# Casino Project 2010 Mineral Resource Update



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Prepared for: Western Copper Corporation 2050 – 1111 West Georgia St. Vancouver, BC, V6E 4M3

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#### 1 SUMMARY

#### **1.1** AUTHOR'S RECOMMENDATIONS

Drilling carried out since 2008 has modified the shape and distribution of the key mineralization types and added significant additional mineralization, which have impacted the economics of the mineralized body. To this end Western Copper should update its previous pre feasibility study to incorporate the new drilling and other data acquired since the previous study was completed.

Additional metallurgical, environmental and geotechnical studies are also required to better understand the economic viability of the deposit. A power source is a key aspect of any development of the Casino deposit and Western Copper should continue to monitor developments in the Yukon, northern British Columbia and Alaska to be in a position to participate in infrastructure development that might be beneficial to the advancement of the Casino project.

The Casino mineralization remains open to the northwest and locally along the northeast and southern boundary. These areas are priority for drilling as they are most likely to impact the economics of the Casino mineralization. Of lower priority is testing of the still open deep hypogene mineralization. The amount of drilling required to close the deposit would range between 5,000 and 10,000 metres depending on whether or not the testing of deep hypogene mineralization is undertaken.

The estimated cost of the recommended work is contingent on whether testing for additional deep hypogene mineralization is undertaken and ranges from \$2.5 million to \$4.0 million.

#### **1.2** AUTHOR'S CONCLUSIONS

Drilling and reinterpretation of the historical drill data since the completion of the previous resource estimation has increase the resource base and significantly changed the understanding of the Casino mineralized body. The current resource estimation for Casino was based on 305 drill holes, 34 of which were completed in 2009 and an additional 56 completed in 2010. In addition Western Copper geologists re-interpreted the geologic model during the 2010 field season, relogging older Pacific Sentinel drill holes. Finally the collar coordinates previously reported in Mine Grid Units were converted by Yukon Engineering Services to NAD83 UTM coordinates.

Reinterpretation of the historical and recently acquired drill data revised the geological model from a series of diatreme-like breccia bodies to a more typical porphyry copper deposit consisting of a central porphyritic intrusion in to older metamorphic and granitoid intrusive. Mineralization is centred on the brecciated and fractured contacts of the porphyritic intrusion and surrounding host rocks. The zone of contact brecciation is best developed at the eastern end of the elliptical porphyry intrusion and most weakly developed at the western end. A late stage, non mineralized diatreme – type breccia present at the south western end of the porphyry intrusion removed the mineralized breccia contact in this area. As a result of these observations, the

breccia-host rock contact was determined to be a soft boundary rather than a hard boundary while the late stage diatreme breccia was treated as a separate domain with a hard boundary. Re interpretation of the geology determined the off sets along some of the key faults with respect to mineralization is much less than previously supposed and so was not treated as a hard boundary in the current calculation. As well as the change to the basic geological model, the boundaries of the supergene zones were better defined by more stringent criteria based on soluble extractable copper.

Within the Leached Cap and oxide gold zone the resource is reported at a 0.4 g/t gold cutoff and are as listed in the table below:

	Table 1-1: Leached Cap / Oxide Gold Zone						
Class	Cutoff Au (g/t)	Tonnes (million)	Au (g/t)	Cu (%)	Weak Acid Sol. Cu (%)	Mo (%)	Ag (g/t)
Measured	0.40 g/t	23.0	0.58	0.06	0.015	0.025	3.2
Indicated	0.40 g/t	9.0	0.48	0.04	0.012	0.017	2.9
Inferred	0.40 g/t	1.1	0.44	0.01	0.004	0.006	2.1
Total Measured + Indicated		32.0	0.56	0.05	0.015	0.023	3.1

Within the Supergene and Hypogene domains the resource is reported using copper equivalent cutoffs. The CuEq is determined using the following metal prices: Cu - US2.00 / lb, Au - US875.00 / oz, Ag - US11.25 / oz and Mo - US11.25 / lb as follows:

CuEq % = (Cu %) + (Au g/t x 28.13/44.1) + (Mo % x248.06/	44.1) + (Ag g/t x 0.36/44.1)
Cull q / 0 = (Cu / 0) + (Iu g / v X 20.15/ + 1.1) + (Iu 0 / 0 X 210.00)	(11) (115 5/ ( X 0.30/ 11.1)

	Table 1-2: Combined Supergene and Hypogene Zones						
Class	Cutoff CuEQ (%)	Tonnes (million)	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	CuEQ (%)
M+I	0.20 %	1,137.5	0.19	0.23	0.021	1.65	0.47
M+I	0.25 %	1,056.9	0.20	0.23	0.022	1.71	0.49
M+I	0.30 %	945.6	0.21	0.25	0.024	1.77	0.51
Inferred	0.20 %	2,128.1	0.13	0.16	0.017	1.39	0.34
Inferred	0.25 %	1,696.4	0.14	0.16	0.019	1.37	0.37
Inferred	0.30 %	1,249.1	0.16	0.18	0.022	1.44	0.40

#### **1.3 PROPERTY LOCATION**

The Casino porphyry copper-gold-molybdenum deposit is located at latitude  $62^{\circ}$  44'N and longitude 138° 50'W (NTS map sheet 115J/10), in west central Yukon, in the north-westerly trending Dawson Range mountains, 300 km northwest of the territorial capital of Whitehorse.

The project is located on Crown land administered by the Yukon Government and is within the Selkirk First Nation traditional territory and the Tr'ondek Hwechin First Nation traditional territory lies to the north.

#### **1.4 PROPERTY DESCRIPTION**

The Dawson Range forms a series of well-rounded ridges and hills that reach a maximum elevation of 1,675 m above mean sea level (ASL). The ridges rise above the Yukon Plateau, a peneplain at approximately 1200 m ASL, which is deeply incised by the mature drainage of the Yukon River watershed.

The characteristic terrain consists of rounded, rolling topography with moderate to deeply incised valleys. Major drainage channels extend below 1,000 m elevation. Most of the project lies between the 650 m elevation at Dip Creek and an elevation of 1,400 m at Patton Hill. The most notable local physical feature is the Yukon River, which flows to the west about 16 km north of the project site.

The mean annual temperature for the area is approximately  $-5.5^{\circ}$ C with a summer mean of  $10.5^{\circ}$ C and a winter mean of  $-23^{\circ}$ C. Mean annual precipitation ranges between 300-450 mm. Summers are warm, with very long, cold winters.

#### 1.5 MINERAL TENURE, ROYALTIES AND AGREEMENTS

The Casino property presently consists of 705 full and partial active quartz mineral claims in good standing. The total area covered is 13,124 ha. CRS Copper Resources Corp. ("CRS"), a 100% subsidiary of Western Copper Corporation ("WCC"), is the registered owner of all claims. The claims covering the property are shown on the map in Figure 1.3-2.

The historical claims held by prior owners of the project and transferred as part of WCC's plan of arrangement with Lumina Resources Corp. ("Lumina") consist of the Casino "A", "B" and "JOE" claims.

From 2007 to 2010 Western Copper significantly increased size of the property by adding following claim blocks:

- 188 VIK mineral claims, covering an area of 3,416 ha, were staked in June 2007.
- 94 CC claims, covering an area of 1,933 ha, and the 63 BRIT claims, covering an area of 1,223 ha, were staked in late June 2008
- 136 AXS mineral claims, covering an area of 2,845 ha, were staked in October 2009
- 63 AXS mineral claims, covering an area of 1,318 ha, were staked in May 2010

Certain portions of the Casino property remain subject to royalty agreements in favour of Strategic Metals Ltd. ("Strategic Metals") and to an option agreement with Wildrose Resources Ltd. ("Wildrose").

The royalties and agreements are as follows:

- a 5% Net Profit Royalty on the Casino A, B and JOE claims in favour of Strategic Metals.
- The Casino B claims are subject to an agreement between CRS and Wildrose whereby Wildrose agrees to maintain the Casino A and B claims in good standing until May 2, 2020. In exchange, Wildrose has the right to acquire the Casino B claims for \$1 each, payable on May 2, 2020 subject to CRS reserving a 10% Net Profit Interest on the Casino B claims.
- Wildrose may acquire the Casino B claims at any time prior to May 2, 2020 by making a CND\$200,000 payment to CRS. The payment will relieve Wildrose of any further maintenance obligations respecting the Casino A claims.
- CRS will pay CND\$1,000,000 Production Payment to Great Basin within 30 days of a production decision.

#### 1.6 GEOLOGY AND MINERALIZATION

The geology of the Casino deposit is typical of many porphyry copper deposits. The deposit is centred on an Upper Cretaceous-age, East-West elongated tonalite porphyry stock that intrudes Mesosoic granitiods of the Dawson Range Batholith and Paleozoic schists and gneisses of the Yukon Crystalline Complex. Intrusion of the tonalite stock into the older rocks caused brecciation of the both the intrusive and the surrounding country rocks along the northern, southern and eastern contact of the stock. Brecciation is best developed in the eastern end of the stock where the breccia can be up to 400 metres wide in plan view. To the west, the along the north and south contact, the breccias narrow gradually to less than 100 metres. Little drilling has been done at the western end of the tonalite stock and it is not known if the breccia is present along this contact. Intruded into the tonalite stock and surrounding granitiods and metamorphic rocks are younger, non mineralized dykes of similar composition to the older tonalite stock and a late diatreme, which forms both pipe-like body in the west and a dyke-like body in the east. The overall dimensions of the intrusive complex are approximately 1.8 by 1.0 kilometres.

Primary copper, gold and molybdenum mineralization was deposited from hydrothermal fluids that exploited the contact breccias and fractured wall rocks. Better grades occur in the breccias and gradually decrease outwards away from the contact zone both towards the centre of the stock and outward into the granitoids and schists. A general zoning of the primary sulphides occurs with chalcopyrite and molybdenite occurring in the tonalite and breccias grading outward in to pyrite dominated mineralization in the surrounding granitoids and schists. Alteration accompanying the sulphide mineralization consists of an earlier phase of potassic alteration and a later overprinting of phyllic alteration. The potassic alteration typically has secondary biotite, K-feldspar as pervasive replacement and veins, stockworks of quartz and anhydrite veinlets. Phyllic alteration consists of sericite and silicification in the form of replacements and veins.

The Casino copper deposit is unique amongst the known Canadian porphyry copper deposits in having a well developed secondary enriched blanket of copper mineralization similar to those found in deposits in Chile and the Southwest United States such as Escondida and Morenci. Unlike other porphyry deposits in Canada, the Casino deposit's enriched copper blanket was not

eroded by the glacial action of ice sheets during the last ice age as this part of Yukon was ice free.

At Casino, weather during the Tertiary leached the copper from the upper 70 metres of the deposit and redeposited it lower in the deposit. This created a layer- like sequence consisting of an upper leached zone up to 70 metres thick where all sulphide minerals have been oxidized and copper removed leaving behind a bleached, iron oxide leached cap containing residual gold. Beneath the leached cap is a zone up to 100 metres thick of secondary copper mineralization consisting primarily of chalcocite and minor covellite with a thin, discontinuous layer of copper oxide minerals at the upper contact with the leach cap. The copper grades of the enriched, blanket-like zone can be up to twice that of the underlying non weathered primary copper mineralization consists of pyrite, chalcopyrite and lesser molybdenite. The primary copper mineralization is persistent at depth and is still present at the bottoms of the deepest drill holes over 600 metres from surface.

### 1.7 EXPLORATION AND SAMPLING

Since the previous resource calculation, Western Copper has completed 26,239.75 m of core in 104 drill holes including 18 holes totalling 2,238.71 metres for geotechnical, hydrogeological and a water well drill-hole. The purpose of the bulk of the non geotechnical drilling was on defining the margins of the mineralized body and on infilling areas of inferred mineralization to 100 metre spacing.

In 2010 all Pacific Sentinel's core stored at the Casino Property was relogged. Purpose of the relogging was to provide data for the new lithology and new alteration models.

In 2009, Quantec Geoscience Limited of Toronto, Ontario performed Titan-24 Galvanic Direct Current Resistivity and Induced Polarization (DC/IP) surveys as well as a Magnetotelluric Tensor Resistivity (MT) survey over the entire grid. Magnetotelluric Resistivity results in high resolution and deep penetration (to 1 km) and The Titan DC Resistivity & Induced polarization provides reasonable depth coverage to 750 m.

#### **1.8 MINERAL RESOURCE ESTIMATE**

The current resource estimation for Casino was based on 305 drill holes, 34 of which were completed in 2009 and an additional 56 completed in 2010. In addition Western Copper geologists re-interpreted the geologic model during the 2010 field season, relogging older Pacific Sentinel drill holes. Finally the collar coordinates previously reported in Mine Grid Units were converted by Yukon Engineering Services to NAD83 UTM coordinates.

Analysis of the drill data with contact plots showed copper values within the leached cap, supergene horizons and hypogene needed to be evaluated independently while Au, Ag and Mo could be combined. In addition the lithologies Intrusive Breccia, Patton Porphyry and Dawson Range Granodiorites had higher grades for all variables than the post mineral explosion breccia and were estimated separately. Erratic high values for all variables were capped based on their grade distributions within the various mineral domains. Uniform down-hole 15 m composites

were produced that honoured the domain boundaries. Pair wise relative semi variograms were produced for Cu in the Leached Cap, Supergene and Hypogene domains, and for Au, Ag and Mo in the combined Intrusive Breccia, Patton Porphyry and Dawson Range Granodiorite domain.

The block model was established with blocks 20 x 20 x 15 m in dimension. Each block was coded with the percent below surface topography, within overburden, within Leached Cap, Supergene Oxide, Supergene Sulphide and Hypogene. Bulk density determinations were made on a total of 11,600 pieces of drill core by the Wt. in air/Wt. in water method. Specific gravities were applied based on the proportion of Leached Cap, Supergene Oxide, Supergene Sulphide and Hypogene present within each block. Grades for copper and soluble copper were estimated separately for Leached Cap, Supergene and Hypogene by ordinary kriging. Grades for Au, Ag and Mo were also estimated by ordinary kriging. Blocks were classified based on drill hole spacing and density.

# 2 INTRODUCTION

# 2.1 PURPOSE

The purpose of this report is to provide an independent Technical Report and Reserve Estimate of the copper ore present on the Casino property, in conformance with the standards required by NI 43-101 and Form 43-101F. The estimate of mineral resources contained in this report conforms to the CIM Mineral Resource and Mineral Reserve definitions (December, 2005) referred to in National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects.

#### 2.2 Sources of Information

Resource estimation is based on both the results of the 2008-10 drilling by Western Copper and results of the 1992-94 drilling conducted by PSG. PSG's data incorporated in the data base for this resource estimation includes:

- 1992-94 Assay data
- 1992-94 Specific gravity measurements
- Collar surveys for most 1992-94 drill holes
- 1992-94 Down hole survey

Geological interpretation is the result of the core logging during 2008-2010 programs and of the relogging of Pacific Sentinel's core that was stored on the property. Regional and property geology interpretations are based on published papers.

Sections on Metallurgical and other relevant data rely on a large body of metallurgical, geological, geotechnical and environmental data reports compiled by prior owners over the years. These reports are listed in References.

#### 2.3 **PERSONAL INSPECTIONS**

Various members of the project team conducted on-site inspections of the property. Among those visiting the site were the following:

- Scott Casselman was a site Project Manager at Casino for 2008, 2009 and 2010 exploration programs
- Author Gary Giroux has not visited the property.

# 2.4 UNITS

This report generally uses the SI (metric) system of units. Exceptions are some common uses such as pounds of copper. All engineering calculations are conducted using the SI system. The term "tonne" rather than "ton" is used to denote a metric ton, and is used throughout the report. Units used and their abbreviations are listed in the table below.

Units	Abbreviations
Amperes	А
Cubic meters	m <sup>3</sup>
Density	t/ m³
Hectares	ha
grams	g
Kilo (1000)	k
Kilogram	kg
Kilometer	km
Liters	L
Mega (1,000,000)	М
Meters	m
Millimeters	mm
Parts per million	ppm
Parts per billion	ppb
Specific gravity	S.G.
Square meters	m²
Temperature Celsius	°C
Temperature Fahrenheit	°F
Tonnes	t
Tonnes per day	t/d

 Table 2-1:
 Abbreviations Used in This Document

#### **3 RELIANCE ON OTHER EXPERTS**

In cases where the study authors have relied on contributions of the qualified persons, the conclusions and recommendations are exclusively the qualified persons' own. The results and opinions outlined in this report that are dependent on information provided by qualified persons outside the employ of Western Copper are assumed to be current, accurate and complete as of the date of this report.

Draft copies of reports received from other experts have been reviewed for factual errors by Western Copper Corporation. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in these documents are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of these reports.

#### 4 **PROPERTY DESCRIPTION & LOCATION**

#### 4.1 LOCATION

The Casino porphyry copper-gold-molybdenum deposit is located at latitude  $62^{\circ}$  44'N and longitude 138° 50'W (on NTS map sheets 115J/09, 10 and 15), in west central Yukon, in the north-westerly trending Dawson Range mountains, 300 km northwest of the territorial capital of Whitehorse. Figure 1.6-1 is a map showing the location of Casino property in relation to the Yukon, British Columbia and the Northwest Territories.

Whitehorse is the nearest commercial and population center. No human settlements can be described as "local." The village of Carmacks is about 150 km ESE and Pelly Crossing is about 115 km ENE. Beaver Creek, a tourist stop on the Alaskan Highway, is about 112 km WSW. Fairbanks, Alaska is 500 km WNW.

The project is located on Crown land administered by the Yukon Government and is within the Selkirk First Nation traditional territory. Tr'ondek Hwechin First Nation traditional territory lies to the north.



Figure 4-1: Casino Property Location Map

#### 4.2 **PROPERTY DESCRIPTION**

The Dawson Range forms a series of well-rounded ridges and hills that reach a maximum elevation of 1,675 m above mean sea level (ASL). The ridges rise above the Yukon Plateau, a peneplain at approximately 1200 m ASL, which is deeply incised by the mature drainage of the Yukon River watershed.

The characteristic terrain consists of rounded, rolling topography with moderate to deeply incised valleys. Major drainage channels extend below 1,000 m elevation. Most of the project lies between the 650 m elevation at Dip Creek and an elevation of 1,400 m at Patton Hill. The most notable local physical feature is the Yukon River which flows to the west about 16 km north of the project site.

Characteristic wildlife in the region includes caribou, grizzly and black bear, moose, beaver, fox, wolf, hare, raven, rock and willow ptarmigan, and golden eagle.

The tops of hills and ridges are sparsely covered, most vegetation lies at the bottom and on the slopes of valleys. Vegetation consists of black and white spruce forests with aspen and occasionally lodgepole pine. Black spruce and paper birch prevail on permafrost slopes. Balsam poplar is common along floodplains. Scrub birch and willow form extensive stands in subalpine sections from valley bottoms to well above the tree line.

#### 4.3 MINERAL TENURE

The Casino Property lies within the Whitehorse Mining District and consists of 705 full and partial Quartz Claims acquired in accordance with the Yukon Quartz Mining Act. The total area covered is 13,124 ha. The claims are registered in the name of, and are 100%-owned by CRS Copper Resources Corp., a wholly-owned subsidiary of Western Copper Corporation. A claim location map is given in Figure 4-2 and a list of claims is provided in Appendix A.

The historical claims held by prior owners of the project and transferred as part of Western Coppers' plan of arrangement with Lumina Resources Corp. ("Lumina") consist of 83 Casino "A" claims covering an area of 1,143 ha, 55 Casino "B" claims covering an area of 924 ha, and 23 claims in the "JOE" block covering an area of 322 ha.

The 188 VIK mineral claims, covering an area of 3,416 ha, were staked in June 2007 by CRS Copper. In June 2008, an additional 94 "CC" claims, covering an area of 1,933 ha, and 63 "BRIT" claims covering an area of 1,223 ha were staked by CRS Copper. In October, 2009, CRS Copper staked 136 AXS mineral claims, covering an area of 2,845 ha. In May of 2010, CRS Copper staked an additional 63 AXS claims, covering an area of 1,318 ha.

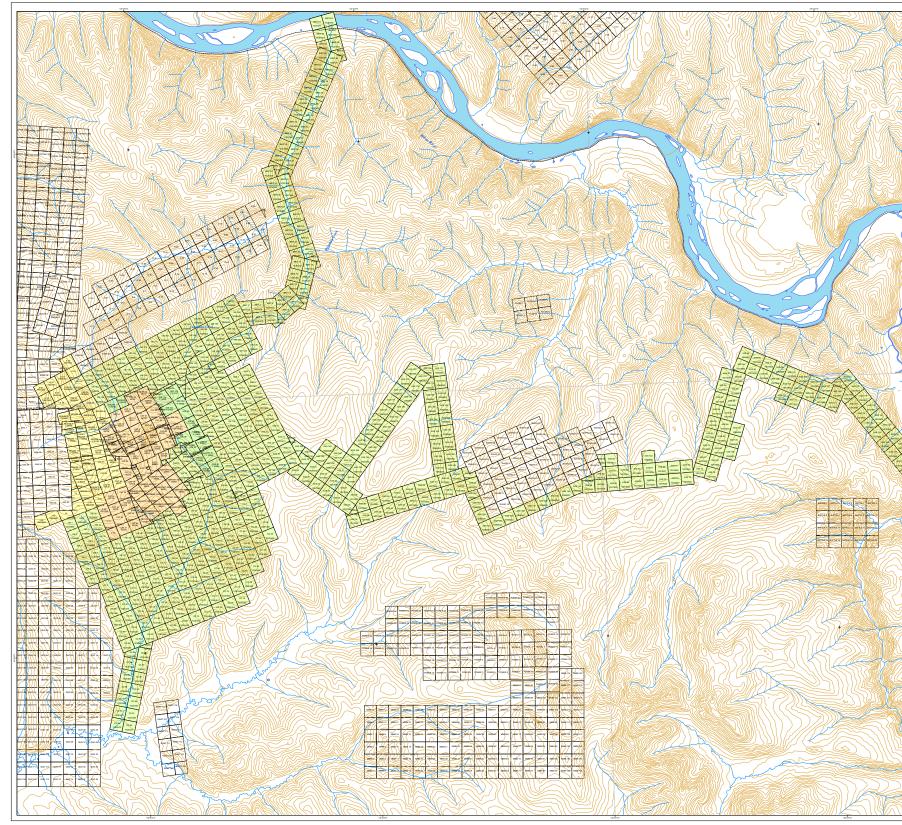
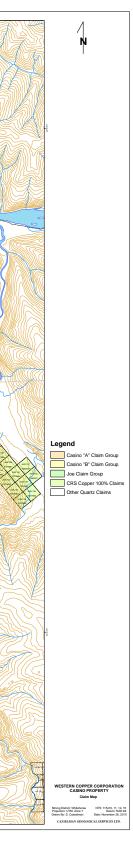


Figure 4-2: Casino Claim Map.



#### 4.4 **OPTION AGREEMENTS AND ROYALTIES**

CRS Copper Resources Corp. ("CRS") acquired the Casino A, B and JOE claims, comprising the historical Casino property, on August 9, 2007 by exercising its option pursuant to a Letter Agreement dated July 15, 2002 with Great Basin Gold ("Great Basin"). The Casino deposit lies entirely on the Casino A claims.

