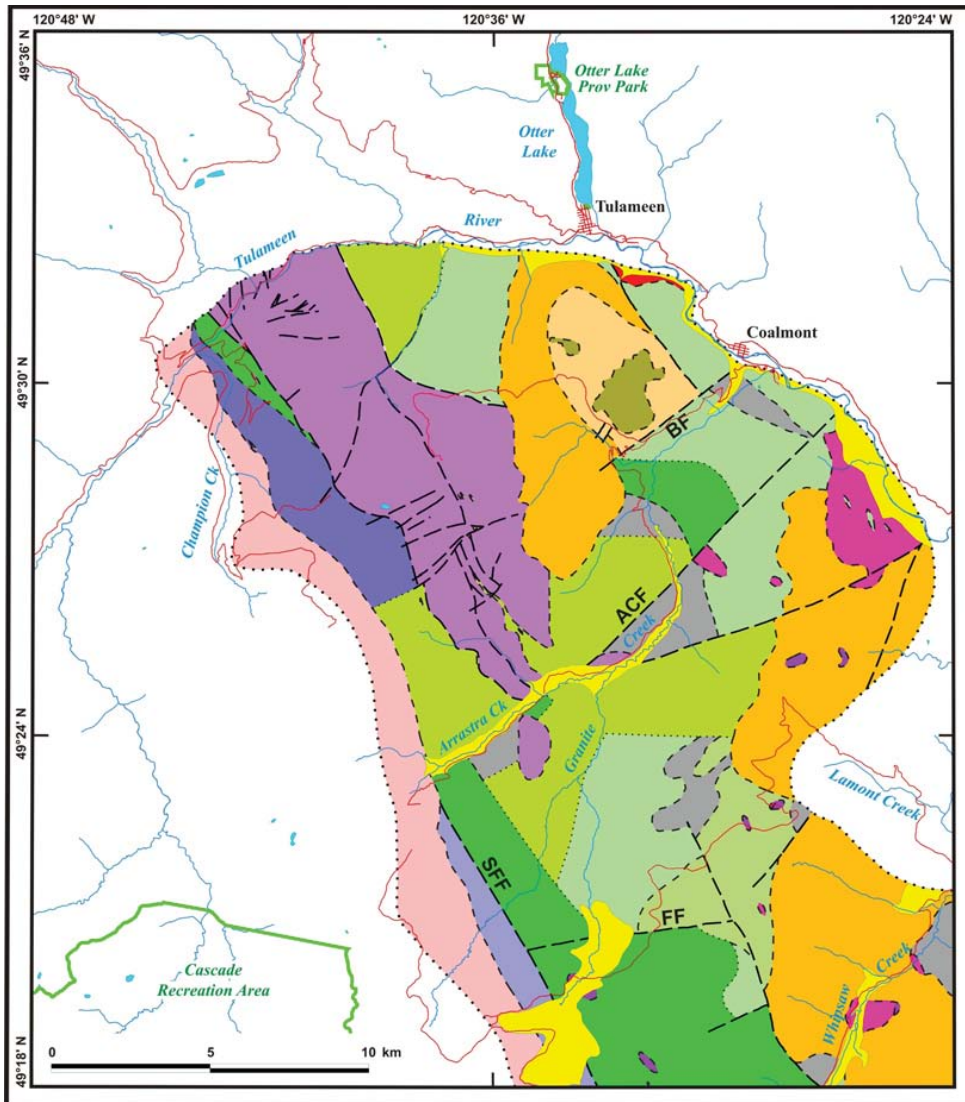


Figure 2B: Local Geology Map (includes Granite Creek Property Area) (Ref.4)  
**Figure 2.** Geology of the Granite Creek area, southern British Columbia, from mapping done in 2009. See Figure 3 for key to geological units. Faults are shown with thick dashed lines; geological contacts with thin dashed lines, or dotted lines where transitional or uncertain. Abbreviations: ACF, Arrastra Creek fault; BF, Blakeburn fault; FF, Frenchy Creek fault; SFF, Similkameen Falls fault.

#### 4.0 PHYSIOGRAPHY AND GLACIATION

Copied from Ref. 6: '*PHYSIOGRAPHY AND GLACIAL GEOLOGY*', page 9, in: McMechan, R.D., 1983. Geology of the Princeton Basin. British Columbia. Ministry of Energy, Mines and Petroleum Resources; Paper 1983-3. British Columbia Ministry of Energy, Mines and Petroleum Resources, Victoria. 52 pp:

*The Princeton Basin is located at the southern end of the Thompson Plateau (Holland, 1964) and is part of a transitional belt between the Interior Plateau to the northeast and the Cascade Mountains to the southwest. Maximum relief is about 770 metres: the highest point is at approximately 1400 metres elevation on the southwestern*

*margin of the basin and the lowest point at about 630 metres on the Similkameen River just east of Princeton.*

*The present drainage pattern has two distinct elements, one parallel to and the other perpendicular to the long axis of the basin. Summers Creek, Whipsaw Creek, the southern segment of the Similkameen River, and local portions of various tributary creeks have a north-northeasterly alignment, whereas the internal drainage network of the basin has a prominent southeasterly grain (Fig. 1).*

*These elements reflect the structural control of the Princeton Basin, although both have probably been modified by glacial activity (see Hills, 1962).*

*During Pleistocene time the entire Princeton Basin became buried under ice. The maximum thickness of this sheet is uncertain, but it was evidently thick enough to erode the tops of mountains as high as 2600 metres (Rice, 1947). All mountain tops in the Princeton area are well rounded and subdued, and the basin itself is covered by an extensive mantle of drift that is commonly 2 to 25 metres thick and ranges up to 53 metres (Anderson, 1972). The late glacial history of the basin has been described by Mathews (1944) and Hills (1962).*

## 5.0 GEOCHEMICAL ROCK And SEDIMENT SAMPLING SURVEY

A high quality geochemical follow-up sediment (silt) sampling survey was conducted by the author in the fall of 2010 over selected areas on Goldcliff's Tulameen Project precious and base metals mineral property, located in the Whipsaw Creek and Granite Creek drainages in the Princeton area of southwestern British Columbia.

One hundred silt samples, plus fourteen field duplicates, were collected primarily utilizing fluvial sediments along logging road traverses in the Whipsaw, Lamont, Frenchy, Bromley and Findlay creek drainages present on the property.

The drainage samples were wet-sieved in the field in order to isolate the single-phase lithic sediment fraction, free from organic matter and the lightest clay fractions. The high-quality samples in turn can repeatedly identify any subtly-detectable detrital and/or hydromorphic geochemical multi-element anomalies that may be present due to more distant sub-cropping and/or blind mineralization existing under overburden.

Geologist Mel DeBriske collected 117 rock outcrop grab samples along logging road traverses in the same follow-up areas, focusing on some of the known copper showings and alteration zones on the property, and 3 rock samples on Granite Ck. In addition, geophysicist Ed Rockel and the author collected 15 and 12 outcrop and float rock samples respectively, for a total of 144 rock samples, as described by DeBriske in Appendix I.

The anomalous lithochemical results are discussed by the author in this report in conjunction with the anomalous silt samples geochemistry in order to relate anomalous precious elements and base metals silt geochemistry to anomalous bedrock lithochemistry present on the Tulameen Project copper and gold property.

To enhance the geochemical interpretation of the rock and silt sample analytical results, significant trace element correlations have been calculated by the author

from 21 rocks recently collected by government geologists in Massey et al., Ref. 2, from three alteration zones located within and adjacent to the property claims, as discussed below.

All rock and sediment samples were delivered by the author and DeBriske to Goldcliff's warehouse in Keremeos for direct pick-up by the laboratory's personnel. The rock samples and the -80 mesh fraction silt sediments were analyzed for fire-geochemical gold and 35 element ultra-trace aqua regia digest ICP-MS analysis at Eco Tech (Stewart Group) Laboratories in Kamloops, British Columbia. Together with inclusion of fourteen blind field duplicate sediment samples, repeat analyses within every ten samples and inclusion of laboratory standards for quality assurance and control (QA/QC) yielded satisfactory analytical accuracy and precision. Complete analytical results for the rock and sediment samples, together with analytical methodology and comprehensive QA/QC data, are presented in the laboratory certificates, Appendices II A,B, respectively.

Rock and sediment sample locations, together with their gold, silver and copper analytical values, are shown on the large-scale 1:20,000 topographic maps, Figs 3 and 4, in pocket, and summarized on page-sized sample location maps, Figs 3A,B and 4A, overleaf, respectively, where the rock sample locations are evenly split into the northern Lamont-Bromley drainages, and the central Whipsaw-14,15-Mile drainages respectively. The nine northernmost rock samples from the Findlay drainage are omitted from the detailed location maps, but are included in all calculations.

The rock and sediment sample multi-element analytical results are correlated below in Correlation Tables 1, 2, respectively. Anomaly maps for sediment samples are constructed below for copper, gold and silver, and their strongest pathfinder elements, Map Figs 5, and 6A,B.

Geochemical values for copper and the precious metals Au, Ag are directly inscribed for both rock and silt samples, together with their descriptions, in Appendices IA,B, while Appendices IIA,B contain complete laboratory analytical certificates for rock and silt samples respectively.

## 5.1 Anomalous Alteration Zones Geochemistry

As part of their mapping coverage, Massey et al., (Ref. 2), rock-sampled three diverse alteration zones, one of which is located within Goldcliff's Tulameen Project mineral claims area and two on its periphery, the results of which are shown on their 'Figure 12' location map and analytical 'Table 2' below, and summarized on pages 200-203 as follows:

*Table 2 reports the results of analyses of various mineralized grab samples from the map area. These form three groupings (Figure 12). Assays of grab samples northwest*



of the Whipsaw property show reasonably anomalous Cu, Mo and Ag values, suggesting that the Whipsaw porphyry Cu system could be extended. The calcareous matrix of volcanic rocks within the lower Nicola sedimentary sequence is variably altered to skarn with some visible sulphides. Analyses of grab samples, however, proved to be unremarkable. Several grab samples were collected in the northwestern part of the map area, where several areas of orangebrown iron carbonate–silica alteration occur in Nicola volcanic rocks and possibly the Princeton Group. The samples are somewhat variable but do show some elevated As and Ag values and moderate Au and Cu. The full extent and continuity of this alteration is unknown. No MINFILE occurrences are reported in this area and there is little recorded work in assessment reports.

