

Geological and Geochemical Report  
CZ Property  
British Columbia, Canada

Cariboo Mining Division  
UTM Zone 10: 5970670 North & 470320 East  
BCGS Map Sheet 093G.083

**BC Geological Survey  
Assessment Report  
32743**

Prepared for:

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## Summary

Porpoise Bay Minerals Ltd (Porpoise Bay) commissioned the author to conduct a small rock channel sampling program on the CZ mineral property and prepare a report of the findings. The author supervised the project November 4th to November 6th, 2010, and was accompanied by Rupert Seel, director of Porpoise Bay. Porpoise Bay is a private mineral exploration company with its main office located in Sechelt, BC. The author is an independent geological consultant and has no ownership in the mineral claims and no ownership interest in Porpoise Bay.

The CZ property consists of eight contiguous mineral claims that total 1773 hectares in size. The property is located between Cluculz and Bednesti lakes, in the Nechako Plateau area of central British Columbia, Canada. The property is approximately 43 kilometers due west of the city of Prince George.

Access is provided by a series of all-weather rural and logging roads that lead south from Highway 16, which itself crosses the northern section of the property. The property is in close proximity to rail service, hydroelectric power and natural gas.

The property is underlain by sediments and volcanic rocks of the Pennsylvanian to Triassic Cache Creek Group, which is bordered directly to the east by fault-bounded slivers of limestone of the Cache Creek Group. There are a series of NW trending faults that demark rock contacts between the different units. The property sits about 10 kilometers west of an assemblage of Upper Triassic Takla Group sedimentary rocks which mark the boundary between the Cache Creek Terrane and the Quesnellia Terrane, a major tectonostratigraphic boundary. The contact between the terrane units is also marked by the northwest trending Pinchi Fault, known to host gold and mercury occurrences over its strike length.

The surficial geology of the area is characterized by a variable veneer of glacial and lacustrine deposits that mask bedrock and make bedrock mapping and sampling very challenging. Only about 5% of the property has bedrock exposure, typical of the central interior plateau in BC.

The CZ claims were originally staked in 1984 by Colin Campbell as a result of prospecting and geochemical soil sampling that identified a number of gold-in-soil anomalies that appeared to straddle Highway 16 (Hwy 16). Follow-up geological mapping later identified a series of auriferous quartz veins in a road cut north of Hwy 16, named the Jen mineral occurrence (MINFILE# 093G 043). Geologic mapping and sampling also outlined several areas of vuggy quartz veining within phyllitic and andesitic units, in the area of a major structural trend, alongside Lloyd Road, south of Hwy 16.

The property has been explored intermittently over the years, since the initial discovery of the Jen showing. Work has included self-potential, magnetometer and I.P. geophysical

surveys, soil, silt and lithogeochemical surveys, mapping, prospecting, overburden drilling and diamond drilling. The most extensive work program was completed in 1988 by Noranda.

Two large and repeatable gold-in-soil anomalies have been identified from several geochemical surveys over the years. One anomaly is across Hwy 16, around the auriferous quartz veins at the Jen occurrence. The second anomalous trend is south of Hwy 16, alongside and parallel to Lloyd Road. Both soil anomalies appear to have a strong structural control, and geophysical surveys have tended to identify coincident linear anomalies interpreted to be structural zones that may host the gold mineralization. Despite several efforts, including diamond drilling, exploration has yet to locate the definitive bedrock source of the persistent gold-in-soil anomalies.

Chip sampling by Noranda in 1988 yielded an assay of 4.6 grams per tonne gold over 1.5 meters at the Jen showing. Limited diamond drilling in 1988 above the Lloyd Road anomaly outlined several highly altered, bleached zones with 2-15% vuggy chalcedonic quartz veining accompanied by low gold values. The best drill hole assay was 1.8 grams per tonne gold over 1.0 meter of quartz vein in hole 88-5, from a downhole depth of 15.0m. The hole was intended to intersect a strong I.P. target coincident with a gold-in-soil anomaly. The hole was collared in a highly altered siltstone unit with numerous vuggy quartz veins and bleached sections. Most of the Noranda drill holes seemed to have stopped short of their intended target; a significant structural lineament that has been purported to be the bedrock host of the gold mineralization.

Seel Enterprises Ltd (Seel) staked the CZ claims in 2005 over the expired Jen claims and conducted a limited program of rock and soil sampling in 2006. Seel later completed a limited percussion drill program in 2008 that targeted anomalous gold-in-silt and soil samples to the south of the known showings/anomalies. Seel then optioned the property to Porpoise Bay in 2008, which completed limited rock, silt and soil sampling on small, focused areas of the property; and completed one short diamond drill hole.

In October 2010 Seel conducted another short program of soil and silt sampling. In November 2010 Seel and the author completed a three-day program of channel sampling on an outcrop exposed in a small quarry pit on Lloyd Road, below the hill from which Noranda had completed their 1988 drilling. Results from the rock channel samples were uniformly low in gold and silver values; although some samples returned elevated to anomalous copper and zinc values from a highly deformed and altered sequence of graphitic phyllite interlaminated with argillite; and micro-stockworked with quartz stringers and laminae. Exploration expenditures in the fall 2010 program amounted to \$23,045.00.

Persistent and repeatable gold-in-soil anomalies that straddle Hwy 16 remain largely unexplained, despite several attempts to rock sample nearby bedrock occurrences; and despite drill testing of suspected faults coincident with I.P./magnetic high zones. A follow-up exploration program is warranted to further test for the bedrock source of the widespread gold anomalies. Airphoto interpretive work is recommended to help identify

and map out the variable drift cover overlying bedrock, in order to understand the regional ice direction, and be able to search up-ice for bedrock sources of the gold-in-soil anomalies. Follow-up prospecting and mapping in these areas may locate previously unknown bedrock occurrences. A focused and detailed geological mapping program is recommended at both the Jen occurrence showing and the Lloyd Road occurrence, to map out alteration and structural patterns and look for vectors to bedrock hosted mineralization. A program of systematic channel sampling is recommended for the Jen occurrence; and additional sampling is warranted on the Lloyd Road occurrence; preferably on the pit wall above the location of the November 2010 channel cuts. This would require a bucket truck or some means to gain access to the upper pit wall.

The total estimated cost of the Phase One project is \$75,000. A phase two project would include a more detailed I.P//ground magnetic survey to refine locations of structures that may host the gold mineralization. A follow-up diamond drilling program of high priority coincident geochemical/geophysical tests is recommended, success dependent on the Phase One results. The total estimated cost for Phase Two exploration, including 1,500 meters of NQ diamond drilling, is \$350,000.

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## 1.0 Introduction

The CZ exploration project is comprised of eight contiguous mineral claims totaling 1773 hectares in size. The property is situated in the Nechako Plateau region of the central interior of British Columbia, Canada. The nearest city is Prince George, located 43 kilometers due east of the property.

The property is accessed by paved Highway 16 (Hwy 16) which transects the northern part of the property, and by the Bobtail Forest Service Road and the Norman Lake Road, both which provide secondary access to most areas of the property via a series of branching rural and logging roads. The roads on the property are good quality, all-weather gravel roads. The main CN rail line to Prince Rupert is 8 kilometers north of the property. A natural gas line and a major hydroelectric powerline border the property to the north.

The property was staked in 2005 by Rupert Seel of Seel Enterprises, over the expired Jen claims which had been established in the 1980's by Colin Campbell. The Jen gold occurrence was discovered in 1984 and later, the nearby Lloyd Road occurrence was confirmed. The Jen occurrence is identified in the BC MINFILE database as # 093G 043; the Lloyd occurrence has never been differentiated from the Jen. Campbell, and later Noranda, performed various exploration programs in the 1980's, including limited diamond drilling. This work outlined several anomalous gold-in-soil trends, with coincident geophysical anomalies, that remain largely unexplained and for which no definitive bedrock source has been located.

Seel conducted several modest programs of prospecting and geochemical sampling, in the 2000's, including limited reverse circulation overburden drilling. The property was optioned in 2008 to Porpoise Bay Minerals (Porpoise Bay), a private mineral exploration company with its main office located in Sechelt, BC. Mr. Seel is a founding owner and principal of Porpoise Bay.

Work conducted in the spring of 2010 by Porpoise Bay included limited reconnaissance soil sampling, random grab rock sampling, and one short diamond drill hole. This work was reported in assessment report #31760.

Later in the fall of 2010, Porpoise Bay continued with additional soil sampling on three small areas of the property bordering Highway 16. A total of 37 "B" horizon soil samples were taken on several short transects in three separate areas bordering Highway 16. Sample values ranged from 0.5 – 32.6 ppb gold, and 5.6 – 140.1 ppm copper.

A late fall 2010 program was conducted on an outcrop located off Lloyd Drive, and consisted of 46 rock channel samples taken from sixteen parallel channel cuts. Gold and silver values were uniformly low but several anomalous copper and zinc values were returned, including 111.7 ppm Cu and 722 ppm Zn over 1.0 m in channel CH-11; from

highly altered graphitic phyllite and intercalated argillite, with pervasive silica alteration and disseminated and blebby pyrite.

The soil and rock samples were submitted to Acme Labs of Vancouver, BC. Total exploration expenditures in the fall 2010 program amounted to \$23,045.

This report was supplemented by published assessment reports and the Minfile database and online Map Place. Studies were also referenced that document bedrock mapping, deposit mapping, and geological fieldwork conducted by the Geological Survey Branch of the British Columbia Ministry of Energy, Mines & Petroleum Resources.

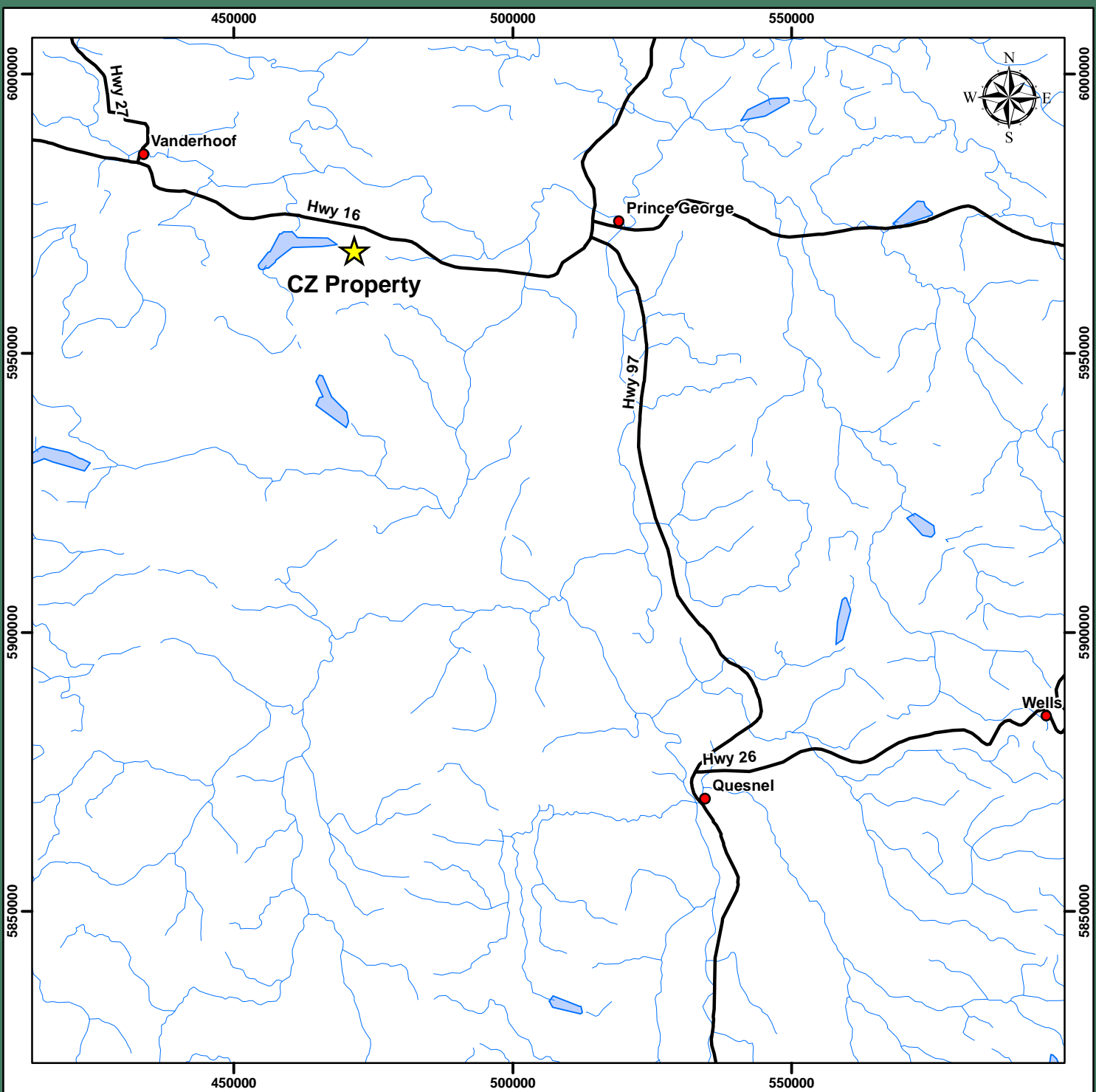


Photo 1: Channel sampling on the CZ Property, November 2010

## **2.0 Location and Access**

The CZ property is situated in the Nechako Plateau area of central British Columbia, Canada. The property is located within the administrative region of the Cariboo Mining Division, on BCGS Mapsheet 093G.083; at approximately UTM coordinates 5970670 North & 470320 (Zone 10) (Figure 1).

The property is located approximately 43 kilometers due west of the city of Prince George, the nearest exploration and mining service center. The property straddles the Highway 16 corridor; which provides access to natural gas, hydroelectric power and mainline rail to the ports of Vancouver & Prince Rupert. Both ports are important export








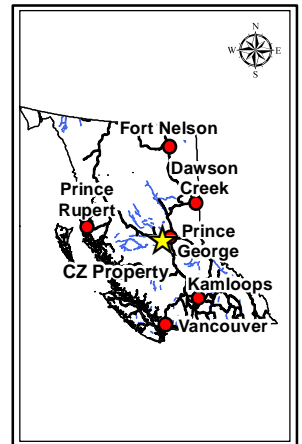
**PORPOISE BAY  
MINERALS LTD.**

**CZ Project  
Location Map  
Figure #1**

20k Mapsheets: 93G083,84  
 Date: 5/17/2011  
 Projection: UTM10N, NAD83  
 Scale: 1:1,000,000  
 Path: C:\10-PC-0117-RidgeviewResources\11GIS\_CZ\Location\_A.mxd  
 Drawn By: TK  
 Checked By: KM  
 Revision #:

Legend

-  CZ Property
-  City/Town
-  Highway
-  Watercourse
-  Lake





locations for the Asia Pacific trade market. The nearest deep water port is Prince Rupert at approximately 675 kilometers to the west, following Highway 16 and the CN rail line. Water is readily available for exploration drilling from a number of lakes and streams.

There is active exploration in the Prince George area for a number of metallic mineral deposit types, including vein gold and porphyry copper  $\pm$  gold deposits. Companies active in the area include Xstrata, Fjordland and Novagold. The area has a skilled open-pit mining and service work force capable of operating major open pit mines.

The nearest operating mine is the Endako molybdenum mine, owned by Thompson Creek Mining, located approximately 75 road kilometers west of Vanderhoof. The Mt. Milligan copper-gold mine, also owned by Thompson Creek Mining, is located approximately 90 road kilometers north of Fort St. James and is presently under construction. Mining operations are expected to commence at Mt. Milligan in 2013.

The CZ property is accessed by Highway 16 which junctions with several arterial roads heading south, including the Bobtail Forest Service Road and the Norman Lake Road. These arteries provide secondary access to many sections of the property via spur and on-block logging roads and trails.

The main logging roads are good quality gravel roads that can provide year-round access. Some of the spur trails would require minimum reactivation to access areas beyond. Access in many locations is readily available for a skid drill or a track excavator.

Lodging and accommodation for exploration crews can be readily found in Prince George or Vanderhoof and would make for a short daily commute to the property. A day camp for core logging and sampling could be accommodated at a motel on Hwy 16, where core integrity and security can be assured.



Photo 2: Logging access, CZ Property, 2010

### **3.0 Physiography and Climate**

The CZ property is situated within the Fraser Basin subdivision of the Interior Plateau Physiographic Division, Interior System. The area is characterized by relatively low relief with undulating hills and shallow valleys that range in elevation from 800m to locally over 900m asl. The hills and valleys constitute a pronounced morainal terrain that is aligned in a NE-SW direction and indicates glacial ice retreat was likely to the northeast.

The property is blanketed with a veneer of glacial deposits of variable composition and thickness, but which generally thin upslope. The orientation of tributary drainages on the property suggests that the main direction of glaciation was NNE. A large steep-banked melt water channel is mapped and curves between the east end of Cluculz Lake and the west end of Bednesti Lake.

Soils are generally characterized by thin and discontinuous organic and A-horizon soils that overly well-developed B-horizon soils, which overly weathered subcrop. Much of the subcrop and outcrop exposed on the property is due to road cuts from logging operations. Outcrop is limited to about 5% of the property, typical for the central interior.

The climate of the property is strongly influenced by its location in the rain shadow of the Coast Mountains, and is characterized by long, cold, dry winters; and short, warm, dry summers. The average maximum and minimum temperatures recorded at Vanderhoof are 8.9°C and -3.9°C, respectively; with an average annual temperature of 2.5°C.

Precipitation is mainly in the form of snow with an average annual accumulation of between 1.0 and 2.0 meters. The average annual snowfall for Vanderhoof is 196.9 cm whereas the annual number of frost free days is 54 days.

There are very few lakes on the property, and only a few scattered, small wetlands. Creeks on the west side of the property tend to mimic the glacial ground moraine pattern and flow southwest and eventually into Cluculz Lake. Creeks on the east side of the property also mimic the morainal pattern and tend to flow NE toward and eventually into Bednesti Lake. First order streams are thought to be mainly ephemeral and are generally not expected to flow year round, except for several that connect to second order tributaries.

Vegetation is dominated by Lodgepole pine, and lesser Douglas Fir, balsam, spruce, aspen and birch; with alder, shrubs and grasses at lower elevations, particularly near swamps and in natural opening. About 500 hectares of the property has been logged off in the recent past; and regrowth is variable. Logging operations have tended to focus on the eastern side of the property. The area has been hard hit by the Mountain Pine Beetle epidemic, with abundant dead standing pine trees over much of the property. The property falls within the Pine Beetle Salvage Area; an area within which an attractive mineral exploration tax credit is available for explorers.

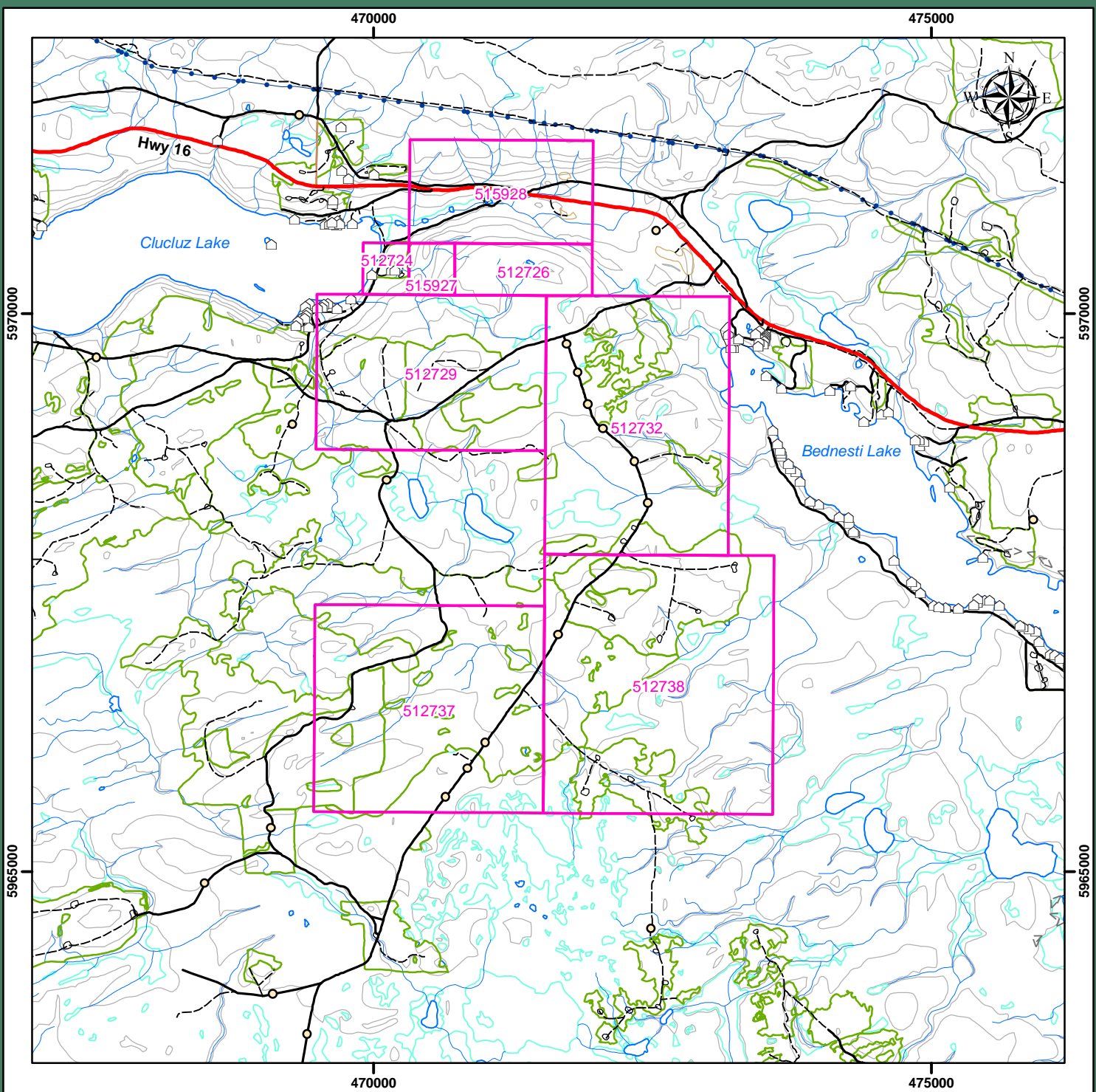
Wildlife in the area includes wolf, black bear, deer, moose, elk, beaver, lynx, bobcat, and several species of birds. Moose are common in the upland forest and deer are found in areas where adequate grazing exists. The Nechako River and its tributaries support salmon and trout fisheries.