Certain portions of the Casino property remain subject to royalty agreements in favour of Strategic Metals Ltd. ("Strategic Metals") and to an option agreement with Wildrose Resources Ltd. ("Wildrose").

The royalties and agreements are as follows:

- a 5% Net Profit Royalty on the Casino A, B and JOE claims in favour of Strategic Metals.
- The Casino B claims are subject to an agreement between CRS and Wildrose whereby Wildrose agrees to maintain the Casino A and B claims in good standing until May 2, 2020. In exchange, Wildrose has the right to acquire the Casino B claims for \$1 each, payable on May 2, 2020 subject to CRS reserving a 10% Net Profit Interest on the Casino B claims.
- Wildrose may acquire the Casino B claims at any time prior to May 2, 2020 by making a CND\$200,000 payment to CRS. The payment will relieve Wildrose of any further maintenance obligations respecting the Casino A claims.
- CRS will pay CND\$1,000,000 Production Payment to Great Basin within 30 days of a production decision.

#### 4.5 PLACER CLAIMS

There are 28 active placer claims staked around Canadian Creek that overlap the Casino property mineral claims.

In summer 2009 an additional 5-mile Placer Lease was staked along the Casino Creek and a 3-mile Placer Lease was staked along the Britannia Creek.

All placer claims are held by others and are in good standing.

There are no pre-existing agreements relating to the overlapping placer claims.

# 5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### 5.1 ACCESSIBILITY

The site is currently accessible year-round only by air. Fixed wing aircraft can use the existing 900 m airstrip.

A 19 km rough road from the camp accesses a barge landing at the mouth of Britannia Creek at the Yukon River. Barge access connects the property with the Minto barge landing or other landings on the Yukon River. Barge service operates on the Yukon River from June to September depending on water levels.

Historically, overland access to the property has been by winter road routes to the east and west. The shorter winter road route extends 194 km northwest from Carmacks: 82 km along the Freegold Road, 40 km along the Casino Trail and 72 km along a bulldozer trail. The other route is a bulldozer trail that extends 224 km northeast from Burwash Landing on the Alaska Highway. The latter route offers better grades than the former.

#### 5.2 CLIMATE

The climate in the Dawson Range is subarctic. Permafrost is widespread on north-facing slopes, and discontinuous on south-facing slopes. Outcrop is rare, except on hilltops and rugged ridge crests. The residual nature of much of the rubble on upper slopes allows for generalized geological mapping and good geochemical and geophysical interpretation. Most broad valleys are filled with thick alpine glacial debris and alluvium, which mask bedrock geology and associated geochemical and geophysical signatures.

The mean annual temperature for the area is approximately  $-5.5^{\circ}$ C with a summer mean of  $10.5^{\circ}$ C and a winter mean of  $-23^{\circ}$ C. Temperatures range between  $-40^{\circ}$ C in the winter to  $30^{\circ}$ C in the summer. Mean annual precipitation is low, ranging between 300-450 mm, with most precipitation occurring in July and early August.

Snow survey data for the years 1977 to 1994 (based on information from Hallam, Knight Piesold, Casino Project, Data Report 1993-1995, March 1997) showed the maximum snow depth was 97 cm containing the equivalent of 225 mm of water in April 1991. Average depths (equivalent H2O) by month were: February 1: 52 cm (73 mm), March 1: 62 cm (107 mm), April 1: 65 cm (126 mm), May 1: 55 cm (128 mm), and May 15: 27 cm (74 mm). Snow begins accumulating in mid to late September and is mostly melted by mid to late May.

#### 5.3 LOCAL RESOURCES

The nearest commercial and human resource centre is Whitehorse, the Capital of the Yukon Territory, about 300 km to the southeast of the property. It is also the point of departure for access by commercial aircraft and the location of lodging and other commercial service.

The village of Pelly Crossing on the Klondike Highway is the nearest community, some 115 km to the east of the property. The village of Carmacks, also on the Klondike highway, is approximately 150 km to the southeast.

#### 5.4 INFRASTRUCTURE

The infrastructure on the property consists of an airstrip, a fully equipped 50 person exploration camp with sewage field, water wells, a shop, a 60,000 litre lined fuel storage farm and barge landing with 24 km access road.

Mine development will require development of water, sanitation, transportation, power, and communications resources and systems.

#### 5.5 **Physiography**

The Casino property is located in the Dawson Range, a north-westerly trending belt of well rounded ridges and hills that reach a maximum elevation of about 1,675 m. The hills rise above the Yukon Plateau, most of which has been peneplaned at about 1,250 m and deeply incised by mature dendritic drainages that are part of the Yukon River watershed. Although the Dawson Range escaped Pleistocene continental glaciation, minor alpine glaciation has produced a few small cirques and terminal moraines.

Local elevations range from 1,580 m on a ridge along the western property boundary to 430 m on the banks of the Yukon River at Britannia Creek.

The deposit area is situated on a small divide. The northern part of the property drains to Canadian Creek and Britannia Creek into the Yukon River. Drainage from the southern part of the property flows southward via Casino Creek, to Dip Creek, to the Klotassin River, to the Donjek River, to the White River, and thence northward to the Yukon River.

Outcrop is rare on the property being restricted to a few widely spaced tors on ridge crests. Soil development is variable ranging from coarse talus and immature soil horizons at higher elevations to a more mature soil profile and thick organic accumulations on the valley floors.

# 6 HISTORY

The Casino Property has had a long and varied exploration history. The first documented placer claims in the immediate area were recorded in April 1911, following a placer gold discovery on Canadian Creek by J. Britton and C. Brown. In 1917, D.D. Cairnes, of the Geological Survey of Canada, recognized huebnerite (MnWO<sub>4</sub>) in the heavy- mineral concentrates of the placer workings. He suggested that the gold and tungsten mineralization was derived from an intrusive complex on Patton Hill (which is now recognized as the core of the Casino porphyry deposit). The total placer gold production is unknown; the most recent work (1980-1985) yielded about 50 kg (1615 troy ounces) of gold. During the Second World War, a small amount of tungsten was recovered.

The first mineral claims at Casino were staked by N. Hansen in 1917. In 1936 silver-lead-zinc veins were discovered by J. Meloy and A. Brown approximately 3 km south of the Canadian Creek placer workings. Over the next several years the Bomber and Helicopter vein systems were explored by hand trenches and pits. The Helicopter claims were staked in 1943 and the Bomber and Airport groups in 1947.

From 1948 to 1967 the focus of exploration on the property was for lead-silver mineralization at the Helicopter and Bomber veins. The property was optioned to Noranda in 1948 and then to Rio Tinto in 1963. During this time trenching, mapping and sampling were conducted.

In 1963, L. Proctor purchased the claims and formed Casino Silver Mines Limited to develop the silver-rich veins. Between 1965 and 1980, the silver-bearing veins were explored and developed intermittently by underground and surface workings. In total, 372.5 tonnes of hand-cobbed argentiferous galena, assaying 3689 g/t Ag, 17.1 g/t Au, 48.3% Pb, 5% Zn, 1.5% Cu and 0.02% Bi, were shipped to the smelter at Trail, British Columbia.

B. Hestor noted that the area had porphyry deposit potential in 1963, but his observations did not become generally known. In 1967, the porphyry potential was recognized again, this time by A. Archer and separately by G. Harper. Archer's evaluation led to the acquisition of Casino Silver Mines Limited by the Brynelsen Group, and from 1968 to 1973 exploration was directed jointly by Brameda, Quintana, and Teck Corporation towards a porphyry target. Exploration included extensive geophysical and trenching program, but it was mainly thanks to the soil geochemistry, that the porphyry deposit was discovered in 1969.

Following the porphyry discovery, various parties including Brameda Resources, Quintana Minerals and Teck Corporation drilled the property. During this period (between 1969 and 1973), 5,328 m of reverse circulation drilling in 35 holes and 12,547 m of diamond drilling in 56 holes was completed.

In 1991, Archer, Cathro & Associates (1981) Ltd. optioned the property and assigned the option to Big Creek Resources Ltd. A drill program in 1992 consisting of 21 HQ (63.5 mm diameter) holes totalling 4,729 m, systematically assessed the gold potential in the core of the deposit for the first time. The larger-sized core gave better recovery and more reliable assays than earlier drilling.

In 1992 Pacific Sentinel Gold Corp. (PSG) acquired the property from Archer Cathro and commenced a major exploration program. The 1993 program included surface mapping and 50,316 m of HQ and NQ (47.6 mm diameter) drilling in 127 holes. All but one of the 1992 drill holes were deepened in 1993.

In 1994, PSG drilled an additional 108 drill holes totalling 18,085 metres. This program completed the delineation drilling set out in 1993 and investigated various geological, geotechnical, structural, and environmental aspects of the project. In addition, PSG performed a considerable amount of metallurgical, geotechnical and environmental work and completed a scoping study in 1995. The scoping study envisioned a large-scale open pit mine, conventional flotation concentrator that would produce a copper-gold concentrate for sale to Pacific Rim smelters.

First Trimark Resources and CRS Copper Resources obtained the property and using the Pacific Sentinel Gold data published a Qualifying Report on the property in 2003 to bring the resource estimate into compliance with National Instrument 43-101 requirements. The two firms combined to form Lumina Copper Corporation in 2004. An update of the Qualifying Report was issued in 2004.

Western Copper Corporation acquired Lumina Copper Corporation, and the Casino Deposit, in November 2006.

In 2007 Western Copper conducted an evaluation of the Bomber Vein System and the southern slope of the Patton Hill by VLF-EM and Horizontal Loop EM survey and soil geochemistry. Environmental baseline studies were also initiated in 2007.

In August 2008, M3 Engineering and Technology Corporation prepared a Pre-Feasibility Study for Western Copper. This study was based on the Pacific Sentinel's data and geological model. The deposit was estimated to host measured and indicated supergene plus hypogene resources of 964 Mt grading 0.22 % copper, 0.24 g/t gold and 0.02 % molybdenum at a 0.30 % copper equivalent cutoff grade, containing an estimated 3.6 billion pounds of copper, 5.7 million ounces of gold, and 515 million pounds of molybdenum. In the overlying oxide cap, the deposit was estimated to host a measured and indicated resource of 38 Mt grading 0.57 g/t gold, 0.07% copper and 0.02 % molybdenum at a 0.40 g/t gold cutoff grade, containing an estimated 696,000 ounces of gold.

The study contemplates the development of the Casino deposit as a conventional truck-shovel, open pit mine, initially processing the gold bearing oxide cap as a heap leach operation. Sulphide ore processing would commence approximately 2.5 years later at a nominal rate of 90,000 tpd in a concentrator, which would produce copper concentrate and molybdenum concentrate.

Mineral reserves for the Casino Project were estimated as follows: The mill ore reserve were 913.5 million tonnes at 0.212% copper, 0.237 g/t gold, and 0.0236% molybdenum. The heap leach reserves were an additional 77.9 million tonnes at 0.427 g/t gold and 0.062% copper.

During the 2008 field season (In late summer and fall of 2008) Western Copper reclaimed the old camp site, constructed a new exploration camp next to the Casino airstrip and commenced with the drilling. Three drill holes (camp water well and two exploration holes) totalling 1,163 m were drilled. Main purpose of the drilling was to obtain fresh core samples for the metallurgical and waste characterization tests. Both exploration holes twinned PSG's holes so their role was also to confirm historic copper, gold and molybdenum grades.

In 2009, Western Copper completed 22.5 km of DC/IP surveying and MT surveying using the Quantec Geosciences Ltd Titan system. As well, the company drilled 10,943 meters in 37 diamond drill holes. 27 holes were infill holes drilled to convert inferred and undefined material to measured and indicated. Infill drilling covered the north slope of the Patton Hill that was mapped as "Latite Plug" on PSG maps. Drilling has identified supergene Cu mineralization and Mo mineralization in this area. The remaining 10 holes, totalling 4,327 m, were drilled to test geophysical targets.

In 2010, infill and delineation drilling continued with most of the drilling done to the North and West of the deposit as outlined by PSG. The drilling program also defined hypogene mineralization at the southern end of the deposit. In addition, the company drilled a series of geotechnical holes at the proposed tailings embankment area and within the pit and several holes for hydrogeological studies.

A breakdown of 2010 drilling by Western Copper is as follows:

- 46 exploration holes for 12,046.19 m
- 4 combined geotechnical/hydrogeological holes for 1,170.50 m
- 6 geotechnical holes in the tailings embankment area for 395.21 m
- 6 hydrogeological holes for 519.08 m
- 1 water well for 153.92 m

The total meterage drilled by Western Copper from 2008 to 2010 is 26,239.75 m.

# 7 **GEOLOGICAL SETTING**

#### 7.1 **REGIONAL GEOLOGY AND STRUCTURE**

The Casino Cu-Mo-Au porphyry deposit lies in the central Dawson Range mountains, within the large and vastly-complex Yukon-Tanana Terrane: an accretionary and pericratonic, metamorphic fragment of the Omineca Belt (Monger & Price, 2002). Local to the Casino Property, the Yukon-Tanana is subdivided into the Yukon Cataclastic Terrane to the northeast and the Yukon Crystalline Terrane to the southwest separated by a northwest-trending suture. Sporadic bands of Permian to Triassic ultramafic rocks exist along this contact (Tempelman-Kluit, 1974).

The Yukon Crystalline Terrane in the Dawson Range area is represented by the Devono-Mississippian Wolverine Creek Metamorphic Suite (Johnston, 1995) made up of sedimentary and igneous protoliths (Tempelman-Kluit, 1974; Payne et al., 1987). These meta-sedimentary rocks consist mainly of quartz-feldspar-mica schist and gneiss, quartzite, and micaceous quartzite, while the meta-igneous unit includes biotite-hornblende-feldspar gneiss and other orthogneisses, as well as hornblende amphibolite (Selby & Nesbit, 1997).

During the mid-Cretaceous, Wolverine Creek Metamorphic rocks of this area were intruded by the Dawson Range Batholith and subsequent Casino Intrusions (Selby et al., 1999). The Dawson Range Batholith is the main country rock of the Casino Property and is represented by a relatively homogeneous, medium- to coarse-grained, hornblende-bearing, potassic quartz diorite to granodiorite; and lesser fine- to medium-grained diorite and quartz monzonite veins, dykes, and plugs (Tempelman-Kluit, 1974).

The Casino Intrusions, better termed the Casino Plutonic Suite, were said to be composed of quartz monzonite stocks up to 18 kilometres across (Hart and Selby, 1998) trending west-northwest parallel to the Big Creek Lineament and its northwestern extension. Mapping by Tempelman-Kluit (1974), and successively by Payne et al. (1987), associates this Casino Plutonic Suite with the mid-Cretaceous Dawson Range Batholith. Subsequently, Johnston (1995) grouped the intrusions with the late-Cretaceous Prospector Mountain Plutonic Suite based largely on field relationships that show stocks of the Casino Plutonic Suite cutting the Dawson Range Batholith. Later age determination by Mortensen and Hart (1998), as well as geochemistry provided by Selby et al. (1999), placed the Casino Intrusions back into the mid-Cretaceous as fractionated magmas of the Dawson Range Batholith. Recent field relationships have proven that the 'quartz monzonites' of the Casino property, once thought to be separate intrusions, are actually intensely altered and recrystallized diorites of the Dawson Range Batholith.

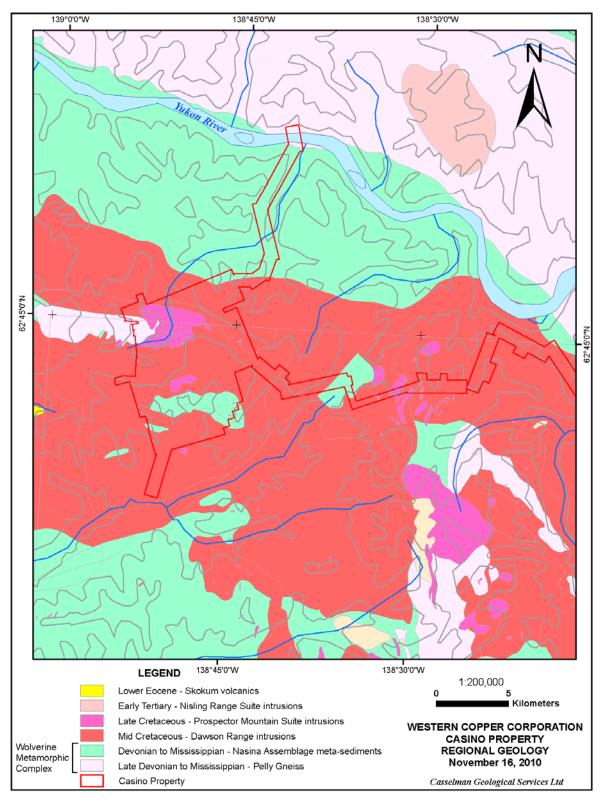


Figure 7-1: Regional Geology

In the late Cretaceous, the Prospector Mountain Plutonic Suite intruded as stocks and apophyses into the Dawson Range Batholith (Johnston, 1995; Selby et al, 1999). In the Casino area, this suite is represented by Patton Porphyry: small, biotite-bearing, feldspar-porphyritic, hypabyssal rhyodacite to dacite intrusions near the centre of the deposit and discontinuous centimeter- to metre-wide dikes northwest of the property. Here, early phases the Patton Porphyry grade into a mineralized intrusive breccia. Later, unaltered dykes of similar rock cut surrounding hydrothermally altered and mineralized rocks (Payne et al., 1987) suggesting there are multiple phases of this unit (Bower, 1995; Selby and Creaser, 2001). Hydrothermal alteration and mineralization occur in and adjacent to some of these late Cretaceous intrusions.

The Casino Property is sandwiched between parallel west-northwest-trending faults that form contacts between rocks of the Wolverine Creek Metamorphic Suite and the Dawson Range Batholith. In Figure 7-2, the fault furthest to the northeast is an extension of the Big Creek Fault-thought to be dextrally offset by 20 to 45 km. A parallel fault 8 km to the southwest forms the southwest boundary of a sliver of Wolverine Creek Metamorphic Suite rocks and contains outcroppings of ultramafic rocks in a similar fashion to those seen along the Big Creek Fault.

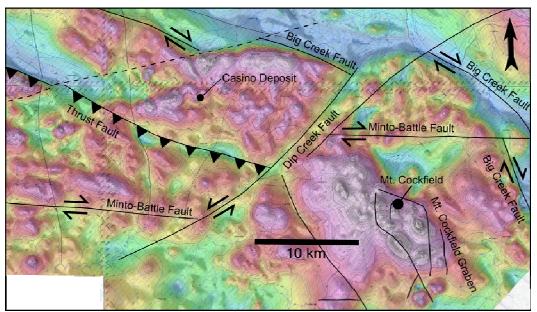


Figure 7-2: Regional structures overlain on recent aeromagnetic survey

The Casino Property is bounded to the southeast by a northeast-trending regional structure known as the Dip Creek Fault. The left-lateral displacement of the Yukon River well east of the Casino Property is a reflection of sinistral movement along this fault. The east-trending Minto-Battle Fault is also sinistrally translated by the Dip Creek Fault (Johnston, 1999). This dextrally offset fault lies east of the Casino Property on the opposite side of Dip Creek with its extension lying south and southwest of the Casino Property.

#### 7.2 LOCAL GEOLOGY AND STRUCTURE

#### 7.2.1 Local Geology

Historical descriptions of the geology of the Casino Property are somewhat variable and inconsistent. Systematic relogging efforts of the entire property have recently simplified the geologic interpretation, shown in Figure 7-3. The following table outlines the major geological units with relative and isotopic ages (where available) based on work done by Selby et al. (2001), and references therein.

	Map Unit	Geological Unit	Isotopic Age	
	7	Explosive breccia		
s		Heterolithic; fine-grained matrix; angular clastic		
noa	6	Heterolithic intrusive breccia		
ate Cretaceous		Heterolithic; patton porphyry/potassic matrix; autobrecciated fragments		
ce C	5	Patton Porphyry	72.4 +/-0.5 Ma	
Lat				
SL	4	Granodiorite	104.0 +/-0.5 Ma	
ceol		bi-hbld granodiorite		
Mid- Cretaceous	3	Diorite	104.0 +/-0.5 Ma	
Mid- Creta		Hbld-Bi-Qtz diorite; hbld-bi diorite		
		WOLVERINE CREEK METAMORPHIC SUITE:		
an	2	Meta-sedimentary		
- iqq		Micaceous Quartzite		
ono	1	Meta-igneous		
2       Meta-sedimentary         Micaceous Quartzite         1       Meta-igneous         Qtz-Bi-Plag-Microcline Gneiss; KF-Qtz-Bi Gneiss; Amphibolite				

Modified from Bower et al. (1995).

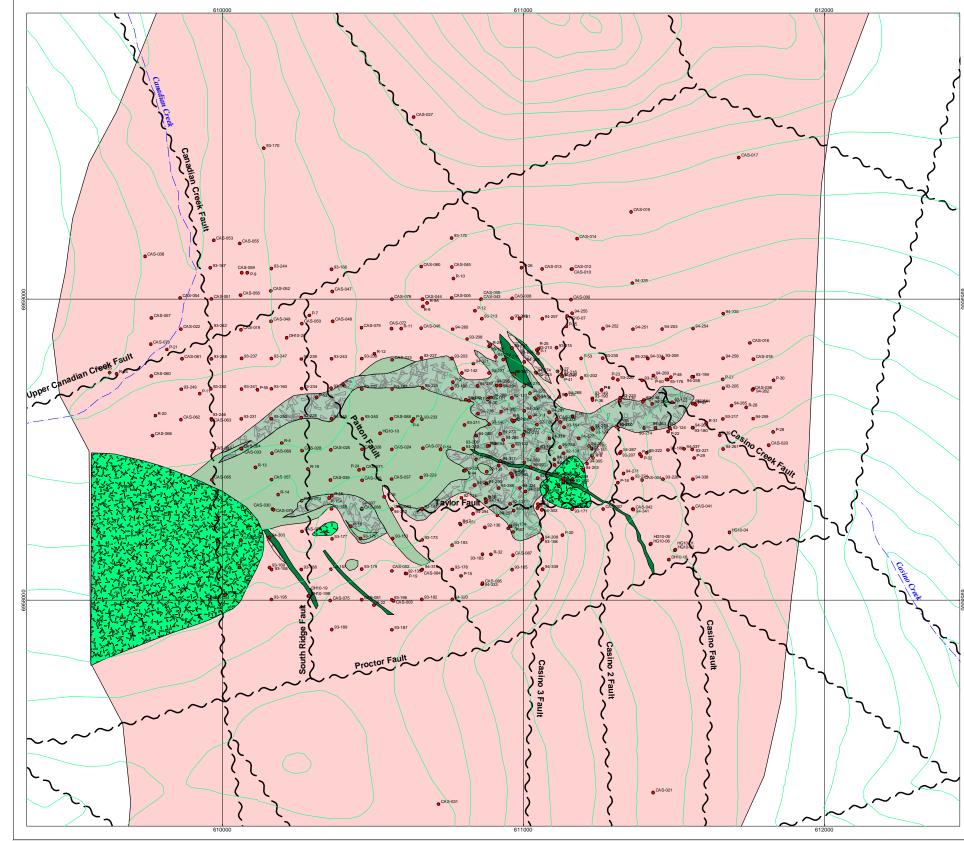
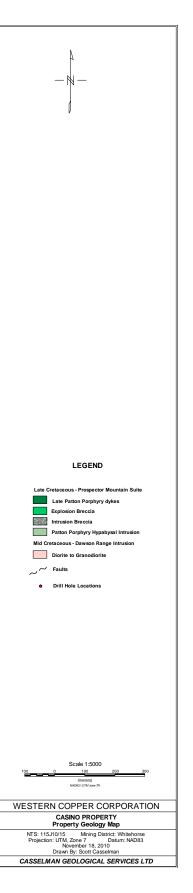


Figure 7-3: Geology of the Casino Deposit



Casino property geology has been described in detail by Godwin (1975) and Payne et al. (1987), and was later summarized by Bower et al. (1995). Although groupings have changed, the majority of rock descriptions have not; therefore the following sections borrow significantly from all three reports.