In order to enhance the geochemical interpretation of the drainage sampling survey analytical results, the author constructed correlation tables, attached to their 'Table 2', for the rock sample results from each of the three alteration zones described above by Massey et al., as discussed by the author below.

Figure 2C, Alteration Zones Location Map, (Ref.2)

Figure 12. Locations of assay samples (see Table 2 for analyses and identification of groupings). Geological contacts and faults in the grey map area are as in Figure 3.

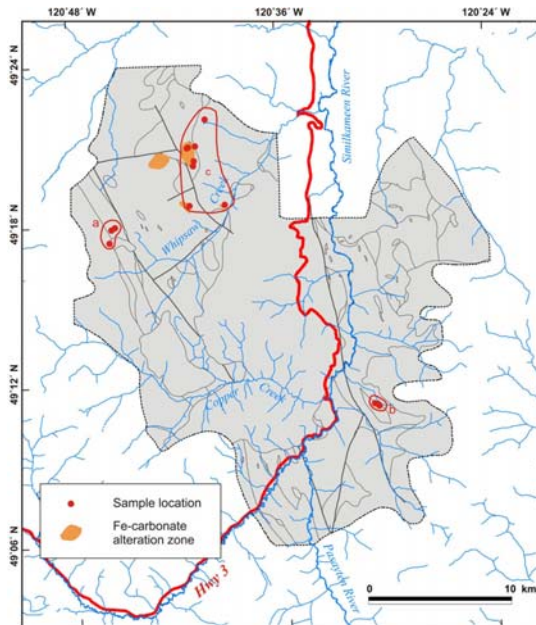


Table 2. Analyses for selected elements on mineralized grab samples collected in the map area in 2008. Samples crushed and milled in a Cr steel mill. Analyses by ACME Analytical Laboratories Ltd. (Vancouver) using inductively coupled plasma–mass spectrometry (ICP-MS) after HCl-HNO<sub>3</sub> (aqua regia) digestion.



a) Sulphide mineralization associated with Whipsaw porphyry:												<i>Whpsw Porph.</i>									
E.	N.	Lab #	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb	Zn	Ag ppb	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb	
662519	5461990	61556	2.9	541	1	0.03	0.9	50.3	456	1.2	35	0.1	0.1	1.0							
662902	5463070	61548	1.6	651	1	0.07	1.5	0.5	722	0.8	140	0.8	0.1	1.0							
662902	5463070	61550	1.7	710	1	0.07	0.7	4.6	595	0.7	107	-0.5	0.8	-0.3	1.0						
662655	5462915	61546	1.7	177	1	0.02	0.9	1.1	238	1.1	69	0.6	0.2	0.8	-0.1	1.0					
662655	5462915	61547	3.9	582	2	0.03	1.9	0.9	665	1.3	55	0.3	0.1	-0.3	-0.3	-0.4	1.0				
												0.2	0.9	0.4	0.7	0.6	-0.2	1.0			
												0.8	-0.4	0.6	-0.9	0.4	0.3	-0.3	1.0		
												Zn	-0.7	0.4	-0.3	0.9	0.0	-0.6	0.5	-0.9	

b) Calcareous tuffs, partially skarned:												<i>Calc. Skarn</i>								
E.	N.	Lab #	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb	Zn	Ag ppb	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb
681387	5450765	61564	1.5	60	0.5	0.22	1.4	0.9	47	3.5	30	0.0	1.0							
681357	5450788	61719	3.2	133	2	0.24	1.5	0.8	23	4.7	45	1.0	-0.2	1.0						
681274	5450851	61562	4.7	31	4	0.20	1.0	0.7	77	1.8	35	0.4	0.7	0.1	1.0					
681063	5450910	61563	1.3	47	1	0.15	1.6	1.4	102	1.9	56	-0.8	-0.2	-0.6	-0.8	0.7	1.0			
												-0.2	-0.8	0.1	-1.0	-0.1	0.6	1.0		
												Pb	-0.1	0.9	-0.3	0.8	0.4	-0.4	-0.9	1.0
												Zn	-0.3	0.2	-0.2	-0.6	0.6	0.8	0.4	-0.2

c) Iron carbonate-silica alteration zones:												<i>FeCaSi,AlTZ</i>								
E.	N.	Lab #	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb	Zn	Ag ppb	Au ppb	Ag ppb	As	Sb	S%	Mo	Cu	Pb
668103	5464629	61554	1.5	59	1	0.03	0.1	0.2	24	2.1	22	-0.4	1.0							
668103	5464629	61555	23.2	91	1	0.01	0.1	0.1	196	1.9	58	-0.5	0.4	1.0						
668015	5468693	61551	0.9	143	106	0.15	0.2	0.4	79	1.1	64	-0.5	0.7	0.1	1.0					
668015	5468693	61552	1.8	85	78	0.10	0.1	0.5	75	1.7	52	0.1	0.0	0.2	-0.2	1.0				
668015	5468693	61553	2.6	238	152	0.13	0.2	0.3	122	0.8	60	-0.1	0.3	0.0	0.3	-0.2	1.0			
668015	5468693	61565	3.5	267	155	0.14	0.2	0.3	133	1.0	64	0.4	0.3	0.2	-0.2	0.1	0.0	1.0		
667926	5468638	61560	2.6	172	136	0.28	0.1	1.8	67	3.9	49	-0.2	0.3	-0.1	0.6	-0.6	0.5	-0.1	1.0	
668478	5468754	61561	12.1	16	63	0.07	0.1	0.2	7	0.6	35	-0.1	0.4	0.1	0.3	-0.1	1.0	0.2	0.4	
668405	5467743	61557	4.9	242	122	0.09	0.1	0.7	94	1.1	51									
668343	5467377	61558	4.5	236	76	0.22	0.1	17.8	87	3.1	222									
670586	5464714	61559	13.7	88	29	0.07	0.4	0.2	65	0.4	60									
669174	5470646	61549	2.9	293	4	0.43	0.1	1.0	56	2.9	64									

The author's correlation tables, which are included in Massey et al.'s 'Table 2' above for each of the three alteration zones sampled, indicate:

Alteration Zone A: The sulfide-mineralized Whipsaw porphyry from the 'S & M' showing, located in Whipsaw Creek headwaters between the 43 Mile and 47 Mile creeks at the western property line, is relatively strongly anomalous in Cu, Mo, Ag, and S, where Ag-Cu strongly correlate at the  $r=0.9$  level, while weakly anomalous Au values correlate well with very weak As, Pb, and the stronger S values.

Alteration Zone B: The partially skarned calcareous tuffs, located between the eastern property line and the Copper Mtn. mine, contain weakly anomalous Au values which correlate well with very weak As values, while weak Ag and weakly anomalous Sb values correlate strongly with weakly anomalous Pb values at the  $r=0.8-0.9$  level.

Alteration Zone C: The altered iron carbonate-silica rocks, extensively sampled by Massey et al. in the headwaters of the 14 Mile Creek, located in the center of Goldcliff's mineral property, are strongly anomalous in gold and arsenic, with up to 23.2 ppb Au, 155 ppm As, and anomalous in Ag, Cu, Mo, Sb, Pb, Zn, which do not translate into correlations because the highest values for each element do not show up in the same rock sample.

## 5.2 Anomalous Rock Samples Geochemistry (Figs 3,3A,B, 5)

For the 144 rock samples collected, almost all of which are outcrop, the highest gold value of 65ppb Au is present in Tertiary Princeton Group andesite limonitic

near-in-place boulder sample 20105020 from the LAM South showing. Several of the remaining rock samples contain only weakly anomalous gold values of up to 20ppb Au.

The strongly anomalous highest copper value of 1280ppm Cu, accompanied by anomalous silver, tellurium and sulfur values of 0.4ppm Ag, 0.2ppm Te, 3.1% S is present in Tertiary andesite sample 20105021, also from the LAM S. showing. Rock sample 20105036 of Nicola andesite float from the WILMAC show area, also located in the Lamont Creek headwaters, carries strongly anomalous 841ppmCu,0.9ppmAg,0.2ppm Te,1.3% S.

The strongly anomalous highest silver value of 1.7ppm Ag occurs in Nicola andesite outcrop sample 20105098 from the NEV showing.

The limonitic Triassic diorite samples 20105071, 5072 from below the first Whipsaw broken bridge FORD area are strongly anomalous, with up to 686ppm Cu, 1.0 ppm Ag, 0.5ppm Te, 3.3% S.

In Massey et al's 'iron carbonate-silica 14MILE alteration zone 'C', Ref.2, numerous rock samples of Nicola sandstone carry strongly anomalous arsenic values of up to 165ppm As in pyritic sample 20105064, which is associated with highly elevated >10% Ca, 6% Fe, 1500ppm Mn.

The Princeton Group limonitic dacite outcrop 20105048 from the adjacent iron carbonate zone in the 15 MILE drainage carries anomalous copper value of 294ppm Cu associated with elevated 4.6% Fe, and otherwise non-anomalous major elements geochemistry. This hydromorphic Cu-Fe oxide bedrock anomaly may be indicative of copper mineralization at some depth.

In the Finglay Creek area in the north, the 20105105 rusty magnetic boulder of Tertiary sandstone carries strongly anomalous 0.5ppm Te, 1.8% S, while rust-stained Tertiary andesite outcrop 20105107 is similarly anomalous with 0.5ppm Te, and 1.8% S.

The anomalous tellurium values may be associated with precious metals mineralization at depth, since a 90% sulfide ore sample collected by the author from a Granite Creek prospector during the 2008 reconnaissance survey, which assayed 33 g/t Au, 163 g/t Ag, contained also a very strongly anomalous tellurium value of 639ppm Te.

(Fig. 3): Tulameen Project – a Copy of Rock Sample, Cu-Au-Ag Values Map, with Claims Outline (in pocket).