#### **4.0 Property Status & Ownership**

The CZ property is comprised of eight contiguous mineral claims located in the Cariboo Mining Division (Figure 2.0). The claims are in good standing until July 02, 2011 and total 1,773 hectares in size. The individual claims, size and their respective anniversary dates are shown in the table below.

**Table 1: Mineral Claim Dispositions**

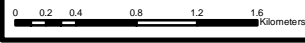
<b>Tenure #</b>	<b>Claim Name</b>	<b>Owner</b>	<b>Tenure Type</b>	<b>Map #</b>	<b>Issue Date</b>	<b>Good To Date</b>	<b>Status</b>	<b>Area (ha)</b>
512724	C Z 1	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	19.062
512726	C Z 2	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	57.187
512729	C Z 3	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	285.994
512732	C Z 4	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	381.363
512737	C Z 5	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	381.571
512738	C Z 6	209729 (100%)	Mineral	093G	2005/may/16	2011/jul/02	GOOD	476.94
515927	C Z 9	209729 (100%)	Mineral	093G	2005/jul/04	2011/jul/02	GOOD	19.062
515928	C Z 10	209729 (100%)	Mineral	093G	2005/jul/04	2011/jul/02	GOOD	152.477



**PORPOISE BAY  
MINERALS LTD.**

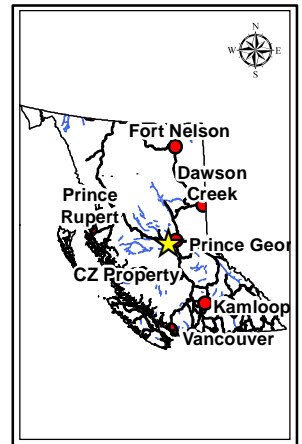
**CZ Project  
Claim Map  
Figure #2**

20k Mapsheets: 93G083.84  
 Date: 5/17/2011  
 Projection: UTM10N, NAD83  
 Scale: 1:50,000  
 Path: C:\16-PC-017-RidgeviewResources\11GIS\_CZ\Claim\_A.mxd  
 Drawn By: TK  
 Checked By: KM  
 Revision #:



**Legend**

- Building
- Sand or Gravel Pit
- Hwy 16
- Gravel Road
- Rough Road
- Road Bridge
- Trail
- Building
- Campground or Campsite
- Cutline or Seismic Line
- Gravel or Sand Pit
- Transmission Line
- Cut Block
- Log Landing
- Lake
- Stream
- Beaver Dam
- Island
- Wetland
- Contour
- Mineral Tenure



The claims were staked online by prospector Rupert Seel in 2005 to cover the Jen mineral occurrence, and the area formerly covered under the old Jen claims from the 1980's. The claims are owned 100% by Porpoise Bay Minerals, a private junior exploration company formed by Rupert Seel and several partners, with a main office located in Sechelt, BC.

There are no other agreements, liens, judgments, debentures, royalties, or back-in rights known to the author. The northern and eastern segment of the property is encumbered by surveyed crown land but status is unknown. The northwestern edge of the property butts up against Cluculz Lake which is a popular boating and recreational area, with cabins on the east shore. The extreme eastern edge of the property butts up against Bednesti Lake, also a popular recreational destination.

The property falls within the traditional territory of the Nazko Indian Band with a band office located in Quesnel, BC. There are no Wildlife Habitat or Ungulate Winter Range areas near the property. The Bednesti Lake Ecological Reserve is located due south of claim 512729 and is off-limits for claim staking. The area is part of the Prince George Timber Supply area and Canfor has an operating license for the area under claim. There may be private woodlots in the area but these would not impede mineral exploration or development. Land use in general is dictated by the strategies and objectives of the approved Prince George Land and Resource Management Plan (LRMP).

## 5.0 Exploration History

The focus of previous exploration in the area of the CZ claims has been various surveys to identify the source of widespread gold-in-soil anomalies that straddle Hwy 16. Recorded historical expenditures in the area of the CZ claims total \$240,000.00.

A brief summary of historical work is provided in the table below.

Table 2: Historical Recorded Exploration Expenditures

Year	Company/Person	Work	Exploration Expenditures
1984	Campbell	Mapping/geochemistry/magnetic survey	\$8,207.00
1985	Campbell	Mapping/geochemistry/SP survey	\$10,711.00
1988	Noranda	Mapping/geochemistry/I.P./magnetic surveys	\$24,196.00
1988	Noranda	Mapping/geochemistry/I.P/magnetic surveys/diamond drilling	\$101,800.00
2005-2006	Seel Enterprises	Soil geochemistry	\$21,358.00
2005-2006	Seel Enterprises	Soil geochemistry	\$9,390
2007-2008	Seel Enterprises	Overburden percussion drilling/Soil geochemistry	\$25,427.00
2010	Porpoise Bay	Soil geochemistry/Diamond drilling	\$15,827.00

	Minerals		
2010	Porpoise Bay Minerals	Channel sampling	\$23,044.83
Total Known Expenditures			\$239,960.83

The first recorded exploration work was done by Colin Campbell in 1984 when he staked the Jen claims after discovering anomalous gold-in-soil values (up to 2500 ppb Au) near a road cut on Highway 16. The area was believed to be underlain by graphitic phyllite, argillite, and carbonate-altered andesite of the Cache Creek Group. A Scintrex ground magnetic survey, centered on Hwy 16, was conducted over 11.6 line kilometers to define the argillite-andesite contact. The survey purported to discover the contact beneath the southern flank of a crescent shaped magnetic high (>700 gammas), near the grid baseline (400 m east of Cluculz Lake), and was interpreted to extend beyond the baseline to the southeast. Several, variably oriented, magnetic low linears were thought to be shear zones.

A secondary objective was to test for magnetic signatures that might reveal zones of listwanite (silica-carbonate-mariposite) alteration in andesite; although there is no precursor body of serpentinite located nearby. Boulders and outcrops of quartz-ankerite-mariposite altered andesite had been found throughout the central part of the Jen #1 claim and were believed to be from a local but unknown bedrock source.

Follow-up prospecting and mapping south of Hwy 16 revealed black, pyritiferous argillite exposed in the road cut of Lloyd Road; apparently underlain by weakly layered, carbonate-altered andesite. Quartz veins carrying calcite, muscovite and pyrite were noted, up to 30cm wide and 6 m long, and found in a road cut north of Hwy 16. Intervals between veins were tested by chip sample and found to contain the “best gold values” where the andesite was variably veined with stringer quartz and altered to ankerite and sericite (Campbell, 1985). Two base-of-slope soil lines and limited rock chip sampling were completed in close proximity to the two road cuts. The soil sampling was extended to the geophysical survey grid.

A total of 44 soil samples, 40 rock chip samples and 6 stream sediment samples were taken. Soil samples from near the road cuts were described as a mixture of poorly develop “B” horizon and “disturbed” “C” horizon. Grid soil samples were described as typical thin, poorly developed “B” horizon soils, overtop of glacial deposits. 40 rock chip samples were taken, on 5 meter intervals, along the survey grid (Campbell, 1985).

Soil sampling revealed two widespread gold anomalies straddling Hwy 16, which were recommended for additional detailed geochemical sampling (Campbell, 1985). The first area measured 200 m long with results from 10-2800 ppb Au; and was believed to be coincident with carbonate-altered andesite. The second area was near a carbonate-altered andesite-argillite contact, and returned soil values in excess of 2500 ppb Au, and coincident chip samples up to 700 ppm Au; suggesting to Campbell that altered argillite

with local quartz veining was the source of the gold. Arsenic values of up to 100 ppm were found associated with both gold anomalies. The grid lines established during November of 1984 were extended to 14.9 kilometers.

Work continued in 1985 through into 1986 and included limited geological mapping petrography, 8.5 line kilometers of self-potential survey, 46 rock chip samples, and 215 soil samples, collected on 50 m centers on an extended survey grid. Soil results identified one new gold-in-soil anomaly and extended two previously known anomalies. The self-potential survey identified three anomalies greater than -100 millivolts. The "B" anomaly measured about 700m long, was located near the grid baseline, and was coincidental with the strongest gold-in-soil anomaly.

Chip sampling focused on the Hwy 16 road cut for a third time, where earlier 1984 and 1985 sampling had returned anomalous Au values, including 1,750 ppb Au from a 5-meter chip sample. The same intervals were re-sampled in 1986, this time on a tighter 1m sample spacing. However, significant differences were found in gold values, suggesting some nugget effect may be at play. Two 5m intervals returned 1230 ppb Au (440 ppb in 1985) and 890 ppb Au (1,750 ppb Au in 1985), respectively. Further follow-up work was believed warranted (Campbell, 1986).

Noranda optioned the property in 1987 and conducted a large exploration program in 1988, including 60 line kilometers of grid, 50 line kilometers of magnetometer survey, 2 line kilometers of I.P. survey, 286 soil samples and detailed geological mapping.

Gold in soil values ranged from 10 – 1,700 ppb. Two main anomalies were outlined: a large area of outcrop immediately north of Hwy 16; and a 500 m linear trend immediately south of the east-west trending swamp near Cluculz Lake, which appeared to be coincident with a major east-west trending fault structure. Copper-in soil values ranged from 6 to 240 ppm; with >100ppm Cu considered anomalous. Anomalous copper seemed to be coincident with the gold anomaly on the north side of the highway. Zinc values ranged from 34 – 600 ppm with >350 ppm Zn considered anomalous. Arsenic-in-soil values returned a range from between 2 and 180 ppm, with >100 ppm considered anomalous. The magnetometer survey defined two narrow magnetic highs, the more prominent one on a 125° trend. The I.P. survey mapped a number of sub parallel low resistivity features; two which were interpreted to be fault structures, possibly mineralized with disseminated sulphides or graphite, trending between 070° and 075°, respectively. These two areas were considered high priority for follow-up. Recommendations for follow-up included extending the magnetometer and I.P. grids and conducting diamond drilling to test apparent fault zones for gold bearing mineralization.

Further follow up work was conducted in August and September which included geologic mapping, collecting 407 "B" horizon soil samples, establishment of 60 line kilometers of flagged grid line, of which 30 line kilometers were covered by ground magnetic survey. Additional work in October included 4.7 line kilometers of additional I.P. survey, and 8 diamond drill holes totaling 655.0 meters on the south anomaly zone, bordering Lloyd Road.



Gold-in-soil values were found to be erratic, likely due to varying intervals of overburden, with values ranging from 1 ppb to 1700 ppb. Two main anomalous areas were defined; a widespread anomaly surrounding the road cut immediately north of the highway; and a 900 m long zone bordering on Lloyd Road. Anomalous copper-in-soil values (>100 ppm) were coincident with the north gold-in-soil anomaly, and a second zone that measured 200m long. Zinc values were noted to be high across large areas (>300 ppm), and interpreted to be a result of abnormally high background related to black graphitic phyllite.

Magnetometer results showed the gridded area had a fairly uniform magnetic response with few strong anomalies. However, several subtle fault structures were interpreted from the magnetic data. Two prominent directions of 065° - 080 and 130° - 138° were indicated. Similarly the I.P. survey identified three features interpreted to be fault structures, possibly mineralized with graphite or sulphides.

These surveys identified a strong sub east-west trending structure bordering Hwy 16, coincident with gold-in-soil anomalies scattered over about 800 meters of strike length and 200 meters of width. The magnetic survey also identified a northwest trending fault structure, with several coincident gold geochemical anomalies.

Eight diamond drill holes tested the southern Lloyd Road anomaly, in the hopes of discovering gold mineralization, possibly listwanite-altered orogenic veins, hosted in a fault structure. The drilling resulted in a few narrow and low grade gold results, but failed to indicate any economic gold mineralization. Two holes had to be abandoned due to drilling difficulties. Drill hole 88-2 was intended to test a strong I.P. response on line 4400E where a string of anomalous gold soil samples, ranging up to 1700 ppb occur over 125 meters. The hole was intended to go to 120 meters, but was lost due to caving after 68.6 meters. The hole was collared in what appeared to be a highly altered and bleached zone, with 2-5% vuggy chalcedonic quartz veining. The remainder of the hole intersected intercalated siltstone, argillite and andesite tuff. The hole failed to explain the source of the anomalous gold-in-soils, and no significant results were reported from assays.

Drill hole 88-3 (-45° dip) was a step back behind hole 88-2 to test another section of stratigraphy, where a very high resistivity response was coincident with anomalous gold soil geochemistry. The drill hole was collared in siltstone and argillite but intersected several highly altered zones, with minor chalcedonic quartz veining. Significant results were from sample 46194 which returned 1,320 ppb Au over 1.5 m width, from a downhole depth between 70.0m-71.5m. This particular section contains numerous vuggy quartz veinlets within a silicified siltstone unit.

Drill hole 88-5 testing a section of the same structure 200 meters to the east of the previous fence of holes. The hole was intended to intersect a strong I.P. target with a coincident gold soil geochemistry anomaly. The hole was collared in a highly altered siltstone unit with numerous vuggy quartz veins and bleached sections. Significant results included sample 46209 which returned 1,800 ppb Au over 1.0m width, from a downhole



depth of 15.0m to 16.0 m. This section was taken from a milky white quartz vein at the top of the hole. Drill hole 88-7 was the first attempt to test the northwest trending structure, but the hole was abandoned after 37.2 meters, due to equipment problems down the hole. The hole was in listwanite-altered rock when it was stopped. There is no record of any further work at this time, and the Jen claims were allowed to lapse.

Rupert Seel staked the CZ claims in 2005 over top of the expired Jen claims, and conducted a small summer exploration program. A total of 538 soil and 12 rock samples were taken. The soil survey was conducted at 100 m spacing on north-south lines that were spaced 500 m apart. Stream sediment samples were taken where the lines crossed major drainages. Soil geochemistry displayed anomalous gold in two areas. The three highest soil samples returned 2,133 ppb, 4,032 ppb and 7,013 ppb Au, respectively. The two lower samples are from the same road cut on Lloyd Road where previous sampling had occurred. The higher of the three values came from the road cut on the north side of the highway, where Noranda had done three campaigns of detailed chip sampling. Seel found that arsenic values tended to correlate well with anomalous gold values. Several isolated single-point gold results were returned from an area well south of Lloyd Road, which ranged from 115.4 to 159.1 ppb Au.

Seel followed up in 2008 with an overburden percussion drill program to evaluate several anomalous gold zones found in his earlier soil geochemistry. A total of 366 meters were drilled in 26 short drill holes, using a rotary percussion tank drill which was set up where opportunistic logging roads and trails were found. Overburden was described as mostly glacial till. Examination of rock chips from bedrock directly below the overburden interface showed a wide variety of lithologies, from sediment with quartz and pyrite to volcanic rock with pyrite. A total of 133 samples were taken with sample intervals at 3.3 m. Only 57 samples, those at or near bedrock, were submitted for ICP-MS analysis. The results were generally low, in the 1-5 ppb Au range; with the highest gold result of 52.7 ppb returned from hole 10. Seel recommended follow-up diamond drilling in the vicinity of hole 10.

Porpoise Bay Minerals, a private company located in Sechelt BC, acquired the claims in 2008 through an option agreement from Seel. Porpoise Bay completed a short exploration program in 2010, including 109 soil samples, 9 rock chip samples and one short 36.3m diamond drill hole (MacIntyre, 2010).

The soil sampling was done in the same general area as the two known and widespread gold-in-soil anomalies that straddle the Hwy 16. The work identified a number of significant multi-element anomalies. A total of 8 samples were returned with Au values that ranged from 119.5 ppb to 281 ppb. The most anomalous sample was CZ-S111, from near the road cut on Lloyd Road, that returned 5808 ppb Au (MacIntyre, 2010). This sample was also anomalous in Mo, Cu, Zn and As.

The linear distribution of anomalous soil samples suggested to MacIntyre (2010) that the source of metals is most likely a mineralized fault zones trending at 070° and parallel to Lloyd Road and to the Hwy 16 road cut. A slight offset of the soil anomaly was noted

north of Highway 16, and was explained by a cross-cutting, northwest trending fault. Noranda appeared to have tested this northwest trending fault zone with one drill hole in 1988 (Hole CL-88-8).

The soil sampling tended to corroborate previous work done by Noranda and confirmed that the main exploration target is one or more gold-bearing orogenic quartz vein systems, possibly with listwanite-alteration, and emplaced into a northeast trending fault zone. This fault zone was believed to be at least 1.5 kilometers long, and possibly longer.

A total of 9 random rock grab samples were taken in 2010 from outcrops on Lloyd Road and the Hwy 16 road cut. Only 3 of the 9 samples were slightly anomalous in gold. One sample was anomalous in Zn at 855 ppm, and one sample was anomalous in both Ni (946.9 ppm) and As (122.7 ppm). MacIntyre surmised that random sampling is probably not very effective in evaluating the overall metal concentration within the altered fault zones that are poorly exposed on the property. A more rigorous approach involving hand trenching, detailed chip sampling and additional drilling was recommended as more appropriate for this style of mineralization.

One BQ diamond drill hole was drilled 3.3 kilometers southeast of the main area of economic interest, in the same vicinity where Seel had conducted overburden drilling in an attempt to explain spotty gold soil anomalies. The hole experienced significant core loss. The core was logged but left unsampled because there was no visible sulphide mineralization. Three random samples were selected for check analyses but failed to return any significant results. Most of the hole was banded, strongly foliated mudstone, siltstone and graphitic argillite. Macintyre (2010) concluded there was very low potential for significant mineralization on this part of the property.

## **6.0 Regional Geology**

The regional geology of the area is dominated by four, large, fault-bounded, northwest trending tectonic terranes (Stikinia, Quesnellia, Slide Mountain and Cache Creek terranes) that were sutured together into the Intermontane Superterrane, approximately 180 million years ago.

The Cache Creek Terrane in general is an intercalated package of Upper Carboniferous to Lower Jurassic sedimentary rocks, limestone and subordinate metavolcanic and plutonic ultramafic rocks. The volcanic rocks are believed to have formed on the sea floor, and were later covered by overlying successions of limestone, ribbon chert, basalt, ultramafite, gabbro, greywacke, siltstone and slate. In the immediate vicinity of the CZ property, the Cache Creek rocks appear to be the remnants of a Triassic–Jurassic subduction complex which was caught between the colliding blocks of the Quesnel and Stikine terranes. These rocks are believed to have been thrust westward, along an east-dipping fault, over rocks of the Stikine Terrane, which outcrop further to the west (MacIntyre, 2010).

Several large ultramafic bodies are exposed within the Cache Creek Terrane and have been mapped as complex sequences of dunite, pyroxenite and their serpentized equivalents. These rock units are believed to represent tectonically emplaced slivers of upper mantle material and may represent relatively flat-lying thrust sheets (MacIntyre, 2010). Porpoise Bay has been actively exploring several large serpentized pyroxenite occurrences in the general area of the CZ claims, for magnesium and nickel.

The Quesnellia Terrane is located approximately 10 kilometers east of the property and represents an early Mesozoic accretionary complex composed of sedimentary and volcanic rocks. The boundary between the Cache Creek and Quesnellia terranes is believed to be marked by deep-seated crustal faults, whose near-surface expression may be the Pinchi Fault. The Pinchi Fault has been mapped as a regional-scale Early Tertiary strike-slip fault associated with a variety of mineral deposits, including the Snowbird and Pinchi deposits.