#### Wolverine Creek Metamorphic Suite (YM)

The Wolverine Creek Metamorphic Suite rocks include meta-sedimentary and meta-igneous rocks (Tempelman-Kluit, 1974; Payne et al. 1987; Johnston, 1995) of Devono-Mississippian age (Johnston, 1995). They occur mainly in the northern and northeastern parts of the Casino deposit, as fragments in intrusion breccias and local roof pendants/screens throughout the Dawson Range Batholith (Bower et al., 1995). More common rock types in the deposit area are biotite-hornblende-feldspar diorite schist and gneiss. Less abundant types include meta-diorite/ amphibolite, quartz-rich and intermediate gneiss, quartzite, and micaceous quartzite.

#### **Dawson Range Batholith (WR)**

The mid-Cretaceous Dawson Range Batholith is the main country rock of the deposit and is characterized by hornblende-biotite-quartz diorite, hornblende-biotite diorite, and biotite-hornblende granodiorite (Payne et al. 1987). Hornblende-biotite bearing phases are common throughout the deposit, and lesser biotite-hornblende bearing phases are generally north of Patton Hill (Godwin, 1975). Diorite is concentrated north and northeast of the deposit, particularly east of Casino Fault, and is considered to be the earliest phase of the batholith.

Casino diorites are typically dark gray to brown, locally inequigranular, and texturally similar to the meta-diorite of the Wolverine Metamorphic Suite. Average grain size is less than 1 millimetre, dominated by locally aligned and/or zoned plagioclase; hornblende; and interstitial, anhedral quartz. In places, primary biotite is more abundant than hornblende. Accessory minerals include up to 1 percent apatite and trace titanite. Some intrusions show foliation and increased mafic content near their margins, particularly north of the deposit and in the block east of the Casino Fault (Bower et al., 1995). Locally, mafic diorites are cut by later, more felsic phases of the Dawson Range Batholith (Johnston and Shives, 1995).

Granodiorite is generally pale gray, medium to coarse grain and equigranular to porphyritic. They can be distinguished by scattered, subhedral hornblende phenocrysts averaging 0.5 to 1.2 centimetres long; poikilitic K-feldspar; zoned plagioclase; and 10 to 20 percent mafic minerals, which may be layered. Plagioclase shows minor myrmekitic rims when in contact with K-feldspar. Anhedral quartz and K-feldspar are interstitial to earlier subhedral plagioclase, hornblende and biotite. Locally, quartz forms interlocking aggregates of slightly, to moderately strained grains. Accessory minerals include honey-coloured titanite and apatite to 1 percent each.

Rocks of the Dawson Range commonly display in-situ/crackle to intensely deformed cataclastic brecciation where in contact with the Patton porphyry intrusive plug. Elsewhere, this unit may

be truncated by the late Cretaceous dykes and associated explosive breccias (modified from Bower, 1995).

#### **Prospector Mountain Plutonic Suite**

Late-Cretaceous igneous activity of the Prospector Mountain Plutonic suite is locally represented by the Patton Porphyry intrusive and associated breccias.

#### i) Patton Porphyry (PP)

The main body of the Patton Porphyry is a relatively small, locally mineralized, stock measuring approximately 300 by 800 metres and is surrounded by a potassically-altered intrusive breccia in contact with rocks of the Dawson Range. Elsewhere, the Patton Porphyry forms discontinuous dikes ranging from less than one to tens of metres wide, cutting both the Patton Porphyry Plug and the Dawson Range Batholith (Bower et al., 1995). Contacts between the Patton Porphyry and breccias are variable and range from sharply intrusive to gradational and brecciated. It has therefore been suggested by Bower et al. (1995) and Selby and Creaser (2001) that this suite consists of two or more episodes of high-level intrusions.

Godwin (1975) determined that the Patton Porphyry has an overall composition of rhyodacite, with phenocrysts falling into a dacite composition and the matrix being of quartz latite composition. It is more commonly made up of distinct phenocrysts of abundant plagioclase and lesser biotite, hornblende, quartz and opaques (Godwin, 1975). Phenocrysts average 4 millimetres in size, and can comprise up to 50 percent of the rock. Lathes of plagioclase are euhedral and zoned, and range in size from 2 to 7 millimetres, with some up to 2.5 centimetres in length (Bower et al., 1995). Biotite lathes range from 2-3 millimetres across, and make up 1-5 percent of the rock. They are kink-banded, subhedral, and locally chloritized. Hornblende phenocrysts are difficult to recognize due to their alteration, but have generally been replaced by chlorite and other opaques, and can be recognized by their diamond cross-section. Quartz phenocrysts are not always present but can be anhedral, embayed, and 3-5 millimetres in size. K-feldspar phenocrysts are rare but the mineral is abundant in the commonly medium to dark green, microcystalline matrix.

Smaller, possibly more evolved, discontinuous plugs of Patton Porphyry exist where K feldspar and/or quartz megacrysts range from 3-20mm in size, displaying ragged boundaries and intergrowths with surrounding grains (Godwin, 1975). Contacts between the main Patton plug and this unit are generally gradational or masked by alteration. Currently, the age-relationship between the megacrystic variety and the main plug is unknown.

Later Patton dykes in the south-central part of the deposit somewhat resemble the main Patton Porphyry body and contain 2 to 5 percent quartz phenocrysts and up to 35 percent plagioclase phenocrysts in an aphanitic latite groundmass (Bower et al., 1995). These dykes intruded after the main hydrothermal event and contain only minor base- and precious-metal mineralization, as well as locally abundant disseminated pyrite (Godwin, 1975). These dykes are of latitic to dacitic composition and are generally steeply dipping, striking between 130 and 160 degrees (Bower et al., 1995). On the Casino property, they are generally pale to light green with abundant plagioclase and lesser hornblende phenocrysts in a very fine- to extremely fine-grained matrix of plagioclase and K-feldspar (Payne et al., 1987). Wider versions of the dyke are coarser grained and may contain scattered quartz and/or biotite phenocrysts to 3 millimetres along with plagioclase and hornblende. Narrow versions with or without chilled dyke margins can be dark green with a glassy groundmass, and may show flow banding and/or lenticular structures near contacts (Bower et al., 1995). Outcrop of this unit can be mapped on surface trending northwest along Proctor Gulch.

### ii) Intrusive/Contact Breccia (IX)

The intrusive/contact breccia surrounding the main Patton Porphyry body consists of granodiorite, diorite, and metamorphic fragments in a fine-grained Patton Porphyry matrix. It may have formed along the margins, in part, by the stoping of blocks of wall rocks (Bower et al., 1995). The unit is rhyodacitic in composition and is inherently related to the Patton Porphyry intrusive (Godwin, 1975 and Payne et al., 1987). Local quartz grains are generally 1 to 2 millimetre unstrained crystals and crystal-fragments, and are texturally similar to quartz phenocrysts of the Patton Porphyry (Bower, 1995). Eroded fragments, ranging in size from less than one centimeter to greater than a few metres, are found proximal to their associated wall rocks, and therefore indicate limited transport and/or mixing (after Bower et al., 1995). For example, an abundance of Dawson Range inclusions are prominent at the southern contact of the main plug, Wolverine Creek metamorphic rocks increase along the northern contact, and bleached diorite increases at the eastern contact of the main plug. Strong potassic alteration locally destroys primary textures (Bower et al., 1995).

# iii) Explosive Breccia (MX)

Abundant fragments of the Patton Porphyry and its intrusive breccia are present in a late Cretaceous explosive breccia pipe. Godwin (1975) concluded that this pipe most likely represents a sub volcanic neck, brecciated from explosions caused by the rapid expansion of hot water (hydrothermal solutions) by vessiculation of rhyolitic magmas, and that any extrusive volcanics related to this event may have since been weathered away. This unit indicates multiple episodes of brecciation (Bower, 1995) as it contains 5 to 50 percent ragged fragments of altered intrusive breccia and host rock, with lesser fragments of late often quartz-phyric Patton Porphyry. Locally, the groundmass has a very fine-grained interlocking igneous texture; elsewhere it resembles milled rock flour (Bower, 1995) with up to 10 percent plagioclase and lesser quartz phenocrysts. Godwin also noted large angular cavities being a distinctive quality of this unit measuring up to 10 centimetres in size.

# 7.2.2 Property-Scale Structure

The largest fault affecting the known mineralized portion of the Casino Property, the Casino Creek Fault, trends at 310 degrees, forming an acute angle to regional structures (Figure 7-1). The right-lateral displacement of this fault has offset the eastern part of the Casino deposit by some 200 metres (B. Bower, et al, 1995). Similarly-directed faults are repeated throughout the Casino Property including one heading south from Canadian Creek, traveling through Patton Gulch, and forming a col in Patton Hill. This fault is aptly named the Patton Fault. The fault

nearly bisects the known Casino Deposit but little movement has been noted or described. The West Fault, on the west side of the property is thought to be similarly-oriented. Most of these shear zones are denoted by brittle to gougy drill-core intercepts and may show increased amounts of hydrothermal veining including tourmaline, pyrite, magnetite, and gangue infilling fractures.

At the eastern part of the Casino deposit is the Casino Fault: a narrow zone of steeply-dipping, south-directed faults and conductors interpreted from ground geophysics. This orientation may have weak repetitions throughout the deposit and is considered to be a mineralized, early structure predating the Casino Creek Fault system.

West-directed fault systems have been noted in some early workings of the Casino 'C' anomaly (southeast along the Casino Creek Fault), have been suggested by airborne magnetics south of the deposit, and have been interpreted in air photos west of the deposit. In addition, this orientation proved to be prominent in veins in Pacific Sentinel Groups study of oriented core in 1994. A suture between Dawson Range diorite and granodiorite along this orientation has locally incorporated older metamorphic rocks. This orientation is parallel to the Minto-Battle Fault and may have had a hand in dictating the overall shape of the main Patton stock and resultant mineralization.

# 8 **DEPOSIT TYPE**

The geology of the Casino deposit is typical of many porphyry copper deposits. The deposit is centred on an Upper Cretaceous-age, east- west elongated tonalite porphyry stock that intrudes Mesozoic granitods of the Dawson Range Batholith and Paleozoic schists and gneisses of the Yukon Crystalline Complex. Intrusion of the tonalite stock into the older rocks caused brecciation of the both the intrusive and the surrounding country rocks along the northern, southern and eastern contact of the stock. Brecciation is best developed in the eastern end of the stock where the breccia can be up to 400 metres wide in plan view. To the west, the along the north and south contact, the breccias narrow gradually to less than 100 metres. Little drilling has been done at the western end of the tonalite stock and it is not known if the breccia is present along this contact. Intruded into the tonalite stock and surrounding granitods and metamorphic rocks are younger, non mineralized dykes of similar composition to the older tonalite stock and a late diatreme, which forms both pipe-like body in the west and a dyke-like body in the east. The overall dimensions of the intrusive complex are approximately 1.8 by 1.0 kilometres.

Primary copper, gold and molybdenum mineralization was deposited from hydrothermal fluids that exploited the contact breccias and fractured wall rocks. Better grades occur in the breccias and gradually decrease outwards away from the contact zone both towards the centre of the stock and outward into the granitoids and schists. A general zoning of the primary sulphides occurs with chalcopyrite and molybdenite occurring in the tonalite and breccias grading outward in to pyrite dominated mineralization in the surrounding granitoids and schists. Alteration accompanying the sulphide mineralization consists of an earlier phase of potassic alteration and a later overprinting of phyllic alteration. The potassic alteration typically has secondary biotite, K-feldspar as pervasive replacement and veins, stockworks of quartz and anhydrite veinlets. Phyllic alteration consists of sericite and silicification in the form of replacements and veins.

The Casino Copper deposit is unique amongst the known Canadian porphyry copper deposits in having a well developed secondary enriched blanket of copper mineralization similar to those found in deposits in Chile and the Southwest United States such as Escondida and Morenci. Unlike other porphyry deposits in Canada, the Casino deposit's enriched copper blanket was not eroded by the glacial action of ice sheets during the last ice age as this part of Yukon was ice free.

At Casino, weather during the Tertiary Period leached the copper from the upper 70 metres of the deposit and redeposited it lower in the deposit. This created a layer- like sequence consisting of an upper leached zone up to 70 metres thick where all sulphide minerals have been oxidized and copper removed leaving behind a bleached, iron oxide leached cap containing residual gold. Beneath the leached cap is a zone up to 100 metres thick of secondary copper mineralization consisting primarily of chalcocite and minor covellite with a thin, discontinuous layer of copper oxide minerals at the upper contact with the leach cap. The copper grades of the enriched, blanket-like zone can be up to twice that of the underlying non weathered primary copper mineralization consists of pyrite, chalcopyrite and lesser molybdenite. The primary copper mineralization is persistent at depth and is still present at the bottoms of the deepest drill holes over 600 metres from surface.

# 9 MINERALIZATION

### 9.1 HYPOGENE MINERALIZATION

Mineralization of the Casino Cu-Au-Mo deposit occurs mainly in the steeply plunging, in-situ contact breccia surrounding the Patton Porphyry intrusive plug by crystallization and exsolution of hydrothermal fluids from late Cretaceous magmas of the Prospector Mountain Plutonic Suite (Selby and Nesbitt, 1997). Mineralization was superimposed onto the Prospector Mountain Plutonic suite, as well as in surrounding mid-Cretaceous intrusions of the Dawson Range Batholith. The breccia forms an ovoid band around the main porphyry body with dimensions up to 250 metres, and has an interior zone of potassic alteration surrounded by discontinuous phyllic alteration, typical of some porphyry deposits.

Hypogene mineralization occurs throughout the various alteration zones of the Casino Porphyry deposit, as mineralized stock-work veins and breccias (Selby et al., 2000). Field relationships show that the potassic alteration came first as mineralized quartz veins of the phyllically altered zones, cut those of the potassically altered zones; Re-Os age dating by Selby et al. (2000) showed that the dates of the potassic and phyllic alteration are contemporaneous at around 74.4 +/- 0.28 Ma. Significant Cu-Mo mineralization is related to the potassically- altered breccia surrounding the core Patton Porphyry, as well as in the adjacent phyllically-altered host rocks of the Dawson Range Batholith.

Mineralization in the potassic zone is mainly finely disseminated pyrite, chalcopyrite, molybdenite as well as trace sphalerite and bornite (Godwin, 1975). The phyllic zones have increased gold, copper, molybdenite, and tungsten values concentrated in disseminations and veins of pyrite, chalcopyrite, and molybdenite along the inner side of the pyrite halo (Payne, 1987). The pyrite halo follows the potassic-phyllic contact, within the phyllic zone, and discontinuously surrounds the main breccia body. It is host to the highest Cu values on the property (Godwin, 1975).

Chalcopyrite commonly occurs as veins, disseminations and irregular patches. In breccia and granodiorite west of the Casino Fault, disseminated chalcopyrite is more abundant than chalcopyrite in veins and veinlets, whereas to the east of the fault, chalcopyrite is controlled by brittle deformation and found in fractures and open space fillings (Bower et al, 1995). Pyrite to chalcopyrite ratios range from less than 2:1 in the core of the deposit, to greater than 20:1 in the outer phyllic zone (Bower et al, 1995). Locally, bornite and tetrahedrite can be coarsely intergrown with chalcopyrite (Bower et al., 1995).

Molybdenite is not generally intergrown with other sulfides and occurs as selvages in early, high temperature, potassic quartz veins; discrete flakes and disseminations (after Bower et al., 1995)

Native gold can occur as free grains in quartz (50 to 70 microns) and as inclusions in pyrite and/or chalcopyrite grains (1 to 15 microns) (Bower et al., 1995). High grade smoky quartz veins with numerous specks of visible gold are also reported to exist.

Late-stage, commonly vuggy, polymetallic veins (like those of the Bomber Vein) follow roughly parallel, steeply dipping fractures trending 150 to 170 degrees (Bower et al., 1995). Metallic mineralogy includes abundant sphalerite and galena, with less abundant tetrahedrite, chalcopyrite (commonly intergrown with tetrahedrite), and bismuth bearing minerals, and are geochemically anomalous in any or all of Ag, As, Bi, Cu, Cd, Mn, Pb, Sb, Zn, and locally W (Bower, 1995).

In drill-core, the hypogene zone is un-weathered, un-oxidized.

### 9.2 Hydrothermal Alteration

Crystallization and exsolution of hydrothermal fluids from Patton porphyry magmas produced porphyry style Cu-Mo-Au mineralization (Selby and Nesbitt, 1997). Therefore, the Patton Porphyry, and associated intrusion breccia, is genetically related to the Cu-Mo-Au mineralization of the deposit (Godwin, 1975; Selby & Creaser, 2001).

Hydrothermal alteration at the Casino property consists of a potassic core centered on and around the main Patton Porphyry body, in turn bordered by contemporaneous, strongly developed and fracture controlled phyllic zone, a weak propylitic zone, and a secondary discontinuous argillic overprint (Godwin, 1975; Selby and Nesbitt, 1997). Mineralized stockwork veins and breccias on the Casino Property are closely associated with the hydrothermal alteration (Selby and Nesbitt, 1997)

Figure 9-1 represents alteration below the weathering frond marked with argillic alteration.

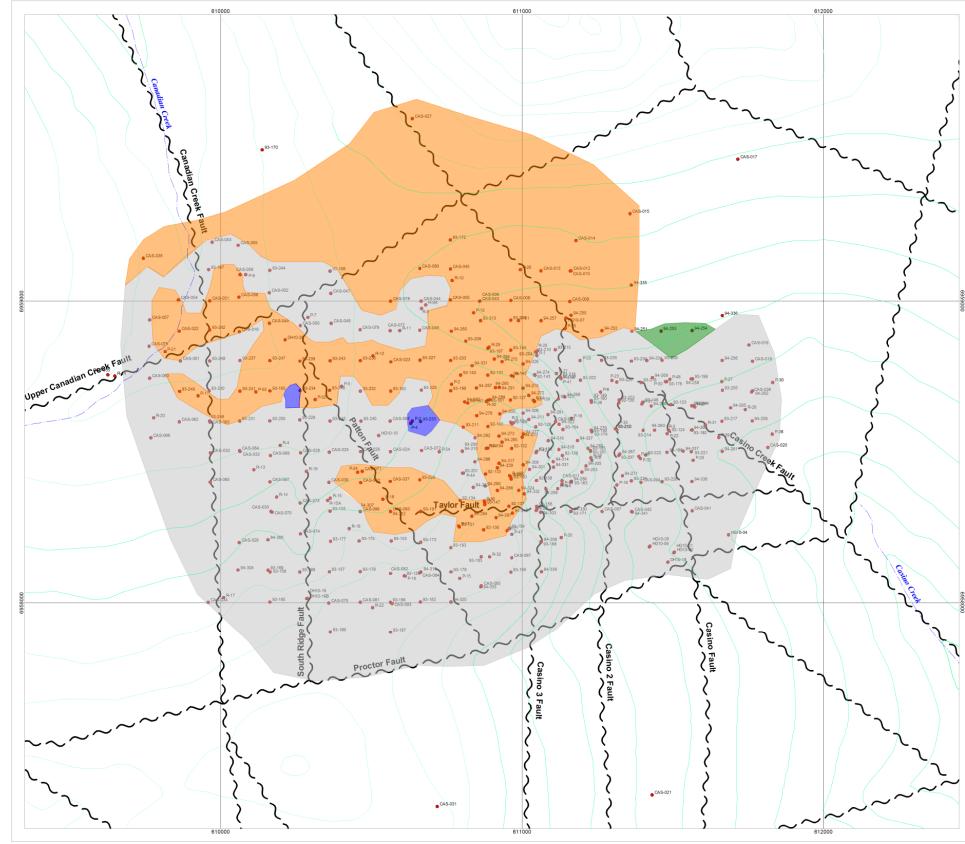
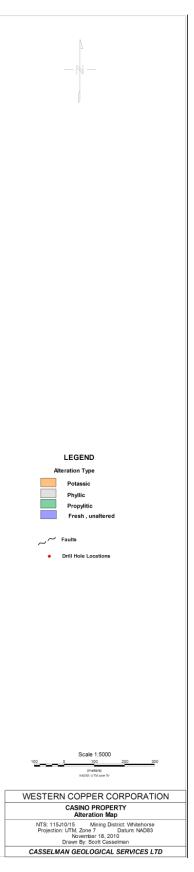


Figure 9-1: Hydrothermal alteration zones of the Casino deposit



Potassic alteration minerals include texturally destructive K-feldspar, biotite, magnetite and quartz (Selby and Nesbitt, 1997) with lesser hematite, purple anhydrite and gypsum (Godwin, 1975). Biotite is generally felted and pseudomorphic after hornblende. Occasionally, magnetite may form braided veinlets. In drillcore potassic alteration is represented by dark brown to black biotite alteration and/or by pink potassium feldspar alteration.

The texturally destructive phyllic zone is found peripheral to, and locally overprints, the potassic zone of alteration. It has a distinctive 'bleached' appearance and can be structurally controlled. Phyllic alteration minerals include quartz, pyrite, sericite, muscovite (after biotite), and abundant tourmaline (Selby & Nesbitt, 1997), as well as minor hematite and or magnetite towards the potassic zone (Godwin, 1975). Quartz and sericite are generally alteration minerals after potassic and plagioclase feldspars (Godwin, 1975). Biotite alters to muscovite or titanite and hornblende alters to chlorite, calcite, quartz and biotite (Bower et al, 1995). Tourmaline forms radiating disseminations and veinlets. Sulphides are typically high, with pyrite ranging from 5-10% throughout as disseminated blebs or cores to quartz 'd' veins.

Where intense phyllic overprints potassic alteration relict textures are destroyed and minerals are recrystallized, commonly to equal portions of quartz, plagioclase, and K-feldspar; up to 10 percent biotite; and trace apatite and titanite. Strongly zoned plagioclase and locally kinked biotite form subhedral lathes, surrounded by K-feldspar, locally strained quartz, and biotite. The colour is pale pink overall.

Propylitic alteration is rare on surface, but forms a wide halo around the deposit in gradational contact with the inner potassic alteration. Alteration minerals include epidote, chlorite and calcite (Selby and Nesbitt, 1997), with lesser carbonate, clay, sericite, pyrite and albite (Godwin, 1975). Hornblende and biotite are completely chloritized (Godwin, 1975) whereas feldspars look relatively fresh, and textures are generally well-preserved

In typical porphyry copper deposits, advanced argillic alteration will occur above the phyllic alteration. It appears that on the Casino property, all evidence of advanced argillic alteration has been eroded or destroyed.