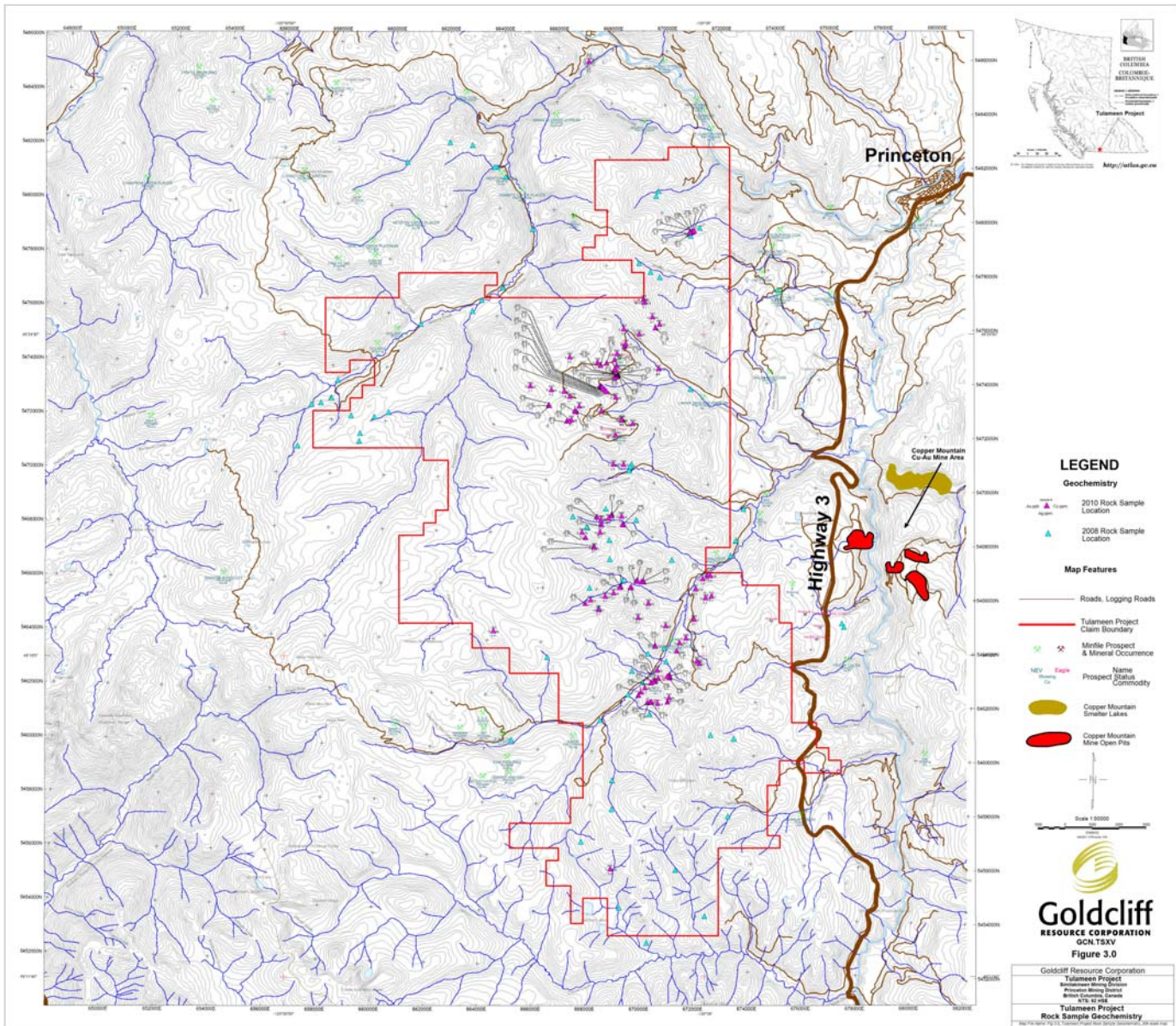


Fig. 3A: 2010 Rock Sample Location Map – Lamont-Bromley

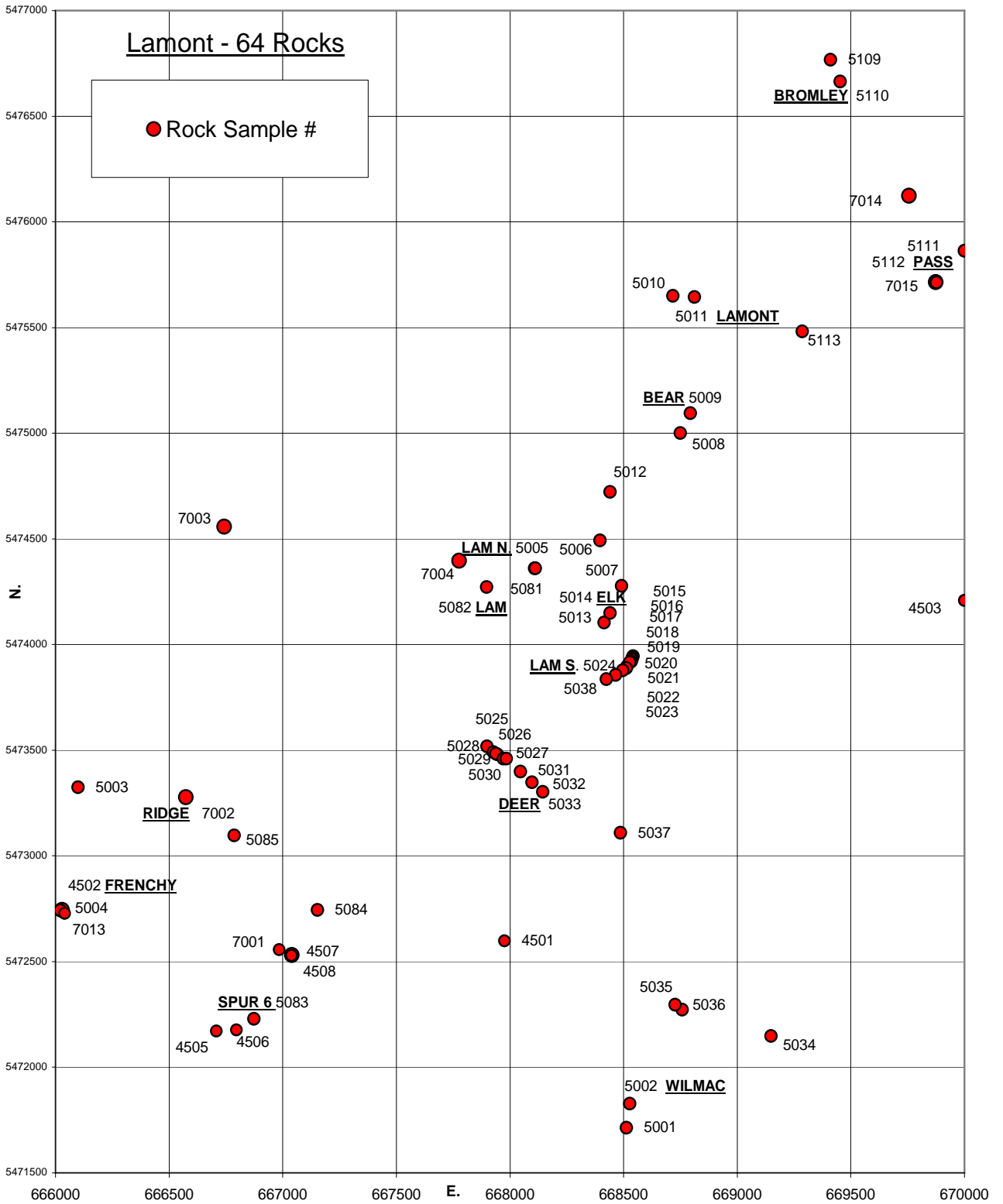
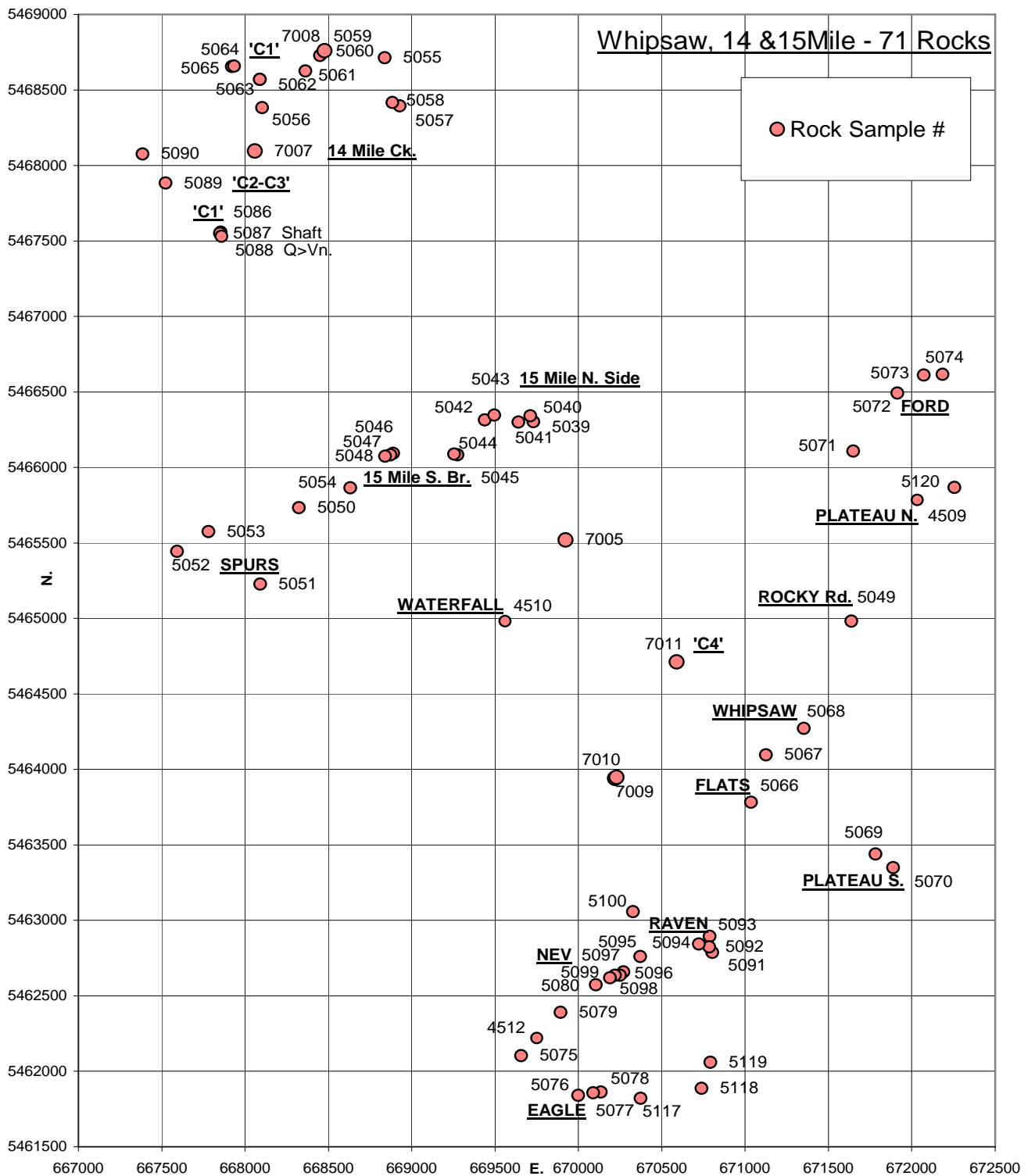