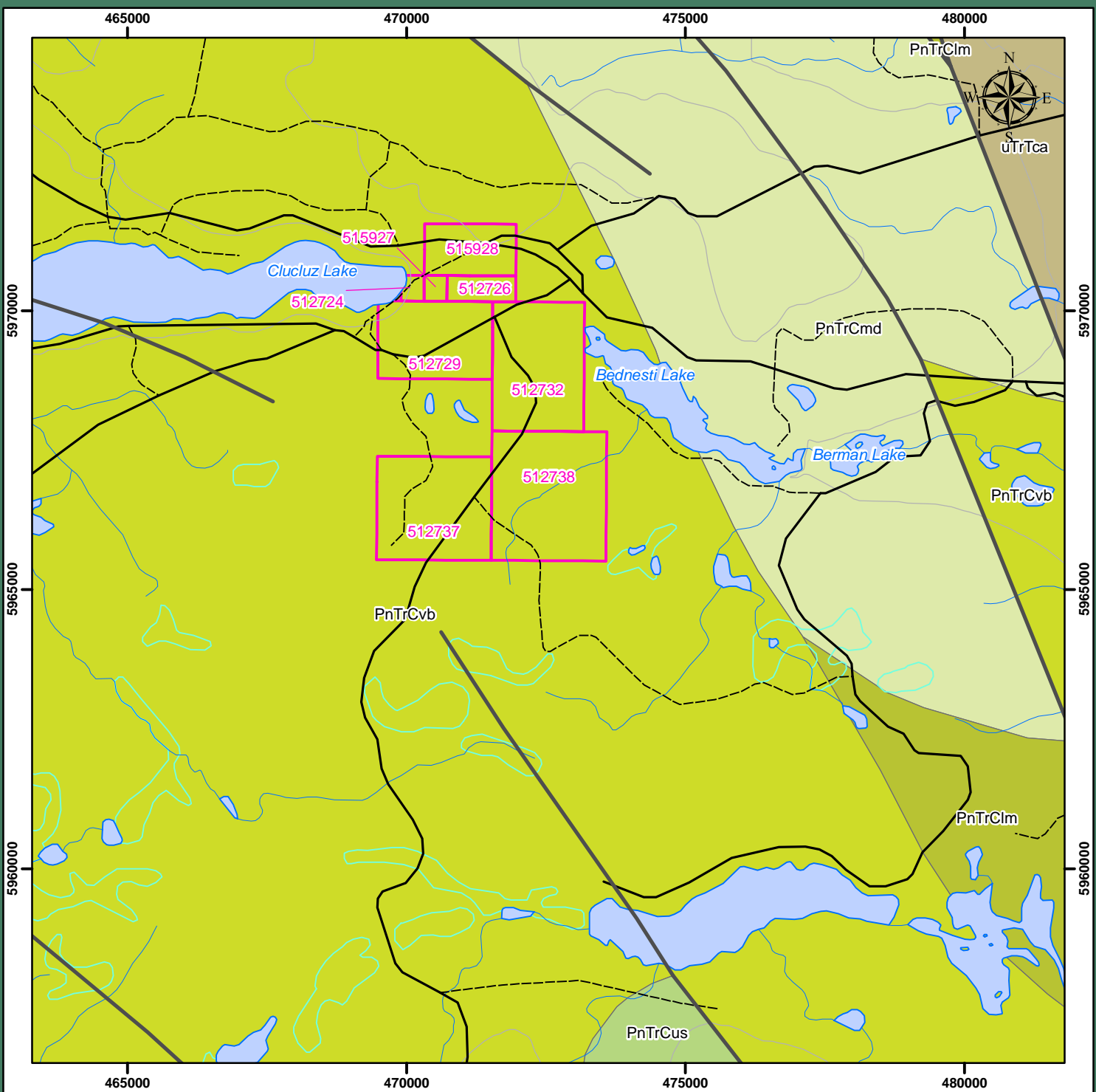
Other faults occur in the area, including northwest and northeast trending high-angle faults that form prominent lineaments. These faults are mainly related to Eocene or younger block faulting (MacIntyre, 2010).

Post-accretionary granitic intrusives have been mapped across the Intermontane Superterrane, and are known to cross terrane boundaries. Coarse clastic sediments have been mapped across terrane boundaries and are also believed to be post-accretionary. The youngest rocks in the region are characterized by un-deformed plateau basalts of the Chilcotin Group which occur irregularly throughout the region and represent a thin, discontinuous cover on older rocks.

## **7.0 Property Geology**

The property is believed to be underlain by a combination of Permian Cache Creek Group phyllite in fault contact with Upper Triassic to Lower Jurassic Takla Group (Quesnellia Terrane) andesite. This juxtaposition suggests the mapped contact of the Cache Creek and Quesnellia terranes, shown on the regional geology map (Figure 3) as 10 kilometers to the west, is inaccurate. Or, as is more likely, the andesite is a subordinate unit within the Cache Creek oceanic sequence. Much of the detailed mapping described below comes from Maxwell and Bradish (1988), with some descriptions from Campbell (1985).

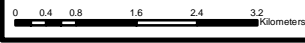
The andesite was described by Noranda as typically pale to light green, massive to strongly foliated with weak to moderate pervasive carbonate alteration. These units are sometimes interbedded with thin beds of strongly foliated argillite, lending credence to the theory that the volcanic unit belongs to the Cache Creek Group. The largest outcrop of andesite occurs immediately adjacent to the highway at the bottom of Cluculz hill. Here the andesite is cut by numerous, thin (1-2cm) quartz veins trending at 070°.



**PORPOISE BAY  
MINERALS LTD.**

**CZ Project  
Regional Geology  
Figure #3**

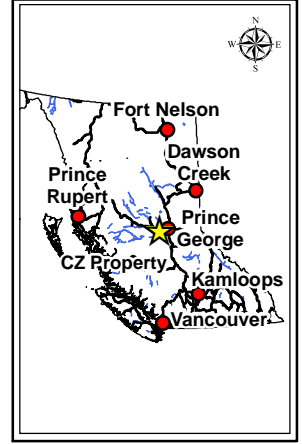
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 Date: 5/17/2011  
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 File: C:\10-PC-0117-RidgeviewResources\11GIS\_CZ\RegGeol\_A.mxd  
 Drawn By: TK  
 Checked By: KM  
 Revision #:



- Legend**
- Fault
  - Road
  - Limited Use Road/Trail
  - Esker
  - Stream
  - Contour
  - Lake
  - Wetland
  - Mineral Tenure

- Pennsylvanian to Triassic**
- Takla Group (Quesnellia Terrane)*
- uTrTca  
calc-alkaline volcanic rocks
- Cache Creek Complex (Cache Creek Terrane)*
- PnTrCvb  
basaltic volcanic rocks
  - PnTrCm  
limestone, marble, calcareous sedimentary rocks
  - PnTrCus  
serpentinite ultramafic rocks
  - PnTrCmd  
mudstone/laminite fine clastic sedimentary rocks

Source: Digital Geology Map of British Columbia, BC Ministry of Energy and Mines, Geofile 2005-2



The phyllite was described by Noranda as light to dark grey, well foliated with 0-25% cherty laminations; and weakly to moderately graphitic with numerous quartz and calcite veinlets. The best exposure is along Lloyd Road, where the rocks trend 070° and dip shallowly to the south. Here a series of pinched and swelled quartz veins appear within the strongly foliated phyllite. In addition, a small unit of highly calcareous phyllite (marble?) is found further to the east.

Noranda described a highly altered unit of buff to brown quartz, ankerite and mariposite altered rock (listwanite) that was speculated to occur along suspected splays of the Pinchi Fault.

Several structures were believed to transect the property; the most notable is an east-west trending fault zone which parallels the main swamp to the east of Cluculz Lake. This structure appears to offset a northwest trending structure, which is believed to be a parallel splay of the Pinchi Fault.

Earlier geological mapping by Campbell had defined two main rock types: greenstone and argillite. He defined the “greenstone” unit as consisting of altered fragmental and flow sequences of andesite and green-black carbonate-altered ultramafics, believed to be locally serpentinized. Campbell described argillite as intercalated, white to black, pyritiferous argillite tending to phyllite, with secondary chert, quartz, sericite, and “carbonaceous material”.

Campbell found listwanite-altered ultramafic rock in outcrop and boulders, consisting of fractured, light to bright green rocks containing quartz, ankerite (as veinlets and cementing fragments) and mariposite as finely disseminated flakes in the chalcedonic quartz. Antigorite was also identified in thin section. Campbell also recognized several types of dykes: augite basalt dyke and a pyritiferous quartz rhyolite dyke. Dyke orientations were found to strike 280° to 290°, dipping steeply to the south.

Campbell described gold mineralization in the sericitized and carbonatized crystal tuff located near the Hwy 16 road cut, consisting of quartz veins containing pyrite, sericite, and minor calcite. Pyrite grains were observed with moderately abundant inclusions of hematite, and a moderate number of grains were said to contain native gold from 0.005 - 0.02 mm in size (Campbell, 1986). Gold mineralization was also noted on a road cut on Lloyd Road, “with boudins in black argillite contain gold with carbonaceous material” (Campbell, 1986).

## **8.0 2010 Exploration Work (Fall)**

Porpoise Bay conducted a short fall 2010 exploration program. Three areas were selected for soil sampling; with all three areas bordering near the junction of Highway 16 and Lloyd Drive. A total of 37 “B” horizon soil samples were taken on several short transects in each area. The sampling tended to be random, or generally along contour. Sample values ranged from 0.5 – 32.6 ppb gold, and 5.6 – 140.1 ppm copper. See Appendix I.

The lack of sample density and wide spacing preclude identification of any significant multi-point anomalies. The samples shown on Sheet One (map 1629-1) returned several isolated, single point elevated gold values that generally support earlier work which defined a 070° trend, parallel to the suspected fault in the area.

A November 2010 rock channel sampling program was conducted on a prominent outcrop exposed in a road cut/quarry on Lloyd Road. The outcrop is comprised of intercalated, foliated, and locally strongly brecciated, graphitic phyllite and argillite. The metasedimentary sequence is impregnated with tiny to cm-scale boudins, sweats and stringer of quartz, with or without pyrite, that is both foliation-parallel and cross cutting foliation. The overall strike of the foliation is 070°.

The intent of the program was to follow-up on earlier soil sampling in 2010, from below the outcrop, that returned a value of 5,808 ppb Au (MacIntyre, 2010). This sample was also anomalous in Mo, Cu, Zn and As.

A total of 46 channel samples were taken in 16 parallel channel cuts that measured each about 3 m to 4 m long. The cuts were designed to cover as much of the exposed unit as was practical. The cuts were spaced about 10 m apart, over a total width of about 100m. The slopes across the outcrop face were variable, from vertical to horizon over short distances of 1-3 meters. The location of the foot of each channel cut, and the location of each sample within each cut, was taken by handheld GPS. A compass and chain survey was also made of the location and slope angle of the channels to attempt to accurately plot the sample results (see Appendix II).

Analytical certificates are included in Appendix III.

All rock channel samples were collected using a portable rock saw with a diamond tipped blade; and a cold chisel was used to pry the samples loose. The sample runs were marked in the field by a geologist, and generally tied to lithological changes or marked breaks in silica alteration or pyrite content. Samples ranged in slope length from 0.5 to 1.5 m, but on average were closer to one meter in slope length. The weight of each sample varied from 2.1 to 14.2 kg, with an average weight of 9.3 kg.

The chiseled samples were broken from the sawn channels walls and placed in heavy duty polyethylene sample bags. The sample number was marked on the bag. A numerical Acme Lab assay tag was placed inside a sandwich bag and then placed inside the sample bag, which was closed by a security strap.

Closed sample bags were then placed in large-capacity rice bags and transported by Porpoise Bay directly to the Acme preparation lab in Smithers, BC.

At the Smithers lab the samples were crushed, split and pulverized to 250 gram samples that passed -200 mesh. This fraction was sent to the Acme Lab in Vancouver B.C. where a 30-gram sample was digested in Aqua Regia and analyzed for 36 elements, using ICP-

MS (analytical package 1DX3). Gold values were by fire assay fusion method (analytical package G601).

The selected analytical packages have appropriate detection limits for exploration rock samples; and in the case of the ICP-MS package, provided a broad range of standard base and precious metal elements of economic interest. Detection limits are indicated on the analytical certificates included in Appendix III. A number of standards and duplicate samples were run by the lab for quality control purposes as indicated on the analytical certificate in Appendix III. Porpoise Bay did not include any duplicates with the samples sent to the laboratory.

The analytical results of selected elements of interest, from the late fall 2010 rock channel sampling program, are summarized in Table 3.

Gold and silver values were uniformly low but several anomalous copper and zinc values were returned, including sample 20584 which returned 111.7 ppm Cu and 722 ppm Zn over 1.0 m in channel CH-11. This sample is from a sequence of graphitic phyllite intercalated with argillite and swirling boudins and contorted sweats/stringers of quartz. Disseminated and clotty, blebby pyrite was noted in the metasediments. Sample 20585 from channel cut CH-12 returned 1.0m of 136 ppm Cu and 591 Zn in a similar sequence but was more highly tectonized, and had drag folding evident in the foliation.

The average gold value was 1.2 ppb and the average silver value was 0.5 ppm. Arsenic values were highly variable, and no clear-cut association with any other element was discernable. The highest arsenic value was 131.3 ppm over 1.0m, from sample 20591 taken in channel cut CH-15. The average arsenic value was 32.3 ppm.

The average copper value was 86.7 ppm with the maximum value of 161.4 ppm over 1.0m, from sample 20595 taken in channel cut CH-16.

The average zinc value was 256.7 ppm. The maximum zinc value was 722 ppm over 1.0m, from sample 20584 taken in channel cut CH-11. As has been noted before, the rocks in this area seem to have a fairly high zinc background.

Exploration expenditures in the fall 2010 program amounted to \$23,045.00.

Table 3: Channel Sample Statistical Analysis of Selected Elements

Sample Statistics	Wt (Kg)	Au ppb	Au g/t	Ag ppm	As ppm	Cu ppm	Mo ppm	Pb ppm	Zn ppm
Ave	9.3	1.2	0.0	0.5	32.3	86.7	7.1	5.9	256.7
Max	14.2	2.4	0.1	2.0	131.3	161.4	20.7	10.5	722.0
Min	2.1	0.6	0.0	0.1	3.8	45.2	0.4	2.8	36.0
90th Percentile	12.7	1.8	0.1	1.0	64.7	130.5	15.2	8.4	506.0
95th Percentile	13.8	2.3	0.1	1.2	68.4	135.7	18.6	8.9	619.5
99th Percentile	14.2	2.4	0.1	1.7	107.8	153.9	20.7	9.8	713.0

## 9.0 Conclusions

Modest soil and rock geochemical sampling on the CZ property by Porpoise Bay in 2010 has tended to corroborate earlier work done by Campbell and Noranda; although the sample density and widespread nature of the 2010 soil sampling precludes direct comparison to widespread gold-in-soil anomalies identified in the 1980's.

The November 2010 rock channel sampling program failed to locate a local bedrock source for the highly anomalous soil sample found in the spring 2010 program (5,808 ppb). A total of 46 samples were taken from 16 rock channel cuts but precious metal values were uniformly low. There were some elevated to anomalous copper and zinc values from several 1.0 meter wide samples. It's possible the source of the anomalous gold-in-soil result from earlier sampling is topographically above the road cut, and beyond the safe reach of the channel sampling program. The location of the rock cut is directly parallel to the inferred fault that follows Lloyd Road; and the site has demonstrated quartz veining, pyrite alteration, and variable listwanite alteration.

The CZ property, especially in the vicinity of Hwy 16, seems to have two main exploration targets; a zone of listwanite alteration and quartz veining that corresponds to a 070° trending fault zone that parallels Lloyd Road for at least 800 metres and; a similar trending zone exposed in outcrop north of Highway 16 at the start of Cluculz hill (the original Jen showing).

The two zones may be offset by a northwest trending fault that could be a splay to the Pinchi Fault zone, located east of the property.

The property demonstrates potential for high grade gold mineralization but no definitive bedrock target has been identified. It's possible that mineralized zones are buried under overburden and have no surface expression, except insofar as has been demonstrated by historical widespread soil anomalies and inferred structural zones.

Diamond drilling by Noranda in 1988, above Lloyd Road, may have fallen short of the structural targets; both the 070° trend that parallels Lloyd Road, and the cross-cutting NW trending inferred offset. It's possible that deeper drilling, and more widespread drilling, may locate a bedrock source of gold mineralization.

MacIntyre (2010) recommended more wide spaced diamond drill holes to be completed along the northwest trending fault structure and a few short drill holes could test the Hwy 16 road cut (Jen showing), which has never been drilled.



## **10.0 Recommendations**

Persistent and repeatable gold-in-soil anomalies that straddle Hwy 16 remain largely unexplained, despite several attempts to rock sample adjacent bedrock occurrences; and despite historic drill testing of suspected faults coincident with I.P./magnetic high zones.

A follow-up exploration program is warranted to further test for the bedrock source of the widespread gold anomalies.

Airphoto interpretive work is recommended as a first step to help identify and map out the variable drift cover overlying bedrock; in order to understand the regional ice direction, and be able to search up-ice for bedrock sources of the gold-in-soil anomalies. Follow-up prospecting and mapping in these areas may locate previously unknown bedrock occurrences.

A focused and detailed geological mapping program is recommended at both the Jen showing and the Lloyd Road occurrence, to map out alteration and structural patterns and look for vectors to bedrock hosted mineralization.

A program of systematic channel sampling is recommended for the Jen occurrence; and additional sampling is warranted on the Lloyd Road occurrence; preferably on the pit wall above the location of the November 2010 channel cuts. This would require a bucket truck or some means to gain access to the upper pit wall.

The total estimated cost of the Phase One project is \$75,000. A phase two project would include a more detailed I.P./ground magnetic survey to refine locations of structures that may host the gold mineralization. A follow-up diamond drilling program of high priority coincident geochemical/geophysical tests would be recommended, success dependent on the Phase One results. The total estimated cost for Phase Two exploration, including 1,500 meters of NQ diamond drilling, is \$350,000.

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## 12.0 Statement of Qualifications

I, Ken MacDonald, P. Geo., do hereby certify that:

1. I am an independent consulting geologist, residing at 2665 Carlisle Way, Prince George, British Columbia, Canada.
2. I graduated with a Bachelor of Science degree with Specialization in Geology from the University of Alberta in 1987.
3. I am a member in good standing of the Professional Engineers and Geoscientists of British Columbia.
4. I have continually practiced my profession as a geologist, both within government and the private sector, in British Columbia and other parts of Canada, since graduation.
5. I supervised a rock channel sampling program on the CZ property from November 4<sup>th</sup>-6<sup>th</sup> 2010.
7. I am responsible for the preparation of this assessment report entitled "Geological and Geochemical Report CZ Property dated June 7<sup>th</sup>, 2011.
8. I am independent of Porpoise Bay Minerals and performed the work described herein under contract.



### 13.0 Statement of Expenses

The following are expenditures that were incurred for work on the CZ Claims between October 4 and November 12, 2010.

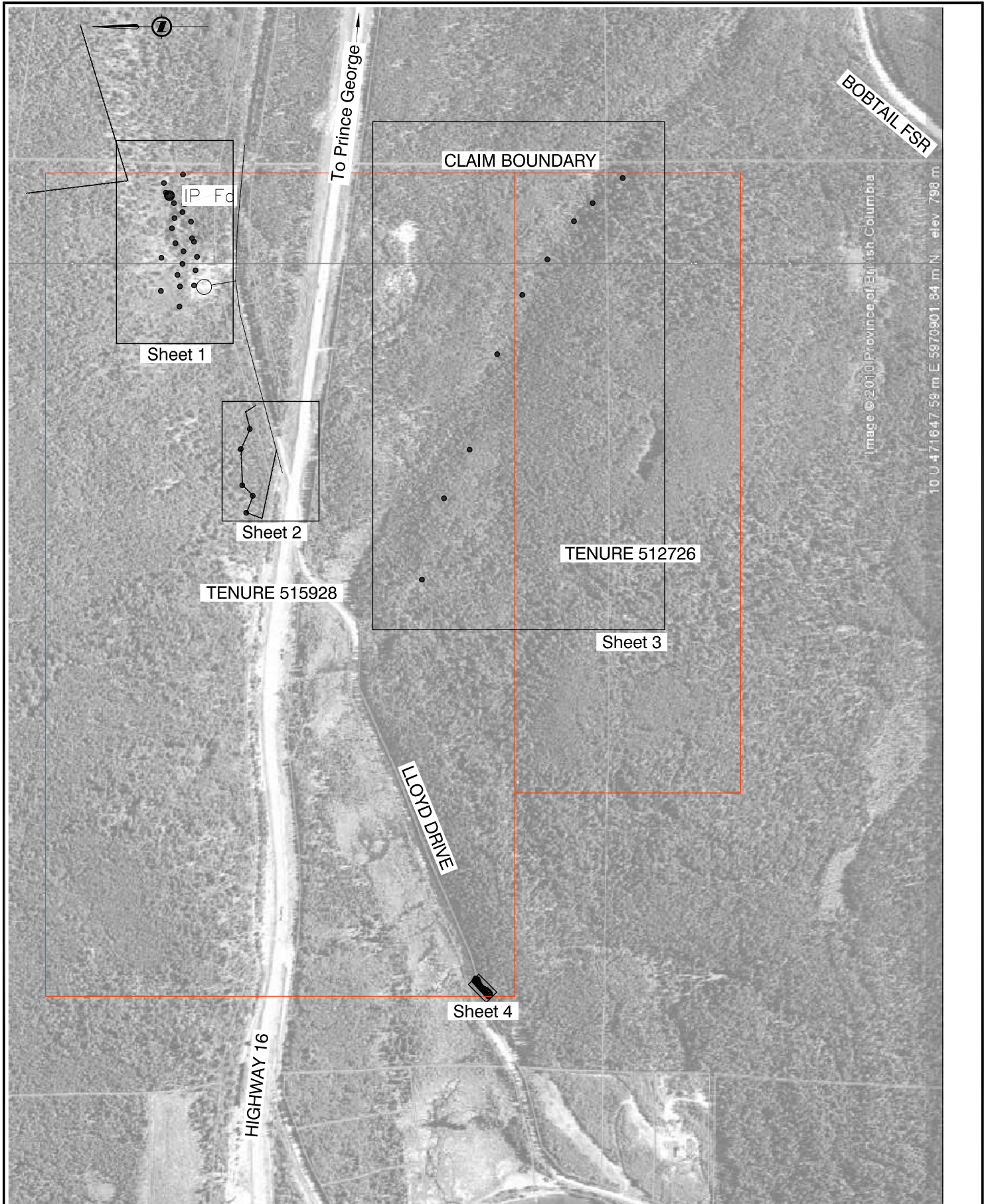
Field	Dates	Rate	Unit	Subtotal
R. Seel	Oct. 4, 5, 9, 29, Nov. 1-6, 10, 12	\$400.00	12	\$ 4,800.00
A. Spicer	Oct. 5, 9, 29, Nov. 2-6	\$200.00	8	\$ 1,600.00
K. MacDonald	Nov. 4-6	\$650.00	3	\$ 1,950.00
C. Tokarek	Nov. 5	\$513.25	1	\$ 513.25
Expenses	Dates	Rate	Unit	Subtotal
McElhanney Consulting (Mapping)	April, Nov.	\$ 94.89	20	\$ 1,897.80
Sample Analysis (ACME Lab)	April, Dec.			\$ 2,863.72
Fuel	Nov.			\$ 766.38
Chain saw rental	Nov.			\$ 700.00
Sample bags & flagging	Nov.			\$ 279.38
Diamond saw blade	Nov.			\$ 325.00
IRL Diamond saw blade	Nov.			\$ 289.00
PG Rental (saw rental)	Nov.			\$ 120.35
Lodging - R. Seel	Oct. 4, 5, 9, 29, Nov. 1-6, 10, 12	\$120.00	12	\$ 1,440.00
Vehicle - Seel Enterprises	Oct.-Nov.	\$100.00	17	\$ 1,700.00
Vehicle - A. Spicker	Nov.	\$100.00	3	\$ 300.00
Post-Field	Dates	Rate	Unit	Subtotal
Report Writing (K. MacDonald)	June 3-6	\$650.00	4	\$ 2,600.00
Mapping	June 3-6	\$ 75.00	12	\$ 900.00
<b>Total</b>				<b>\$23,044.88</b>