Secondary argillic alteration is closely associated with the supergene zone and may appear locally as patches or pockets within potassic and phyllic alteration. It is poorly developed, appears bleached or pale green, and contains abundant clays (kaolinite, montmorillionite), and possible chlorite and/or carbonate. In drill core, this unit may be recognized by distinctive "pock-marks" along the surface of the core (Godwin, 1975).

# 9.3 SUPERGENE MINERALIZATION

The Casino deposit is unique among Canadian porphyry deposits as it has a substantially preserved, outcropping oxide gold leached cap; an upper well-developed, copper enriched supergene zone; and a lower copper-gold hypogene zone.

### Leached Cap Mineralization (CAP)

The Leached Cap (oxide gold zone) is gold-enriched and copper-depleted due to supergene alteration processes as well as the lower specific gravity of this zone relative to the other supergene zones (Bower, 1995). It averages 70 metres thick and is characterized by boxwork textures filled with jarosite, limonite, goethite, and hematite (Bower et al., 1995). This weathering has completely destroyed rock textures and replaces most minerals with clay. The resulting rock is pale gray to cream in colour and is friable to the touch, and the clay is often stained yellow, orange, and/or brown by iron oxides. The weathering is most intense at the surface and decreases with depth.

### **Supergene Oxide Mineralization (SOX)**

The poorly defined Supergene Oxide zone is copper-enriched, with trace molybdenite. It exists as a few perched bodies within the leached cap (Bower et al., 1995) likely due to more recent fluctuations in the water table (Godwin, 1975). This zone is thought to be related to present day topography, and is best developed where oxidation of earlier secondary copper sulphides occur above the water table, on well drained slopes (Bower et al., 1995). Where present, the supergene oxide zone averages 10 metres thick, and can contain chalcanthite, malachite and brocanthite, with minor azurite, tenorite, cuprite and neotocite (Bower et al., 1995). Where present the supergene copper oxide zone grades into the better-defined supergene copper sulphide zone.

### **Supergene Sulphide Mineralization (SUS)**

Supergene copper mineralization occurs in an up to 200 metre-deep weathered zone below the leached cap and above the hypogene (Bower et al, 1995). It has an average thickness of 60 metres (Bower, 1995) and is positively correlated with high grade hypogene mineralization, high permeability, and phyllic and/or outer potassic alteration (Godwin, 1975). Grades of the Supergene sulfide zone vary widely, but are highest in fractured and highly pyritic zones, due to their ability to promote leaching and chalcocite precipitation (Godwin, 1975). Thus, secondary enrichment zones are thickest along contacts of the potassic and phyllic alteration; accordingly, the copper grades in the Supergene Sulphide zone are almost double the copper grades in the Hypogene (0.43% Cu versus 0.23% Cu). Grain borders and fractures in chalcopyrite, bornite and tetrahedrite may be altered to chalcocite, diginite and/or covellite (Bower, 1995). Chalcocite also locally coats pyrite grains and clusters, and may extend along fractures deep into the hypogene zone. Molybdenite is largely unaffected by supergene processes, other than local alteration to ferrimolybdite (Bower, 1995).

In drill-core, the SUS zone is generally broken with decreasing clay alteration and weathering and is 'stained' dark blue to gray.

Table 9-1 summarizes the main minerals identified in the Leached Cap and Supergene zones.

Zone	Minerals Present	Average Thickness
Leached Cap	jarosite, goethite, hematite, ferrimolybdite	70 metres
Supergene Oxide	chalcanthite, brochantite, malachite, azurite, tenorite, cuprite, neotocite, copper WAD native copper, copper-bearing goethite	10 metres
Supergene Sulphide	digenite, chalcocite, minor covellite, bornite, copper-bearing goethite	60 metres

Table 9-1: Leached Cap & Supergene Minerals
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### **10 EXPLORATION**

This section describes Western Copper's exploration programs from 2008 through 2010 at the Casino Property. Prior exploration activities are described in the History Section of this report.

#### 10.1 2008 DRILLING PROGRAM

In 2008 Western Copper drilled three drill holes (camp water well and two exploration holes) totalling 1,163 m. The main purpose of the drilling was to obtain fresh core samples for the metallurgical and waste rock characterization tests. Both exploration holes twinned PSG's holes and their role was also to confirm historic copper, gold and molybdenum grades.

### **10.2 2009** TITAN TM GEOPHYSICAL SURVEY

Between July 16 and 29, 2009, Quantec Geoscience Limited of Toronto, Ontario performed Titan-24 Galvanic Direct Current Resistivity and Induced Polarization (DC/IP) surveys as well as a Magnetotelluric Tensor Resistivity (MT) survey over the entire grid. Magnetotelluric Resistivity results in high resolution and deep penetration (to 1 km) and The Titan DC Resistivity & Induced polarization provides reasonable depth coverage to 750 m.

The survey grid was centered on the Casino deposit covering 2.4km by 2.4km area. The grid consisted of nine (9) lines, spaced 300 m apart, each 2.4 km long and at an azimuth of approximately 64 degrees (perpendicular to Casino Creek Fault).

Results of Titan survey were used by Quantec to identify a series of drill targets within the survey grid and adjacent to the known mineralization. 10 holes, totalling 4,327 m, were drilled to test geophysical targets. Several distal PB-Zn veins and arsenopyrite rich veins were intercepted during this drilling, but porphyry copper mineralization wasn't found.

Results of the Titan survey were later used to interpret structures within and around the Casino deposit.

#### 10.3 2009 DRILLING PROGRAM

In 2009 the company drilled 10,943 meters in 37 diamond drill holes. 27 holes (6,616 m) were infill holes drilled to upgrade inferred and undefined material to measured and indicated classes. Holes CAS-004 and CAS-007 were designed to test inferred grades at the bottom of the proposed pit. Most of the infill drilling was done on the north slope of Patton Hill that was mapped as "Latite Plug" on PSG maps. Drilling has identified supergene Cu mineralization and Mo mineralization in this area.

### **10.4 2010 DRILLING PROGRAM**

In 2010, infill and delineation drilling continued with most of the drilling done to the North and West of the deposit as outlined by PSG. The drilling program also defined hypogene mineralization at the south end of the deposit. In addition, the company drilled a series of geotechnical holes at the proposed tailings embankment area and within the pit. Several hydrogeological holes were also drilled in 2010.

A breakdown of 2010 drilling by Western Copper is as follows:

- 46 exploration holes for 12,046.19 m
- 4 combined geotech/Hydrogeo holes for 1,170.50 m
- 6 geotech holes in the tailings embankment area for 395.21 m
- 6 Hydrogeological holes for 519.08 m
- 1 water well for 153.92 m

The total meterage drilled by Western Copper from 2008 through 2010 is 26,239.75 m in 104 drill holes.

### 10.5 2010 RELOGGING PROGRAM

From April to June 2010 all Pacific Sentinel's core stored at the Casino Property was relogged. Purpose of the relogging was to provide data for the new lithology and new alteration models. All previously logged lithologies were grouped in four generalized lithological groups:

WR – Dawson Range batholith granodiorite, diorite and earlier metamorphic rocks

PP – Patton porphyry

IX – intrusion breccia formed between Patton porphyry and Dawson range rocks

MX – post-mineral explosion breccia

Alteration assemblages were relogged according to the following criteria:

Pottassic –K-spar or biotite altered rocks

Phyllic – Sericitised, Qz-Ser and silicified rocks

Propylitic – marked with the first appearance of secondary epidote and chlorite

Argillic – argillic was interpreted as the result of supergene weathering, not as hydrothermal alteration. Argillic alteration usually coincides with the leached cap.

Cu mineralization zones were also reinterpreted: in Western Copper holes weak acid soluble assay Cu-AA05 and CN leach assay Cu-AA17a were used to define supergene zones. Following criteria were used to define SOX and SUS zones:

SOX = Cu grade > 0.10% and Cu-AA05 > 25% of the total Cu SUS = any Cu grade and Cu-AA17a >20\% of the total Cu

Pacific Sentinel utilized different assay methods to determine oxide and supergene sulphide copper. As reported in 2008 Pre-Feasibility Study (M3 Engineering, 2008):

In 1994, selected samples in the Leached Cap, Supergene zone and the upper 50 m of Hypogene zone were composited two to one and subjected to a two-stage leach process. The filtered solution from a weak (3%) sulphuric acid initial leach was analyzed for copper by AAS. This result was designated weak acid soluble (CuW). This leach digested all copper oxide minerals (including neotocite, tenorite, malachite, azurite, chalcanthite, and brochantite), with the exception of cuprite. A second, stronger leach of (5%) sulphuric acid combined with 2% ferric sulphate. This leach digested from 25 to 50 percent of the copper present as supergene sulphide minerals such as chalcocite, digenite and covellite, without digesting a significant amount of the copper present as chalcopyrite and/or bornite. This leachate was analyzed for Cu by AAS and was designated moderate acid soluble (CuM). Copper remaining in the residue was undissolved chalcopyrite and/or bornite which was reported as insoluble sulphide copper or strong acid soluble copper (CuS).

Since the analytical procedures used in 1994 are not commonly available, Western Copper did a comparison of the modern supergene copper assay and historic supergene copper assays. 90 samples from different parts of supergene mineralization zone were assayed for copper after:

- 3% sulphuric acid leach
- 5% sulphuric acid leach
- 5% sulphuric acid + 2% ferric sulphate leach
- Cyanide leach

Plots have shown that CuW corresponds to currently utilized Cu-AA05 and that sum of CuW and CuM factored by 1.67 corresponds to CN leach copper.

CuW = Cu-AA05(CuW+CuM) x 1.67 = Cu-AA17a

# **10.6 TOPOGRAPHIC SURVEY**

The topographic base map used in this report was made by Eagle Mapping Services Ltd. of Port Coquitlam, B.C for PSG.in 1993. The map was created from aerial photos flown in July 1993, by Lamerton & Associates of Whitehorse.

In 1993, Eagle Mapping calculated transformation parameters for the shift from local grid to UTM NAD83 grid, for control station #11 at the summit of the Patton Hill (South-West end of the deposit). At some point later the accuracy of this translation/rotation and elevation shift was brought into question by PSG and they decided not to switch to UTM coordinates. Drill hole collars, geological model, block model and proposed pits remained in local coordinates in both the 1995 Scoping Study and 2008 Pre-Feasibility Study.

In 2010 Yukon Engineering Services resurveyed control station #11. Surveyed coordinates were used to calculate new transformation parameters for the shift from Local Grid to UTM grid. New transformation parameters are shown in Table 10-1.

TRANSLATION:	6 903 702.59 N
	599 862.73 E
<b>ELEVATION SHIFT:</b>	7.34 m

 Table 10-1:
 Transformation Parameters

Yukon Engineering Services transformation was applied on all 1992-94 collar coordinates and on the 1993 Eagle Mapping's topographic base map.

In April 2010 Associated Engineering from Burnaby, B.C. flew new aerophotography and mapped property for the proposed transportation route purposes and other engineering purposes.

# 11 DRILLING

The drilling for 2008 to 2010 exploration programs was contracted to Kluane Drilling Ltd from Whitehorse, Yukon. Up to three hydraulic diamond drills were utilized.

Water for the drilling was pumped from Canadian Creek (Canadian creek bend, location of the old placer camp) and from Casino Creek.

Drilling was carried out from March through November. Conditions in the late winter and fall required winter-type drilling equipment. The main challenges during the winter drilling were water supply due to the low water level in both creeks and freezing of long water lines.

All drilling was done using "thin wall" drill rods. Holes CAS-001 to CAS-007 were HTW size (core diameter 70.92 mm) and the remainder of the drilling was done primarily in NTW core size (core diameter 56.00 mm). In few cases holes were reduced to BTW core size (core diameter 42.00 mm).

Core recoveries were consistently in the 80% to 90% range in the Leached Cap and Supergene zones and 90% to 100% in the hypogene zone.

Down-hole orientation surveying was performed using an Icefield Tools MI3 Multishot Digital Borehole Survey Tool for holes CAS-002 to CAS-076. For holes CAS-077 to CAS-085 and the geotechnical and hydrogeological holes a Reflex Instruments downhole survey instrument was used

Western Copper continued the drilling pattern established by PSG, utilizing a vertical drill hole orientation, for the most part and a nominal 100 metre grid spacing. Later in the program, Western Copper drilled a series of inclined holes in the northern part of the deposit. Several inclined holes were also drilled in the Western part of the deposit to establish contacts with the post-mineral explosion breccia and to confirm orientation of proposed N-S structure.

Geostatistics done in 2010 have shown that the 100 m spacing was sufficient for supergene mineralization which prevails in this area. The same studies have shown that the 100 m drill hole spacing is only marginally sufficient for hypogene copper mineralization.

1992 to 1994 Collar co-ordinates (Northing, Easting and elevation) were surveyed using a total station Nikon C-100. Surveying of the 1992 and 1993 drill holes was undertaken by Lamerton & Associates. 1994 holes were surveyed by Z. Peter, Surveyor from Burnaby, B.C. It should be stressed that all Pacific Sentinel's collar co-ordinates were surveyed in local grid coordinates.

2008-2010 collars were surveyed by Yukon Engineering Services from Whitehorse. The survey was doneusing a Differential GPS units and the results are reported in UTM NAD83 coordinates.

Ten of Pacific Sentinel's drill hole collars were also surveyed by Yukon Engineering for comparison purposes. Those were entered in data base with their new UTM NAD83 collar coordinates.

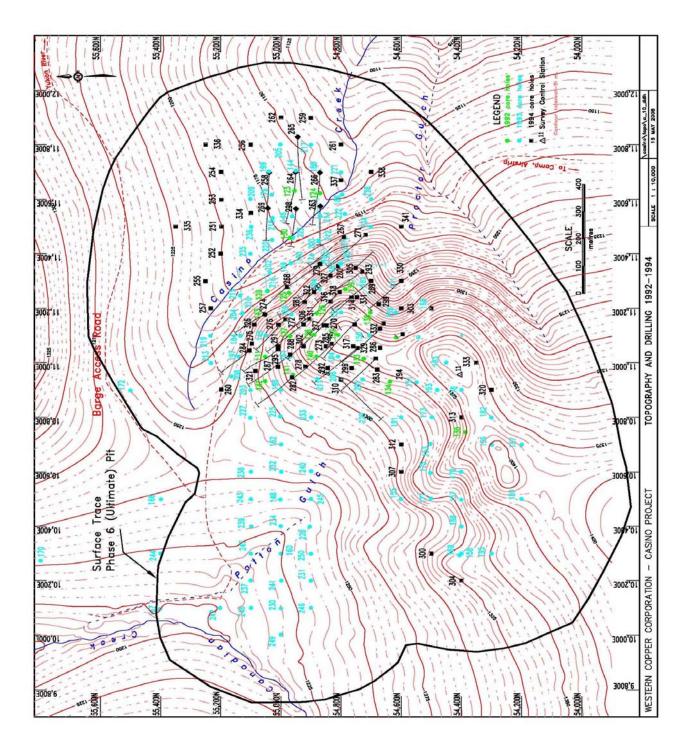


Figure 11-1: Casino project drilling from 1992 to 1994

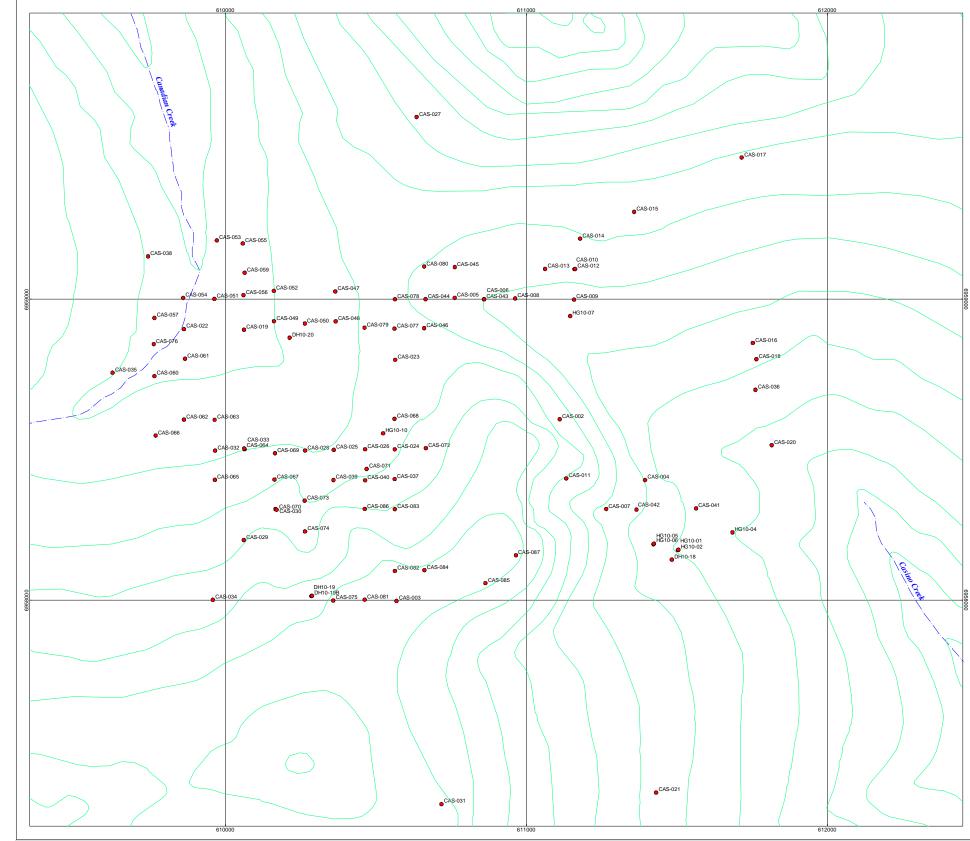
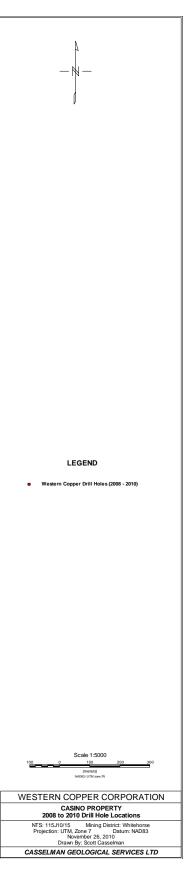


Figure 11-2: Casino project drilling from 2008 to 2010



# 12 SAMPLING METHOD AND APPROACH

### 12.1 CORE PROCESSING

At the drill site, core was placed into wooden core boxes directly upon emptying the core tube. A wooden block marked with the depth in feet and meters was placed in the core box upon the completion of each drill run, which in good conditions was 10 feet. Core boxes were transported by drilling company truck less than 5 km to the core logging facility adjacent to the Casino Airstrip. There, core boxes were laid out in sequence on elevated tables in the core shack.

Boxes were labeled with black felt tip pens and embossed steel tags containing hole number, box number and interval of core within the box. Geotechnical data including core recovery, RQD, hardness and natural breaks were recorded for each drill run, as marked by the wooden core run blocks. This information was recorded by the geologist or trained logging assistant under direct supervision of a geologist. Logging of the geotechnical data followed codes and format outlined in a project specific manual prepared by Knight Piesold.

The geologist then recorded key geologic information including lithology, zone, mineralization and alteration. The data was entered directly into a Microsoft Excel table for each drill hole. The codes and logging form followed as close as possible, format outlined in the Pacific Sentinel's logging procedures. The 4-letter lithology codes, 3-letter copper mineralization zone codes and 4-digit alteration codes used in 2008-2010 drilling programs were all developed by Pacific Sentinel.

Core was photographed after the geology log was completed and after the sampling intervals were marked.

### 12.2 CORE SAMPLING

Sample intervals were marked by the geologist on the core generally at 3-meter-long intervals or at geological contacts.

In 2008, all samples were split using a conventional core splitter. In 2009, about 150 samples were split with a core splitter at the beginning of the program. From then on, in 2009 and 2010, all samples were cut with a core saw. All samples were split or cut on site and placed in individually labelled plastic sample bags with the unique sample number selected by the geologist logging the hole. The core samples were split lengthwise with half of the core placed in the sample bag, the other half returned to the core box. The samples were sent to ALS Chemex Labs in North Vancouver for analysis.

In 2008, 422 drill core samples were collected; in 2009, 3,832 drill core samples were collected; and in 2010, 4,768 drill core samples were collected.

# 13 SAMPLE PREPARATION, ANALYSIS AND SECURITY

All original samples were sent to ALS Chemex Labs in North Vancouver for analysis. The standard analytical request for all samples was for preparation by procedure Prep-31A. This processed involved logging the sample into the tracking system, weighing, drying and crushing the entire sample to better than 70% -2mm. A 250 gram split of the crushed material was then collected by riffle splitter and it was pulverized to better than 85% passing 75 microns. The resultant pulp was then sent for analysis.

Duplicate samples were sent to Acme Analytical Laboratories Ltd in Vancouver for analysis. At Acme, preparation procedure R150 was used. This processed involved logging the sample into the tracking system, weighing, drying and crushing the entire sample to better than 70% passing 10 mesh. A 250 gram split of the crushed material was then collected by riffle splitter and it was pulverized to better than 85% passing 200 mesh. The resultant pulp was then sent for analysis.

Sample Standards and Blanks arrived at the labs in pulverized form. These samples skipped the crushing and pulverizing stage and went to the analysis stage.

### **13.1** Assay Analysis

The analytical process at used at ALS Chemex and for the sample duplicates Acme Analytical Laboratories were similar.

#### **Gold Analysis**

At ALS Chemex gold assays were run using 30 gram sample of the pulp with fire assay and AA finish to a 0.005 ppm detection limit according to procedure Au-AA23. Results were reported in parts per million (ppm).

At Acme gold assays were run by using a 30 gram sample of the pulp with fire assay and ICP-ES finish to a 2 ppb detection limit according to procedure Group 3B. Results were reported in parts per billion (ppb).

### **ICP Analysis**

Samples sent to ALS Chemex were analyzed for multiple elements, including copper, molybdenum and silver by process ME-ICP61. This process involved a four acid "Near Total" digestion of 1.0 grams of sample pulp with Mass Emission-Inductively Coupled Plasma Spectroscopy for the analysis. This process returned results for: Ag (ppm), Al (%), As (ppm), Ba (ppm), Be (ppm), Bi (ppm), Ca (%), Cd (ppm), Co (ppm), Cr (ppm), Cu (ppm), Fe (%), Ga (ppm), K (%), La (ppm), Mg (%), Mn (ppm), Mo (ppm), Na (%), Ni (ppm), P (ppm), Pb (ppm), S (%), Sb (ppm), Sc (ppm), Sr (ppm), Th (ppm), Ti (%), Tl (ppm), U (ppm), V (ppm), W (ppm), and, Zn (ppm).

Samples sent to Acme were analyzed for multiple elements, including copper, molybdenum and silver by process Group 1EX. This process involved a four acid digestion of 0.25 grams of sample pulp with Mass Emission-Inductively Coupled Plasma Spectroscopy for the analysis. This process returned results for: Ag (ppm), Al (%), As (ppm), Au (ppm), Ba (ppm), Be (ppm), Bi (ppm), Ca (%), Cd (ppm), Co (ppm), Cr (ppm), Cu (ppm), Fe (%), K (%), La (ppm), Mg (%), Mn (ppm), Mo (ppm), Na (%), Nb (ppm), Ni (ppm), P (%), Pb (ppm), Sb (ppm), Sc (ppm), Sn (ppm), Sr (ppm), Ti (%), U (ppm), V (ppm), W (ppm), Y (ppm), Zn (ppm) and, Zr (ppm).