Fig. 3B: 2010 Rock Sample Location Map – Whipsaw-14,15Mile



Correlation Table 1 – Tulameen Project, 2010 Rock Samples



147Rx	Au,pp	Ag	Al%	As	Ba	Bi	Ca%	Cd	Co	Cr	Cu	Fe%	Ga	Hg,pp	K%	La	Mg%	Mn	Mo	Na%	Ni	P	Pb	S%	Sb	Sc	Se	Sr	Te	
Ag	0.1	1.0																												
Al%	0.0	0.0	1.0																											
As	0.0	0.0	-0.2	1.0																										
Ba	0.0	0.0	0.0	0.0	1.0																									
Bi	0.0	0.0	0.0	0.1	0.0	1.0																								
Ca%	0.1	0.0	0.0	0.5	0.2	0.0	1.0																							
Cd	0.1	0.1	0.0	0.1	0.1	0.3	0.2	1.0																						
Co	0.1	0.2	0.6	0.2	0.0	0.1	0.3	0.2	1.0																					
Cr	0.1	0.0	0.1	0.3	0.2	0.0	0.2	0.0	0.3	1.0																				
Cu	0.1	0.4	0.1	0.0	-0.1	0.0	0.0	0.1	0.5	0.0	1.0																			
Fe%	0.0	0.2	0.2	0.2	-0.1	0.0	0.1	0.0	0.4	0.0	0.2	1.0																		
Ga	0.0	0.0	0.8	-0.2	0.1	0.1	-0.1	0.0	0.4	0.1	0.1	0.3	1.0																	
Hg,ppb	0.1	0.2	-0.1	0.1	0.0	0.0	-0.1	0.0	0.3	0.0	0.3	0.7	0.0	1.0																
K%	0.0	0.0	0.3	-0.1	0.5	0.0	0.0	0.0	0.1	0.3	0.0	0.0	0.3	-0.1	1.0															
La	0.1	-0.1	0.0	-0.1	0.2	0.1	-0.1	0.1	0.0	0.1	-0.1	0.0	0.2	-0.1	0.2	1.0														
Mg%	0.0	-0.1	0.8	0.1	0.1	0.0	0.3	0.0	0.6	0.4	0.0	0.2	0.7	-0.1	0.3	0.0	1.0													
Mn	0.1	0.0	0.5	0.3	0.1	0.1	0.5	0.4	0.5	0.2	0.0	0.1	0.4	-0.1	0.1	0.0	0.6	1.0												
Mo	0.0	0.2	-0.2	0.1	-0.1	0.0	-0.2	0.0	0.1	-0.1	0.1	0.7	0.0	0.7	-0.1	0.0	-0.2	-0.2	1.0											
Na%	0.0	-0.1	-0.1	-0.2	0.2	0.0	-0.2	-0.1	-0.1	-0.1	-0.1	-0.2	0.1	-0.2	0.1	0.2	-0.2	-0.1	-0.2	1.0										
Ni	0.1	0.1	0.2	0.4	0.1	0.1	0.3	0.1	0.6	0.7	0.1	0.4	0.2	0.3	0.3	0.1	0.3	0.2	0.2	0.0	1.0									
P	0.2	0.1	0.3	0.0	0.1	0.1	0.0	0.1	0.3	0.0	0.2	0.2	0.3	0.2	0.3	0.3	0.2	0.1	0.1	0.0	0.2	1.0								
Pb	0.1	0.2	-0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.1	0.7	0.0	0.7	-0.1	0.1	-0.2	-0.1	0.8	-0.1	0.3	0.0	1.0							
S%	0.0	0.2	0.0	0.0	-0.1	0.0	-0.1	0.0	0.3	-0.1	0.5	0.1	0.0	0.2	0.0	-0.1	0.0	-0.2	0.1	0.0	0.0	0.1	0.0	1.0						
Sb	0.0	0.2	-0.1	0.1	-0.1	0.0	-0.1	0.0	0.2	0.0	0.1	0.8	0.0	0.8	-0.1	-0.1	-0.2	-0.1	0.8	-0.2	0.3	0.1	0.8	0.0	1.0					
Sc	0.1	0.0	0.4	0.3	0.1	0.1	0.4	0.2	0.5	0.4	0.0	0.3	0.5	0.0	0.0	0.1	0.6	0.6	-0.1	0.0	0.3	0.2	-0.1	-0.1	-0.1	1.0				
Se	0.1	0.3	0.0	0.0	0.0	0.0	-0.1	0.1	0.1	-0.1	0.3	0.2	0.1	0.2	-0.1	-0.1	0.0	-0.1	0.2	-0.1	0.0	0.2	0.0	0.6	0.1	-0.1	1.0			
Sr	0.0	-0.1	-0.1	0.0	0.4	0.0	0.6	0.0	0.0	0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.1	0.2	-0.1	0.0	0.0	0.0	0.0	-0.1	-0.1	0.1	0.0	1.0		
Te	-0.1	0.1	0.0	-0.1	0.0	0.0	-0.1	0.0	0.1	-0.1	0.2	0.2	0.0	0.3	0.0	-0.2	0.0	-0.1	0.2	0.0	0.0	0.2	0.0	0.7	0.0	-0.1	0.6	0.0	1.0	
Th	0.1	-0.1	0.0	-0.1	0.0	0.0	-0.1	0.1	0.0	0.0	-0.1	0.1	0.1	0.0	0.0	0.8	-0.1	0.0	0.2	0.0	0.1	0.3	0.2	-0.1	0.1	0.0	-0.1	-0.1	-0.1	
Ti%	-0.1	0.1	0.4	-0.3	0.0	0.0	-0.2	0.1	0.2	-0.3	0.2	0.1	0.4	0.1	0.3	0.0	0.1	0.0	0.0	0.1	-0.1	0.4	0.0	0.0	0.1	-0.1	0.1	0.1	-0.2	0.0
Tl	0.0	0.1	0.2	-0.1	0.3	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.0	0.7	0.1	0.0	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.1
U	0.1	0.0	-0.1	0.2	-0.1	0.1	-0.1	0.4	0.0	-0.1	0.0	0.3	0.0	0.4	0.0	0.3	-0.3	-0.1	0.5	-0.2	0.2	0.2	0.4	-0.1	0.5	0.0	0.0	-0.1	-0.1	
V	0.0	0.0	0.7	-0.1	0.0	0.1	0.0	0.0	0.5	0.1	0.1	0.4	0.8	0.0	0.2	0.1	0.6	0.4	-0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.7	0.0	0.0	0.0	
W	0.4	0.1	0.1	-0.1	-0.1	0.0	0.0	0.1	0.0	-0.1	0.1	0.0	-0.1	0.1	0.0	0.0	-0.1	0.0	0.0	-0.1	-0.1	0.3	0.1	0.0	0.1	-0.1	0.1	-0.1	0.1	
Zn	0.2	0.1	0.5	0.0	0.1	0.1	0.1	0.3	0.4	-0.1	0.1	0.1	0.6	-0.1	0.2	0.3	0.4	0.6	-0.2	0.1	0.0	0.3	0.0	-0.1	-0.1	0.4	0.1	0.0	-0.1	

The Correlation Table1 above for all the rock samples collected in 2010 indicates that the strongest coefficient for **gold** is tungsten, at the r=0.4 level.

**Copper** best correlates with sulfur and cobalt at r=0.5, and silver at r=0.4; then with selenium and mercury at r=0.3, tellurium at =0.2, and hydromorphic iron in the carbonate alteration zones described above, possibly with an apatite/rutile-rich matrix indicated by major elements phosphorus and titanium.