July 5/2011

APPENDIX I  
2010 Soil Geochemistry Maps  
(sampling by Porpoise Bay)



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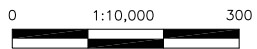


**McElhanney**

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 Drawn: SAB Date: 10-11-12



**PORPOISE BAY MINERALS LTD.**

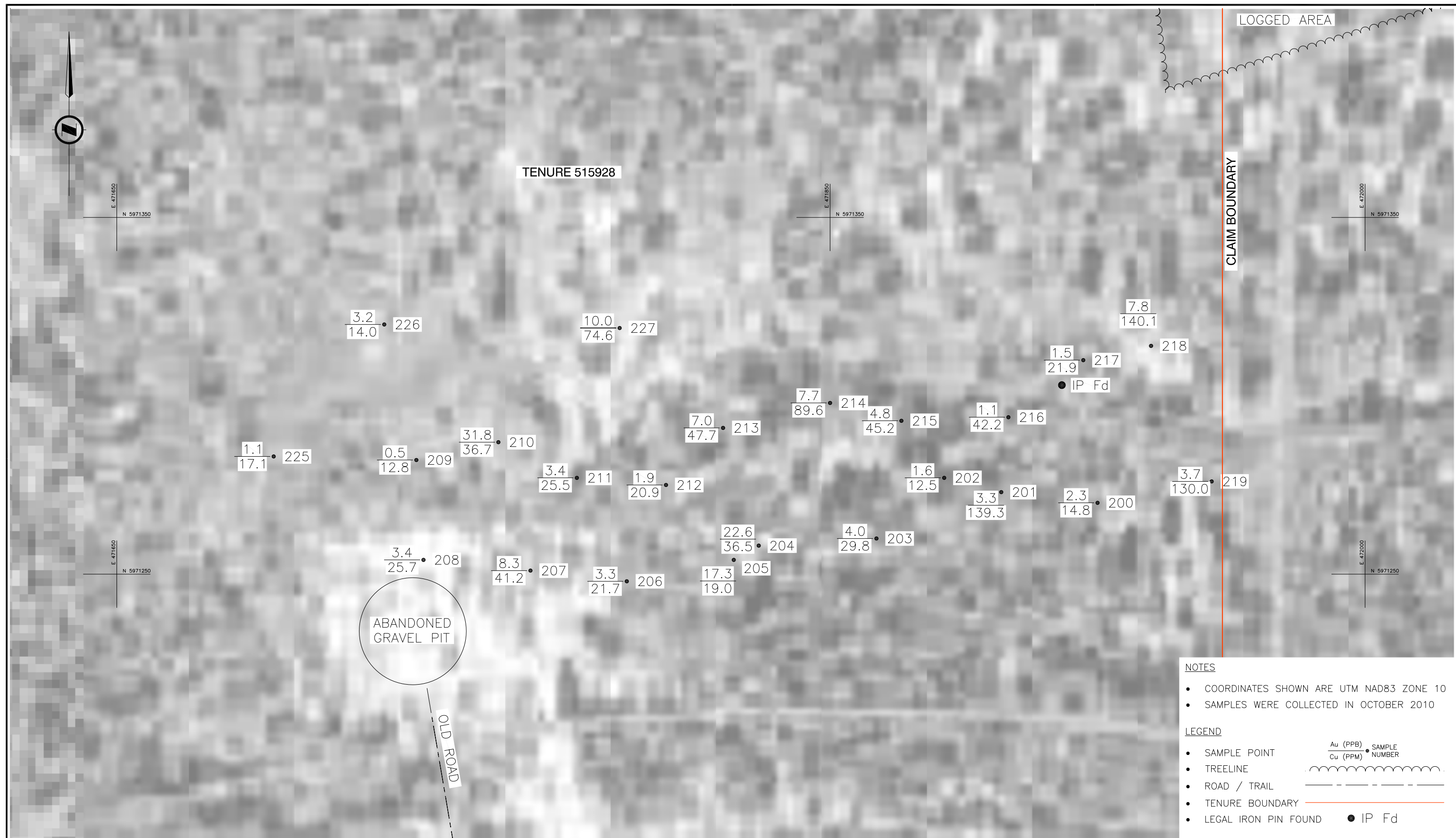
**CZ Claims**  
**British Columbia, Canada**  
**Key Plan**

Client Project No	
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MCSL Project No.	2341-01629-0
Drawing No.	<b>1629-Key</b>
Sheet	0 of 0
Revision	

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- NOTES**
- COORDINATES SHOWN ARE UTM NAD83 ZONE 10
  - SAMPLES WERE COLLECTED IN OCTOBER 2010
- LEGEND**
- SAMPLE POINT Au (PPB) Cu (PPM) SAMPLE NUMBER
  - TREELINE
  - ROAD / TRAIL
  - TENURE BOUNDARY
  - LEGAL IRON PIN FOUND IP Fd

No.	Date	Revision	Dr.	CK'd

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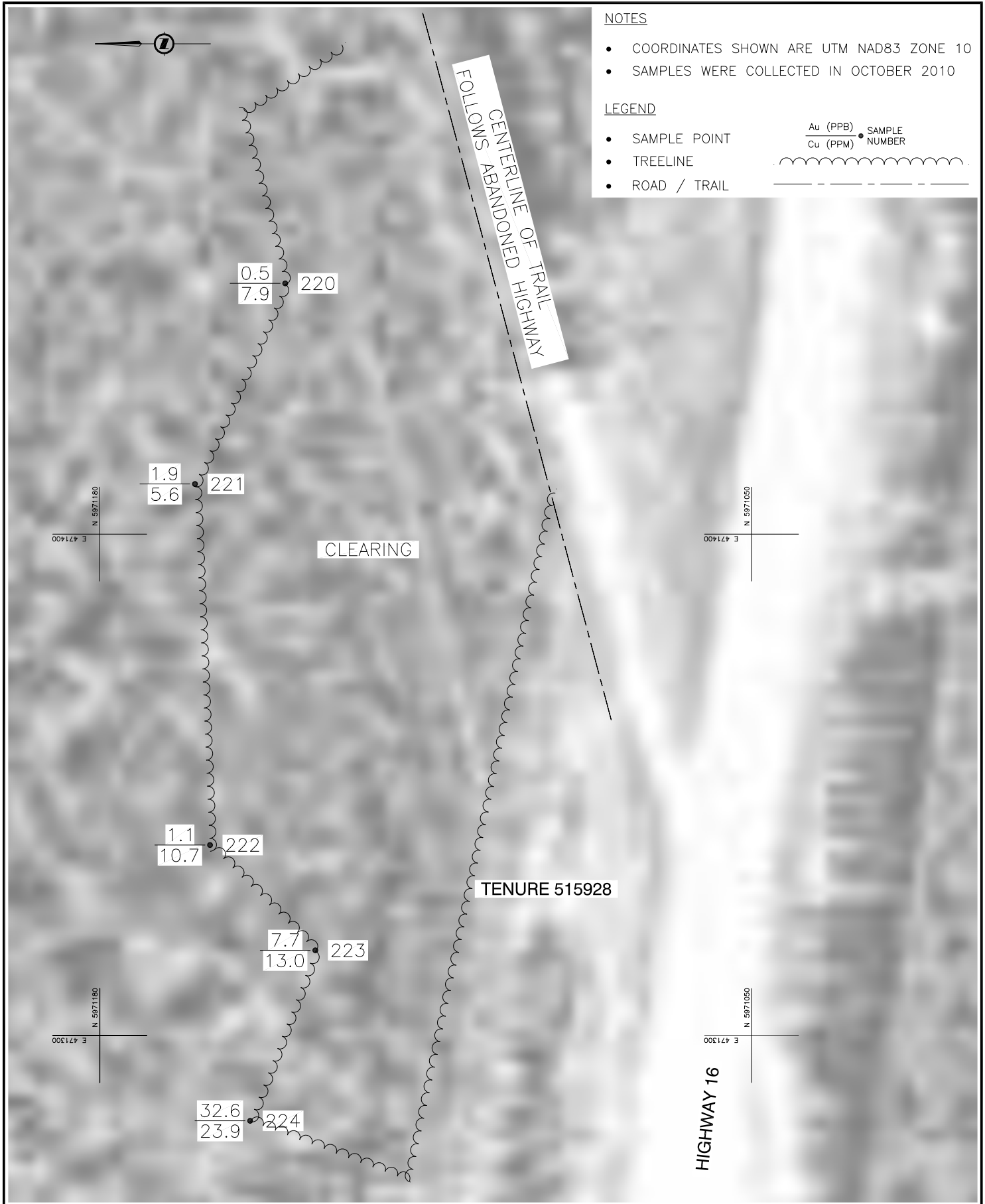
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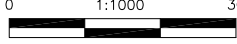
**PORPOISE BAY MINERALS LTD.**  
 CZ Claims  
 British Columbia, Canada  
 Soil Geochemistry

Client Project No	
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MCSL Project No.	2341-01629-0
Drawing No.	1629-1
Sheet	0 of 0
Revision	

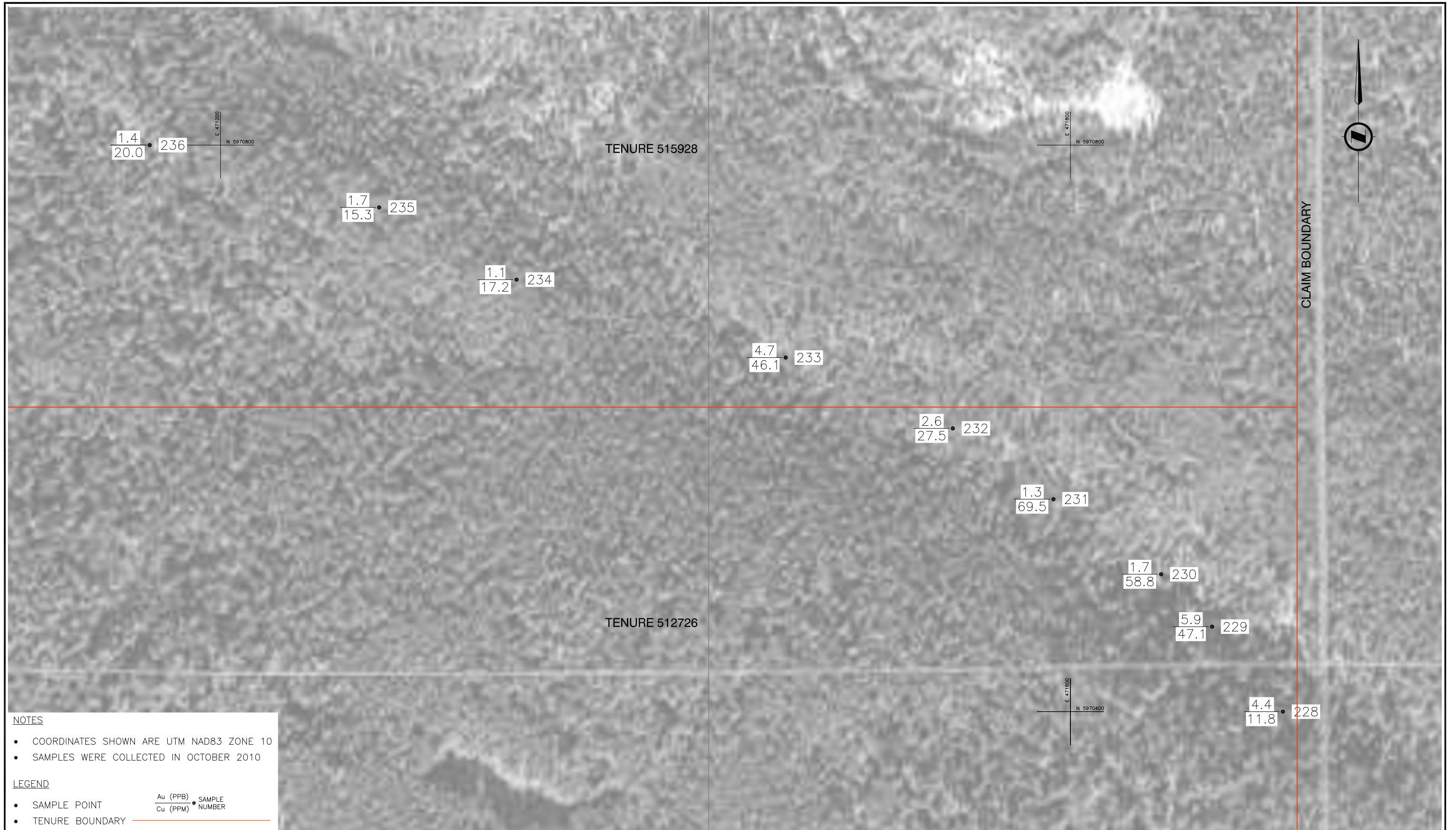
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**NOTES**

- COORDINATES SHOWN ARE UTM NAD83 ZONE 10
- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SAMPLE POINT  $\frac{\text{Au (PPB)}}{\text{Cu (PPM)}} \bullet$  SAMPLE NUMBER
- TENURE BOUNDARY

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CZ Claims  
 British Columbia, Canada  
 Soil Geochemistry

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MCSL Project No. 2341-01629-0	
Drawing No.	<b>1629-3</b>
Sheet 0 of 0	Revision

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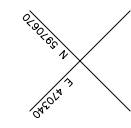
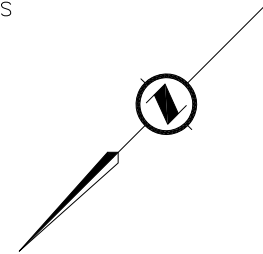
APPENDIX II  
2010 Rock Channel Sample Maps  
(sampling by Author)

NOTES

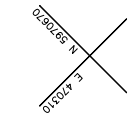
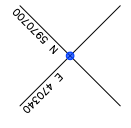
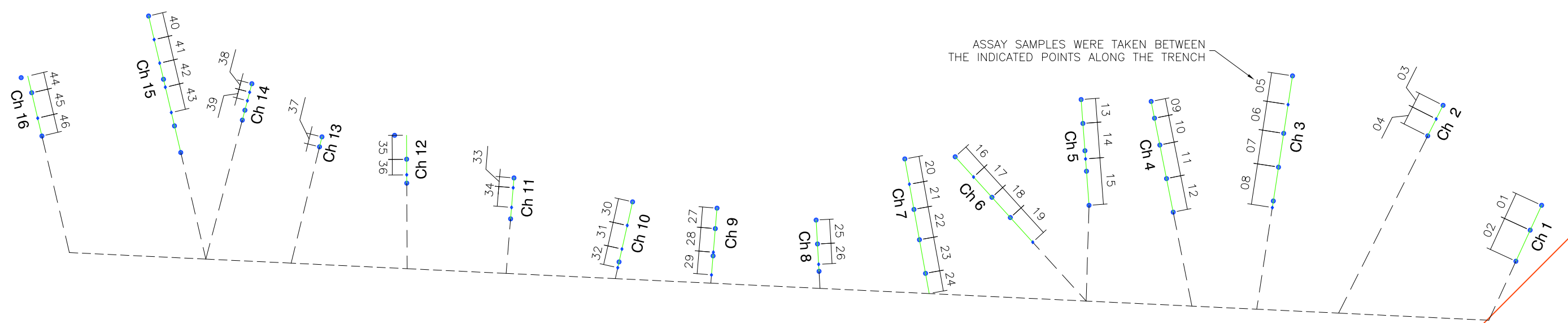
- COORDINATES SHOWN ARE UTM NAD83 ZONE 10
- SAMPLES WERE COLLECTED IN OCTOBER 2010
- SEE SHEETS 5 & 6 FOR GROUND PROFILES ALONG THE CHANNEL ALIGNMENTS

LEGEND

- TOPOGRAPHIC SURVEY POINT
- BOUNDARY OF ASSAY SAMPLE
- TENURE BOUNDARY
- REFERENCE BASELINE
- LINE OF CHANNEL CUT INTO ROCK



TENURE 515928



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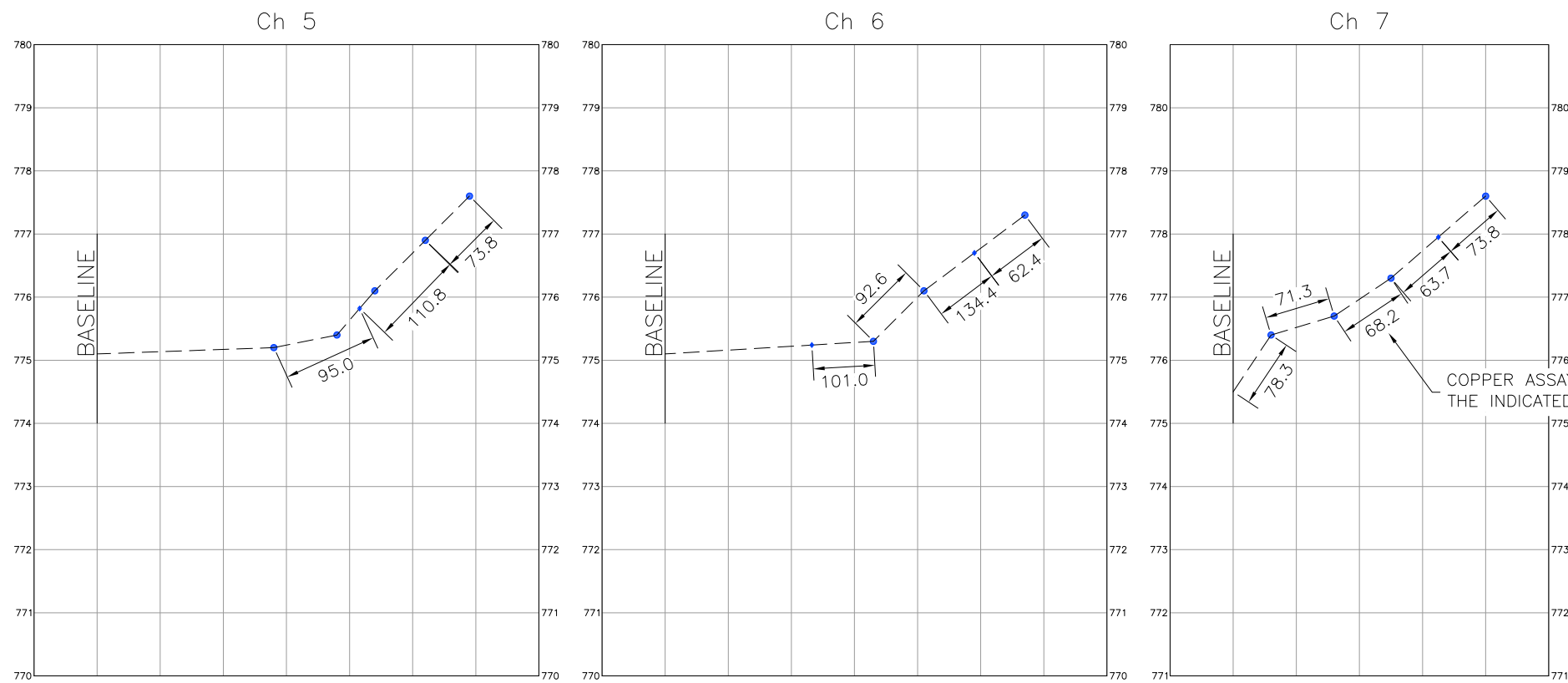
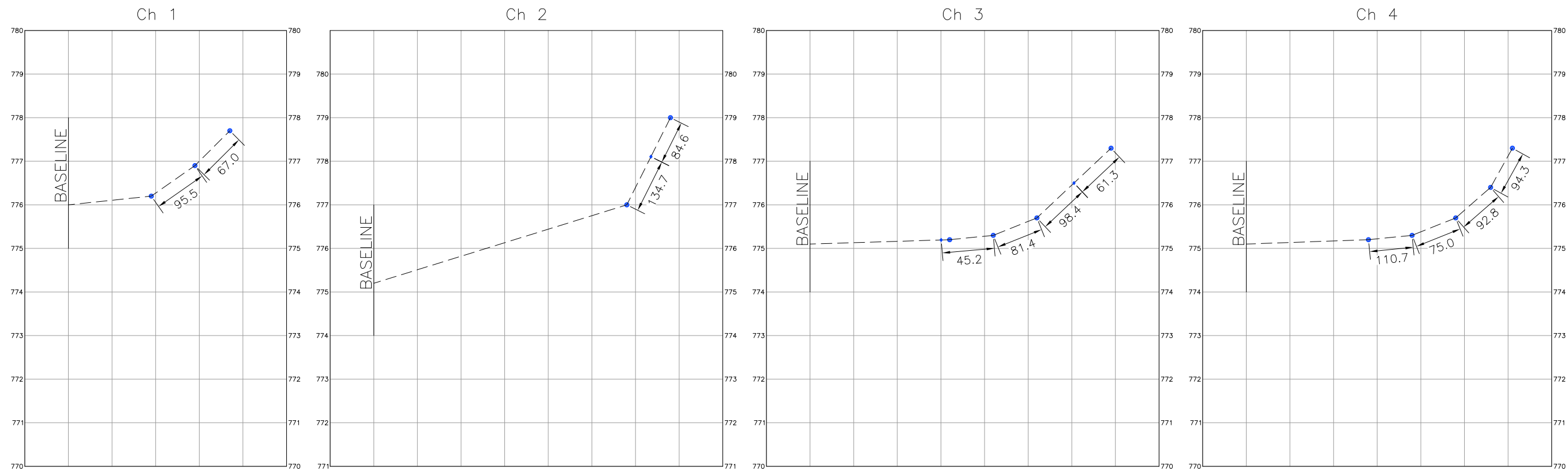
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Drawing No.	<b>1629-4</b>
Sheet 0 of 0	Revision