### Copper, Molybdenum and Silver Assay

Samples that returned over-limits for copper, molybdenum or silver in the ICP analysis were assayed by process OG62 at ALS Chemex. This process involved a four acid digestion and analysis by Inductively Coupled Plasma-Atomic Emission Spectroscopy or Inductively Coupled Plasma-Atomic Absorbtion Spectroscopy. Results were reported in percent (%).

### Acid Soluble Copper Analysis

In 2008 and 2009, following receipt of the copper analyses, samples were selected for "non-sulphide" or "acid soluble" copper analysis. The criteria for "non-sulphide" selection was any sample that contained >100 ppm Cu in the Leached Cap, Supergene Zone, or top 50 m of the Hypogene Zone. A list of these samples was presented to ALS Chemex. ALS Chemex then retrieved the pulps and analyzed it by 5% sulphuric acid leach and AAS finish (procedure Cu-AA05).

In 2010, selected samples for "acid soluble" copper analyses were identified by the geologist logging the core and the request for this analysis was submitted when the samples were originally sent to the lab. The samples identified by the geologist were generally from the top of the hole down through the top 50 m of the hypogene zone. On a few occasions, after receiving the geochemical results additional samples were identified for "non-sulphide" copper analyses and ALS Chemex was requested to pull these sample pulps and perform the analysis.

### **Cyanide Soluble Copper Analysis**

In 2010, a large number of samples from the 2008, 2009 and 2010 were identified for cyanide soluble copper analyses. These samples were selected to aid with identification of the Supergene Sulphide – Hypogene metallurgical boundary. The selected samples were analyzed by cyanide leach with AAS finish (ALS Chemex procedure Cu-AA17a). For samples that had already been received and processed at the lab, ALS Chemex retrieved the pulps and analyzed this material. For samples not yet sent to the lab, the geologist would identify the Supergene Sulphide – Hypogene boundary visually and samples 30 m on either side of the boundary were identified for cyanide leach copper analysis. On a few occasions, after receiving the geochemical results additional samples were identified for cyanide soluble copper analyses and ALS Chemex was requested to pull these sample pulps and perform the analysis.

### **13.2** SECURITY

Samples were shipped in rice bags with uniquely-numbered, non-re-sealable security tags. Each sample shipment was shipped from the Casino Property via air to Whitehorse. The samples were received at the airport by the project expediter and trans-shipped to the appropriate lab from there. In 2008 and early 2009, all shipments were sent by Byers Transport to North Vancouver. Later in 2009 and early 2010, samples for ALS Chemex were shipped by Byers Transport to the ALS Chemex preparation facility in Terrace, BC, where they were crushed and pulverized. The pulps were then shipped by ALS Chemex to North Vancouver for analyses. In May of 2010, ALS Chemex opened a preparation facility in Whitehorse. From then on, all samples were delivered to the Whitehorse preparation lab by the project expediter. The samples were crushed and pulverized in Whitehorse and the pulps were shipped to North Vancouver for analysis.

If a shipment was received with a broken security tag, the lab would notify the project manager to determine if it the shipment was tampered with, or if the tag was accidentally damaged during shipping.

The remoteness of the Casino site provided a large degree of security as air traffic into the project was closely monitored. Further, the Casino gold grades were low and any metal contamination or grade enhancement would be quickly and easily identified. There did not appear to be any tampering of any samples.

# 14 DATA VERIFICATION

Data entry and verification for historic data used in the updated resource estimate was documented in the Casino Project Pre-Feasibility Study, Yukon Territory, Canada, prepared by M3 Engineering and Technology Corp in 2008. Data entry and verification for the drilling programs conducted by Western Copper Corporation from 2008 through 2010 is documented below. The Western Copper database was verified on an ongoing basis by the Scott Casselman, Project Manager, as the data was received from the field or the assay labs. The objective was to obtain an error free computer database of all the geological logs, geotechnical logs, assay results, ICP results, drill collar coordinates and down hole surveys, for the 2008, 2009 and 2010 diamond drill holes.

### 14.1 DATA ENTRY

Drill hole logging, sampling and geotechnical data was entered directly by the geologist or geotechnical logger working on the core in a Microsoft Excel spreadsheet. Upon completion of each hole these files was submitted to the Project Manager for checking. Upon receipt of analytical data from the lab, the data was merged with the sample intervals by the Project Manager and the data was checked.

Down hole survey information was recorded digitally by the down hole survey instruments and the dumped data was submitted by the operator to the Project Manager. This data was checked by the Project Manager.

Hole collar surveying was performed by surveyors from Yukon Engineering Services Ltd and this data was provided to the Project Manager for inclusion into the project data base. This data was checked by the Project Manager.

Geotechnical data such as Specific Gravity measurements, Rock Quality Determinations (RQD), and core box intervals was first recorder on paper then transcribed into the computer.

Sample interval data was entered directly into the computer with the hole number and interval being also written in the sample booklets. The booklets were checked in the event of a discrepancy in sample intervals.

All the data was brought into Microsoft Excel for Windows spreadsheets where the data was organized into a standardized format. Once the data was checked it was posted on the Western Copper FTP site for use in the office. The data was merged into Geosoft Target software database for creation of drill plans and sections and for 3D modelling.

### **Verification Procedure**

The data verification process was performed under the supervision of the Project Manager. When errors were observed in geological, geotechnical or sample intervals, the Project Manager and geologist or technician would go back to the core and/or original notes or sample booklets and sort

out the error and make appropriate corrections. Data verification was performed on an ongoing basis and kept as up to date as possible. At times where data were first recorded on paper, then transcribed to the computer, original copies of the hand notes were kept for future reference. All original data is kept in the Project Files.

Occasionally, in verification of field logs, when it was unclear which value was correct, or it seemed both may be in error, other sources such as the geologists' side logs, synoptic logs, drillers' time sheets, and/or core photographs were referred to and a decision was made by a geologist familiar with logging and sampling techniques.

### **Common Errors**

The errors encountered during the data verification process varied depending upon the data being checked. Overall there were very few errors in the database. The most common error observed was in geological or sample intervals, where the "To" recording of a previous sample did not match the "From" recording of the subsequent sample. These were generally easy to sort out by the geologist or geotechnical logger.

Because of the nature of the laboratory derived data, there were very few mistakes due to human error.

Errors detected in the field data of the geological logs, geotechnical logs, synoptic logs, specific gravity logs and down hole survey data were often a result of human error in recording the original or in transcription. Wherever possible computer checks were done on the data; several types of errors were detected this way.

### 14.2 QUALITY ASSURANCE AND QUALITY CONTROL

During the 2008 through 2010 drilling programs at Casino, standards and half-core duplicates were assayed at regular intervals in order to check the security of the samples as well as the quality and accuracy of the laboratory analyses. The standards and blanks were prepared by CDN Resource Laboratories Ltd. of Delta, BC.

### Sample Standards

The sample standard used in 2008, 2009 and 2010 was prepared by CDN Resource Laboratories Ltd. of Delta, BC. The standard is a gold-copper-molybdenum standard, CDN-CM-4. It is certified by Duncan Sanderson, Licensed BC Assayer with independent certification by Dr. Barry Smee, Ph.D, geochemist. Round robin assaying for the standard was performed at 12 independent laboratories. CDN reports the recommended values and the "Between Lab" Two Standard Deviations of the standard values of:

 Gold:
 1.18 ± 0.12 g/t

 Copper:
 0.508 ± 0.025 %

 Molybdenum:
 0.032 ± 0.004 %

In 2008, 8 sample standards were submitted regularly with the sample shipments; in 2009, 81 standards were submitted; and in 2010, 86 standards were submitted (approximately 1 every 50<sup>th</sup> sample). ALS Chemex analyzed the standards along with the drill core samples by gold, copper and molybdenum assay, as well as multi-element ICP as described above.

The results from sample standard CDN-CM-4 for 2008, 2009 and 2010, for gold, copper and molybdenum analyses are plotted below:

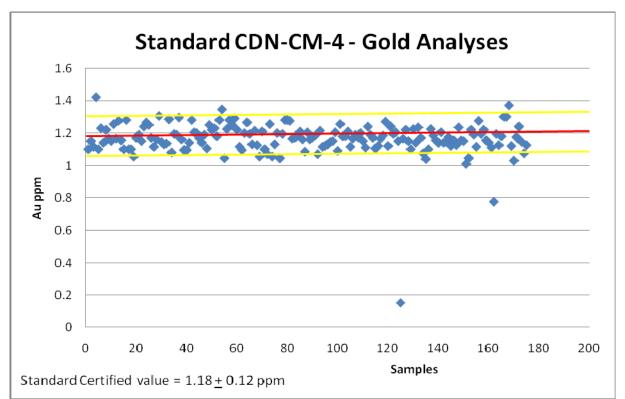


Figure 14-1: Sample Standard CDN-CM-4 Gold Assay Results

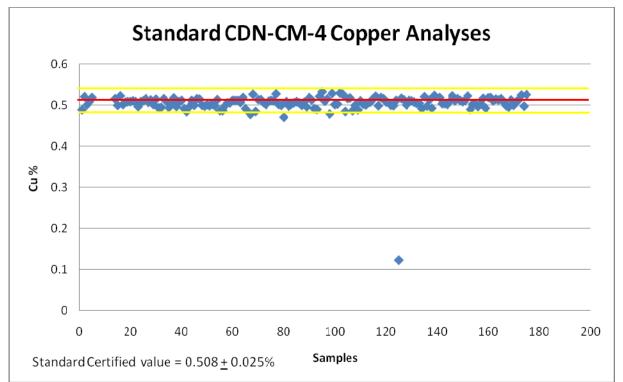


Figure 14-2: Sample Standard CDN-CM-4 Copper Assay Results

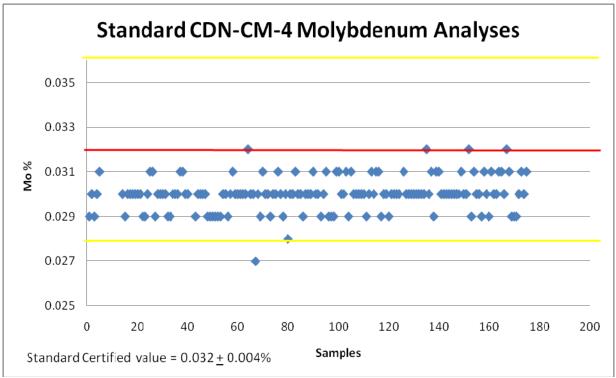


Figure 14-3: Sample Standard CDN-CM-4 Molybdenum Assay Results

The three plots demonstrate that with very few exceptions (9 for gold, 2 for copper, and one for molybdenum), the values plot within the acceptable range of the certified standard. The plots

also demonstrate that there is a reasonable spread of values within the recommended value range of 2 standard deviations as provided by CDN Resource Laboratories Ltd. There does not appear to be any systematic bias.

Later in 2010, a second sample standard (CDN-CM-7) was purchased from CDN Resource Laboratories Ltd. because they had run out of standard CDN-CM-4. This sample is also certified by Duncan Sanderson and Dr. Barry Smee. CDN reports the recommended values and the "Between Lab" Two Standard Deviations of this standard as:

Gold:	$0.427 \pm 0.042 \ g/t$
Copper:	0.445 <u>+</u> 0.027 %
Molybdenum:	0.027 <u>+</u> 0.002 %

Fifteen of these standards were submitted in 2010. ALS Chemex analyzed these standards in the same manner as standard CDN-CM-4, described above.

The results from sample standard CDN-CM-7 for 2010, for gold, copper and molybdenum analyses are plotted below:

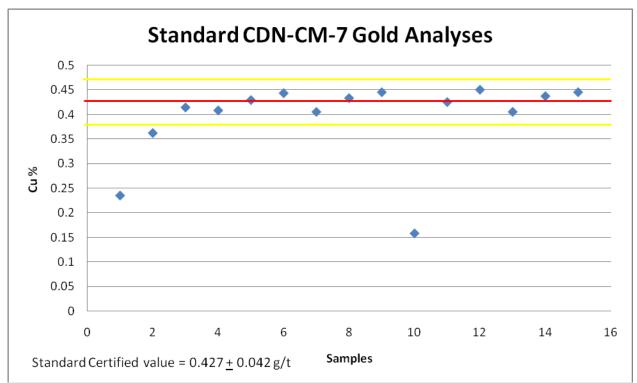


Figure 14-4: Sample Standard CDN-CM-7 Gold Assay Results

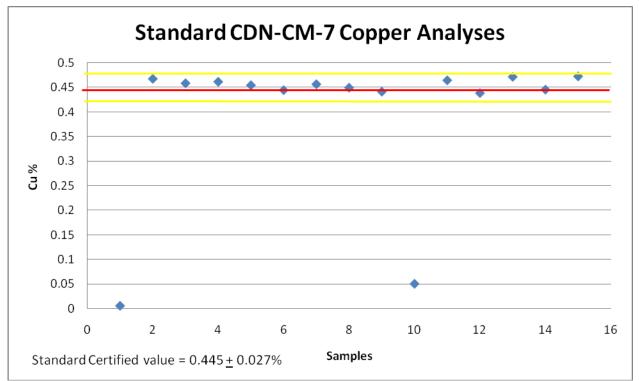


Figure 14-5: Sample Standard CDN-CM-7 Copper Assay Results

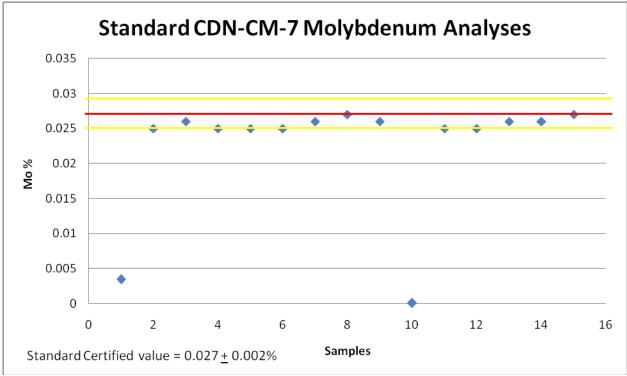


Figure 14-6: Sample Standard CDN-CM-7 Molybdenum Assay Results

The three plots show good precision with the exception of samples 1 and 10 which are well below the expected values as certified by CDN. After checking the ALS Chemex internal

standards for these batches and the sample duplicates from these batches of analyses there did not appear to be a systemic error in the batches. The suspicion is that an error may have occurred when the sample standards were inserted in the field, or when the standard was originally placed in the geochemical run at the lab. These anomalous errors are not considered significant considering that, in general, the great majority of standards returned analysis within the expect range.

### Blanks

Commencing in 2010 sample Blanks were regularly inserted into the sample stream. Blanks are included as a check of the lower limit of the analytical range and to ensure that at all stages in the process, the equipment and instruments are thoroughly cleaned prior to running subsequent samples. This is particularly important for precious metals. A total of 75 blanks were submitted during the 2010 program, nominally one every 50 samples.

The Blank was also prepared by CDN Resource Laboratories Ltd (CDN-BL-6). It is certified for gold, platinum and palladium. The recommended values for these elements are:

Gold:	<0.01 g/t
Platinum:	<0.01 g/t
Palladium:	<0.01 g/t

Since the reported recommended gold values by CDN are less than detection it is not included in a plot. The gold values of the Blanks analyzed ranged from below detection (<0.005 g/t) to a maximum of 0.046 g/t. The silver values ranged from <0.5 to 0.8 ppm; copper values ranged from 48 to 85 ppm; and molybdenum from 1 to 10 ppm.

# Field Duplicate Drill Core Analysis

Field duplicates are separate samples taken in the same manner and at the same core interval as the original sample. They are used to measure inherent variability in metal content from a single location and sample medium, and give an idea of sample reproducibility in the field. Core duplicates were collected from the ½ core that remained following the collection of the original sample. The duplicate was collected by sawing the ½ core in half longitudinally, so that ¼ of the original core was collected. Duplicates were collected, nominally every 20<sup>th</sup> sample. Where duplicates were collected, only ¼ of the core remains stored in the core box on the property.

In 2008, 21 core duplicate pairs were collected; in 2009, 199 core duplicate pairs were collected; in 2010, 245 core duplicate pairs were collected. The original ½ core sample was shipped to ALS Chemex for analysis for gold, copper and molybdenum assay, as well as multi-element ICP as described above. The duplicate ¼ core sample was shipped to Acme Labs for analysis for gold, copper and molybdenum assay, as well as multi-element ICP in a manner identical to that performed at ALS Chemex, as described above. The results for the duplicate analyses for gold, silver, copper and molybdenum are demonstrate in comparison plots between the Acme and ALS Chemex values below:

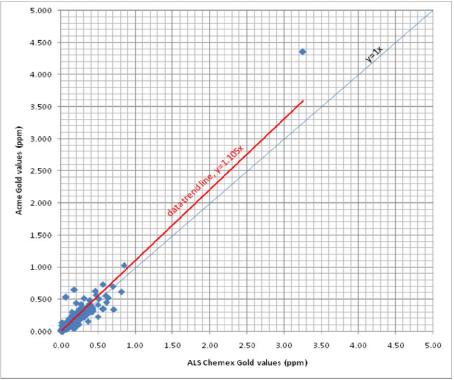


Figure 14-7: Plot of ALS Chemex gold assay versus Acme Labs gold assay for field duplicate samples (2008, 2009 and 2010 data)

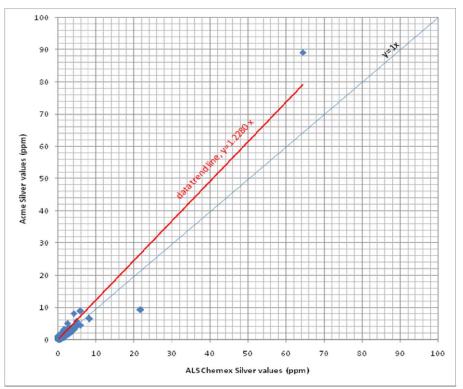


Figure 14-8: Plot of ALS Chemex silver analyses versus Acme Labs silver analyses for field duplicate samples (2008, 2009 and 2010 data)

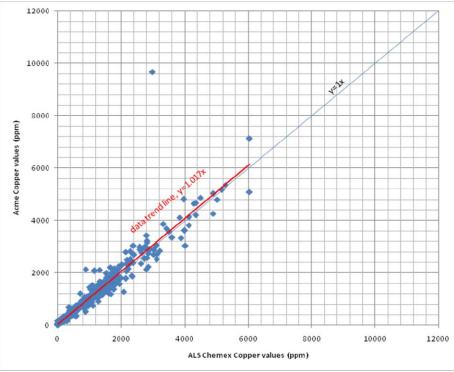


Figure 14-9: Plot of ALS Chemex copper assay versus Acme Labs copper assay for field duplicate samples (2008, 2009 and 2010 data).

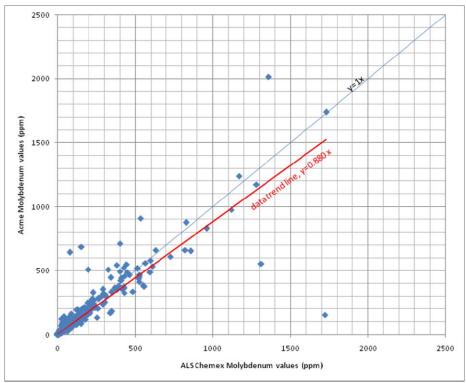


Figure 14-10: Plot of ALS Chemex molybdenum assay versus Acme Labs molybdenum assay for field duplicate samples (2008, 2009 and 2010 data).

The plots generally show good correlation between ALS Chemex and Acme Labs for all four elements of interest.

Often the "nugget effect" associate with gold and silver content will produce widely divergent values, which would plot as highly scattered data points. However, the gold and silver results from the duplicate samples show good correlation.

Ideally, a trend line of y=1x would show perfect reproducibility. This is rarely, if ever, the case due to the difference of mineral content between duplicate samples. The data trend line for gold returned y=1.105x. This demonstrates that Acme Lab results, as a whole, are 10.5% higher than ALS Chemex results. All samples cluster in close proximity to the trend line which indicates no strong "nugget effect" and good reproducibility.

The data trend line for silver is y=1.228x. This demonstrates that Acme Lab analyses, as a whole, are 22.8% higher than ALS Chemex values. In general, the points cluster well around the trend line with the exception of one sample. This also demonstrates good reproducibility.

The results for duplicate analyses for copper demonstrate excellent reproducibility. The data trend line returned y=1.017x. The copper data clusters tightly around trend line with the exception of one value. In general, the Acme results are very slightly higher (1.7%) than the ALS Chemex results.

The molybdenum plot demonstrates slightly more scattered results with 8 points plotting far off the trend line (y=0.880x). The trend line indicates that, in general, the Acme results for molybdenum are 12% lower than ALS Chemex results. Overall, however the duplicate results show good correlation. Molybdenite mineralization was observed in quartz veins in the drill core and it is possible that the 8 erratic values are reflecting a molybdenum "nugget effect", where there is a variability of molybdenite concentration between samples.

The results of analyses from the sample standards, blanks and duplicates provide for acceptable Quality Assurance and Quality Control (QA-QC) for the geochemical program at Casino for 2008 through 2010. The results also indicate that there is no evidence of tampering during the sample collection process, shipping or at the laboratory. There is also no evidence of systemic errors in the sample preparation and analytical processes

# **15 ADJACENT PROPERTIES**

Numerous quartz mineral claim blocks registered to other owners are staked adjacent to and in the general vicinity of Western Copper Corporation's Casino claim block. No known mineral exploration activity is being pursued on these claims at the present time.

Placer claims have been staked on Canadian and Britannia Creeks, some of which overlap with mineral claims on the Casino claim block. During a visit on September 25, 2007, members of the project team observed evidence of recent activity on the Canadian Creek placer claims.

Some of the placer claims overlap the Casino claims in the area of the pit. There is no priority in circumstances where placer and quartz claims overlap and negotiations with the holders of the placer claims will be necessary to determine an appropriate resolution to this situation.

The Bomber and Helicopter Ag-Pb-Zn, +/- Au polymetallic vein occurrences located approximately 2 km S-SW of the Casino porphyry deposit are within Western Copper Corporation's claim block. These occurrences became known in the late 1920's, preceding the discovery of the Casino porphyry deposit by several decades. The majority of work has been undertaken on the Bomber showing where locally high grade silver, sphalerite and galena mineralization occurs in a series of four sub-parallel, northwest trending quartz barite shears that dip steeply to the west and cut Dawson Range batholith granodiorite. The Bomber vein was last mined from 1978 to 1980 when 49 m of drifting, 55 m of raising and extensive surface trenching was carried out. In 2007 Western Copper ran VLF, TMF and soil sampling grids to identify additional exploration targets and possible extensions of the vein shears. A follow-up exploration program is planned for this area.

# 15.1 CARMACKS (WILLIAMS CREEK) PROJECT

Western Copper is actively developing the oxide copper deposit at Carmacks located about 115 km ESE of the Casino deposit and about 200 km NW of Whitehorse. The project anticipates open pit mining with crushing, heap leaching and copper recovery by solvent extraction/electrowinning to produce about 14,500 tonnes per year of cathode copper over about eight years.