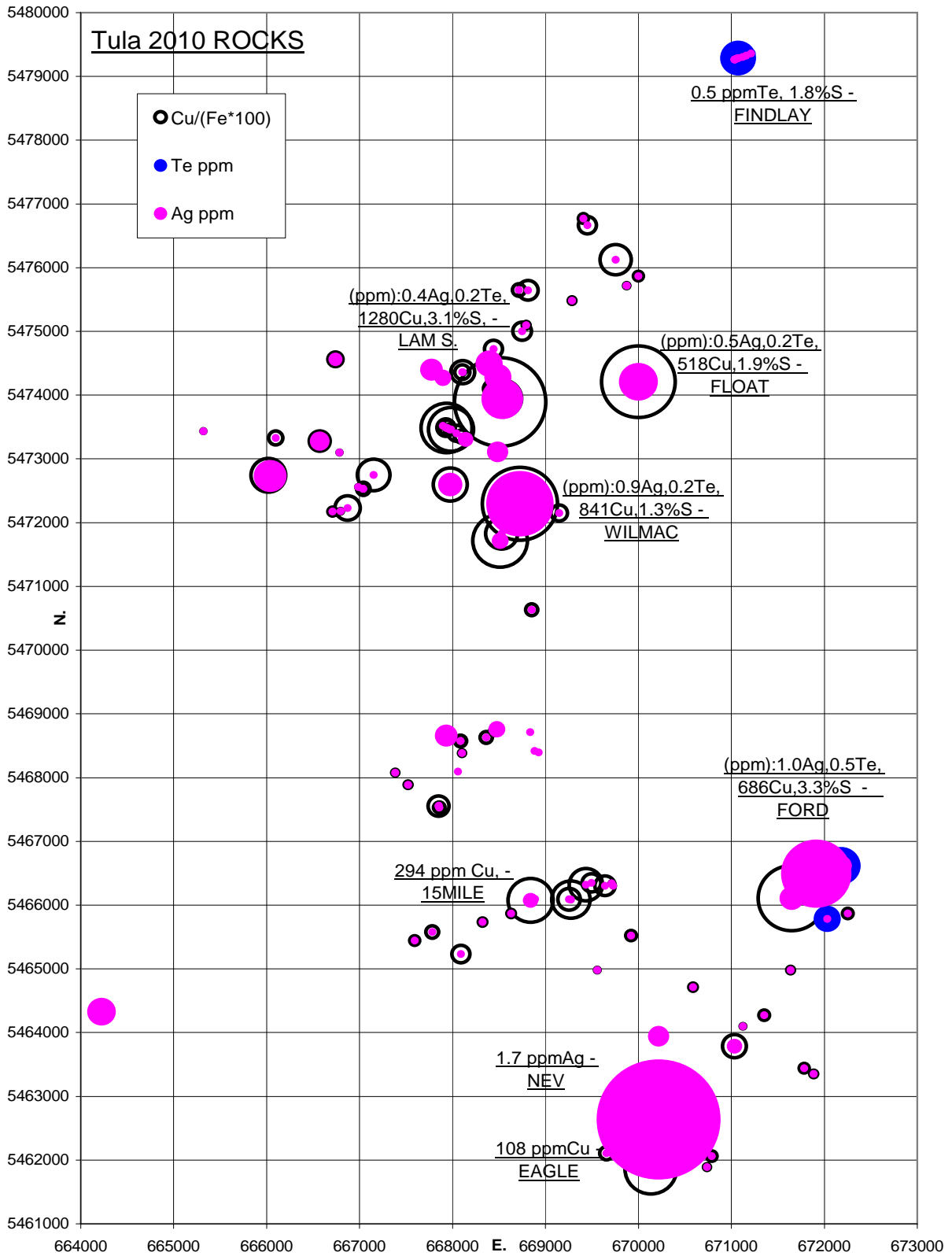
**Silver**, in addition, weakly correlates with molybdenum, lead, antimony at r=0.2.

Fig. 5 Rock Sample Cu-Ag-Te Anomaly Map, below, illustrates the presence of strongly anomalous tellurium values associated with gabbroic intrusive centers in the FORD area below the first broken bridge on Whipsaw Creek, and in the north at Findlay Creek.

Anomalous CU/Fe ratios best define the LAM and WILMAC showings present in the headwaters of Lamont Creek, while a highly anomalous silver value points to likely presence of undiscovered copper-gold-silver mineralization at the NEV showing along the south bank of Whipsaw Creek.

Figure 5: Tulameen Project, Cu-Ag-Te Rock Sample Anomalies





5.3 Anomalous Sediment Samples Geochemistry (Fig.s 4, 6A,B,)

Almost all of the one hundred sediment samples and fourteen field duplicates collected in 2010 by the author on the Tulameen copper and gold property were taken at logging road ditches and intersections with small streams and drainage depressions, whether wet or dry, and transported to a flowing stream for -40 Mesh wet-sieving in the field to obtain pure lithic silt fraction for multi-element analysis.

Complete analytical results are presented in Appendix IIB, while sample number locations, together with their copper, gold and silver values are inscribed on the large-scale map, Fig. 4, in pocket of the report.

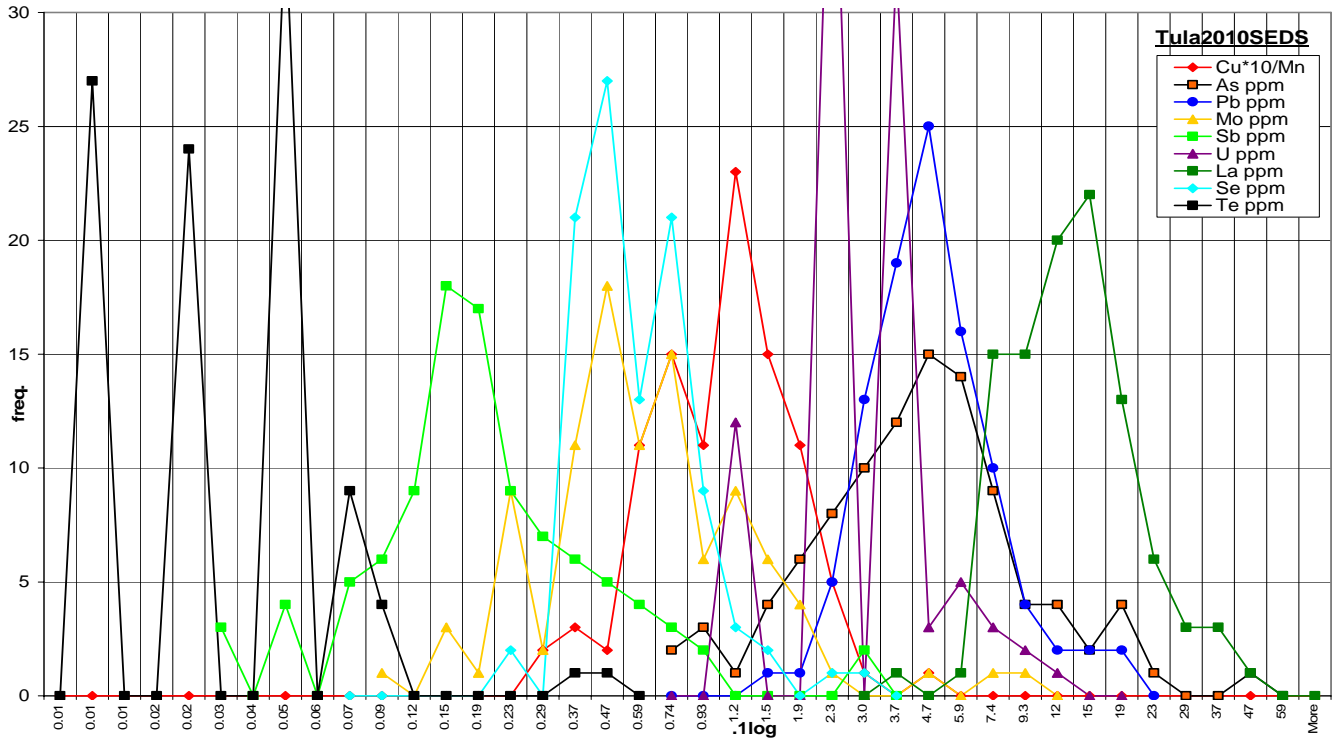
Correlation Table 2, below, indicates the multi-element associations, while the Frequency Table 1 illustrates their log-normal distribution and anomalous intervals.

The two Anomaly Maps, Fig.s 6A,B, overleaf, indicate the locations for the most anomalous values for the three ore elements Cu, Au, Ag, and their most significant pathfinder trace elements, Mo, Sb, U, Se, As, Pb, La, Te, W, in no particular order. Because of the strong correlation between copper and manganese at the  $r=0.7$  level, the Cu/Mn ratio is presented as being more anomalously significant than the analytical copper values alone.