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COPPER ASSAY RESULTS FROM SAMPLE TAKEN BETWEEN THE INDICATED POINTS ALONG THE TRENCH (PPM)

**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL

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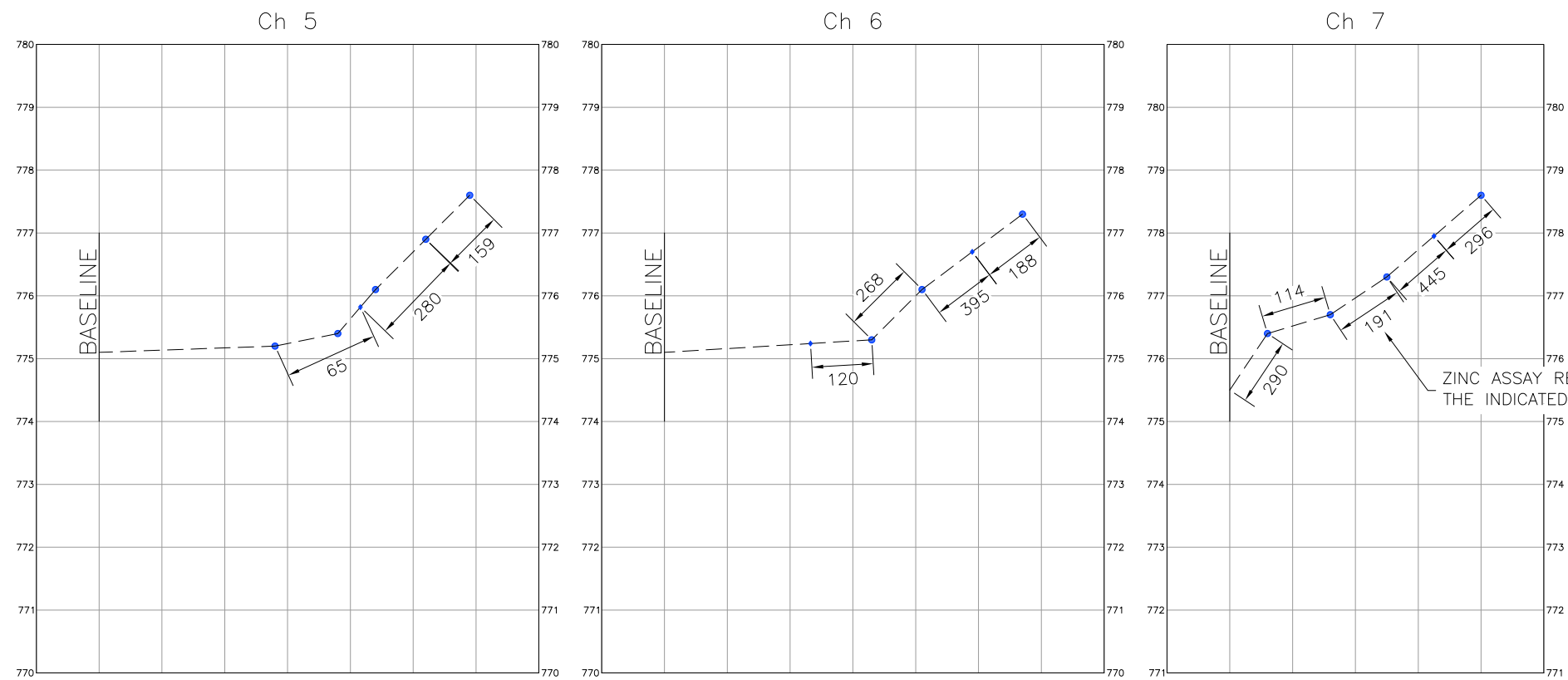
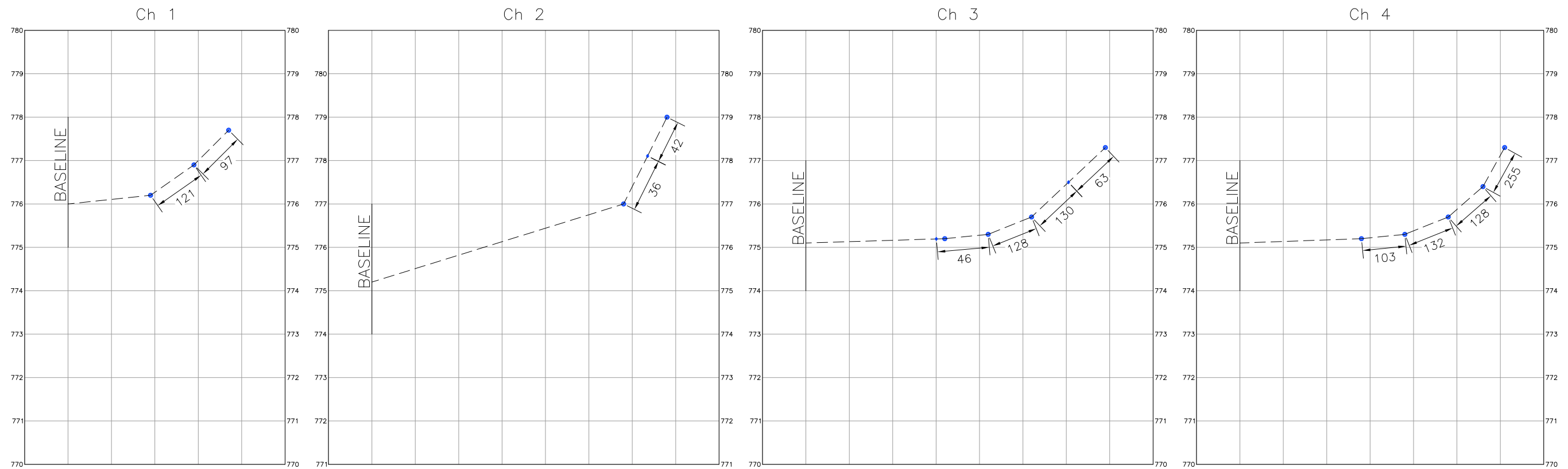
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**PORPOISE BAY MINERALS LTD.**  
 Copper Assay Results  
 CZ Claims  
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Client Project No	
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Drawing No.	1629-5a
Sheet	0 of 0
Revision	

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**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL

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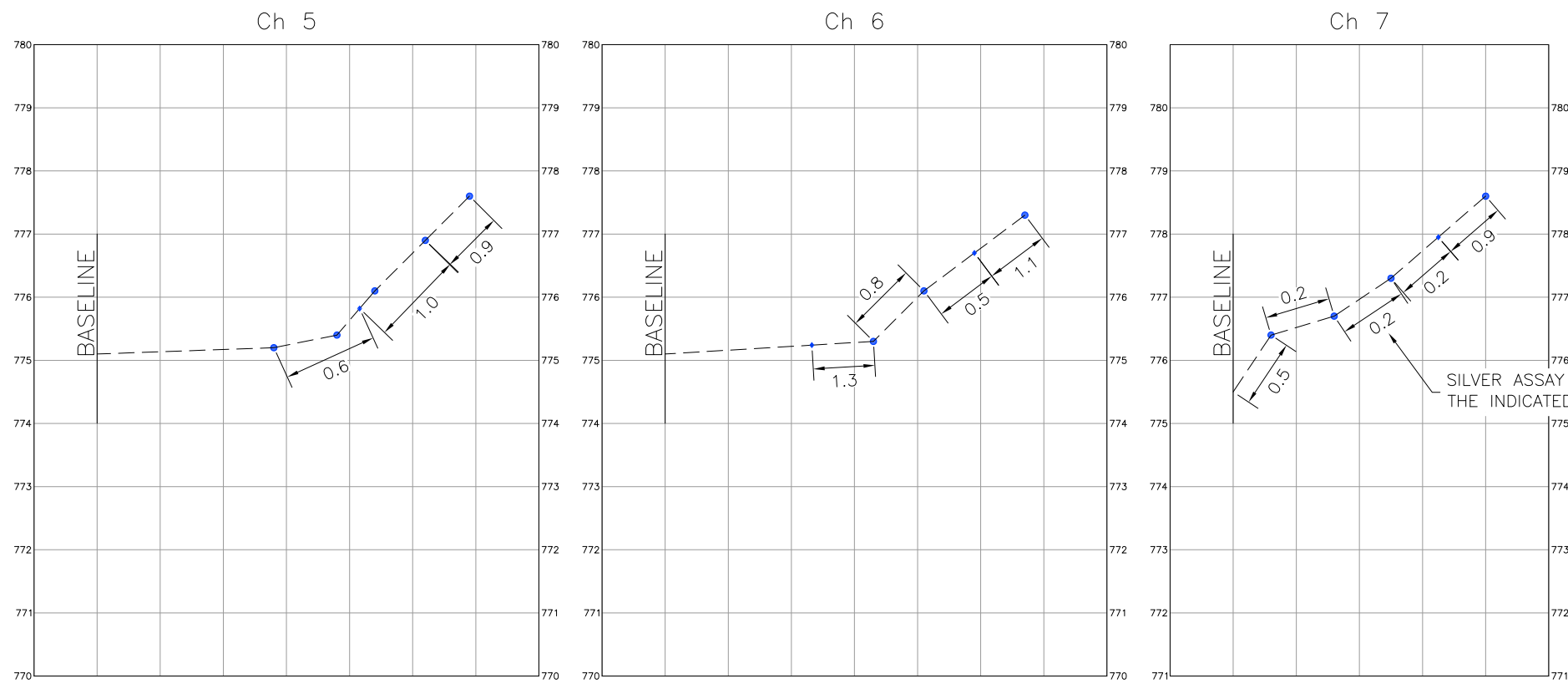
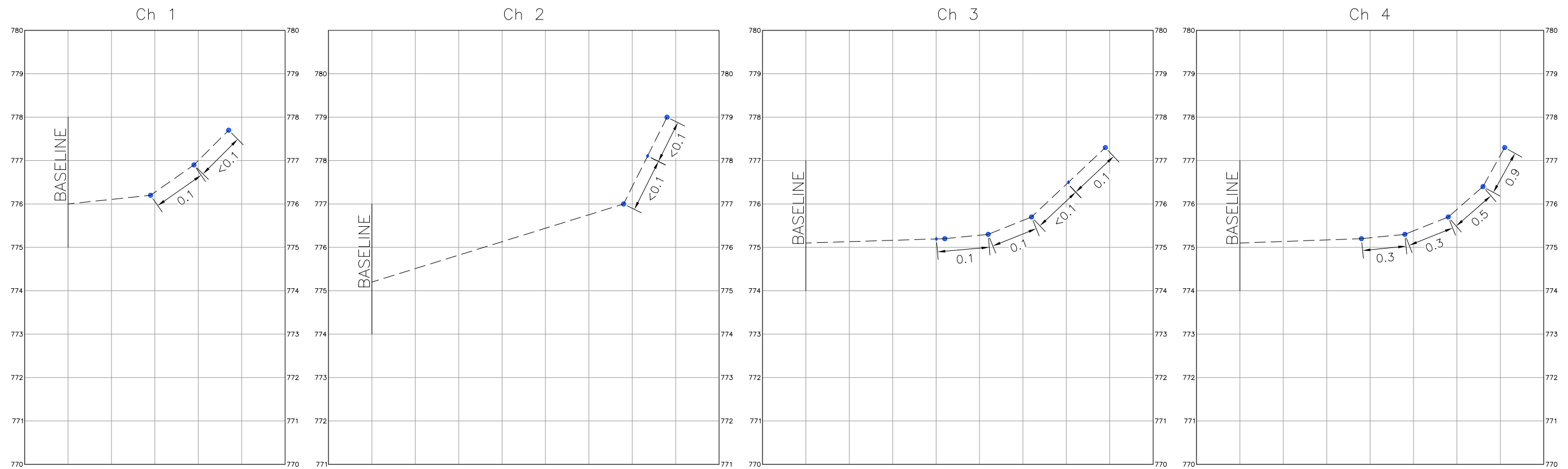
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**PORPOISE BAY MINERALS LTD.**  
 Zinc Assay Results  
 CZ Claims  
 British Columbia, Canada

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Client Drawing No	
MCSL Project No. 2341-01629-0	
Drawing No.	<b>1629-5b</b>
Sheet 0 of 0	Revision

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**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL

No.	Date	Revision	Dr.	CK'd

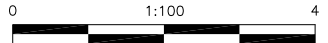
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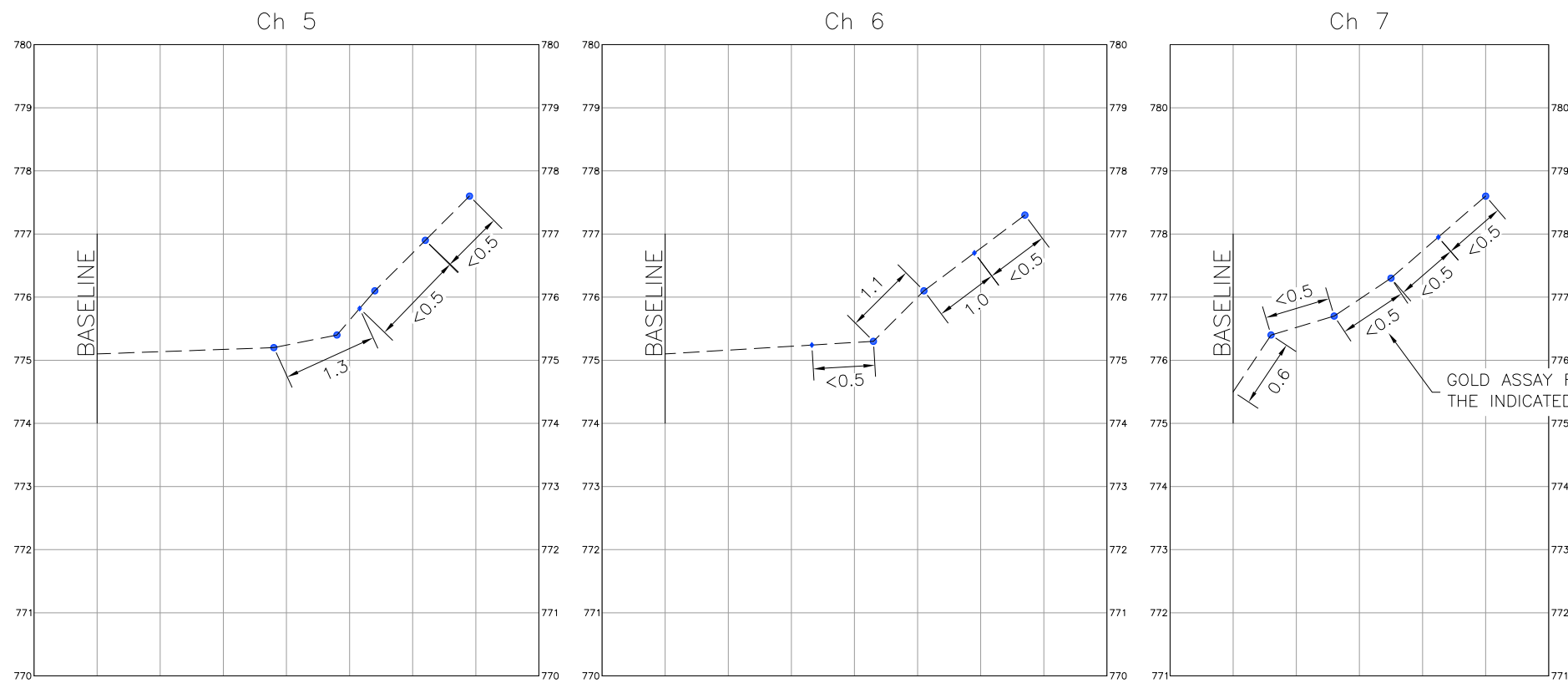
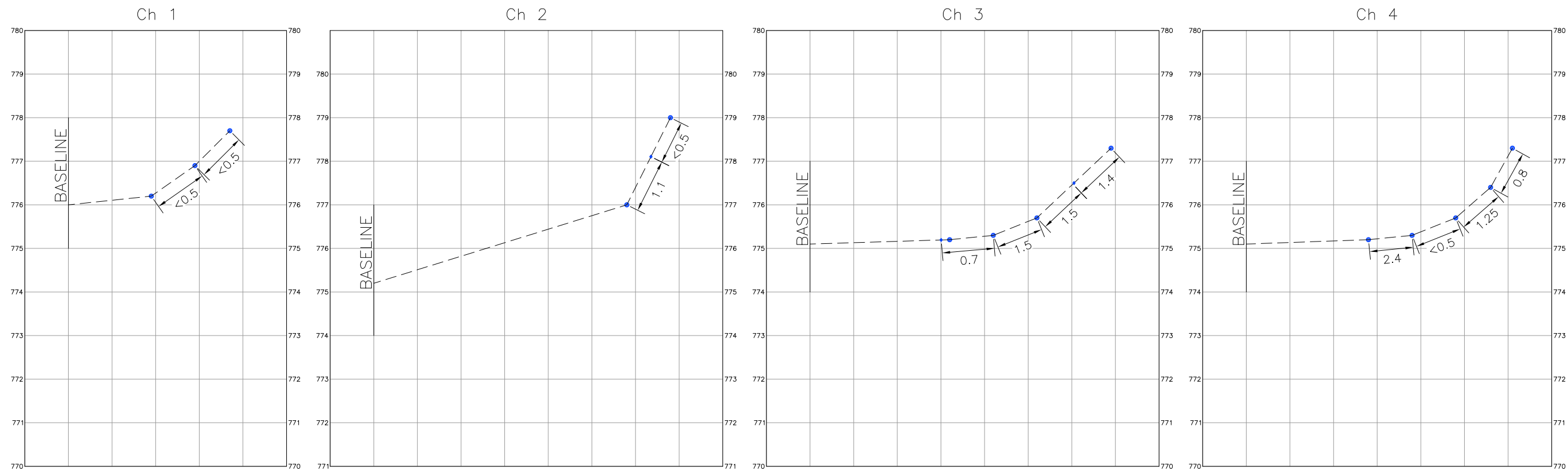
Silver Assay Results  
 CZ Claims  
 British Columbia, Canada

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Drawing No.	<b>1629-5c</b>
Sheet 0 of 0	Revision

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GOLD ASSAY RESULTS FROM SAMPLE TAKEN BETWEEN THE INDICATED POINTS ALONG THE TRENCH (PPB)

**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL

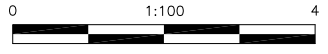
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 Gold Assay Results  
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 British Columbia, Canada

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Client Drawing No	
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Drawing No.	<b>1629-5d</b>
Sheet 0 of 0	Revision

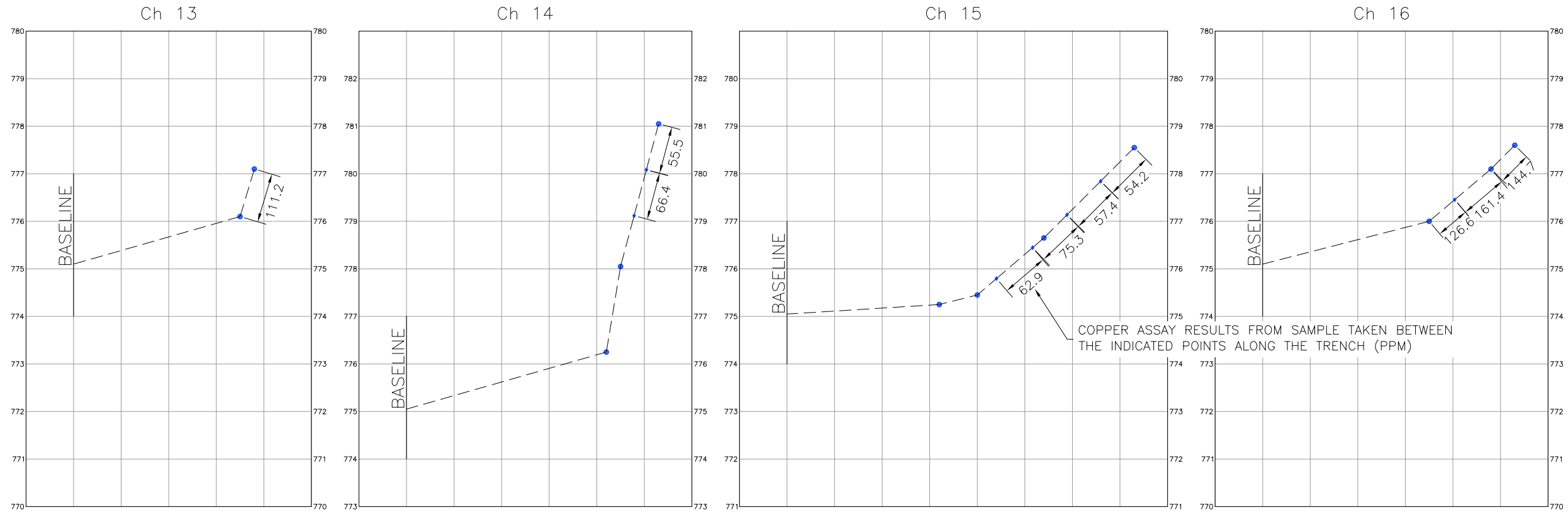
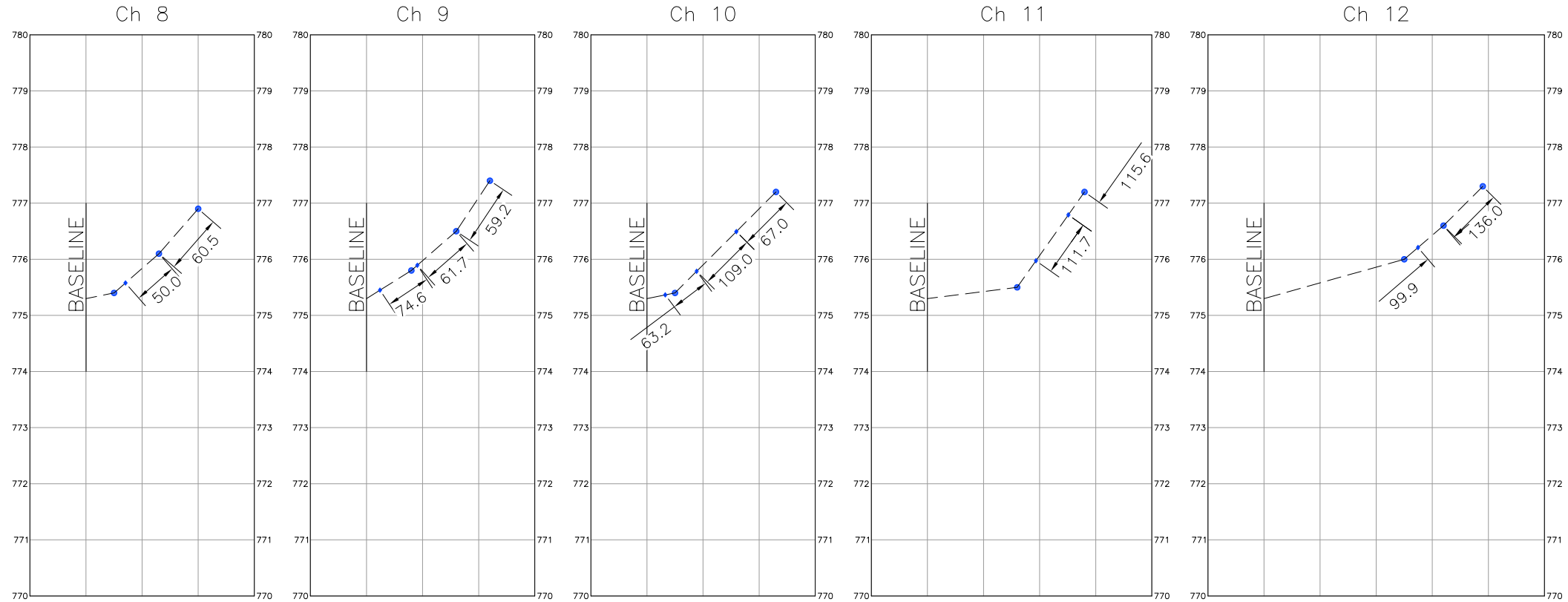
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**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL



COPPER ASSAY RESULTS FROM SAMPLE TAKEN BETWEEN THE INDICATED POINTS ALONG THE TRENCH (PPM)

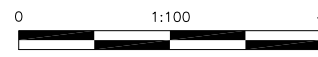
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CZ Claims  
British Columbia, Canada

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Drawing No.	1629-6a
Sheet	0 of 0
Revision	

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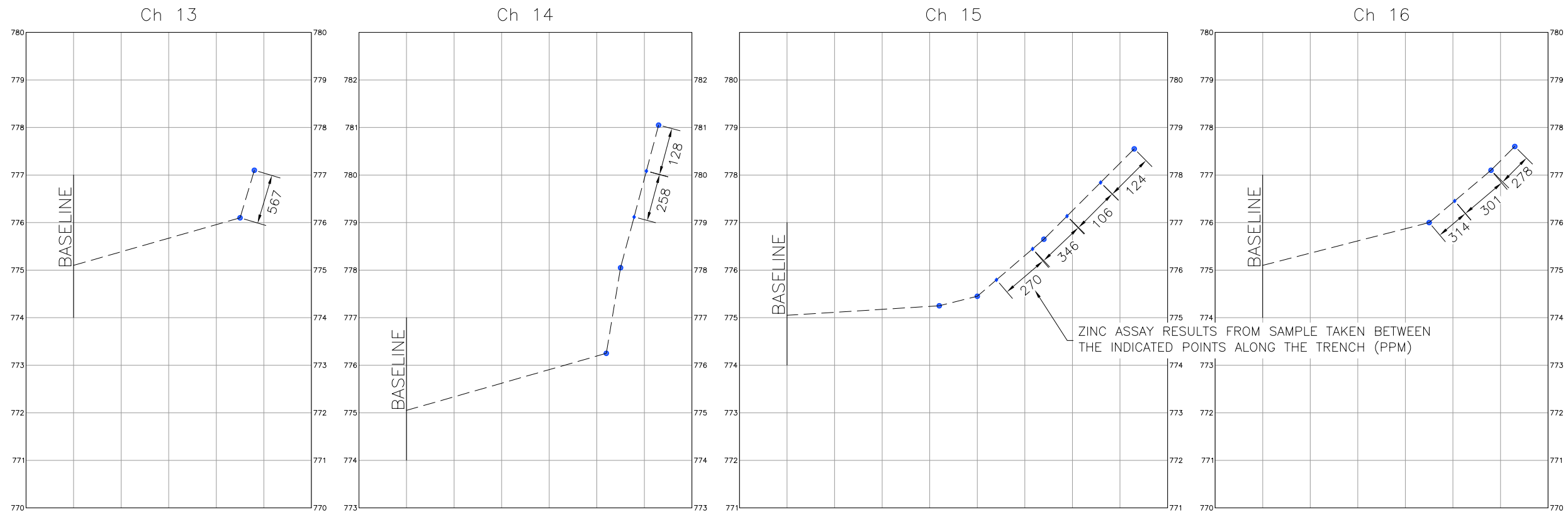
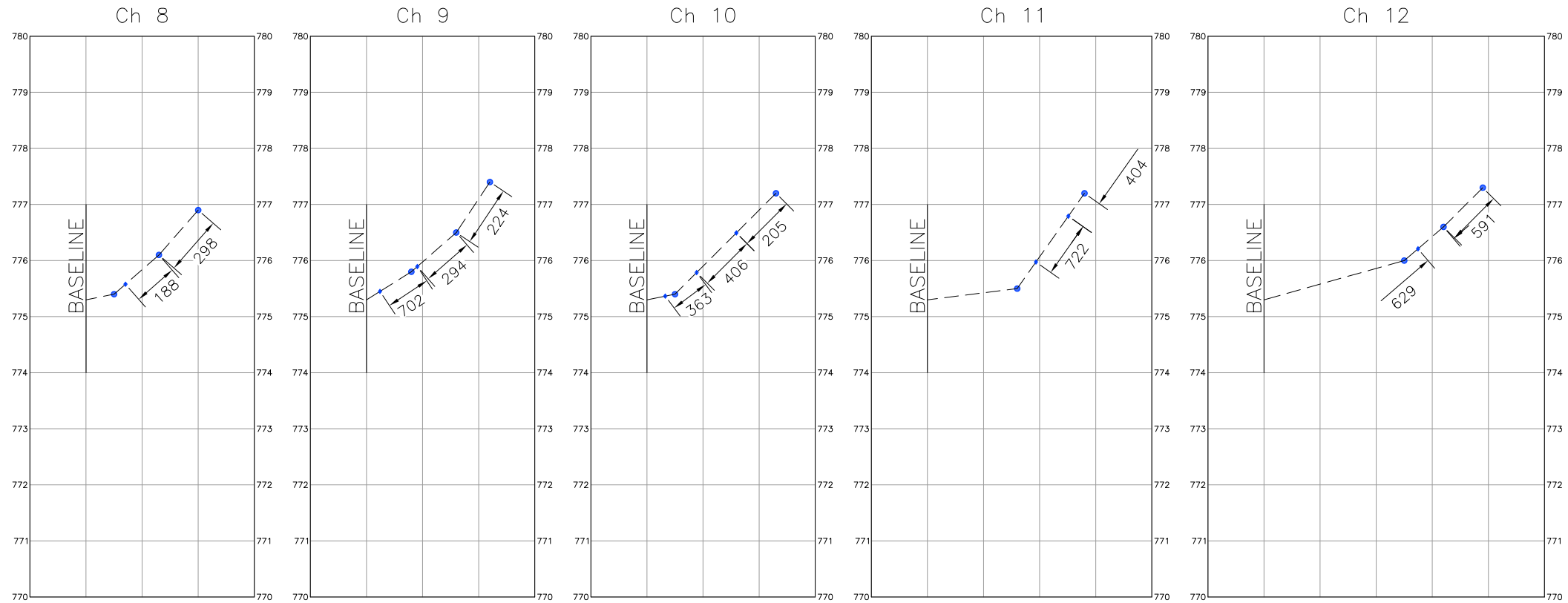
No.	Date	Revision	Dr.	CK'd

**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL



ZINC ASSAY RESULTS FROM SAMPLE TAKEN BETWEEN THE INDICATED POINTS ALONG THE TRENCH (PPM)

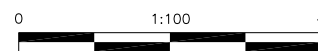
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CZ Claims  
British Columbia, Canada

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Client Drawing No	
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Drawing No.	<b>1629-6b</b>
Sheet 0 of 0	Revision

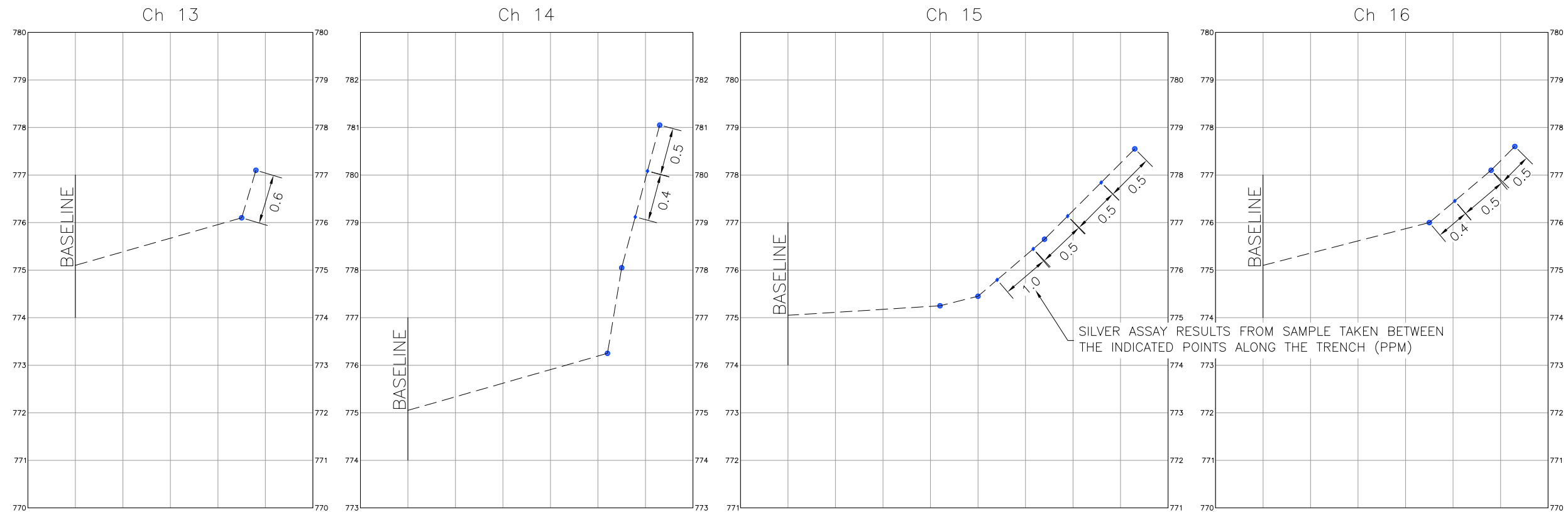
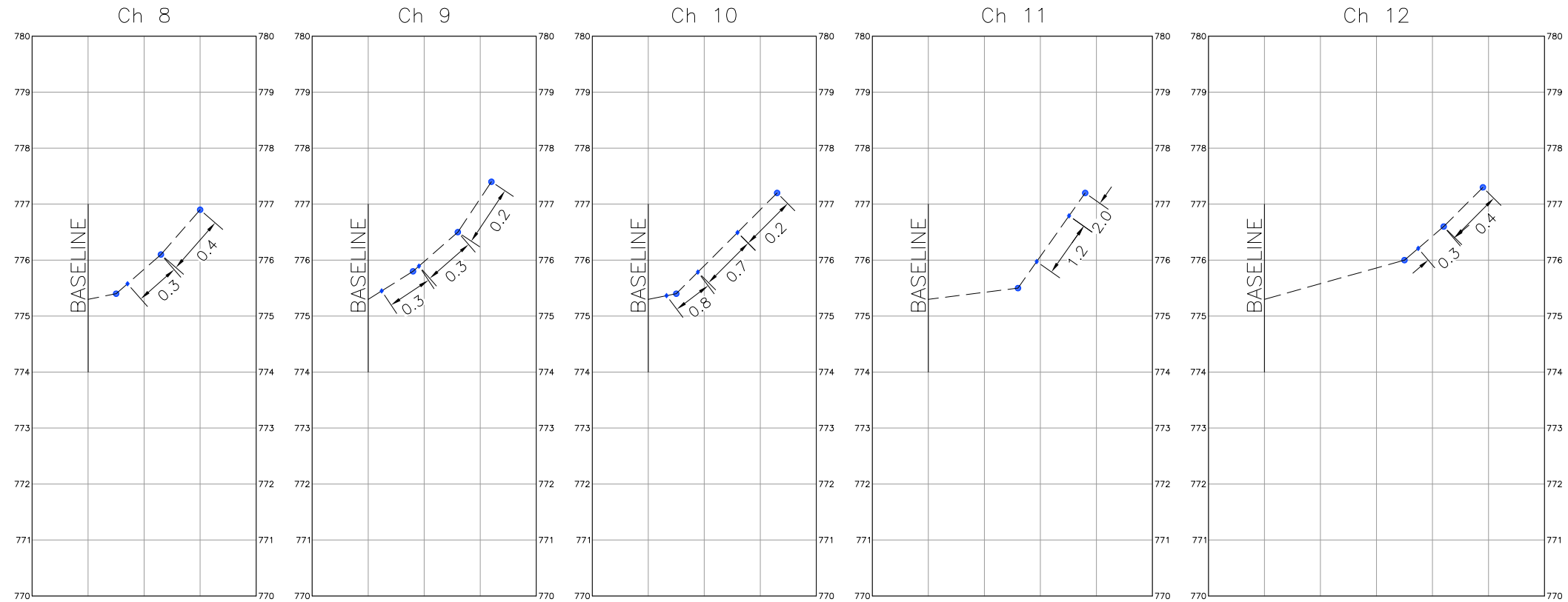
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**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL



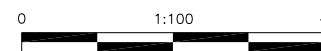
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CZ Claims  
British Columbia, Canada

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Sheet 0 of 0	Revision

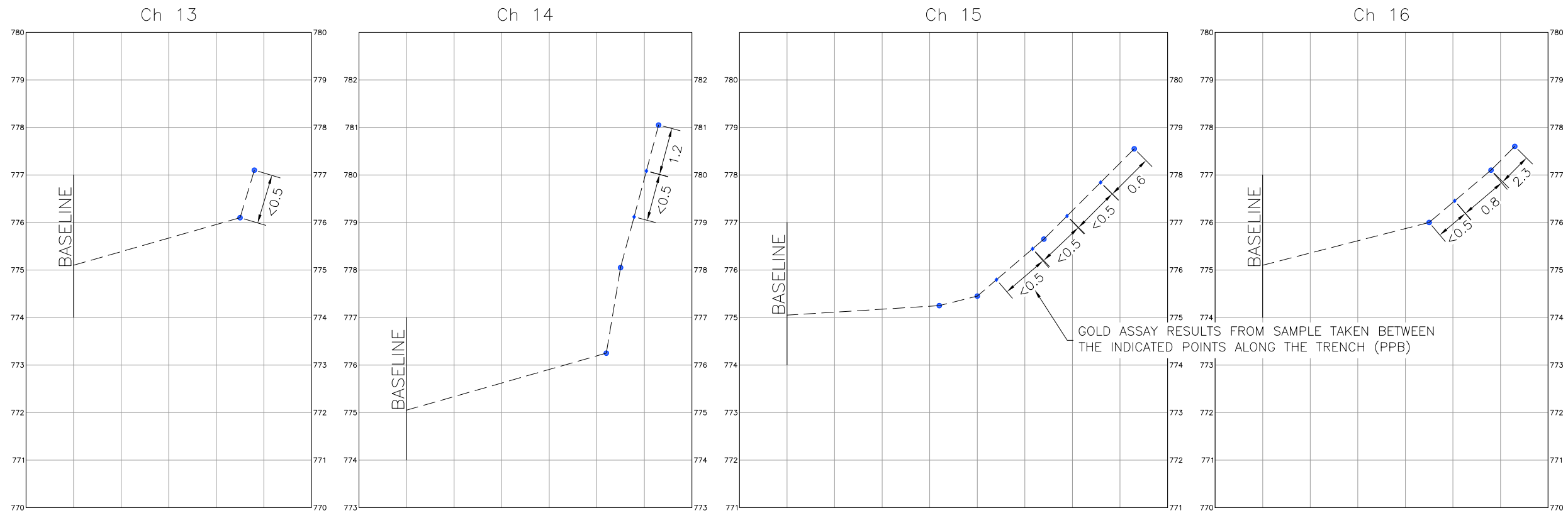
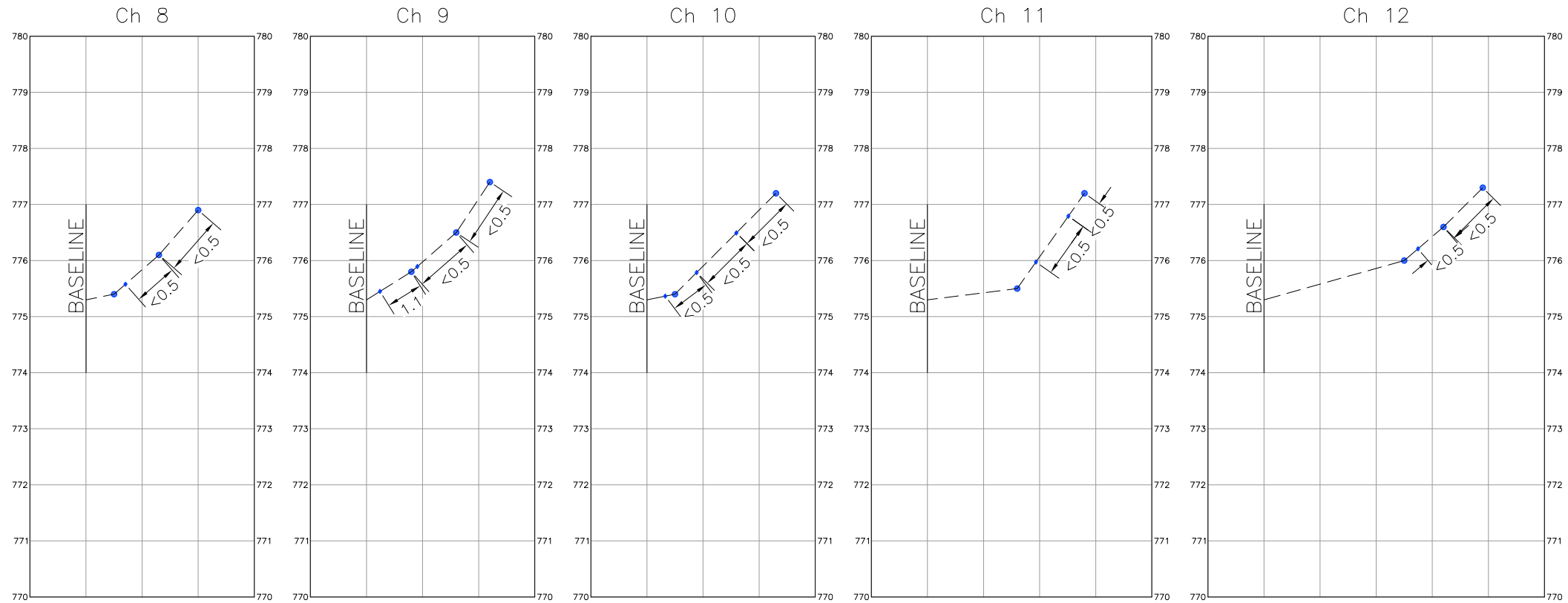
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**NOTES**

- SAMPLES WERE COLLECTED IN OCTOBER 2010

**LEGEND**

- SURVEYED POINT
- BOUNDARY OF ASSAY SAMPLE
- GROUND PROFILE OF CHANNEL



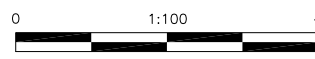
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Designed:	Checked:	QC:
Drawn: SAB	Date: 10-11-19	



**PORPOISE BAY MINERALS LTD.**  
Gold Assay Results  
CZ Claims  
British Columbia, Canada

Client Project No	
Client Drawing No	
MCSL Project No.	2341-01629-0
Drawing No.	1629-6d
Sheet	0 of 0
Revision	

Destroy all prints bearing previous number ▲

APPENDIX III  
2010 Assay Certificates



1020 Cordova St. East Vancouver BC V6A 4A3 Canada

Acme Analytical Laboratories (Vancouver) Ltd.