# **15.2 MINTO MINE**

In October 2007 Sherwood Copper Corp. commenced operations at the Minto Mine about 240 km NW of Whitehorse and about 80 km east of the Casino Deposit.

The Minto mine is an open pit mine and flotation concentrator presently treating about 2,400 tonnes per day of ore, with a planned expansion to 3,500 tonnes per day.

The Carmacks and Minto deposits share some geologic and mineralogical similarities. Neither one is similar to the Casino deposit and therefore hold no value in terms of leading to a better understanding of Casino.

# 15.3 OTHER EXPLORATION PROJECTS IN THE AREA

- BC Gold's Carmacks Copper-Gold Project (not to be confused with Western Copper's Carmacks Project) 70-120 km SE of Casino
- Northern Freegold Resources, Ltd. is actively drilling on their Freegold Mountain claims located about 100 km SE of Casino
- Cariboo Rose Resources holds 253 contiguous claims adjacent to and west of the Casino claims

## 16 MINERAL PROCESSING AND METALLURGICAL TESTING

Note that the text from this section is taken from the Casino Project Pre-Feasibility Study (M3 Engineering, 2008).

The Casino Project will produce copper flotation concentrates with contained gold values, and molybdenum flotation concentrates, both from sulphide ore. Gold in the form of doré, and a high grade copper sulphide product will also be produced from an oxide ore heap leach. All products will be shipped offsite for sale or further processing.

#### **16.1 METALLURGICAL SAMPLES**

In the testwork commissioned by Pacific Sentinel Gold in the mid 90's, all of the samples used were assay rejects that were nominally -10 mesh in particle size. These assay rejects were combined to prepare a number of composites that were sent to Lakefield Research for flotation and other testing under the direction of Melis Engineering, Ltd., to Brenda Process Technology for flotation testing, and to Kappes, Cassiday and Associates for copper and gold leaching.

The source of samples for the current work was split HQ core that was retrieved from site in September 2007. The core had been at site since it was drilled in 1993 and 1994, but was stored under cover and well preserved by the cold temperatures of the Yukon. Recent oxide copper analysis of the core confirmed that oxidation was insignificant.

### **16.2** LEACHING TESTS

Kappes, Cassiday and Associates performed two studies in 1995 on the leaching of the oxide cap and supergene material. In the first study they leached a selection of oxide cap material with cyanide and in the second study they examined pre-leaching both oxide cap and supergene material with acid followed by cyanidation of the residue.

Gold extraction was affected by the amount of copper leached during cyanidation and ranged from 10-97.4%. Average gold extraction was 79.9%.

Lime consumption during cyanidation averaged 3.9 kg/t without the acid pre-leach, and 4.1 kg/t with the acid pre-leach. Cyanide consumption was significant, averaging 5.5 kg/t without the acid pre-leach. There was not a significant difference between the lime consumption for the oxide copper composites and copper oxide composites.

In the current leaching testwork, two column tests were run by METCON Research, Inc. on a composite sample blended to create similar gold and copper concentrations as the average reserve.

The ore was crushed coarsely to -3.8 cm (-1.5 inch), placed in 15 cm by 6 m columns, and irrigated at 12  $L/h/m^2$ . One column was leached "open cycle" – a 0.5 g/L NaCN solution was fed to the top of the column and the pregnant solution was collected and assayed. The second column was "locked cycle" and solution was recycled. In the locked cycle column when the

copper concentration in solution exceeded 50 mg/L, the solution was treated through a SART pilot plant discussed in the next section, and the gold was recovered on activated carbon. Results from the tests are shown in Table 16-1.

The gold, silver, and copper extractions from the open and locked cycle tests compare favourably. Although the gold extraction was slightly higher for the open cycle test, both tests produced good gold recovery considering the coarse crush size.

Table 16-1: Extractions and Reagent Consumptions from Open Cycle and Locked Cycle
Cyanidation

	Assays (calculated head) (g/t)			Perc	ent Extra	ction	Reagent Consumption (kg/t)		
	Au	Ag	Cu	Au	Ag	Cu	NaCN*	NaCN**	CaO
Open	0.47	1.92	693	69.52	25.14	17.4	0.39		2.83
Locked	0.42	1.61	654	65.79	27.31	18.2	0.48	0.54	3.06

\*based on titrations

\*\*based on additions

### 16.3 SART COPPER RECOVERY

SART stands for Sulfidation, Acidification, Recovery and Thickening. In this process, a cyanide solution containing copper is treated to remove copper – gold is not affected.

In the locked cycle test described previously, the pregnant leach solution from the column was treated using a SART pilot plant several times before having the gold removed using carbon and being recycled to the column. Average SART results are summarized in Table 16-2.

	Table 10-2: SAK1 Kesuits										
]	Pregnant	Solutior	ı	Barren Solution							
				after SART & Carbon			Copper	Reagen	t Consum	ption	
NaCN	Cu	Au	Ag	NaCN	NaCN Cu Au Ag			Removal	(g/L so	lution tre	ated)
(g/L)	(ppm)	(ppm)	(ppm)	(g/L)	(ppm)	(ppm)	(ppm)	(%)	<b>S</b> <sup>2-</sup>	H <sub>2</sub> SO <sub>4</sub>	CaO
0.25	81	0.21	0.30	0.39	6.8	0.04	0.02	91.3	0.024	0.64	0.37

### Table 16-2: SART Results

### **16.4** COMMINUTION TESTING

A limited amount of comminution tests were performed on the composite samples tested by Melis Engineering, Ltd., and Brenda Process Technology in prior testwork.

SGS Mineral Services performed a comminution study for this present study. 50 split drill core samples, representing the first 6 years of production were sent to SGS and subjected to several tests. The results from these tests were then analyzed by SGS using SGS MinnovEx CEET2 technology.

A summary of the grinding results appears in Table 16-3. As per the SGS report, the samples tested were characterized as medium in hardness from the perspective of semi-autogenous milling and of medium in hardness with respect to ball milling.

Test	CEET	SPI	RWI	BWI	MBWI	AI
Name	CI	(min)	(kWh/t)	(kWh/t)	(kWh/t)	( <b>g</b> )
Average	29.2	52.9	9.9	14.5	14.30	0.265
Std. Dev.	13.9	20.8	5.6	2.6	1.60	0.046
Rel. Std. Dev.	47.5	39.3	56.5	18.1	11.30	17.0
Minimum	13.5	12.6	0.0	11.2	11.40	0.226
10 <sup>th</sup> Percentile	15.3	31.4	4.4	12.1	12.50	0.232
25 <sup>th</sup> Percentile	19.1	37.4	11.1	13.3	13.00	0.242
Median	24.1	50.3	12.5	14.1	14.10	0.252
75 <sup>th</sup> Percentile	38.0	63.4	13.0	15.9	15.60	0.275
90 <sup>th</sup> Percentile	52.3	82.5	13.0	17.3	16.30	0.309
Maximum	66.9	114.1	13.0	18.2	18.30	0.332

 Table 16-3:
 Summary of Comminution Results

A circuit consisting of one 12.2 m SAG mill and two 8.2 m ball mills in closed circuit with two pebble crushers was selected as a circuit that would likely meet the design tonnage. This circuit was modeled by CEET2 technology for the first six years of production based on the results from the comminution testwork to produce a primary grind size of 80% passing 147  $\mu$ m.

The throughput as a function of year was correlated with the ore type per year from the preliminary mining schedule. A simple correlation was found that is outlined in Table 16-4. These throughput per ore type values in Table 16-4 were used for the final mining schedule developed by IMC.

Ore	Throughput
Туре	(t/h)
CAP	4469
SUP	4469
HYP	3933

# Table 16-4: Throughput Based on Ore Type

### 16.5 FLOTATION

Previous testwork in 1994 and 1995 consisted of both Melis and Brenda (later International Metallurgical and Environmental, Inc.) performing flotation tests on the oxide cap, supergene and hypogene mineralization. These tests were unable to routinely produce good concentrate grades with reasonable copper recoveries. A high pyrite concentration in the hypogene material and the presence of oxide copper in the supergene material were cited as the key issues.

The present work at G&T Metallurgical focused on two composites at two different levels of oxide copper - an "oxide composite" and a "sulphide composite". The composites were prepared to be close to the average grade of ore received for the first 5 years.

#### **Oxide Composite**

Copper recovery and grade from the oxide composite was very poor. Various combinations of sulphidizing the ore, changing grind size, using different reagents were attempted. Poor concentrate grades and low metal recoveries were obtained in all cases leading to the conclusion that this material be treated as waste in this study.

#### **Sulphide Composite**

Copper recovery from the sulphide composite was much better than that achieved for the oxide composite. Copper concentrate grades greater than 28% were routinely achieved.

Cleaner copper recoveries of 70-82% were obtained into concentrates grading from 26.8 to 32.2% copper at primary grinds with K80's of 147 and 121  $\mu$ m, and regrinds with K80's less than 22  $\mu$ m.

Molybdenum cleaner recovery appeared to be somewhat independent of the copper concentrate grade at a K80 of 147  $\mu$ m, with an average recovery of 65% obtained.

Gold recovery decreased slightly with increasing copper grade in the concentrate. Gold recoveries at a K80 of 147  $\mu$ m were 57% when the concentrate copper grade was greater than 25%.

### Locked Cycle Tests

Duplicate locked cycle tests at both primary grind K80's of 121  $\mu$ m and 147  $\mu$ m were performed as well as one locked cycle at a primary K80 of 209  $\mu$ m. The results from these tests are presented in Table 16-5.

P. Grind	Regrind	Cycle	Assa	y - per	cent o	or g/t	Distribution - percent			
K80 µm	K80 µm		Cu	Fe	Mo	Au	Cu	Fe	Mo	Au
121	18	IV	30.3	27.0	1.5	28.9	85.2	5.9	59.0	64.8
121	18	V	27.5	27.4	1.9	28.1	86.0	7.0	66.5	73.5
121	18	IV	31.3	25.3	1.0	30.3	83.3	4.7	34.7	68.5
121	18	V	30.6	25.2	0.5	27.7	84.7	5.1	27.8	71.1
147	20	IV	31.7	26.8	0.5	27.2	82.6	4.7	26.5	59.3
147	20	V	31.0	27.8	0.6	25.7	85.3	5.5	37.1	62.6
147	20	IV	24.5	28.2	1.4	20.6	87.0	7.7	63.9	67.1
147	20	V	26.8	28.3	1.8	22.6	88.5	7.5	69.4	66.8
147	20	avg.	28.5	27.8	1.1	24.0	85.8	6.3	49.2	64.0
209	20	IV	26.1	26.2	1.5	19.0	80.1	5.9	62.3	53.0
209	20	V	31.7	27.4	1.6	21.6	81.3	5.3	63.7	54.5
121	20	clnr	30.8	25.7	2.3	22.3	80.7	4.8	59.9	43.8
147	20	clnr	28.9	26.5	1.6	38.8	83.4	5.3	64.0	57.1
147	20	clnr	31.7	26.2	1.6	42.1	80.7	4.9	57.8	55.1
147	20	avg.	30.3	26.4	1.6	40.5	82.0	5.1	60.9	56.1

 Table 16-5:
 Locked Cycle Test Results with Comparative Cleaner Tests

# Variability Testing

The results from the variability tests were normalized to a 28% copper concentrate grade for analysis. To ensure that inaccurate extrapolation did not occur, all flotation tests that did not achieve a concentrate grade of at least 25% copper were not extrapolated to the 28% grade. These results were used to determine the recovery correlations below.

# Copper

Copper recovery correlated well with the copper *sulphide* head grade of the sample – that is the total copper minus the weak acid soluble copper grade. The equation for copper recovery was found to be:

Cu Recovery = 
$$100 \text{ x} (Cu_{total} - Cu_{WAS} - 0.022\%)/(Cu_{total})$$

# Molybdenum

The molybdenum recovery was also shown to be a function of the molybdenum head grade. The equation for molybdenum recovery to a molybdenum concentrate, assuming a 90% molybdenum recovery from the copper/moly concentrate was found to be:

Mo Recovery = 76.0 x  $(Mo_{total} - 0.003\%)/(Mo_{total})$ 

### Gold

Gold recovery was not found to be related to head grade or any other parameter. The gold recovery was averaged over the tests and found to be:

Au Recovery = 66.0%

#### **Reagent Consumptions**

Table Table 16-6 shows the average reagent consumptions for the variability tests where the weak acid soluble copper as a percentage of the total is less than 15% as will be typical in the plant.

<b>Table 16-6:</b>	Average Reagent	<b>Consumptions for</b>	Variably Flotation Tests

	Consumption
	g/t
Lime:	3,300
No. 2 Diesel Fuel:	66.6
Aerophine 3418A:	9.6
Aerofloat 208:	36.7
MIBC	79.0

# 17 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES

### 17.1 DATA ANALYSIS

A total of 305 drill holes within the area of interest and totaling 95,655 m, were provided by Western Copper Corporation for analysis. A list of drill holes used in this study is attached as Appendix B. Collar coordinates previously reported in Mine Grid Units were converted by Yukon Engineering Services to NAD83 UTM coordinates during the 2010 drill season. Assays reported as < some detection limit were assigned a value of ½ that limit. Assays reported as not sampled (NS) were left blank. A total of 348 gaps in the assay record at surface (OB) or within the hole were assigned a nominal value of Cu = 0.001%, Au= 0.002 g/t, Mo= 0.0001% and Ag = 0.1 g/t.

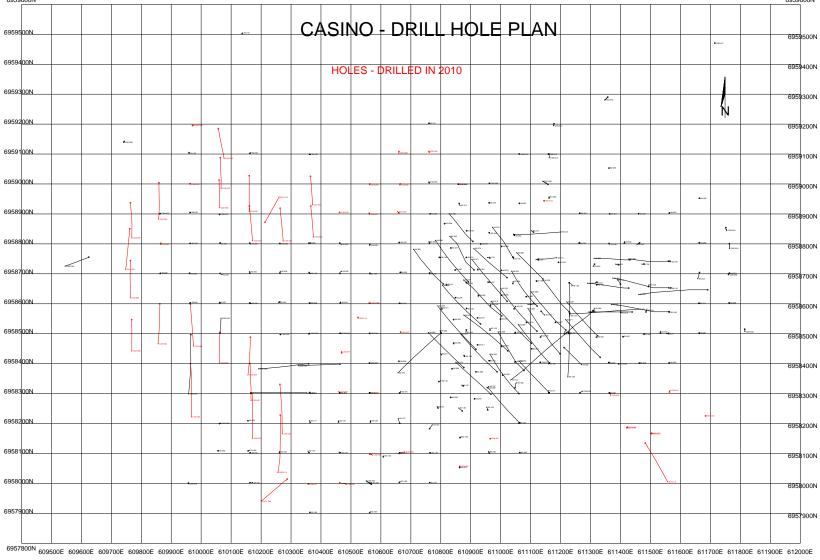
Western Copper geologists reassessed the Casino geologic model during the 2010 field season. The lithologic model and oxidation zone models were digitized from cross sections and three dimensional surfaces were created in GemCom software. The contacts were joined to produce three-dimensional geologic solids to control the grade estimation procedure. The lithologic units and codes are listed in Table 17-1. Oxidation zones were modeled as surfaces (Leached Cap, Supergene oxides, Supergene Sulphides and Hypogene) from drill cross sections. The oxidation zone codes are listed in the Table 17-2. Overburden surface was modeled based on the drill data. The surface topography model was created from the Eagle Mapping project 1993 digital base-map. The various geologic models and surfaces were combined in the block model.

Lithology Code	Description
OB	Overburden
WR & GD	Dawson Range Granodiorites
PP	Patton Porphyry
IX & FZ	Intrusion Breccia and Fault Zones
MX	Post Mineral Explosion Breccia

 Table 17-1:
 Lithology (Rock)
 Codes

Table 17-2: Oxidation Z	Zone Codes
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Zone Code	Description
OVB	Overburden
CAP	Oxide Gold/Leached Cap
SOX	Supergene Oxide
SUS	Supergene Sulphide
HYP	Hypogene



6955600N 609500E 609600E 609700E 609800E 609900E 610000E 610100E 610200E 610300E 610400E 610500E 610600E 610700E 610800E 610900E 611000E 611100E 611200E 611400E 611500E 611400E 611500E 611800E 611900E 6195060N

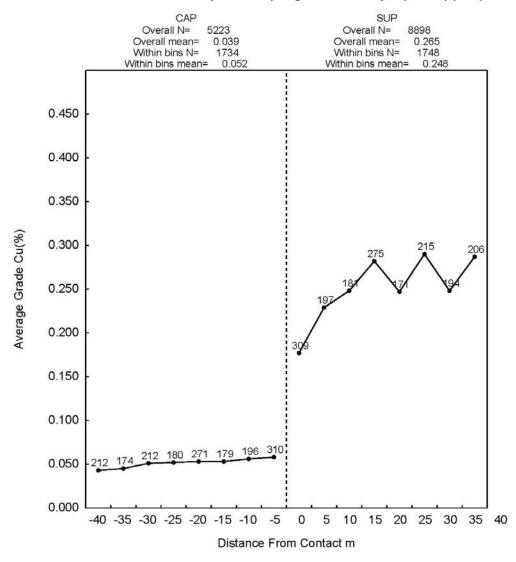
Figure 17-1: Casino Drill Hole Plan

The sample statistics are sorted by Lithologic Codes and Zone codes where applicable in the following Table.

Variable	Lith.	Zone	Number	Mean	S.D.	Min.	Max.	C.V.
Cu (%)	IX	CAP	1,790	0.050	0.045	0.001	0.62	0.91
		SUP	3,189	0.331	0.288	0.005	5.63	0.87
		HYP	4,130	0.231	0.193	0.001	2.99	0.84
	PP	CAP	754	0.038	0.039	0.001	0.38	1.03
		SUP	1,595	0.207	0.163	0.001	1.86	0.79
		HYP	1,806	0.121	0.099	0.001	1.31	0.81
	WR	CAP	2,557	0.031	0.046	0.001	1.36	1.50
		SUP	4,121	0.237	0.200	0.001	2.70	0.85
		HYP	11,011	0.151	0.129	0.001	2.95	0.86
	MX	CAP	272	0.015	0.026	0.001	0.19	1.76
		SUP	178	0.107	0.101	0.001	0.65	0.95
		HYP	596	0.055	0.061	0.001	0.68	1.12
Au (g/t)	IX	ALL	9,110	0.395	1.112	0.002	99.96	2.82
	PP	ALL	4,170	0.192	0.851	0.002	53.50	4.43
	WR	ALL	17,854	0.196	0.206	0.002	9.67	1.05
	MX	ALL	1,046	0.133	0.312	0.002	7.75	2.34
Mo (%)	IX	ALL	9,110	0.0304	0.0384	0.0001	0.8933	1.26
	PP	ALL	4,170	0.0176	0.0311	0.0001	1.2400	1.77
	WR	ALL	17,854	0.0154	0.0240	0.0001	0.8153	1.56
	MX	ALL	1,046	0.0049	0.0084	0.0001	0.1020	1.72
Ag (g/t)	IX	ALL	9,108	2.21	3.30	0.10	128.60	1.50
	PP	ALL	4,170	1.77	7.30	0.10	200.00	4.12
	WR	ALL	17,851	1.45	3.36	0.10	131.20	2.31
	MX	ALL	1,046	1.48	1.62	0.10	24.00	1.10

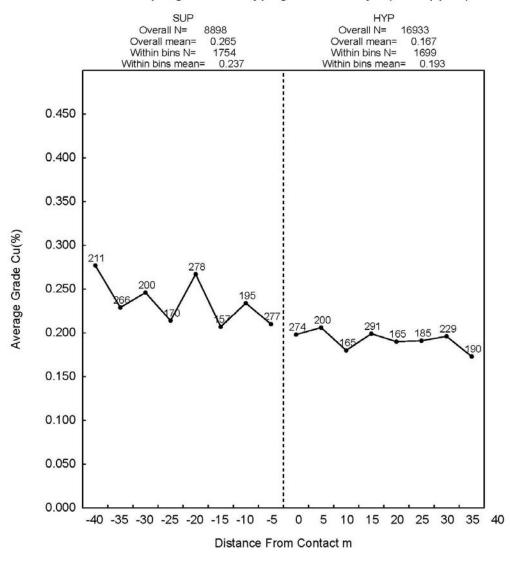
 Table 17-3: Assay Statistics Sorted by Lithology and Oxidation Zone

Contact plots which compare average grades for a particular variable at distances away from a contact were produced for each variable on the Leached Cap/Supergene Oxide, Leached Cap/Supergene Sulphide, Supergene Oxide/Supergene Sulphide, Supergene Oxide/Hypogene and Supergene Sulphide/Hypogene contacts. The results are included as Appendix C. There is a clear break in grades for Cu at the Leached Cap/Supergene contact (see Figure 17-2) and the Supergene/Hypogene contact (see Figure 17-3). There is no difference in Cu grades crossing the Supergene Oxide/Supergene Sulphide contact. As a result assay data should have hard boundaries for Cu along the Leached Cap/Supergene and Supergene/Hypogene boundaries. There were no other contacts for Au, Mo or Ag that would require Hard Boundaries.



Cu - Leached Cap VS Supergene - Assays (Uncapped)

Figure 17-2: Contact plot for Cu showing Leached Cap – Supergene contact



#### Cu - Supergene VS Hypogene - Assays (Uncapped)

Figure 17-3: Contact plot for Cu showing Supergene – Hypogene contact

Lognormal cumulative frequency plots were produced for each variable within each oxidation zone comparing the 4 lithologies. For example within the Leached Cap for Cu the PP, WR and IX grade distributions are very similar and show no reason to separate them for estimation. The post mineral explosive breccia however is clearly lower grade and should be treated separately. Cu in both supergene sulphides and hypogene also follows this pattern and only the post mineral explosive breccia should be treated independently. This follows the geologic assumption that the mineralization came up through a zone of breakage and brecciation surrounding the Patton Porphyry and was dispersed into both the central Patton Porphyry and the surrounding host granodiorite. While the grades for all minerals in the intrusive breccia are higher in most cases they show gradational drop offs away from the intrusive breccia indicating soft boundaries are required. In the case of the later explosive breccia the grades are clearly lower and this unit should be isolated with hard boundaries for all elements.

Similar lognormal cumulative frequency plots were produced for gold, molybdenum and silver and are attached in Appendix D. In most cases the Explosive Breccia is clearly different with lower grades over the whole grade distribution.