Correlation Table 2 – Tulameen Project, 2010 Sediment Samples

98 SILTS	Au,ppb	Ag	Al%	As	Ba	Bi	Ca%	Cd	Co	Cr	Cu	Fe%	Ga	Hg,ppb	K%	La	Mg%	Mn	Mo	Na%	Ni	P	Pb	S%	Sb	Sc	Se	
Ag	0.1	1.0																										
Al%	0.0	-0.1	1.0																									
As	0.0	0.0	0.1	1.0																								
Ba	-0.1	-0.1	-0.2	0.0	1.0																							
Bi	0.0	-0.3	-0.2	0.3	0.5	1.0																						
Ca%	0.0	-0.1	0.2	0.0	-0.1	-0.2	1.0													Sr	Te	Th	Ti%	Tl	U	V	W	
Cd	0.0	-0.1	0.7	0.3	0.0	0.0	0.1	1.0											Te	0.0	1.0							
Co	0.0	0.1	0.7	0.3	-0.3	-0.1	0.3	0.4	1.0										Th	0.2	0.1	1.0						
Cr	0.0	0.2	-0.2	-0.2	0.1	-0.1	0.1	-0.2	0.0	1.0									Ti%	-0.2	-0.1	-0.3	1.0					
Cu	0.0	-0.1	0.7	0.3	-0.3	-0.1	0.3	0.4	0.8	-0.2	1.0								Tl	0.1	-0.1	0.0	0.1	1.0				
Fe%	0.0	0.3	0.2	0.2	-0.3	0.0	0.5	0.1	0.5	0.2	0.4	1.0							U	0.2	0.2	0.8	-0.2	0.2	1.0			
Ga	-0.1	-0.1	0.7	0.0	0.2	0.1	0.1	0.6	0.5	0.0	0.4	0.2	1.0						V	0.2	0.0	-0.2	0.0	-0.1	-0.2	1.0		
Hg,ppb	0.0	-0.1	0.2	0.2	0.0	0.3	0.4	0.1	0.3	0.1	0.2	0.1	0.1	1.0					W	-0.1	0.4	-0.1	0.1	0.0	-0.1	0.0	1.0	
K%	-0.1	0.0	0.2	-0.2	0.2	-0.1	0.0	0.2	0.0	0.0	0.1	-0.1	0.2	-0.1	1.0				Zn	0.1	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	
La	-0.1	-0.1	-0.2	0.1	0.5	0.0	0.0	0.0	0.0	0.0	-0.1	0.2	-0.1	0.0	0.0	1.0												
Mg%	-0.1	0.0	0.9	0.0	-0.3	-0.3	0.4	0.4	0.7	0.2	0.6	0.2	0.6	0.3	0.2	-0.2	1.0											
Mn	-0.1	-0.1	0.6	0.2	0.0	0.1	0.3	0.4	0.8	-0.1	0.7	0.2	0.5	0.3	0.1	0.3	0.6	1.0										
Mo	0.0	-0.1	-0.1	0.7	0.0	0.4	-0.1	0.2	0.2	-0.2	0.2	0.3	-0.1	0.1	0.0	0.2	-0.1	0.1	1.0									
Na%	-0.1	0.0	-0.3	-0.2	0.2	0.0	0.4	-0.3	-0.2	0.2	-0.3	0.2	-0.1	0.0	-0.1	0.2	-0.2	-0.2	1.0									
Ni	-0.1	0.0	0.0	0.0	0.2	0.3	0.1	0.0	0.2	0.5	0.0	0.1	0.2	0.2	0.0	0.5	0.2	0.3	0.0	0.1	1.0							
P	0.0	-0.1	-0.1	0.0	-0.1	-0.1	0.7	-0.1	0.1	0.0	0.0	0.5	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.6	0.0	1.0						
Pb	-0.1	-0.1	0.2	0.4	0.1	0.3	0.0	0.3	0.3	-0.1	0.3	0.2	0.3	0.0	-0.1	0.3	0.2	0.4	0.3	0.0	0.0	0.1	1.0					
S%	-0.1	0.1	0.1	0.1	-0.1	0.2	0.2	0.0	0.2	-0.1	0.2	0.2	0.0	0.5	0.0	-0.1	0.2	0.1	0.4	0.0	-0.1	0.1	0.0	1.0				
Sb	0.0	-0.1	0.3	0.3	-0.2	0.2	0.5	0.3	0.4	0.0	0.4	0.3	0.2	0.7	-0.2	-0.1	0.4	0.4	0.1	-0.1	0.1	0.0	0.2	0.3	1.0			
Sc	-0.1	0.0	0.6	0.2	0.0	0.1	0.5	0.4	0.7	0.1	0.6	0.4	0.6	0.4	0.0	0.1	0.6	0.6	0.1	0.0	0.3	0.1	0.3	0.2	0.6	1.0		
Se	-0.1	0.1	0.1	0.4	0.0	0.4	0.0	0.3	0.2	-0.2	0.2	0.2	0.0	0.2	0.0	0.3	0.0	0.1	0.6	-0.2	0.1	0.1	0.2	0.5	0.2	0.3	1.0	
Sr	-0.1	-0.2	-0.2	0.0	0.5	0.3	0.5	-0.2	-0.1	0.2	-0.1	0.0	0.0	0.0	-0.1	0.5	-0.1	0.1	0.0	0.6	0.3	0.5	0.2	0.0	0.0	0.1	0.0	
Te	0.0	-0.1	0.0	0.2	0.0	0.4	0.2	0.0	0.1	0.0	0.1	0.2	0.0	0.6	-0.1	0.1	0.0	0.0	0.5	0.0	0.1	0.1	0.0	0.8	0.4	0.1	0.6	
Th	-0.1	0.0	-0.2	0.0	0.2	0.5	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	0.0	0.7	-0.2	0.1	0.1	0.0	0.3	-0.1	0.1	0.0	-0.1	-0.1	0.3	
Ti%	0.0	-0.1	0.3	-0.3	0.1	-0.1	0.0	0.3	0.1	0.0	0.1	0.0	0.4	0.2	0.2	-0.2	0.1	0.0	-0.3	0.0	0.0	-0.2	-0.1	-0.1	0.1	0.1	-0.3	
Tl	0.0	-0.1	0.1	-0.1	0.2	0.0	-0.1	0.1	0.1	-0.1	0.1	-0.2	0.2	0.0	0.3	0.1	0.1	0.1	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1	0.1	-0.1	
U	-0.1	0.0	0.0	0.2	0.2	0.5	-0.1	0.1	0.2	-0.3	0.2	0.0	0.1	0.1	0.0	0.6	-0.1	0.3	0.3	-0.1	0.2	-0.1	0.3	0.3	0.0	0.2	0.5	
V	0.0	0.3	-0.1	-0.2	-0.2	0.2	0.5	-0.2	0.1	0.2	-0.1	0.7	0.0	0.0	-0.1	-0.2	0.0	-0.1	-0.1	0.6	0.0	0.7	-0.1	0.0	0.0	0.1	-0.1	
W	0.2	-0.1	0.1	0.1	-0.1	0.2	0.2	0.1	0.1	0.0	0.1	0.0	-0.1	0.7	-0.1	-0.2	0.1	0.1	0.0	-0.1	0.1	0.0	-0.1	0.3	0.4	0.1	0.0	
Zn	0.0	-0.1	0.4	0.3	0.0	0.2	0.2	0.4	0.3	-0.1	0.4	0.2	0.4	0.1	0.1	0.2	0.3	0.4	0.1	-0.1	0.1	0.1	0.4	-0.1	0.1	0.4	0.1	

Frequency Table 1 – Tulameen Project, 2010 Sediment Sample Distributions



As with the rock samples described above, anomalous gold values in silt samples correlate most strongly with tungsten, but only at the  $r=0.2$  level. The highest gold value of 60ppb Au is present in the headwaters of the south branch of Lamont Ck., weakly anomalous gold values of up to 20ppb Au are present at Findley and Frenchy creeks, and below the NEV showing.

As with gold, the highest silver values of 0.4ppm Ag, are also present above the S. Branch of Lamont Ck. and in Frenchy Ck. headwaters, but only correlate with iron and vanadium, at  $r=0.3$ , indicating anomalous hydromorphic accumulation.

The highest copper and cobalt values are strongly correlated with aluminum, magnesium, scandium and manganese in the clay fraction at  $r=0.7$ ; therefore, the strong Cu/Mn ratio anomaly, and associated Mo-Ag zonation, stretching between moly-anomalous Findley-Bromley and silver-anomalous Frenchy creeks, is of greater significance than the highest copper values alone.

The strongly anomalous antimony-mercury values present at Bromley-Findley areas are indicative of a peripheral epithermal center, while strongly anomalous selenium-uranium values, present at Spur 6 and in the arsenic-moly-lead anomalous 15Mile Creek iron carbonate alteration area, indicate breccia and/or strong structural zones, such as suggested by the Tertiary conglomerate present in the high Plateau South area.