[www.acmelab.com](http://www.acmelab.com)

**Client:** Porpoise Bay Minerals Ltd.

PO Box 1974  
Sechelt BC V0N 3A0 Canada

Submitted By: J. Henderson

Receiving Lab: Canada-Smithers

Received: November 10, 2010

Report Date: December 08, 2010

Page: 1 of 3

## CERTIFICATE OF ANALYSIS

SMI10000812.1

### CLIENT JOB INFORMATION

Project: CZ  
Shipment ID:  
P.O. Number  
Number of Samples: 46

### SAMPLE DISPOSAL

RTRN-PLP Return  
RTRN-RJT Return

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

Invoice To: Porpoise Bay Minerals Ltd.  
PO Box 1974  
Sechelt BC V0N 3A0  
Canada

CC: Ken MacDonald  
Rupert Seel

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
R200-250	46	Crush, split and pulverize 250 g rock to 200 mesh			SMI
1DX3	46	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN
G601	46	Fire Assay fusion Au by ICP-ES	30	Completed	VAN

### ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. \*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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 PO Box 1974  
 Sechelt BC V0N 3A0 Canada

Project: CZ  
 Report Date: December 08, 2010

Page: 2 of 3 Part 1

CERTIFICATE OF ANALYSIS

SMI10000812.1

Method	Analyte	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca
Unit	MDL	kg	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	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
020551	Rock	11.31	1.2	67.0	4.3	97	<0.1	17.4	5.0	270	1.47	6.3	0.2	<0.5	1.3	19	1.7	1.0	0.2	7	0.96
020552	Rock	9.46	0.4	95.5	4.4	121	0.1	22.8	6.8	265	1.62	5.5	0.2	<0.5	1.8	20	1.2	2.0	0.2	6	0.48
020553	Rock	14.19	0.6	84.6	4.9	42	<0.1	17.3	4.2	154	2.37	30.4	0.2	<0.5	1.9	19	1.1	0.9	0.2	10	1.05
020554	Rock	11.30	0.5	134.7	4.1	36	<0.1	15.0	3.2	317	3.03	38.9	0.5	1.1	2.5	32	1.9	0.8	0.2	13	1.79
020555	Rock	10.59	2.1	61.3	3.3	63	0.1	13.0	3.5	209	2.05	42.3	0.2	1.4	1.3	34	2.0	6.7	0.2	16	1.28
020556	Rock	9.24	1.1	98.4	3.5	130	<0.1	29.8	3.9	210	2.61	35.0	0.4	1.5	1.6	25	3.1	2.1	0.1	12	1.16
020557	Rock	10.96	1.6	81.4	4.6	128	0.1	23.1	3.9	194	1.98	21.4	0.3	1.5	1.6	21	1.7	2.4	0.2	10	0.73
020558	Rock	12.71	0.4	45.2	3.6	46	0.1	10.8	2.9	217	1.36	5.4	0.2	0.7	1.3	27	0.5	1.8	0.1	5	1.28
020559	Rock	7.68	13.0	94.3	8.1	255	0.9	25.7	4.7	188	3.00	79.0	1.3	0.8	1.1	43	4.5	29.5	0.2	46	0.89
020560	Rock	12.62	6.9	92.8	4.5	128	0.5	17.7	3.5	130	1.65	24.3	0.5	1.2	0.9	33	2.9	13.5	0.2	16	0.59
020561	Rock	7.21	1.4	75.0	3.6	132	0.3	16.5	4.5	246	1.49	7.3	0.2	<0.5	1.1	30	2.0	4.3	0.2	11	1.02
020562	Rock	8.69	1.0	110.7	4.9	103	0.3	20.8	7.6	313	1.75	10.8	0.2	2.4	1.4	37	2.6	2.4	0.2	7	1.60
020563	Rock	6.65	16.0	73.8	8.0	159	0.9	23.2	5.3	141	2.22	63.9	0.8	<0.5	0.9	22	2.8	23.0	0.2	20	0.45
020564	Rock	12.96	10.6	110.8	8.9	280	1.0	30.3	9.4	244	2.57	65.4	0.7	<0.5	0.9	32	5.4	27.6	0.1	21	0.82
020565	Rock	14.02	7.2	95.0	4.4	65	0.6	15.3	3.4	146	1.41	16.2	0.4	1.3	0.9	23	1.4	11.5	0.2	12	0.79
020566	Rock	7.22	5.0	62.4	8.4	188	1.1	12.7	2.4	69	1.70	23.2	0.3	<0.5	0.8	7	2.3	7.5	0.1	11	0.17
020567	Rock	8.71	5.6	134.4	2.8	395	0.5	21.0	5.9	242	2.47	41.2	0.5	1.0	1.1	11	8.2	7.1	0.1	15	0.23
020568	Rock	11.36	5.6	92.6	4.5	268	0.8	19.0	5.1	160	2.01	37.7	0.4	1.1	1.0	16	4.5	12.1	0.1	12	0.36
020569	Rock	8.00	14.3	101.0	4.0	120	1.3	16.6	3.5	110	1.64	25.2	0.6	<0.5	0.8	23	1.6	9.4	0.2	16	0.44
020570	Rock	6.49	4.3	73.8	8.0	296	0.9	21.8	4.2	53	2.46	16.9	0.4	<0.5	0.8	4	1.3	4.3	0.1	19	0.07
020571	Rock	6.81	4.4	63.7	2.8	445	0.2	28.7	5.7	76	2.87	11.0	0.4	<0.5	0.9	4	2.9	1.7	<0.1	15	0.07
020572	Rock	7.31	2.2	68.2	5.4	191	0.2	18.0	4.8	94	1.61	5.4	0.2	<0.5	1.2	4	2.7	1.4	0.2	8	0.09
020573	Rock	8.49	0.8	71.3	5.6	114	0.2	19.8	7.1	162	1.76	7.8	0.2	<0.5	1.6	11	1.5	1.8	0.2	5	0.24
020574	Rock	8.10	4.4	78.3	4.7	290	0.5	43.6	14.8	851	2.10	29.4	0.5	0.6	1.2	8	5.7	8.1	0.2	13	0.08
020575	Rock	11.59	4.7	60.5	6.5	298	0.4	20.1	6.0	103	2.29	3.8	0.2	<0.5	1.0	5	2.8	1.7	0.2	14	0.10
020576	Rock	9.95	2.6	50.0	5.0	188	0.3	35.3	12.5	732	1.73	11.5	0.2	<0.5	1.0	7	1.4	2.9	0.2	6	0.13
020577	Rock	6.86	4.3	59.2	4.5	224	0.2	32.7	6.9	106	1.90	7.9	0.3	<0.5	1.8	4	1.1	1.7	0.2	12	0.04
020578	Rock	9.80	5.3	61.7	7.0	294	0.3	44.5	9.5	123	2.97	22.4	0.3	<0.5	3.3	5	1.3	6.9	0.3	7	0.07
020579	Rock	5.02	5.1	74.6	5.5	702	0.3	91.7	22.5	1388	4.58	53.2	0.8	1.1	2.7	8	11.4	9.5	0.2	10	0.08
020580	Rock	11.48	5.3	67.0	7.2	205	0.2	32.8	8.6	121	2.25	17.9	0.4	<0.5	2.9	5	1.3	8.1	0.2	6	0.03

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Project: CZ  
 Report Date: December 08, 2010

Page: 2 of 3 Part 2

# CERTIFICATE OF ANALYSIS

SMI10000812.1

Method	Analyte	Unit	MDL	1DX30 P	1DX30 La	1DX30 Cr	1DX30 Mg	1DX30 Ba	1DX30 Ti	1DX30 B	1DX30 Al	1DX30 Na	1DX30 K	1DX30 W	1DX30 Hg	1DX30 Sc	1DX30 Ti	1DX30 S	1DX30 Ga	1DX30 Se	1DX30 Te	G6 Au
				%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t
				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
020551	Rock			0.015	3	6	0.50	53	<0.001	2	0.17	0.003	0.08	<0.1	0.07	1.9	<0.1	0.43	<1	1.7	0.2	<0.005
020552	Rock			0.007	3	6	0.49	84	<0.001	3	0.24	0.003	0.13	0.1	0.08	2.1	<0.1	0.39	<1	1.6	<0.2	<0.005
020553	Rock			0.052	2	11	0.34	46	<0.001	2	0.18	0.002	0.08	0.3	0.07	2.4	<0.1	0.91	<1	1.6	<0.2	<0.005
020554	Rock			0.089	2	11	0.64	49	<0.001	2	0.22	0.003	0.08	0.1	0.09	4.1	0.1	0.92	<1	1.4	<0.2	<0.005
020555	Rock			0.050	1	11	0.51	55	<0.001	3	0.17	0.002	0.08	0.1	0.16	3.0	0.1	0.81	<1	4.0	<0.2	<0.005
020556	Rock			0.067	2	9	0.49	59	<0.001	3	0.19	0.002	0.08	0.8	0.11	3.0	<0.1	0.47	<1	2.1	<0.2	<0.005
020557	Rock			0.044	3	8	0.36	68	<0.001	2	0.20	0.002	0.09	0.4	0.16	1.9	0.1	0.45	<1	2.3	<0.2	<0.005
020558	Rock			0.017	2	10	0.55	58	<0.001	2	0.16	0.003	0.09	<0.1	0.08	1.7	<0.1	0.38	<1	1.4	<0.2	<0.005
020559	Rock			0.098	1	16	0.34	67	<0.001	4	0.24	0.002	0.11	0.5	1.28	3.4	0.6	1.76	<1	13.6	0.3	0.050
020560	Rock			0.028	2	14	0.25	73	<0.001	3	0.20	0.002	0.09	0.1	0.39	2.3	0.3	0.83	<1	5.3	0.2	0.022
020561	Rock			0.014	2	12	0.49	71	<0.001	2	0.18	0.002	0.09	<0.1	0.18	2.2	0.1	0.69	<1	4.6	<0.2	0.007
020562	Rock			0.014	2	9	0.75	68	<0.001	4	0.19	0.004	0.10	<0.1	0.13	2.7	0.1	0.90	<1	3.9	<0.2	0.007
020563	Rock			0.070	2	12	0.15	73	<0.001	5	0.22	0.002	0.11	0.4	0.75	2.1	1.2	1.97	<1	9.6	0.4	0.028
020564	Rock			0.064	1	14	0.32	59	<0.001	5	0.21	0.002	0.12	0.3	0.96	3.6	0.8	2.22	<1	11.9	0.5	0.057
020565	Rock			0.032	2	12	0.34	53	<0.001	2	0.15	0.002	0.07	<0.1	0.33	2.2	0.3	1.01	<1	4.5	<0.2	0.021
020566	Rock			0.027	3	6	0.06	74	<0.001	4	0.33	0.004	0.11	0.1	0.92	2.1	0.9	1.19	<1	9.0	<0.2	0.040
020567	Rock			0.054	3	8	0.21	73	<0.001	4	0.43	0.008	0.11	<0.1	0.47	3.4	0.3	1.18	<1	12.0	<0.2	0.014
020568	Rock			0.038	2	10	0.18	59	<0.001	4	0.23	0.004	0.09	0.1	0.52	2.6	0.2	1.27	<1	8.1	<0.2	0.022
020569	Rock			0.037	2	14	0.19	62	<0.001	3	0.18	0.002	0.08	0.1	0.55	2.0	0.3	0.91	<1	6.4	0.4	0.020
020570	Rock			0.042	3	7	0.03	84	<0.001	3	0.37	0.013	0.11	<0.1	0.80	2.0	0.6	1.29	<1	8.9	0.6	0.024
020571	Rock			0.044	4	9	0.06	73	<0.001	3	0.39	0.015	0.10	<0.1	0.34	2.6	0.4	0.82	<1	10.1	<0.2	<0.005
020572	Rock			0.021	3	10	0.09	74	<0.001	3	0.26	0.005	0.10	<0.1	0.20	1.9	0.3	0.71	<1	5.3	0.4	<0.005
020573	Rock			0.024	3	13	0.18	69	<0.001	4	0.19	0.005	0.10	<0.1	0.13	1.9	0.2	0.80	<1	4.8	<0.2	<0.005
020574	Rock			0.028	3	12	0.07	70	0.002	3	0.19	0.003	0.10	0.2	0.46	2.0	0.7	0.47	<1	4.7	<0.2	0.012
020575	Rock			0.035	3	8	0.10	82	<0.001	4	0.29	0.014	0.12	<0.1	0.54	2.5	0.2	1.09	<1	7.1	<0.2	<0.005
020576	Rock			0.022	3	12	0.07	55	0.002	2	0.19	0.003	0.08	0.3	0.18	1.6	0.3	0.61	<1	2.5	0.2	<0.005
020577	Rock			0.024	3	10	0.04	64	<0.001	3	0.26	0.004	0.11	0.3	0.29	1.9	0.2	0.49	<1	3.4	<0.2	<0.005
020578	Rock			0.025	5	9	0.08	73	<0.001	4	0.28	0.004	0.13	0.2	0.26	2.2	0.2	1.06	<1	6.7	<0.2	0.014
020579	Rock			0.039	5	12	0.08	80	0.005	3	0.36	0.007	0.12	0.3	0.23	2.9	0.2	0.69	<1	4.7	<0.2	0.010
020580	Rock			0.026	4	10	0.03	59	<0.001	3	0.30	0.003	0.10	0.1	0.22	2.3	0.2	0.61	<1	5.2	<0.2	<0.005



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Project: CZ  
 Report Date: December 08, 2010

Page: 3 of 3 Part 1

CERTIFICATE OF ANALYSIS

SMI10000812.1

Method	Analyte	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		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	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%
MDL		0.01	0.1	0.1	0.1	1	0.1	0.1	0.1	0.01	0.5	0.1	0.5	0.1	1	0.1	0.1	0.1	0.1	2	0.01
020581	Rock	11.36	12.4	109.0	8.3	406	0.7	95.5	49.2	1988	2.74	32.3	1.6	<0.5	1.9	12	8.1	12.1	0.2	22	0.11
020582	Rock	7.84	12.4	63.2	6.7	363	0.8	83.0	24.2	2860	2.49	28.1	1.6	<0.5	1.6	27	12.0	9.9	0.2	32	0.07
020583	Rock	2.07	19.4	115.6	8.7	404	2.0	56.4	20.0	904	2.20	39.1	1.1	<0.5	1.0	15	2.5	15.3	0.2	33	0.21
020584	Rock	7.26	20.6	111.7	7.0	722	1.2	78.8	28.2	1119	2.66	47.1	1.7	<0.5	1.2	13	8.7	38.3	0.1	38	0.20
020585	Rock	6.62	11.5	136.0	5.4	591	0.4	124.5	49.4	3544	4.26	27.8	1.3	<0.5	1.8	13	10.2	4.8	0.2	23	0.09
020586	Rock	5.03	8.1	99.9	3.3	629	0.3	126.8	64.6	5972	3.21	15.4	0.5	<0.5	1.6	17	6.6	3.3	0.1	18	0.11
020587	Rock	8.43	12.6	111.2	6.4	567	0.6	157.5	40.0	3165	3.83	28.3	2.0	<0.5	2.5	36	14.5	9.5	0.1	32	0.18
020588	Rock	10.84	6.0	55.5	8.1	128	0.5	33.5	8.9	503	2.04	23.4	0.2	1.2	2.0	8	0.5	11.3	0.3	6	0.06
020589	Rock	10.19	8.3	66.4	7.1	258	0.4	39.3	8.8	130	3.57	56.5	0.4	<0.5	1.1	10	1.0	20.9	0.2	22	0.07
020590	Rock	14.21	6.5	54.2	3.9	124	0.5	13.2	3.0	52	1.70	41.7	0.2	0.6	0.4	9	0.5	13.2	0.1	14	0.06
020591	Rock	12.21	11.6	57.4	9.0	106	0.5	21.4	5.5	90	2.43	131.3	0.2	<0.5	0.6	10	0.7	20.5	0.2	22	0.15
020592	Rock	9.11	7.8	75.3	6.4	346	0.5	63.7	27.5	1053	4.82	68.6	0.5	<0.5	1.4	10	2.3	21.2	0.3	17	0.07
020593	Rock	9.03	20.7	62.9	8.0	270	1.0	47.7	15.3	316	4.06	34.2	1.5	<0.5	1.1	7	1.4	12.6	0.2	19	0.08
020594	Rock	9.29	16.3	144.7	10.5	278	0.5	61.8	11.5	464	2.91	67.7	1.0	2.3	2.7	17	4.6	18.6	0.3	15	0.05
020595	Rock	10.45	9.1	161.4	7.5	301	0.4	85.1	26.4	1687	4.71	44.3	0.7	0.8	2.6	10	6.1	17.8	0.2	14	0.04
020596	Rock	5.66	5.1	126.6	6.0	314	0.4	82.8	33.0	1629	2.93	35.3	0.6	<0.5	1.5	8	3.3	20.0	0.2	8	0.04



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 Report Date: December 08, 2010

Page: 3 of 3 Part 2

CERTIFICATE OF ANALYSIS

SMI10000812.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	G6
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t	
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	
020581	Rock	0.055	4	14	0.07	98	0.007	3	0.36	0.006	0.11	0.4	0.74	2.9	1.1	0.95	<1	8.2	0.4	0.019
020582	Rock	0.056	6	15	0.06	101	0.015	3	0.34	0.010	0.12	0.5	0.95	2.2	1.1	0.12	1	5.8	<0.2	0.020
020583	Rock	0.066	3	14	0.03	74	0.002	3	0.26	0.002	0.11	0.3	1.38	2.5	0.7	0.88	<1	14.0	0.3	0.023
020584	Rock	0.082	3	14	0.04	73	0.003	3	0.27	0.003	0.10	0.2	1.81	2.8	1.3	1.52	<1	14.7	0.3	0.052
020585	Rock	0.052	5	15	0.08	98	0.013	3	0.51	0.010	0.12	0.1	0.58	3.8	0.5	0.47	1	8.3	<0.2	0.009
020586	Rock	0.045	4	10	0.06	108	0.005	3	0.45	0.011	0.12	<0.1	0.76	3.2	0.5	0.59	1	9.6	<0.2	<0.005
020587	Rock	0.085	7	22	0.10	102	0.030	2	0.56	0.012	0.11	0.3	0.58	3.9	0.7	0.12	2	3.7	<0.2	0.017
020588	Rock	0.015	3	11	0.03	77	<0.001	3	0.21	0.003	0.12	<0.1	0.31	2.6	0.2	0.89	<1	5.5	<0.2	0.016
020589	Rock	0.011	1	10	0.05	54	<0.001	5	0.18	0.002	0.10	0.2	0.57	4.2	0.1	0.92	<1	5.3	<0.2	0.044
020590	Rock	0.005	<1	9	0.02	46	<0.001	2	0.13	0.002	0.07	0.2	0.72	1.6	0.2	0.40	<1	5.5	<0.2	0.062
020591	Rock	0.006	<1	9	0.07	45	<0.001	4	0.17	0.002	0.09	0.2	0.94	2.8	0.3	0.85	<1	7.6	<0.2	0.081
020592	Rock	0.012	3	9	0.06	83	0.002	4	0.25	0.004	0.11	0.2	0.61	4.7	0.3	0.80	<1	4.8	<0.2	0.042
020593	Rock	0.037	4	10	0.03	85	0.003	3	0.33	0.004	0.11	0.5	1.36	2.5	0.9	1.51	<1	10.8	<0.2	0.019
020594	Rock	0.027	5	7	0.02	96	<0.001	4	0.32	0.002	0.11	0.2	0.55	5.4	0.2	<0.05	<1	2.6	<0.2	0.046
020595	Rock	0.026	4	7	0.02	93	<0.001	4	0.31	0.003	0.12	0.2	0.37	5.2	0.3	<0.05	<1	2.0	<0.2	0.009
020596	Rock	0.010	3	8	0.02	83	<0.001	5	0.27	0.002	0.11	0.2	0.29	4.8	0.3	0.26	<1	2.9	<0.2	0.006



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Project: CZ  
 Report Date: December 08, 2010

Page: 1 of 2 Part 1

QUALITY CONTROL REPORT

SMI10000812.1

Method	WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
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																					
020577	Rock	6.86	4.3	59.2	4.5	224	0.2	32.7	6.9	106	1.90	7.9	0.3	<0.5	1.8	4	1.1	1.7	0.2	12	0.04
REP 020577	QC		4.5	59.4	4.4	223	0.2	33.3	7.0	109	1.94	8.0	0.4	<0.5	1.9	4	0.9	1.7	0.2	12	0.05
Core Reject Duplicates																					
020567	Rock	8.71	5.6	134.4	2.8	395	0.5	21.0	5.9	242	2.47	41.2	0.5	1.0	1.1	11	8.2	7.1	0.1	15	0.23
DUP 020567	QC		5.6	140.0	3.0	408	0.6	22.6	6.0	242	2.62	43.6	0.5	0.6	1.1	11	7.8	7.1	0.1	16	0.23
Reference Materials																					
STD DS7	Standard		21.1	110.2	72.8	399	1.0	55.9	9.5	636	2.39	50.7	5.0	67.1	4.9	74	5.9	5.8	4.6	81	0.97
STD DS7	Standard		20.8	104.7	71.1	379	1.0	51.2	8.3	568	2.22	51.7	5.2	57.8	4.7	77	6.5	5.7	5.1	80	0.93
STD DS8	Standard		13.7	113.4	133.7	315	1.7	37.8	7.8	626	2.42	25.7	3.0	107.5	7.2	64	2.4	5.5	6.8	40	0.71
STD DS8	Standard		13.3	114.8	129.5	327	1.7	37.7	8.0	614	2.49	98.5	3.0	119.5	7.4	68	2.6	6.0	6.8	43	0.72
STD OXH66	Standard																				
STD OXH66	Standard																				
STD OXH66	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD OXK79	Standard																				
STD OXH66 Expected																					
STD OXK79 Expected																					
STD DS7 Expected			20.5	109	70.6	411	0.9	56	9.7	627	2.39	50	4.9	70	4.4	72	6.4	4.6	4.5	84	0.93
STD DS8 Expected			12.87	113	126	313	1.71	40.6	7.9	622	2.54	27.73	2.89	99	7.91	70.74	2.35	4.89	6.67	41	0.76
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank		<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		<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