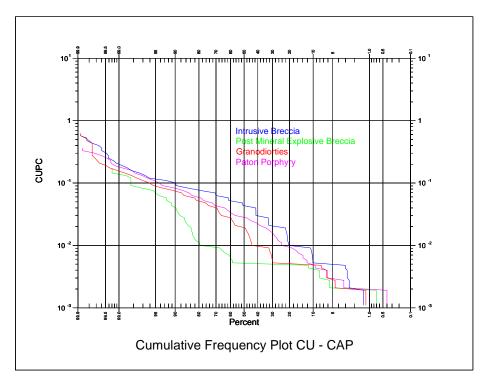


Figure 17-4: Lognormal cumulative frequency plot for Cu in Leached Cap

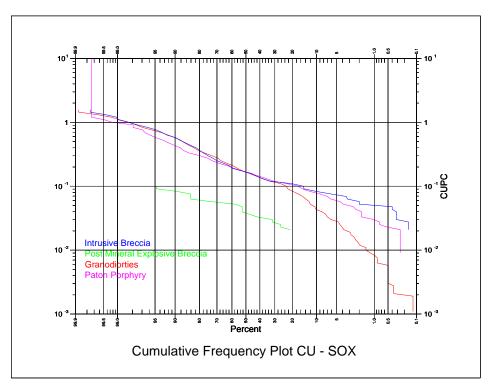


Figure 17-5: Lognormal cumulative frequency plot for Cu in Supergene Oxides

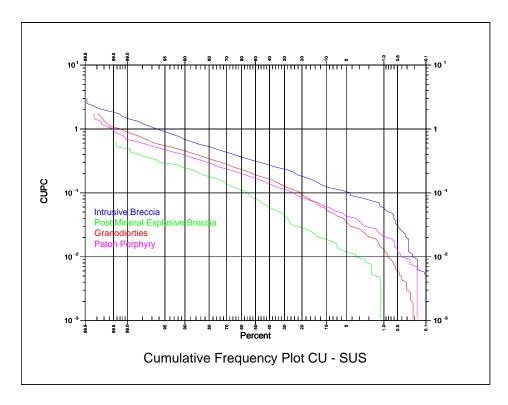


Figure 17-6: Lognormal cumulative frequency plot for Cu in Supergene Sulphides

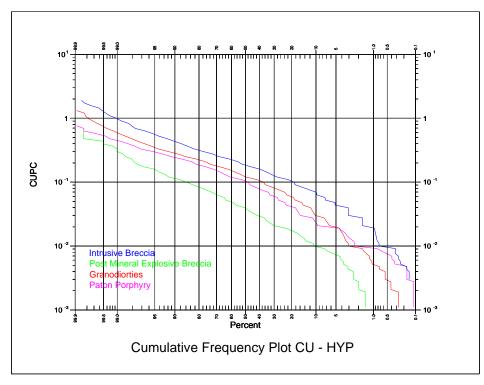


Figure 17-7: Lognormal cumulative frequency plot for Cu in Hypogene

Based on the statistical data the following mineral domains were formed:

- 1) CAPCU1 The contact plots for Cu in the Leached Cap showed this domain should be treated separately but the average grades within all lithologies and the cumulative frequency plot show the IX, PP and WR lithologies all could be grouped.
- 2) CAPCU2 Leached cap Cu within the Post Mineral Explosive Breccia (MX)
- 3) SUPCU1 The contact plots for Cu in the two Supergene zones show they should be treated separately and the statistics plus cumulative frequency plots show the IX, PP and WR lithologies all could be grouped.
- 4) SUPCU2 The Supergene zones for Cu in post mineral explosive breccia (MX).
- 5)HYPCU1 The contact plots for Cu in the Hypogene zone show the hypogene should be treated separately and the statistics for Cu show the IX, PP and WR lithologies all could be grouped.
- 6) HYPCU2 The Hypogene zones Cu in post mineral explosive breccia (MX).

Contact plots for Au, Mo and Ag between the Leached Cap, Supergene and Hypogene zones show similar average grades across the contacts and as a result these mineral zones could all be treated as one. Again the lithologies can be grouped into post mineral explosive breccia (MX) and a combination of the PP, IX and WR lithologies.

7) ALLREST Gold, Molybdenum and Silver in lithologies PP, IX and WR should be grouped.

8) ALLMX Gold, Molybdenum and Silver in post mineral breccia (MX) for all alteration zones could be grouped.

For the leached cap and supergene zones weak acid soluble assays were also taken. These consisted of copper analysis in a filtered solution from a weak (3%) sulphuric acid initial leach. The leach digested most copper oxide minerals.

	Table 17-4:	Assay	Statistics	Sorted	by Mine	ral Dom	ain	
Variable	Domain	Code	Number	Mean	S.D.	Min.	Max.	C.V.
Cu (%)	CAPCU1	100	5,237	0.039	0.045	0.001	1.36	1.18
	WAS CU	100	2,917	0.013	0.026	0.001	0.60	2.09
	CAPCU2	400	272	0.015	0.026	0.001	0.19	1.76
	WAS CU	400	67	0.006	0.007	0.001	0.05	1.30
	SUPCU1	200	8,914	0.265	0.236	0.001	5.63	0.89
	WAS CU	200	8,551	0.055	0.072	0.001	1.68	1.31
	SUPCU2	500	178	0.107	0.101	0.001	0.65	0.95
	WAS CU	500	174	0.016	0.013	0.001	0.07	0.81
	HYPCU1	300	16,953	0.167	0.150	0.001	2.99	0.90
	HYPCU2	600	596	0.055	0.061	0.001	0.68	1.12
Au (g/t)	ALLREST	700	31,223	0.254	0.700	0.002	99.86	2.76
	ALLMX	800	1,046	0.133	0.312	0.002	7.75	2.34
Mo (%)	ALLREST	700	31,223	0.0201	0.0306	0.0001	1.24	1.52
	ALLMX	800	1,046	0.0049	0.0084	0.0001	0.10	1.72
Ag (g/t)	ALLREST	700	31,218	1.72	4.11	0.10	200.0	2.39
	ALLMX	800	1,046	1.48	1.62	0.10	24.0	1.10

The statistics for these 8 groups are shown below:

Note: WAS Cu refers to Weak Acid Soluble Cu assays taken in Leached Cap and Supergene zones

As can be seen in the occasional high coefficient of variation (C.V.) there are some outlier values present in some groups that skew the grade distribution. Lognormal cumulative frequency plots were used to assess the grade distribution for each variable within each group in order to determine if capping was required and if so at what level. Each mineralized domain showed multiple overlapping lognormal populations for each variable. In all but one case the top or upper population was considered erratic outlier grades and a cap level of two standard deviations above the mean of the second population was selected as at capping level. The following table shows the cap level for each domain and the number of assays capped.

Table 17-5: Capping Levels by Mineral Domain									
Variable	Domain	Code	Capping	Cap Level	Number Capped				
			Strategy						
Cu (%)	CAPCU1	100	2SDAMP2	0.32 %	14				
	CAPCU2	400	2SDAMP2	0.15 %	2				
	SUPCU1	200	2SDAMP2	2.26 %	5				
	SUPCU2	500	2SDAMP2	0.44 %	2				
	HYPCU1	300	2SDAMP2	2.07 %	4				
	HYPCU2	600	2SDAMP2	0.51 %	1				
Au (g/t)	ALLREST	700	2SDAMP2	7.6 g/t	4				
	ALLMX	800	2SDAMP2	2.0 g/t	3				
Mo (%)	ALLREST	700	2SDAMP2	0.64 %	9				
	ALLMX	800	2SDAMP2	0.05 %	7				
Ag (g/t)	ALLREST	700	2SDAMP2	130.0 g/t	5				
	ALLMX	800	2SDAMP2	14.0 g/t	2				

Table 17-5: Capping Levels by Mineral Domain

Note: 2SDAMP2 refers to two standard deviations above the mean of population 2
--

The effects of capping are shown below with slightly reduced mean grades and lowered coefficient of variations.

Variable	Domain	Code	Number	Mean	S.D.	Min.	Max.	C.V.
Cu (%)	CAPCU1	100	5,237	0.038	0.038	0.001	0.32	1.01
	CAPCU2	400	272	0.015	0.025	0.001	0.15	1.69
	SUPCU1	200	8,914	0.264	0.227	0.001	2.26	0.86
	SUPCU2	500	178	0.105	0.094	0.001	0.44	0.89
	HYPCU1	300	16,953	0.167	0.147	0.001	2.07	0.88
	HYPCU2	600	596	0.055	0.059	0.001	0.51	1.08
Au (g/t)	ALLREST	700	31,223	0.249	0.272	0.002	7.60	1.09
	ALLMX	800	1,046	0.126	0.188	0.002	2.00	1.50
Mo (%)	ALLREST	700	31,223	0.0200	0.0293	0.0001	0.64	1.46
	ALLMX	800	1,046	0.0047	0.0075	0.0001	0.05	1.59
Ag (g/t)	ALLREST	700	31,218	1.71	3.81	0.10	130.0	2.23
	ALLMX	800	1,046	1.46	1.41	0.10	14.0	0.97

 Table 17-6: Capped Assay Statistics Sorted by Mineral Domain

## **17.2** Composites

Uniform down hole composites 15 m in length were produced for each of the mineralized Domains. Intervals less than 7.5 m at the domain contacts were combined with adjoining samples to produce a uniform support of  $15\pm$  7.5 m. The composite statistics are tabulated below.

Variable	Domain	Number	Mean	S.D.	Min.	Max.	C.V.
Cu (%)	CAPCU1	1,027	0.038	0.032	0.001	0.217	0.85
	WAS CU	666	0.012	0.016	0.001	0.167	1.28
	CAPCU2	52	0.014	0.021	0.003	0.113	1.44
	WAS CU	20	0.006	0.005	0.001	0.022	0.94
	SUPCU1	1,697	0.266	0.188	0.003	1.750	0.71
	WAS CU	1,644	0.055	0.060	0.001	0.919	1.09
	SUPCU2	33	0.106	0.074	0.017	0.267	0.70
	WAS CU	33	0.017	0.011	0.002	0.050	0.67
	HYPCU1	3,307	0.168	0.128	0.002	1.513	0.76
	HYPCU2	114	0.056	0.043	0.005	0.318	0.77
Au (g/t)	ALLREST	6,034	0.249	0.213	0.003	3.328	0.85
	ALLMX	196	0.127	0.125	0.009	0.629	0.98
Mo (%)	ALLREST	6,034	0.020	0.025	0.0001	0.521	1.22
	ALLMX	196	0.005	0.007	0.0001	0.040	1.40
Ag (g/t)	ALLREST	6,034	1.70	2.51	0.10	80.80	1.47
	ALLMX	196	1.48	0.89	0.30	5.13	0.60

Table 17-7: 1	15 m Con	iposite S	statistics	Sorted	by	Min	eral Do	main

Note: WAS Cu	1 refers to W	Veak Acid Solı	ible Cu assa	vs taken ii	n Leache	d Can an	d Superge	ne zon	es
Note. WAS CI		eak Aciu Son	ible Cu assa	уз сакен п	I Leathe	u Cap an	u Superge	ene zon	62

#### 17.3 VARIOGRAPHY

A variogram study using pairwise relative semivariograms was completed for all the domains west of the Casino Fault. The similar units east of the fault did not have enough data to determine variography and as a result the west models were used for all east domains. In each case semivariograms were produced in the four principal directions of E-W, N-S, SW-NE and NW-SE. These were used to determine the maximum continuity in the horizontal plane. Vertical or down hole semivariograms were produced to establish the nugget effect and the vertical continuity. In almost all cases the maximum continuity was in the east-west direction. In all cases nested spherical models were fit to the data. The semivariogram parameters are tabulated below.

DOMAIN	VARIABLE	AZ / DIP	C <sub>0</sub>	<b>C</b> <sub>1</sub>	<b>C</b> <sub>2</sub>	Short Range	Long Range
						( <b>m</b> )	( <b>m</b> )
CAPCU1	Cu	080 / 0	0.05	0.10	0.35	40	180
Leached Cap		350 / 0	0.05	0.10	0.35	40	50
		0 / -90	0.05	0.10	0.35	60	140
SUPCU1	Cu	012 / 0	0.05	0.06	0.14	30	150
Supergene		282/0	0.05	0.06	0.14	30	80
		0 / -90	0.05	0.06	0.14	30	50
HYPCU1	Cu	090 / 0	0.05	0.05	0.10	80	100
Hypogene		0 / 0	0.05	0.05	0.10	50	80
		0 / -90	0.05	0.05	0.10	100	200
ALLREST	Au	155 / 0	0.08	0.04	0.10	40	90
		65/0	0.08	0.04	0.10	30	40
		0 / -90	0.08	0.04	0.10	50	140
	Mo	155 / 0	0.08	0.05	0.18	40	84
		65/0	0.08	0.05	0.18	20	34
		0 / -90	0.08	0.05	0.18	40	140
	Ag	135 / 0	0.10	0.05	0.08	30	50
		45 / 0	0.10	0.05	0.08	20	40
		0 / -90	0.10	0.05	0.08	40	74

## **17.4 BULK DENSITY**

An extensive specific gravity data base has been compiled for Casino over the years with a total of 11,600 measurements taken on drill core by the Wt .in Air-Wt. in Water method. The results are tabulated below as a function of oxidation zone.

Table 17-9: Bulk Density									
Domain	Number	Minimum	Maximum	Average					
		SG	SG	SG					
Leached Cap	1,986	1.62	3.59	2.52					
Supergene Oxide	797	1.61	3.74	2.58					
Supergene Sulphide	3,442	1.46	3.85	2.62					
Hypogene	5,375	1.26	4.67	2.65					
Total	11,600	1.26	4.67	2.62					

Specific gravity increases with depth in general and as a function of alteration. As a result the average specific gravity for each alteration zone was used to determine a weighted average for each block in the model.

Block SG =((%Cap\*2.52) + (%SOX\*2.58) + (%SUS\*2.62) + (%HYP\*2.65))/ %Below Topo - % OVB

## 17.5 BLOCK MODEL

A block model with blocks 20 x 20 x 15 m was superimposed over the geologic solids. The block model was coded for lithology on a bench by bench basis by Western Copper using the majority rule for each block. Once the model was coded for lithology it was compared to the various surfaces namely: surface topography, overburden, leached cap, supergene oxide, supergene sulphide and hypogene with the percentage of each recorded for each block. The block mode origin was as follows:

Lower Left Corner

609492.73 E	Column size $= 20 \text{ m}$	138 Columns
6957332.60 N	Row size $= 20 \text{ m}$	113 Rows
Top of Model		
1530 Elevation	Level size $= 15 \text{ m}$	72 Levels
No Rotation		

## **17.6** GRADE INTERPOLATION

Grades for Cu, Au, Mo and Ag were interpolated into blocks by Ordinary Kriging.

Copper was estimated for Leached Cap, Supergene and Hypogene zones for both the combined IX, PP and WR lithologies and the MX lithology in separate runs. For each domain hard boundaries were used so that, for example, in the Leached Cap portion of blocks within the MX lithology only Leached Cap Composites within MX were used. The kriging exercise was completed in each Domain in four passes with expanding search ellipse based on the appropriate semivariogram. The first pass required a minimum of 4 composites within a search ellipse with dimensions equal to <sup>1</sup>/<sub>4</sub> the semivariogram range. For blocks not estimated in pass 1 a second pass using a search ellipse with dimensions equal to <sup>1</sup>/<sub>2</sub> the semivariogram range was used. Again a minimum 4 composites were required to estimate the block. For blocks not estimated a third pass using the full range and a fourth pass using twice the range was completed. The maximum number of composites used, from one hole, was set to 3 insuring that for all estimated blocks a minimum of two drill holes were required. In all passes if more than 16 composites were found the closest 16 were used. The copper grade for any given block was the weighted average of Leached Cap Cu, Supergene Cu and Hypogene Cu.

An estimate for weak acid soluble copper in the Leached Cap and Supergene zones was also made. Weak acid soluble Cu assays were used along with the variograms for total Cu. A similar kriging procedure as discussed above was used.

The estimation of gold, molybdenum and silver was completed for the combined IX, PP and WR lithologies and then for the MX lithology. A similar strategy using 4 passes with expanding

search ellipses was used. Again a minimum of 4 composites and maximum of 16 composites were required to estimate a block with a maximum of 3 from one hole allowed. Due to shorter ranges in Au, Mo and Ag a larger fifth pass was required to estimate grades into blocks with a Cu grade estimated.

## **17.7** CLASSIFICATION

Based on the study herein reported, delineated mineralization at Casino is classified as a resource according to the following definitions from National Instrument 43-101 and from CIM (2005):

"In this Instrument, the terms "mineral resource", "inferred mineral resource", "indicated mineral resource" and "measured mineral resource" have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as those definitions may be amended."

The terms Measured, Indicated and Inferred are defined by CIM (2005) as follows:

"A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge."

"The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgement by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports."

#### Inferred Mineral Resource

"An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, workings and drill holes."

"Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies."

## **Indicated Mineral Resource**

"An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed."

"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions."

#### Measured Mineral Resource

"A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity."

"Mineralization or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit."

For the mineralized zone within the Casino Deposit the geological continuity has been established though surface mapping and diamond drill hole interpretation from a number of drilling campaigns. Grade continuity can be quantified by semivariogram analysis. Due to the different domains used for Copper and Gold, the different search directions and distances a simplified classification based on drill hole density was used to classify the resource. Blocks estimated within the hundred metre grid of drill holes were classified as indicated. Blocks within the central core where the hundred meter grid has been infilled to 50 m and where angled cross holes were drilled were classified as measured. All other blocks around the periphery and at depth were classified as inferred.

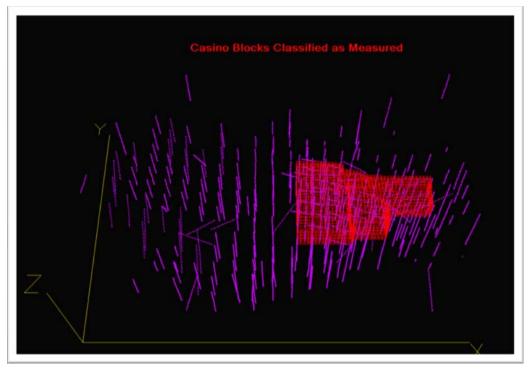


Figure 17-8: Showing Composites and Blocks Classed Measured

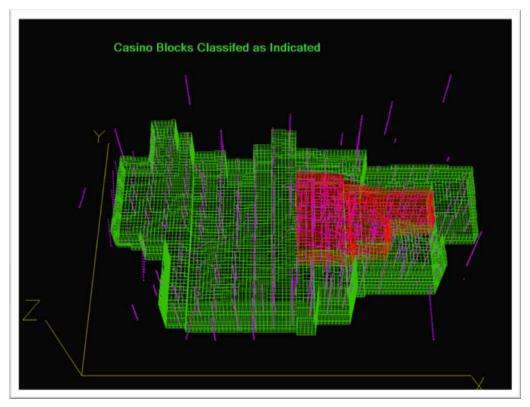


Figure 17-9: Showing Composites and Blocks Classed Measured and Indicated

	Table 17-10: Leached Cap / Oxide Gold Zone									
Class	Cutoff Au	Cutoff AuTonnesAu (g/t)Cu (%)Weak AcidMo (%)Ag (g/t)								
	(g/t)	(million)			Sol. Cu (%)					
Measured	0.40 g/t	23.0	0.58	0.06	0.015	0.025	3.2			
Indicated	0.40 g/t	9.0	0.48	0.04	0.012	0.017	2.9			
Inferred	0.40 g/t	1.1	0.44	0.01	0.004	0.006	2.1			
Total Measur	red + Indicated	32.0	0.56	0.05	0.015	0.023	3.1			

	Table 17-11: Supergene Oxide Zone									
Class	Cutoff Cu	Cutoff CuTonnesAu (g/t)Cu (%)Weak AcidMo (%)Ag (g/t)								
	(%)	(million)			Sol. Cu (%)					
Measured	0.20 %	14.7	0.50	0.37	0.122	0.026	2.4			
Indicated	0.20 %	21.2	0.24	0.28	0.074	0.016	1.6			
Inferred	0.20 %	19.4	0.16	0.29	0.118	0.009	1.3			
Total Measur	red + Indicated	35.9	0.35	0.32	0.094	0.020	1.9			

	Table 17-12: Supergene Sulphide Zone								
Class	Cutoff Cu	Tonnes	Au (g/t)	Cu (%)	Weak Acid	Mo (%)	Ag (g/t)		
	(%)	(million)			Sol. Cu (%)				
Measured	0.20 %	33.1	0.42	0.41	0.065	0.031	2.4		
Indicated	0.20 %	145.0	0.25	0.29	0.040	0.021	1.9		
Inferred	0.20 %	47.1	0.18	0.25	0.049	0.010	1.4		
<b>Total Measured + Indicated</b>		178.1	0.28	0.31	0.045	0.023	2.0		

	Table 17-13: Hypogene Zone								
Class	Cutoff CuTonnesAu (g/t)Cu (%)Mo (%)Ag (g/t)								
	(%)	(million)							
Measured	0.20 %	27.4	0.40	0.35	0.026	2.0			
Indicated	0.20 %	187.5	0.30	0.26	0.025	2.2			
Inferred	0.20 %	175.4	0.23	0.25	0.020	1.7			
Total Measur	red + Indicated	214.9	0.31	0.27	0.025	2.1			

The results in Supergene and Hypogene zones can also be tabulated by a Cu Equivalent. The CuEq is determined using the following metal prices: Cu - US2.00 / lb, Au - US875.00 / oz, Ag - US11.25 / oz and Mo - US11.25 / lb as follows:

CuEq % = (Cu %) + (Au g/t x 28.13/44.1) + (Mo % x248.06/44.1) + (Ag g/t x 0.36/44.1)

The copper equivalent calculations reflect gross metal content and do not apply any adjustment factors for difference in metallurgical recoveries of gold, copper, silver and molybdenum. This information can only be derived from definitive metallurgical testing which has yet to be completed.

The resource estimates for the Supergene Oxide, Supergene Sulphide and Hypogene zones were re-tabulated and stated in terms of two copper equivalent cut-off grades, 0.25% Cu EQ and 0.30% Cu EQ. The gold-dominant Leached Cap zone resource estimates remained unchanged at a gold cutoff grade of 0.40 g/t Au; copper equivalent values are presented for this zone for comparative purposes.