Fig. 4A: Tulameen Project – 2010 Sediment Samples Location Map

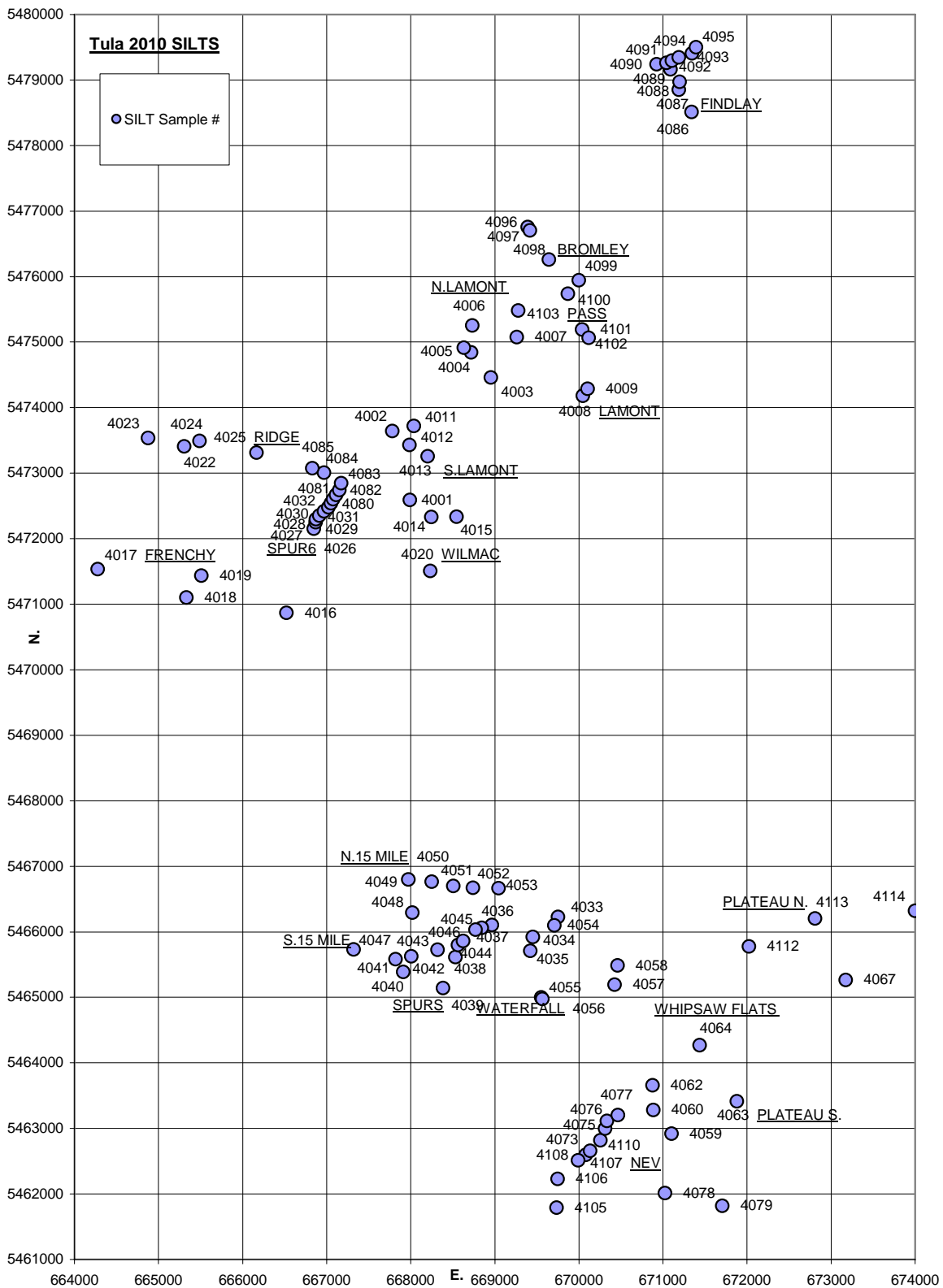


Figure 6A: Tulameen Project, Cu-Mo-Sb-U-Se-Ag Silt Sample Anomalies

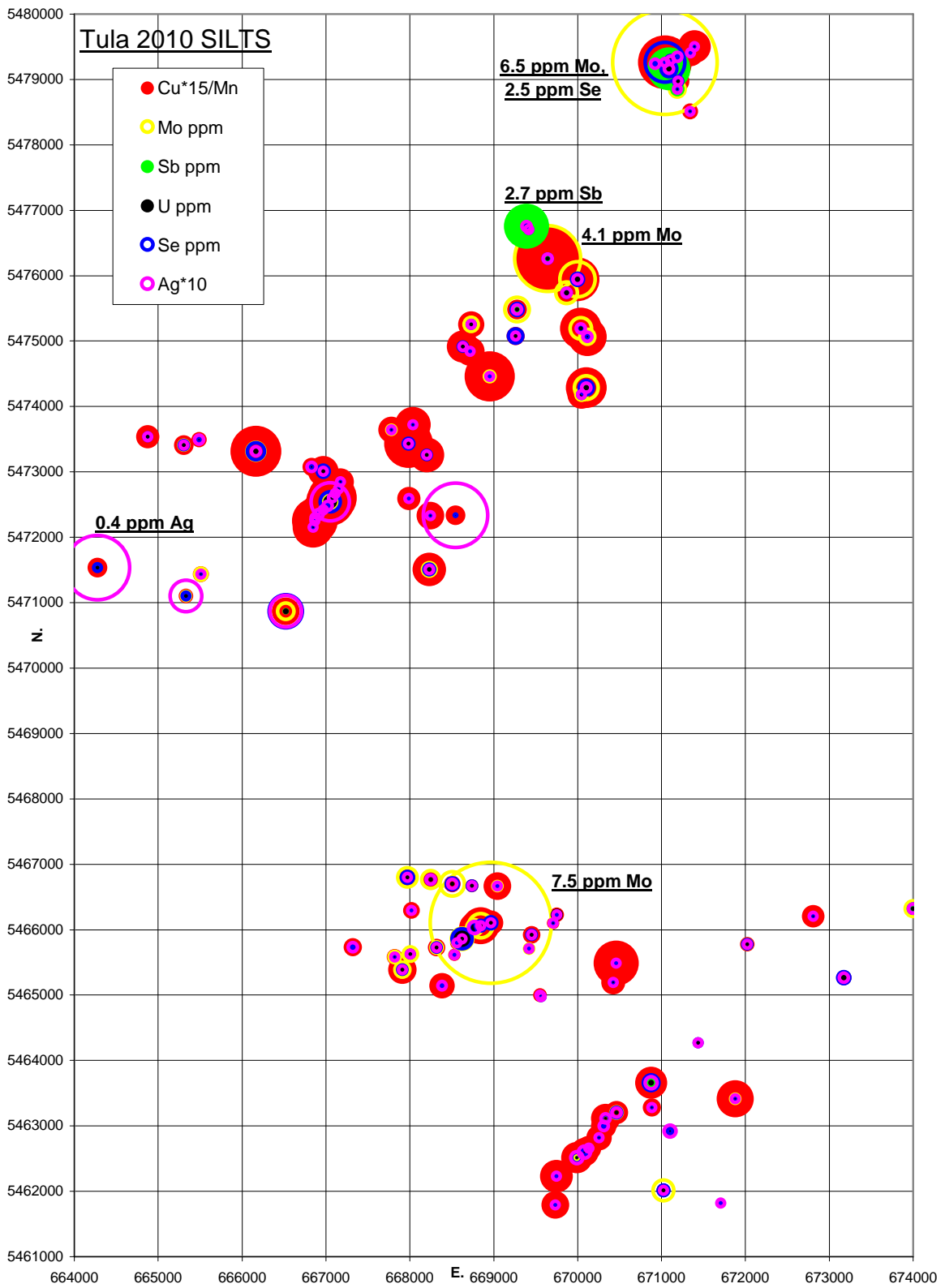
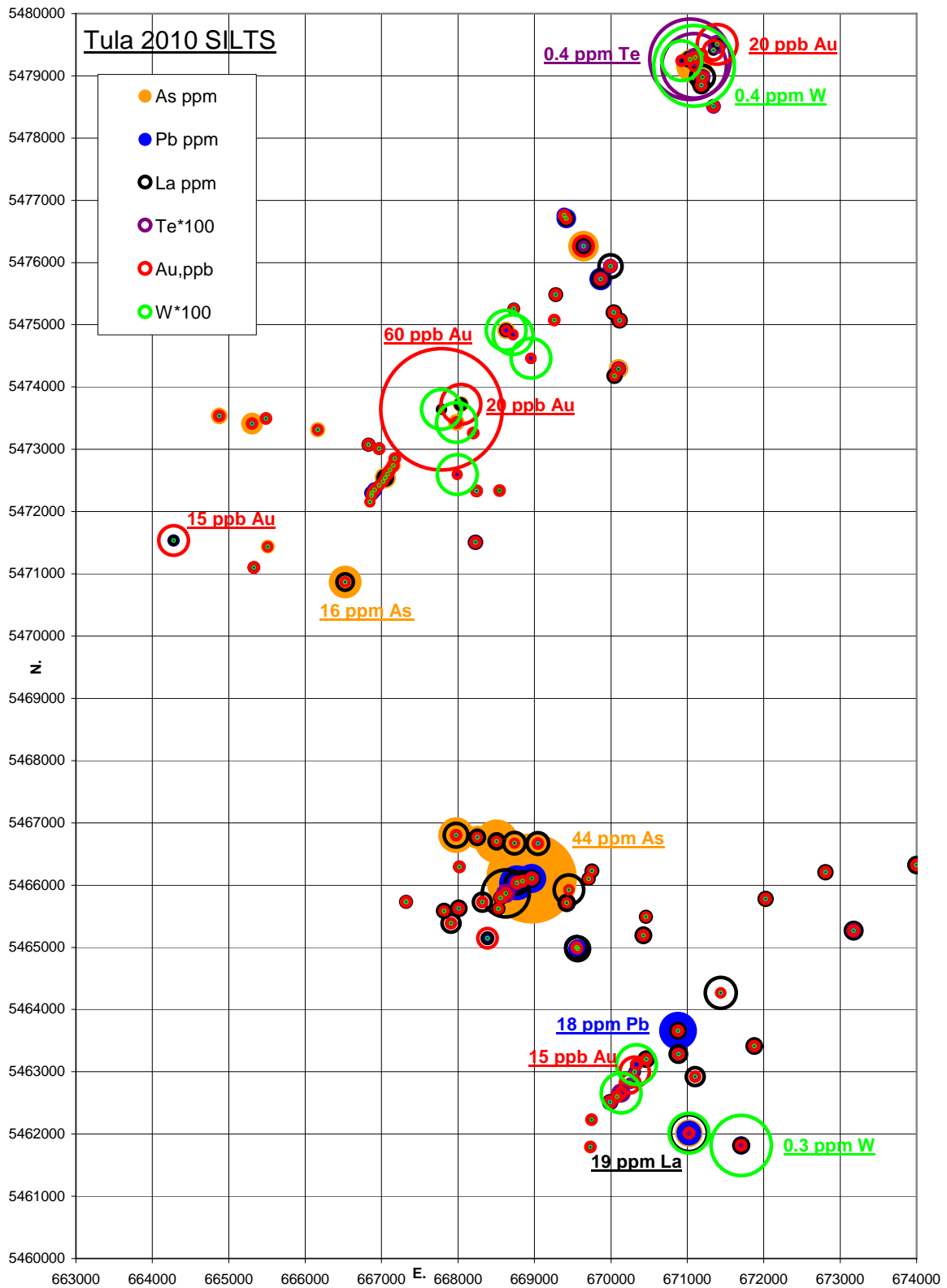


Figure 6B: Tulameen Project, As-Pb-La-Te-Au-W Silt Sample Anomalies



## 5.0 CONCLUSIONS AND RECOMMENDATIONS



1. The 2010 high quality field-sieved follow-up geochemical sediment sampling survey conducted by the author over selected anomaly areas of Goldcliff's Tulameen Project mineral claims, along with outcrop samples collected by geologist Mel DeBriske, have produced several moderate to strong geochemical anomalies in copper, gold, silver, and/or their pathfinder elements, in the Bromley-Lamont-Frenchy headwaters areas, the diorite/gabbro intrusive centers at Findlay and at the Ford and the Nev show areas on Whipsaw Creek, and in the iron carbonate-silica alteration zone in the 15 Mile area.

2. A strongly anomalous gold value of 60ppb Au, present in the South Branch of upper Lamont Creek, centers numerous Cu/Mn ratio outcrop and silt anomalies along the main ridge, including strongly anomalous Ag, Cu values at the WILMAC showing, and anomalous Cu, Mo, As, Sb values above Bromley Creek in the northeast, as well as anomalous silt Ag, Au values in Frenchy Creek headwaters to the southwest, whose source has yet to be discovered.

3. A very strong epithermal pathfinder multi-trace element signature in both rock and silt samples is present above Findlay Creek, with up to 0.5,0.4ppm Te, 1.8,1.4 %S, 9.0,6.5ppm Mo, 35,210ppb Hg, 5.0,2.5ppm Se, 93,126ppm Cu, 89,56ppm Cr, 135,82ppm Ba, respectively.  
In addition, the silts carry strongly anomalous 2.6ppm Sb, 6.6ppm Sc and 0.4ppm W.

4. The strong multi-element correspondence of anomalous values between bedrock and the high quality field-sieved sediment samples indicates that silt sampling along the logging road network on the Tulameen copper and gold claims is a very effective geochemical follow-up exploration method in overcoming the effects of thick glacial deposits on the property.

5. The unsampled upper Granite-Frenchy creek drainages located in the northwestern sector of the Tulameen Project mineral claims require initial sampling completion at the reconnaissance scale, and follow-up sampling of any anomalies identified, including the anomalous Au, Ag values located during the 2010 survey in the headwaters of Frenchy Creek.