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Project: CZ

Report Date: December 08, 2010

Page: 1 of 2 Part 2

# QUALITY CONTROL REPORT

SMI10000812.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	G6	
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au		
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t		
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		
Pulp Duplicates																					
020577	Rock	0.024	3	10	0.04	64	<0.001	3	0.26	0.004	0.11	0.3	0.29	1.9	0.2	0.49	<1	3.4	<0.2	<0.005	
REP 020577	QC	0.024	3	10	0.04	65	<0.001	3	0.26	0.005	0.11	0.3	0.29	1.9	0.3	0.50	<1	3.8	<0.2		
Core Reject Duplicates																					
020567	Rock	0.054	3	8	0.21	73	<0.001	4	0.43	0.008	0.11	<0.1	0.47	3.4	0.3	1.18	<1	12.0	<0.2	0.014	
DUP 020567	QC	0.056	3	9	0.21	77	<0.001	4	0.45	0.008	0.12	0.1	0.46	3.5	0.3	1.29	<1	13.4	<0.2	0.015	
Reference Materials																					
STD DS7	Standard	0.076	13	200	1.07	399	0.129	41	1.05	0.095	0.46	3.7	0.23	2.5	4.0	0.20	5	3.5	2.1		
STD DS7	Standard	0.077	13	184	1.01	382	0.125	39	1.01	0.095	0.47	3.5	0.24	2.2	4.5	0.17	5	3.6	1.2		
STD DS8	Standard	0.079	15	123	0.62	272	0.120	3	0.92	0.084	0.41	3.0	0.20	2.1	5.3	0.16	5	5.3	4.8		
STD DS8	Standard	0.080	16	118	0.61	265	0.117	5	0.96	0.095	0.43	3.2	0.21	2.0	5.5	0.16	5	5.8	4.7		
STD OXH66	Standard																			1.218	
STD OXH66	Standard																				1.294
STD OXH66	Standard																				1.180
STD OXK79	Standard																				3.521
STD OXK79	Standard																				3.696
STD OXK79	Standard																				3.271
STD OXH66 Expected																					1.285
STD OXK79 Expected																					3.532
STD DS7 Expected		0.08	13	192	1.05	410	0.124	39	1.0195	0.089	0.44	3.4	0.21	2.5	4.2	0.19	5	3.5	1.18		
STD DS8 Expected		0.08	17.2	117.9	0.62	279	0.13	12	0.96	0.09	0.4	3.18	0.192	2.77	5.58	0.17	5	5.9	5.15		
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	<0.001	<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	<0.001	<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		

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Project: CZ

Report Date: December 08, 2010

Page: 2 of 2 Part 1

QUALITY CONTROL REPORT

SMI10000812.1

		WGHT	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	
		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	0.1	2	0.01
Prep Wash																						
G1	Prep Blank		0.2	8.4	3.1	47	<0.1	3.4	4.1	569	1.93	50.4	1.8	1.2	5.2	67	<0.1	0.4	<0.1	37	0.49	
G1	Prep Blank		0.1	11.1	2.9	47	<0.1	3.2	4.2	558	1.93	4.6	1.7	1.4	5.4	74	<0.1	0.1	<0.1	37	0.50	



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Project: CZ

Report Date: December 08, 2010

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## QUALITY CONTROL REPORT

SMI10000812.1

		1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	G6
		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te	Au
		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	gm/t
		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
Prep Wash																				
G1	Prep Blank	0.083	11	11	0.55	192	0.119	1	0.98	0.071	0.50	<0.1	<0.01	1.7	0.3	<0.05	5	<0.5	<0.2	<0.005
G1	Prep Blank	0.082	11	11	0.56	207	0.124	2	1.00	0.074	0.49	<0.1	0.01	1.8	0.3	<0.05	5	<0.5	<0.2	<0.005





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Submitted By: Rupert Seel

Receiving Lab: Canada-Vancouver

Received: October 14, 2010

Report Date: November 01, 2010

Page: 1 of 3

## CERTIFICATE OF ANALYSIS

VAN10005440.1

### CLIENT JOB INFORMATION

Project: CZ  
Shipment ID:  
P.O. Number  
Number of Samples: 37

### SAMPLE DISPOSAL

DISP-PLP Dispose of Pulp After 90 days  
DISP-RJT-SOIL Immediate Disposal of Soil Reject

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

Invoice To: Porpoise Bay Minerals Ltd.  
PO Box 1974  
Sechelt BC V0N 3A0  
Canada

CC:

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SS80	37	Dry at 60C sieve 100g to -80 mesh			VAN
Dry at 60C	37	Dry at 60C			VAN
1DX3	37	1:1:1 Aqua Regia digestion ICP-MS analysis	30	Completed	VAN

### ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. \*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: CZ  
 Report Date: November 01, 2010

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CERTIFICATE OF ANALYSIS

VAN10005440.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL		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	2	0.01	0.001	
CZ 200	Soil	0.7	14.8	4.1	60	<0.1	104.5	15.8	880	2.14	2.7	0.3	2.3	1.4	23	0.3	0.9	0.1	44	0.35	0.030
CZ 201	Soil	7.3	139.3	14.0	160	0.2	168.6	32.3	1141	4.14	9.5	0.7	3.3	3.1	61	1.0	2.8	0.4	53	0.91	0.120
CZ 202	Soil	0.8	12.5	3.3	70	<0.1	76.0	9.9	451	2.29	3.4	0.3	1.6	1.4	16	0.2	0.6	<0.1	46	0.18	0.075
CZ 203	Soil	2.1	29.8	4.2	73	<0.1	147.0	15.6	330	3.11	10.3	0.3	4.0	1.9	15	<0.1	1.4	0.1	59	0.14	0.052
CZ 204	Soil	3.7	36.5	5.1	105	<0.1	267.8	22.9	571	4.03	16.6	0.3	22.6	1.9	29	0.2	2.6	0.2	58	0.28	0.122
CZ 205	Soil	1.3	19.0	4.0	87	<0.1	149.4	13.5	330	3.06	6.2	0.3	17.3	1.9	23	0.2	1.1	0.1	54	0.21	0.089
CZ 206	Soil	0.9	21.7	3.4	66	<0.1	120.4	12.1	284	2.94	4.9	0.3	3.3	1.9	26	<0.1	0.8	<0.1	57	0.24	0.058
CZ 207	Soil	3.4	41.2	4.2	77	0.1	102.1	15.8	298	3.42	15.5	0.4	8.3	1.9	20	0.1	1.3	0.1	62	0.20	0.065
CZ 208	Soil	1.1	25.7	7.7	49	<0.1	41.6	10.4	448	2.66	6.4	0.5	3.4	2.5	36	<0.1	0.7	<0.1	54	0.37	0.080
CZ 209	Soil	0.7	12.8	3.5	48	<0.1	35.4	7.4	242	2.35	3.3	0.3	<0.5	1.7	17	<0.1	0.5	<0.1	54	0.17	0.042
CZ 210	Soil	2.3	36.7	5.5	100	<0.1	72.7	14.0	380	3.70	20.7	0.4	31.8	1.9	27	0.2	1.3	0.1	60	0.24	0.072
CZ 211	Soil	1.7	25.5	4.0	96	<0.1	170.9	16.7	323	3.83	9.4	0.2	3.4	1.5	30	0.2	1.8	0.1	57	0.21	0.046
CZ 212	Soil	0.7	20.9	4.0	60	<0.1	179.2	15.3	348	3.30	5.1	0.4	1.9	2.1	24	<0.1	1.1	<0.1	63	0.24	0.047
CZ 213	Soil	4.0	47.7	8.0	122	0.2	409.6	30.5	654	4.52	11.5	0.4	7.0	3.1	34	0.2	3.0	0.2	67	0.38	0.049
CZ 214	Soil	3.7	89.6	8.1	127	0.2	291.8	28.9	873	4.21	21.5	0.4	7.7	2.4	36	0.3	5.5	0.2	63	0.38	0.056
CZ 215	Soil	1.0	45.2	5.1	73	0.2	119.7	18.3	502	3.62	8.0	0.4	4.8	2.6	26	0.2	1.0	0.1	66	0.35	0.057
CZ 216	Soil	0.8	42.2	4.6	207	<0.1	90.0	23.3	1332	4.09	5.8	0.3	1.1	1.7	51	0.9	0.4	<0.1	66	0.79	0.174
CZ 217	Soil	0.8	21.9	4.3	107	<0.1	138.2	14.5	572	3.04	4.4	0.3	1.5	2.3	32	0.3	0.7	<0.1	66	0.31	0.074
CZ 218	Soil	8.3	140.1	15.3	330	0.8	120.7	29.2	1168	5.39	16.6	0.6	7.8	3.7	22	1.7	5.8	0.3	80	0.29	0.056
CZ 219	Soil	3.1	130.0	12.7	178	0.1	83.9	17.9	1292	3.23	17.5	0.4	3.7	3.1	44	0.8	2.8	0.5	36	0.33	0.085
CZ 220	Soil	0.5	7.9	3.6	79	<0.1	22.9	6.0	206	2.05	1.5	0.3	<0.5	1.8	17	0.1	0.2	<0.1	45	0.19	0.196
CZ 221	Soil	0.6	5.6	4.1	99	<0.1	16.0	5.0	430	1.60	0.9	0.2	1.9	1.5	18	0.1	0.2	<0.1	35	0.17	0.092
CZ 222	Soil	0.5	10.7	4.0	56	<0.1	20.9	6.5	321	2.08	2.0	0.5	1.1	1.9	22	0.1	0.2	<0.1	49	0.23	0.056
CZ 223	Soil	0.7	13.0	4.6	80	<0.1	45.7	8.7	460	2.17	2.4	0.3	7.7	2.1	22	0.2	0.3	0.1	45	0.26	0.062
CZ 224	Soil	1.5	23.9	5.6	173	0.2	38.9	10.5	553	3.16	8.0	0.4	32.6	1.8	28	0.4	0.9	<0.1	60	0.27	0.202
CZ 225	Soil	0.7	17.1	3.8	47	<0.1	37.0	9.0	259	2.61	3.5	0.4	1.1	2.3	23	<0.1	0.5	<0.1	64	0.23	0.024
CZ 226	Soil	0.5	14.0	4.4	38	<0.1	28.4	8.7	477	2.40	1.5	0.5	3.2	2.0	26	0.1	0.4	<0.1	44	0.31	0.023
CZ 227	Soil	4.0	74.6	8.6	96	0.4	1023	58.9	1001	6.12	23.4	0.3	10.0	2.2	48	0.3	13.9	0.2	70	1.49	0.029
CZ 228	Soil	2.2	11.8	5.7	174	0.1	35.0	11.3	887	2.66	4.5	0.2	4.4	1.2	14	0.5	0.5	0.1	60	0.22	0.095
CZ 229	Soil	3.7	47.1	5.1	130	0.3	95.9	18.8	676	3.79	12.5	0.6	5.9	1.4	29	1.1	1.4	<0.1	76	0.47	0.074

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Project: CZ  
 Report Date: November 01, 2010

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CERTIFICATE OF ANALYSIS

VAN10005440.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.01	0.01	0.01	0.05	1	0.5	0.2	
CZ 200	Soil	8	150	0.73	168	0.068	3	0.82	0.014	0.08	0.2	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2
CZ 201	Soil	31	113	0.97	367	0.015	4	1.27	0.007	0.21	0.1	0.03	5.7	0.1	<0.05	4	0.7	<0.2
CZ 202	Soil	7	85	0.46	132	0.070	2	0.85	0.015	0.09	<0.1	0.02	2.1	<0.1	<0.05	3	<0.5	<0.2
CZ 203	Soil	10	142	0.71	80	0.063	2	1.06	0.012	0.10	<0.1	0.02	3.5	<0.1	<0.05	4	<0.5	<0.2
CZ 204	Soil	14	181	0.71	182	0.031	3	1.13	0.008	0.18	<0.1	0.06	4.5	<0.1	<0.05	4	<0.5	<0.2
CZ 205	Soil	8	111	0.50	102	0.062	2	0.99	0.010	0.11	<0.1	0.04	3.3	<0.1	<0.05	3	<0.5	<0.2
CZ 206	Soil	7	92	0.43	100	0.087	2	0.88	0.014	0.12	<0.1	0.04	3.8	<0.1	<0.05	3	<0.5	<0.2
CZ 207	Soil	9	69	0.47	65	0.063	1	0.94	0.013	0.10	0.1	0.03	3.8	<0.1	<0.05	3	0.5	<0.2
CZ 208	Soil	11	34	0.51	85	0.081	<1	0.71	0.024	0.08	<0.1	0.03	3.8	<0.1	<0.05	2	<0.5	<0.2
CZ 209	Soil	7	34	0.30	58	0.097	<1	0.81	0.014	0.08	<0.1	0.02	2.3	<0.1	<0.05	3	<0.5	<0.2
CZ 210	Soil	13	55	0.32	127	0.052	3	1.02	0.009	0.21	0.1	0.02	5.1	<0.1	<0.05	3	<0.5	<0.2
CZ 211	Soil	12	166	0.49	154	0.034	4	1.12	0.009	0.21	0.1	0.02	5.7	<0.1	<0.05	3	<0.5	<0.2
CZ 212	Soil	10	146	0.51	103	0.090	1	1.17	0.015	0.16	0.1	0.04	5.5	<0.1	<0.05	4	<0.5	<0.2
CZ 213	Soil	21	306	0.84	178	0.034	4	1.56	0.010	0.32	0.1	0.06	7.6	0.2	<0.05	5	0.8	<0.2
CZ 214	Soil	17	201	0.93	244	0.014	4	1.37	0.006	0.27	<0.1	0.10	8.0	0.1	<0.05	4	1.0	<0.2
CZ 215	Soil	16	123	1.18	105	0.082	4	1.74	0.016	0.23	<0.1	0.03	7.6	<0.1	<0.05	5	0.8	<0.2
CZ 216	Soil	13	87	1.01	401	0.107	4	2.09	0.011	0.22	<0.1	0.03	7.9	<0.1	<0.05	7	0.6	<0.2
CZ 217	Soil	10	136	1.17	171	0.094	2	1.52	0.016	0.14	0.1	<0.01	4.0	<0.1	<0.05	5	<0.5	<0.2
CZ 218	Soil	24	75	0.73	161	0.021	2	1.58	0.006	0.23	0.1	0.10	7.8	0.1	<0.05	4	3.1	<0.2
CZ 219	Soil	17	49	0.23	299	0.004	4	0.88	0.004	0.21	0.1	0.02	5.7	<0.1	<0.05	2	1.1	<0.2
CZ 220	Soil	7	26	0.24	99	0.072	<1	1.13	0.011	0.05	<0.1	0.02	1.9	<0.1	<0.05	4	<0.5	<0.2
CZ 221	Soil	6	22	0.19	141	0.077	<1	0.90	0.012	0.06	<0.1	0.01	1.6	<0.1	<0.05	3	<0.5	<0.2
CZ 222	Soil	9	29	0.26	94	0.098	<1	0.93	0.019	0.08	<0.1	0.01	2.4	<0.1	<0.05	3	<0.5	<0.2
CZ 223	Soil	8	46	0.35	121	0.099	1	1.09	0.016	0.15	<0.1	0.01	2.8	<0.1	<0.05	4	<0.5	<0.2
CZ 224	Soil	9	42	0.39	168	0.070	1	1.55	0.010	0.10	<0.1	0.04	4.2	<0.1	<0.05	4	<0.5	0.5
CZ 225	Soil	9	40	0.43	48	0.110	<1	0.87	0.015	0.12	<0.1	0.03	3.3	<0.1	<0.05	3	<0.5	<0.2
CZ 226	Soil	10	36	0.33	73	0.099	<1	1.16	0.021	0.11	<0.1	0.02	3.6	<0.1	<0.05	3	<0.5	<0.2
CZ 227	Soil	11	578	1.17	120	0.009	3	1.37	0.004	0.26	0.1	0.32	12.0	0.1	<0.05	4	1.0	<0.2
CZ 228	Soil	6	54	0.35	158	0.107	2	1.28	0.009	0.05	<0.1	0.03	2.8	<0.1	<0.05	5	<0.5	<0.2
CZ 229	Soil	7	102	0.83	158	0.069	3	1.82	0.011	0.09	<0.1	0.06	6.5	<0.1	<0.05	5	<0.5	<0.2

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Project: CZ  
 Report Date: November 01, 2010

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CERTIFICATE OF ANALYSIS

VAN10005440.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	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	0.001	
CZ 230	Soil	2.4	58.8	5.8	155	<0.1	94.3	33.6	1059	4.23	8.1	0.5	1.7	2.1	26	0.6	0.9	0.1	88	0.37	0.112
CZ 231	Soil	3.7	69.5	5.0	128	0.1	166.2	29.4	967	5.89	43.6	0.4	1.3	1.1	34	0.4	1.9	0.1	105	0.55	0.127
CZ 232	Soil	2.1	27.5	4.3	82	0.1	41.4	12.7	463	2.84	5.7	0.4	2.6	2.0	28	0.2	0.6	<0.1	65	0.33	0.122
CZ 233	Soil	2.2	46.1	5.6	83	0.1	53.8	16.7	468	4.07	8.9	0.4	4.7	2.0	26	0.3	1.8	0.1	75	0.28	0.067
CZ 234	Soil	1.2	17.2	5.5	87	0.1	28.3	9.5	478	2.61	4.2	0.3	1.1	1.8	20	0.3	0.8	0.1	58	0.22	0.072
CZ 235	Soil	1.1	15.3	5.2	83	0.2	37.4	9.9	366	2.63	4.8	0.4	1.7	2.1	25	0.2	0.5	0.1	62	0.28	0.118
CZ 236	Soil	1.5	20.0	7.9	83	0.1	16.3	7.6	822	2.13	6.7	0.4	1.4	2.0	19	0.4	2.0	0.2	50	0.19	0.054



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CERTIFICATE OF ANALYSIS

VAN10005440.1

Method	Analyte	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	
		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		1	1	0.01	1	0.001	1	0.01	0.001	0.01	0.1	0.01	0.1	0.05	1	0.5	0.2	
CZ 230	Soil	10	87	0.61	218	0.125	2	2.16	0.012	0.09	0.1	0.04	6.3	0.1	<0.05	6	<0.5	<0.2
CZ 231	Soil	7	182	0.96	228	0.037	5	2.14	0.010	0.12	0.2	0.05	12.4	0.1	<0.05	6	0.6	<0.2
CZ 232	Soil	7	60	0.40	151	0.103	1	1.25	0.012	0.07	<0.1	0.01	3.7	<0.1	<0.05	4	<0.5	<0.2
CZ 233	Soil	12	59	0.58	120	0.058	1	1.41	0.009	0.09	<0.1	0.04	5.3	<0.1	<0.05	5	<0.5	0.3
CZ 234	Soil	9	39	0.30	124	0.084	1	1.08	0.009	0.07	<0.1	<0.01	2.5	<0.1	<0.05	4	0.5	<0.2
CZ 235	Soil	8	43	0.39	106	0.122	<1	1.42	0.014	0.10	<0.1	0.02	2.5	<0.1	<0.05	5	<0.5	<0.2
CZ 236	Soil	9	25	0.15	98	0.081	1	0.57	0.007	0.07	<0.1	0.02	1.7	<0.1	<0.05	3	<0.5	<0.2



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## QUALITY CONTROL REPORT

VAN10005440.1

Method	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	%	
MDL	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	0.001	
Pulp Duplicates																					
CZ 217	Soil	0.8	21.9	4.3	107	<0.1	138.2	14.5	572	3.04	4.4	0.3	1.5	2.3	32	0.3	0.7	<0.1	66	0.31	0.074
REP CZ 217	QC	0.9	20.8	4.3	102	<0.1	128.5	14.6	570	2.94	4.4	0.3	2.0	2.0	31	0.3	0.7	<0.1	65	0.30	0.075
CZ 226	Soil	0.5	14.0	4.4	38	<0.1	28.4	8.7	477	2.40	1.5	0.5	3.2	2.0	26	0.1	0.4	<0.1	44	0.31	0.023
REP CZ 226	QC	0.5	13.5	4.7	39	<0.1	28.7	8.6	480	2.42	1.6	0.6	2.8	2.1	26	<0.1	0.3	<0.1	46	0.32	0.024
Reference Materials																					
STD DS7	Standard	20.7	112.1	72.2	409	1.0	57.4	9.2	626	2.42	52.0	5.0	68.7	4.8	77	6.2	6.3	4.8	85	0.98	0.080
STD DS7	Standard	20.6	112.5	69.2	423	0.9	56.9	9.9	671	2.49	52.7	4.8	70.0	4.5	73	6.4	6.5	4.7	85	0.95	0.080
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	0.08
BLK	Blank	<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	<0.001
BLK	Blank	<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	<0.001



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## QUALITY CONTROL REPORT

VAN10005440.1

Method		1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30	1DX30
Analyte		La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Hg	Sc	Tl	S	Ga	Se	Te
Unit		ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm
MDL		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
Pulp Duplicates																		
CZ 217	Soil	10	136	1.17	171	0.094	2	1.52	0.016	0.14	0.1	<0.01	4.0	<0.1	<0.05	5	<0.5	<0.2
REP CZ 217	QC	9	135	1.15	172	0.093	3	1.48	0.016	0.14	<0.1	0.02	3.9	<0.1	<0.05	5	<0.5	<0.2
CZ 226	Soil	10	36	0.33	73	0.099	<1	1.16	0.021	0.11	<0.1	0.02	3.6	<0.1	<0.05	3	<0.5	<0.2
REP CZ 226	QC	9	37	0.34	73	0.100	1	1.19	0.019	0.11	<0.1	0.02	3.7	<0.1	<0.05	3	<0.5	<0.2
Reference Materials																		
STD DS7	Standard	14	208	1.05	407	0.131	39	1.05	0.099	0.47	3.7	0.23	2.7	4.0	0.16	5	2.9	0.3
STD DS7	Standard	13	204	1.11	423	0.126	41	1.10	0.106	0.50	3.8	0.22	2.5	4.3	0.22	5	3.5	1.6
STD DS7 Expected		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
BLK	Blank	<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	<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