## 6.0 REFERENCES

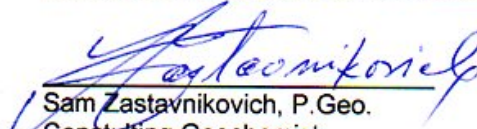
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## CERTIFICATE

I, Sam Zastavnikovich, P. Geo., Consulting Geochemist, with residence and office address at 5063-56<sup>th</sup> Street, Delta, British Columbia, do hereby certify that:

1. I am a 1969 graduate of the University of Alberta, with B. Ed. degree in Physical Sciences.
2. I have been continuously employed from 1969 to 1982, and seasonally since 1966 by Falconbridge Ltd. of Toronto and Vancouver as field geochemist working in Canada, the U.S.A., the Caribbean and S. America.
3. Since 1982 to present I have continuously practiced as a consulting geochemists in the private and government sectors of the mineral exploration industry, having worked in Canada, the U.S.A., Alaska, China, for various clients, including from 1995 to 2000 for Cominco in South America.
4. I am a Fellow of the Association of Exploration Geochemists since 1981.
5. I have been registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1993.
6. In 1986 I supervised on behalf of the Geological Survey of Canada (GSC) and the B.C. Ministry of Mines the regional geochemical drainage sampling (RGS) survey for map sheets NTS93/E and L, and published in *Geological Fieldwork*, 1986, BCMEMPR, Paper 1987-1, pp 405-409, on the importance of sampling quality in drainage sampling surveys.
7. This report is based on my own fieldwork and observations on the Tulameen Project gold-copper property from form April 23<sup>rd</sup> to October 7<sup>th</sup>, 2010, and on my interpretation of the analytical results obtained.

Dated at Delta, British Columbia, this 31<sup>st</sup> day of January, 2011.

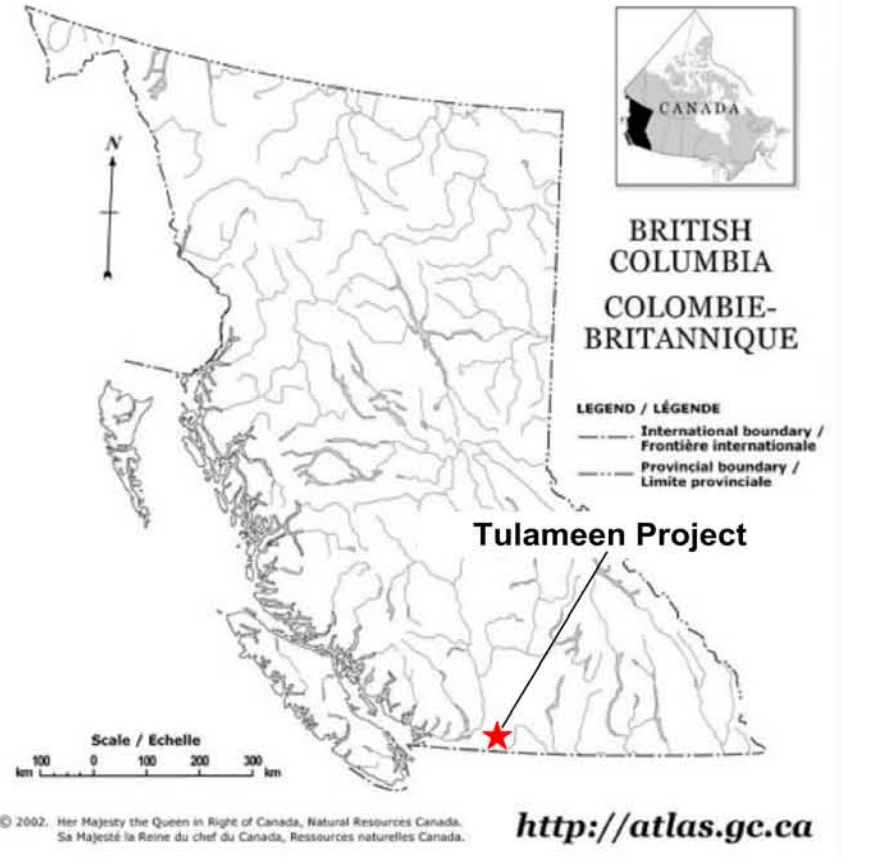
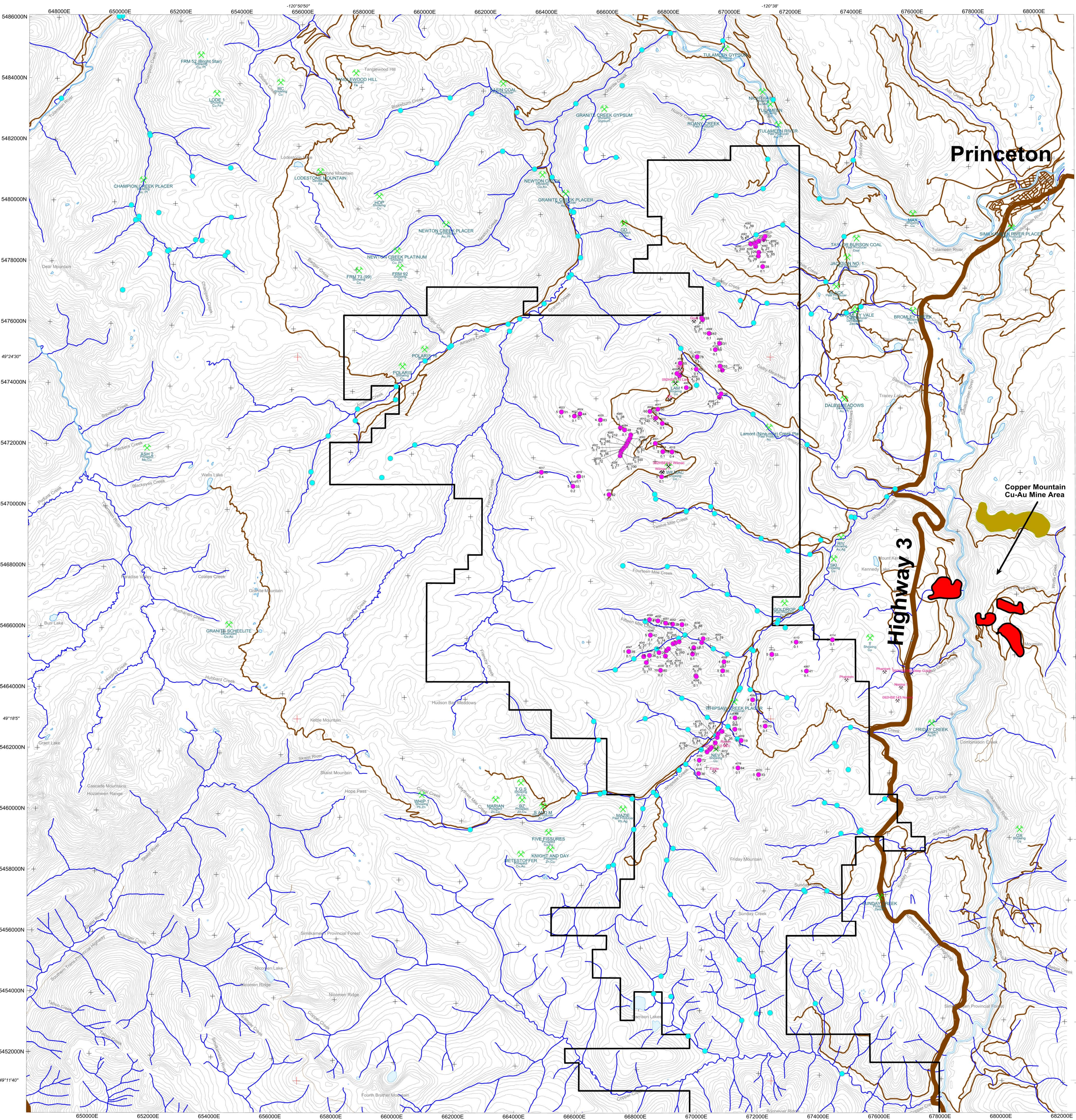
  
Sam Zastavnikovich, P. Geo.  
Consulting Geochemist











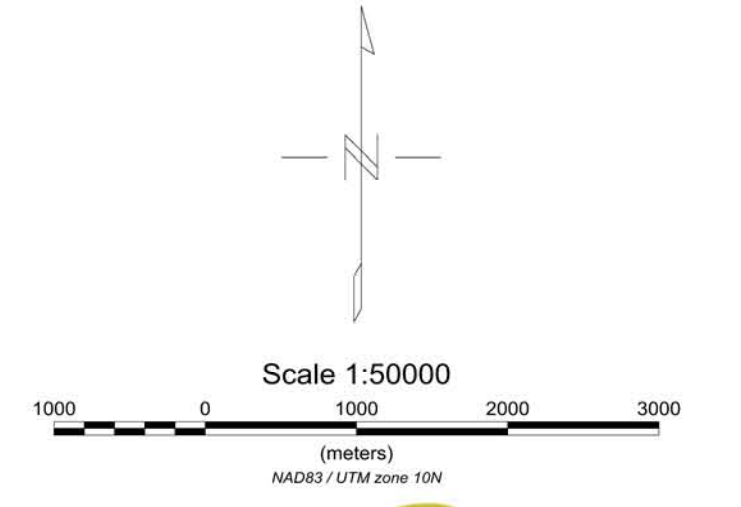
**LEGEND**

**Geochemistry**

- Sample #
- Au ppm
- Cu ppm
- Ag ppm
- 2010 Silt Sample Location
- 2008 Silt Sample Location

**Map Features**

- Roads, Logging Roads
- Tulameen Project Claim Boundary
- Minfile Prospect & Mineral Occurrence
- Name Prospect Status Commodity
- Copper Mountain Smelter Lakes
- Copper Mountain Mine Open Pits



**Goldcliff**  
**RESOURCE CORPORATION**  
 GCN.TSXV  
**Figure 4.0**

Goldcliff Resource Corporation  
 Tulameen Project  
 Similkameen Mining Division  
 Princeton Mining District  
 British Columbia, Canada  
 NTS: 92 HSE  
**Tulameen Project**  
**Silt Sample Geochemistry**  
 Map File Name: Fig 4.0, Tulameen Project Silt Sample Geochemistry, 50k scale map  
 Map Date: January 31, 2011