		Table	e 17-14:	Leached	Cap / Ox	ide Gold	Zone	
Class	Cutoff Au	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	Weak Acid	CuEQ (%)
	(g/t)	(million)					Sol. Cu (%)	
Measured	0.25 g/t	30.6	0.05	0.52	0.025	2.94	0.016	0.56
Indicated	0.25 g/t	53.2	0.03	0.33	0.017	2.36	0.010	0.37
Inferred	0.25 g/t	17.1	0.01	0.31	0.008	1.93	0.004	0.27
Total Measure	ed + Indicated	83.8	0.04	0.40	0.020	2.57	0.012	0.44
Measured	0.30 g/t	27.9	0.05	0.55	0.025	3.04	0.016	0.58
Indicated	0.30 g/t	29.7	0.03	0.38	0.016	2.52	0.010	0.39
Inferred	0.30 g/t	9.0	0.01	0.35	0.006	1.92	0.004	0.28
Total Measure	ed + Indicated	57.6	0.04	0.46	0.020	2.77	0.013	0.48
Measured	0.35 g/t	25.5	0.06	0.57	0.026	3.14	0.016	0.60
Indicated	0.35 g/t	15.2	0.03	0.44	0.016	2.75	0.011	0.43
Inferred	0.35 g/t	3.4	0.01	0.39	0.006	2.01	0.004	0.31
Total Measure	ed + Indicated	40.7	0.05	0.52	0.022	2.99	0.014	0.54
Measured	0.40 g/t	23.0	0.06	0.59	0.025	3.23	0.015	0.61
Indicated	0.40 g/t	9.0	0.04	0.48	0.017	2.88	0.012	0.47
Inferred	0.40 g/t	1.1	0.01	0.44	0.006	2.09	0.004	0.34
Total Measure	ed + Indicated	32.0	0.05	0.56	0.023	3.13	0.015	0.57

		]	Table 17-	15: Supe	rgene Ox	kide Zon	e	
Class	Cutoff	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	Weak Acid	CuEQ (%)
	CuEQ (%)	(million)					Sol. Cu (%)	
Measured	0.20 %	25.0	0.28	0.52	0.026	2.38	0.094	0.77
Indicated	0.20 %	40.4	0.22	0.20	0.018	1.37	0.058	0.44
Inferred	0.20 %	31.3	0.24	0.16	0.008	1.35	0.087	0.38
Total Measur	<b>Total Measured + Indicated</b>		0.24	0.32	0.021	1.76	0.072	0.56
Measured	0.25 %	25.0	0.28	0.52	0.026	2.38	0.094	0.77
Indicated	0.25 %	36.4	0.23	0.21	0.019	1.44	0.060	0.46
Inferred	0.25 %	26.1	0.26	0.17	0.010	1.43	0.097	0.41
Total Measur	red + Indicated	61.4	0.25	0.34	0.022	1.83	0.074	0.59
Measured	0.30 %	24.9	0.28	0.52	0.026	2.39	0.094	0.77
Indicated	0.30 %	31.7	0.24	0.23	0.021	1.54	0.063	0.49
Inferred	0.30 %	22.3	0.27	0.18	0.010	1.46	0.104	0.44
Total Measur	red + Indicated	56.6	0.26	0.36	0.023	1.91	0.077	0.61

		Тε	ble 17-1	6: Super	gene Sulj	phide Zo	ne	
Class	Cutoff	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	Weak Acid	CuEQ (%)
	CuEQ (%)	(million)					Sol. Cu (%)	
Measured	0.20 %	36.4	0.39	0.41	0.029	2.34	0.062	0.83
Indicated	0.20 %	223.6	0.24	0.22	0.019	1.70	0.034	0.49
Inferred	0.20 %	129.0	0.18	0.18	0.009	1.40	0.031	0.34
Total Measur	<b>Total Measured + Indicated</b>		0.26	0.25	0.020	1.79	0.038	0.54
Measured	0.25 %	36.3	0.39	0.41	0.029	2.34	0.062	0.84
Indicated	0.25 %	216.0	0.24	0.22	0.019	1.72	0.034	0.50
Inferred	0.25 %	102.1	0.20	0.19	0.010	1.49	0.034	0.38
Total Measur	ed + Indicated	252.3	0.26	0.25	0.021	1.81	0.038	0.55
Measured	0.30 %	36.0	0.39	0.41	0.029	2.34	0.062	0.84
Indicated	0.30 %	200.1	0.25	0.23	0.020	1.78	0.035	0.52
Inferred	0.30 %	82.1	0.21	0.19	0.011	1.54	0.036	0.40
Total Measur	Total Measured + Indicated		0.27	0.26	0.022	1.86	0.039	0.57

	]	<b>Fable 17-</b> 1	7: Hypo	ogene Zor	ne		
Class	Cutoff	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	CuEQ (%)
	CuEQ (%)	(million)					
Measured	0.20 %	32.7	0.31	0.38	0.025	1.94	0.72
Indicated	0.20 %	779.3	0.16	0.20	0.022	1.59	0.43
Inferred	0.20 %	1,967.7	0.13	0.15	0.018	1.30	0.34
Total Measur	<b>Total Measured + Indicated</b>		0.16	0.21	0.022	1.61	0.44
Measured	0.25 %	32.4	0.32	0.38	0.026	1.94	0.73
Indicated	0.25 %	710.6	0.17	0.21	0.023	1.65	0.45
Inferred	0.25 %	1,568.2	0.14	0.16	0.020	1.36	0.37
Total Measur	ed + Indicated	743.0	0.17	0.22	0.023	1.66	0.46
Measured	0.30 %	32.1	0.32	0.38	0.026	1.95	0.73
Indicated	0.30 %	620.5	0.18	0.22	0.025	1.71	0.47
Inferred	0.30 %	1,144.7	0.15	0.17	0.023	1.43	0.40
Total Measur	ed + Indicated	652.6	0.18	0.23	0.025	1.72	0.49

	Table 17-18: Combined Supergene and Hypogene Zones										
Class	Cutoff	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag (g/t)	CuEQ (%)				
	CuEQ (%)	(million)									
M+I	0.20 %	1,137.5	0.19	0.23	0.021	1.65	0.47				
M+I	0.25 %	1,056.9	0.20	0.23	0.022	1.71	0.49				
M+I	0.30 %	945.6	0.21	0.25	0.024	1.77	0.51				
Inferred	0.20 %	2,128.1	0.13	0.16	0.017	1.39	0.34				
Inferred	0.25 %	1,696.4	0.14	0.16	0.019	1.37	0.37				
Inferred	0.30 %	1,249.1	0.16	0.18	0.022	1.44	0.40				

### **17.8** MODEL VERIFICATION

To determine if any bias exists, the mean grades of the composites used to estimate the blocks were compared to the mean grades of the blocks estimated. When a comparison is done for all blocks estimated the kriged grades are similar but lower in all categories. This is most likely caused by the large number of inferred blocks estimated on the periphery and a depth in the deposit where the composites used are the lower grades on the edge of the mineralized system. When the comparison is restricted to just measured and indicated blocks which are tighter to the data the comparison is much closer. Comparisons between estimated results and drill holes on cross sections were also made and the results were satisfactory.

Variable	Domain	15 m Com	posites	Estimated	Blocks
		Number	Mean	Number	Mean
Cu (%)	CAPCU1	1,027	0.038	28,574	0.033
	CAPCU2	52	0.014	1,824	0.011
	SUPCU1	1,697	0.266	47,588	0.208
	SUPCU2	33	0.106	2,483	0.088
	HYPCU1	3,307	0.168	223,642	0.122
	HYPCU2	114	0.056	10,006	0.042
Au (g/t)	ALLREST	6,034	0.249	278,384	0.169
	ALLMX	196	0.127	12,961	0.090
Mo (%)	ALLREST	6,034	0.020	278,384	0.016
	ALLMX	196	0.005	12,961	0.004
Ag (g/t)	ALLREST	6,034	1.70	278,384	1.35
	ALLMX	196	1.48	12,961	1.11

 Table 17-19:
 15 m Composite Statistics Sorted by Mineral Domain

<b>Table 17-20:</b>	15 m Composite Statistics Sorted by Mineral Domain for Measured and
	Indicated blocks

Indicated blocks										
Variable	Domain	15 m Com	posites	Estimated	Blocks					
		Number	Mean	Number	Mean					
Cu (%)	CAPCU1	1,027	0.038	18,132	0.037					
	CAPCU2	52	0.014	699	0.017					
	SUPCU1	1,697	0.266	27,728	0.247					
	SUPCU2	33	0.106	546	0.129					
	HYPCU1	3,307	0.168	60,814	0.153					
	HYPCU2	114	0.056	1,937	0.067					
Au (g/t)	ALLREST	6,034	0.249	94,365	0.221					
	ALLMX	196	0.127	2,850	0.153					
Mo (%)	ALLREST	6,034	0.020	94,365	0.020					
	ALLMX	196	0.005	2,850	0.005					
Ag (g/t)	ALLREST	6,034	1.70	94,365	1.64					
	ALLMX	196	1.48	2,850	1.62					

### **18 OTHER RELEVANT DATA AND INFORMATION**

Western Copper has retained AECOM (previously Gartner Lee), an international consulting environmental and engineering firm to begin collecting baseline data in the preparation for submission of permits. The information below was submitted by them in preparation of the Casino Pre-Feasibility Study in 2008 (M3 Engineering, 2008).

As of November 2005, the Yukon Environmental and Socio-economic Assessment Board (YESAB) must assess projects in Yukon for environmental and socio-economic effects under the *Yukon Environmental and Socio-economic Assessment Act* (YESAA). The Act includes two regulations: The *Yukon Activity and Project Regulation* and the *Timelines/Decision Bodies Coordination Regulation*.

Development of the Casino properties into a fully operational mine will trigger an environmental assessment under YESAA as all activities related to the construction, operation, modification or closure of a mine are listed as assessable activities. Furthermore, the level of assessment for the Casino project will be at the Executive Committee screening level as the key activities meet or exceed the applicable activity thresholds.

The YESAA screening process for projects submitted to the Executive Committee is estimated to take between 24 to 30 months to complete. For planning purposes, given the scale and complexity of the project, this process including document preparation and response to additional information requests, will likely take close to 30 months. For the Casino project this process will include consultation with the Selkirk First Nation community as a whole, and the Selkirk First Nation Chief and Council in particular in advance of submission of the proposal for a project. Additional consultation with other First Nations is likely also required, depending on the preferred access route chosen.

Western Copper will require a number of authorizations from various agencies to bring the Casino properties into production or perform further work on the property. The regulatory permitting and licensing processes are separate from the environmental and socio-economic assessment process (YESAA), and are generally initiated following the issuance of a positive YESAA Screening Report and Yukon Government decision document.

Authorizations are processed and issued following completion the YESAA assessment. However, some agencies will conduct preliminary reviews of applications or begin drafting authorizations prior to the issuance of a positive YESAA decision document.

Table 18-1 lists the major and minor permits required.

		Table 10-1. Major Termit	3	
Agency Responsible/web link	License/ Authorisation	Description	Term/Timing	Comments
ASSESSMENT STAGE				
Yukon Socioeconomic Assessment Board http://www.yesab.ca	Not a license, recommendations only.	Administers the Yukon Socioeconomic Assessment Act. (YESAA)	2.5 years.	Conducts a review and provides recommendations to government agencies (Decision Bodies)
federal, territorial, or		Decision Bodies respond to recommendations by the Executive Committee of YESAB. A Decision Body may accept, vary or reject a recommendation, and must state its decision in Decision Documents.	the Decision Body accepts, varies or	licenses until a Decision
MAJOR LICENSES				
YG Energy, Mines and Resources/ Minerals Management Branch	- 0	Establishes conditions that authorize specific mining activities, reclamation and closure, security, requirements for design approval, reporting requirement, and advance notification requirements for certain activities.	Discretionary	Broad discretion to establish license terms and conditions and require security.
Yukon Water Board	License	License conditions include: Quantity of water for camp use and mine processing, sets discharge water quality standards and establishes Provisions for the collection of security		
Department of Fisheries and Oceans/Environment Canada		Addition to listing of Tailings Impoundment Areas.		Requires a federal Order- In-Council.

### **19 INTERPRETATION AND CONCLUSIONS**

Drilling and reinterpretation of the historical drill data since the completion of the previous resource estimation has increase the resource base and significantly changed the understanding of the Casino mineralized body. The current resource estimation for Casino was based on 305 drill holes, 34 of which were completed in 2009 and an additional 56 completed in 2010. In addition Western Copper geologists re-interpreted the geologic model during the 2010 field season, relogging older Pacific Sentinel drill holes. Finally the collar coordinates previously reported in Mine Grid Units were converted by Yukon Engineering Services to NAD83 UTM coordinates.

Reinterpretation of the historical and recently acquired drill data revised the geological model from a series of diatreme-like breccia bodies to a more typical porphyry copper deposit consisting of a central porphyritic intrusion in to older metamorphic and granitoid intrusive. Mineralization is centred on the brecciated and fractured contacts of the porphyritic intrusion and surrounding host rocks. The zone of contact brecciation is best developed at the eastern end of the elliptical porphyry intrusion and most weakly developed at the western end. A late stage, non mineralized diatreme – type breccia present at the south western end of the porphyry intrusion removed the mineralized breccia contact in this area. As a result of these observations, the breccia-host rock contact was determined to be a soft boundary rather than a hard boundary while the late stage diatreme breccia was treated as a separate domain with a hard boundary. Re interpretation is much less than previously supposed and so was not treated as a hard boundary in the current calculation. As well as the change to the basic geological model, the boundaries of the supergene zones were better defined by more stringent criteria based on soluble extractable copper.

Analysis of the drill data with contact plots showed copper values within the leached cap, supergene horizons and hypogene needed to be evaluated independently while Au, Ag and Mo could be combined. In addition the lithologies Intrusive Breccia, Patton Porphyry and Dawson Range Granodiorites had higher grades for all variables than the post mineral explosion breccia and were estimated separately. Erratic high values for all variables were capped based on their grade distributions within the various mineral domains.

Uniform down-hole 15 m composites were produced that honoured the domain boundaries. Pair wise relative semi variograms were produced for Cu in the Leached Cap, Supergene and Hypogene domains, and for Au, Ag and Mo in the combined Intrusive Breccia, Patton Porphyry and Dawson Range Granodiorites domain.

The block model was established with blocks 20 x 20 x 15 m in dimension. Each block was coded with the percent below surface topography, within overburden, within Leached Cap, Supergene Oxide, Supergene Sulphide and Hypogene. Bulk density determinations were made on a total of 11,600 pieces of drill core by the Wt. in air/Wt. in water method. Specific gravities were applied based on the proportion of Leached Cap, Supergene Oxide, Supergene Sulphide and Hypogene present within each block. Grades for copper and soluble copper were estimated separately for Leached Cap, Supergene and Hypogene by ordinary kriging. Grades for Au, Ag

and Mo were also estimated by ordinary kriging. Blocks were classified based on drill hole spacing and density. Within the Leached Cap and oxide gold zone the resource is reported at a 0.4 g/t gold cutoff and are as listed in the table below:

	Table 19-1: Leached Cap / Oxide Gold Zone							
Class	Cutoff Au (g/t)	Tonnes (million)	Au (g/t)	Cu (%)	Weak Acid Sol. Cu (%)	Mo (%)	Ag (g/t)	
Measured	0.40 g/t	23.0	0.58	0.06	0.015	0.025	3.2	
Indicated	0.40 g/t	9.0	0.48	0.04	0.012	0.017	2.9	
Inferred	0.40 g/t	1.1	0.44	0.01	0.004	0.006	2.1	
Total Measur	red + Indicated	32.0	0.56	0.05	0.015	0.023	3.1	

Within the Supergene and Hypogene domains the resource is reported using copper equivalent cutoffs. The CuEq is determined using the following metal prices: Cu - US2.00 / lb, Au - US875.00 / oz, Ag - US11.25 / oz and Mo - US11.25 / lb as follows:

CuEq % = (Cu %) + (Au g/t x 28.13/44.1) + (Mo % x248.06/44.1) + (Ag g/t x 0.36/44.1)

	Table 19-2: Combined Supergene and Hypogene Zones						
Class	Cutoff	Tonnes	Cu (%)	Au (g/t))	Mo (%)	Ag(g/t)	<b>CuEQ</b> (%)
	CuEQ (%)	(million)					
M+I	0.20 %	1,137.5	0.19	0.23	0.021	1.65	0.47
M+I	0.25 %	1,056.9	0.20	0.23	0.022	1.71	0.49
M+I	0.30 %	945.6	0.21	0.25	0.024	1.77	0.51
Inferred	0.20 %	2,128.1	0.13	0.16	0.017	1.39	0.34
Inferred	0.25 %	1,696.4	0.14	0.16	0.019	1.37	0.37
Inferred	0.30 %	1,249.1	0.16	0.18	0.022	1.44	0.40

### 20 **RECOMMENDATIONS**

Drilling carried out since 2008 has added significant additional mineralization and modified the shape and distribution of the key mineralization types, which have impacted the economics of the mineralized body. To this end Western Copper should update its previous pre feasibility study to incorporate the new drilling and other data acquired since the previous study was completed. Additional metallurgical, environmental and geotechnical studies are also required to better understand the economic viability of the deposit. A power source is a key aspect of any development of the Casino deposit and Western Copper should continue to monitor developments in the Yukon, northern British Columbia and Alaska to be in a position to participate in infrastructure development that might be beneficial to the advancement of the Casino project.

The Casino mineralization remains open to the northwest and locally along the northeast and southern boundary. These areas are priority for drilling as they are most likely to impact the economics of the Casino mineralization. Of lower priority is testing of the still open deep hypogene mineralization. The amount of drilling required to close the deposit would range between 5,000 and 10,000 metres depending on whether or not the testing of deep hypogene mineralization is undertaken.

The estimated costs of the recommended work has the following ranges

Updating of the pre-feasibility study	\$500,000 to \$1,000,000
Additional metallurgical, environmental and geotechnical studies	\$300,000 to \$500,000
Additional drilling (5,000 and 10,000 metres)	<u>\$1,500,000 to \$2,500,000</u>

Total

\$2,300,000 to \$4,000,000

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# 22 DATE AND SIGNATURES

The information in this report is current as of December 1, 2010.

# 23 CERTIFICATES

#### **CERTIFICATE OF QUALIFIED PERSON**

#### SCOTT CASSELMAN

As a co-author of this report on certain mineral properties of Western Copper Corporation, in the JURISDICTION of Canada, I Scott Casselman, of 33 Firth Road, Whitehorse, Yukon, Y1A 4R5, do hereby certify that:

- 1. I am owner and President of Casselman Geological Services, 33 Firth Road, Whitehorse, Yukon, Y1A 4R5
- 2. This certificate applies to the Technical Report titled "Casino Project 2010 Mineral Resource Update", dated December 1, 2010
- 3. I have a B.Sc. in Geology from Carleton University of Ottawa, obtained in 1985.
- 4. I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia, License #20032
- 5. I have practiced my profession in mineral exploration continuously since graduation. I have over twentyfive years of experience in mineral exploration. I have worked on similar porphyry copper deposits including Kerr, Mt Milligan, South Kemess and Red Chris.
- 6. I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101. I acted as Project Manager at the Casino property over a period of 6 months during the current year. My last day on the property was September 19, 2010.
- 7. I have read NI 43-101 and this technical report has been prepared I compliance with the instrument;
- 8. I am responsible for **all sections excluding section 17**, of the Technical Report titled "Casino Project 2010 Mineral Resource Update", dated December 1, 2010;
- 9. I am independent of the parties involved in the transaction for which this report is required using the tests in section 1.4 of NI 43-101;
- 10. As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading;
- 11. I consent to the filing of this report with any Canadian stock exchange or securities regulatory authority, and any publication by them of the report.

Dated this 1<sup>st</sup> day of December, 2010

"signed" Scott Casselman

Scott Casselman, P.Geo. Geologist Casselman Geological Services

#### **CERTIFICATE OF QUALIFIED PERSON**

#### **Gary H. Giroux**

As a co-author of this report on the Casino Project of Western Copper Corp., in the Yukon Territory of Canada,

I, G.H. Giroux, of 982 Broadview Drive, North Vancouver, British Columbia, do hereby certify that:

- 1) I am a consulting geological engineer with an office at #1215 675 West Hastings Street, Vancouver, British Columbia.
- 2) I am a graduate of the University of British Columbia in 1970 with a B.A. Sc. and in 1984 with a M.A. Sc., both in Geological Engineering.
- 3) I am a member in good standing of the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
- 4) I have practiced my profession continuously since 1970. I have had over 30 years experience calculating mineral resources. I have previously completed resource estimations on a wide variety of porphyry Cu deposits, including Red Chris, Copper Mt., Prosperity, Schaft Cr., Zaldivar and Kemess South.
- 5) I have read the definition of "qualified person" set out in National Instrument 43-101 and certify that by reason of education, experience, independence and affiliation with a professional association, I meet the requirements of an Independent Qualified Person as defined in National Instrument 43-101.
- 6) This report titled "**Casino Project 2010 Mineral Resource Update**" dated December 1, 2010, is based on a study of the data and literature available on the Casino Property. I am responsible for the Mineral Resource Estimate Section 17. I have not visited the property.
- 7) I have previously worked on this property in 1995 producing a resource estimate for Pacific Sentinel Gold Corp. and in 2008 as part of a Pre Feasibility Study for Western Copper.
- 8) As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- 9) I am independent of the issuer applying all of the tests in section 1.4 of National Instrument 43-101.
- 10) I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

Dated this 1<sup>st</sup> day of December, 2010

"signed" G. H. Giroux

G. H. Giroux, P.Eng., MASc.

# 24 APPENDICES

## **Appendix A: List of Claims**

## Table 24-1: Casino Property – List of Active Mineral Claims

### "VIK" MINERAL CLAIMS (188) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	YC64893	VIK	1	5-Mar-2024	CRS - 100%.	115J10	Active
2	YC64894	VIK	2	5-Mar-2024	CRS - 100%.	115J10	Active
3	YC64895	VIK	3	5-Mar-2024	CRS - 100%.	115J10	Active
4	YC64896	VIK	4	5-Mar-2024	CRS - 100%.	115J10	Active
5	YC64897	VIK	5	5-Mar-2024	CRS - 100%.	115J10	Active
6	YC64898	VIK	6	5-Mar-2024	CRS - 100%.	115J10	Active
7	YC64899	VIK	7	5-Mar-2024	CRS - 100%.	115J10	Active
8	YC64900	VIK	8	5-Mar-2024	CRS - 100%.	115J10	Active
9	YC64901	VIK	9	5-Mar-2024	CRS - 100%.	115J10	Active
10	YC64902	VIK	10	5-Mar-2024	CRS - 100%.	115J10	Active
11	YC64903	VIK	11	5-Mar-2024	CRS - 100%.	115J10	Active
12	YC64904	VIK	12	5-Mar-2024	CRS - 100%.	115J10	Active
13	YC64905	VIK	13	5-Mar-2024	CRS - 100%.	115J10	Active
14	YC64906	VIK	14	5-Mar-2024	CRS - 100%.	115J10	Active
15	YC64907	VIK	15	5-Mar-2024	CRS - 100%.	115J10	Active
16	YC64908	VIK	16	5-Mar-2024	CRS - 100%.	115J10	Active
17	YC64909	VIK	17	5-Mar-2024	CRS - 100%.	115J10	Active
18	YC64910	VIK	18	5-Mar-2024	CRS - 100%.	115J10	Active
19	YC64911	VIK	19	5-Mar-2024	CRS - 100%.	115J10	Active
20	YC64912	VIK	20	5-Mar-2024	CRS - 100%.	115J10	Active
21	YC64913	VIK	21	5-Mar-2024	CRS - 100%.	115J10	Active
22	YC64914	VIK	22	5-Mar-2024	CRS - 100%.	115J10	Active
23	YC64915	VIK	23	5-Mar-2024	CRS - 100%.	115J10	Active
24	YC64916	VIK	24	5-Mar-2024	CRS - 100%.	115J10	Active
25	YC64917	VIK	25	5-Mar-2024	CRS - 100%.	115J10	Active
26	YC64918	VIK	26	5-Mar-2024	CRS - 100%.	115J10	Active
27	YC64919	VIK	27	5-Mar-2024	CRS - 100%.	115J10	Active
28	YC64920	VIK	28	5-Mar-2024	CRS - 100%.	115J10	Active
29	YC64921	VIK	29	5-Mar-2024	CRS - 100%.	115J10	Active
30	YC64922	VIK	30	5-Mar-2024	CRS - 100%.	115J10	Active
31	YC64923	VIK	31	5-Mar-2024	CRS - 100%.	115J10	Active
32	YC64924	VIK	32	5-Mar-2024	CRS - 100%.	115J10	Active
33	YC64925	VIK	33	5-Mar-2024	CRS - 100%.	115J10	Active
34	YC64926	VIK	34	5-Mar-2024	CRS - 100%.	115J10	Active
35	YC64927	VIK	35	5-Mar-2024	CRS - 100%.	115J10	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
36	YC64928	VIK	36	5-Mar-2024	CRS - 100%.	115J10	Active
37	YC64929	VIK	37	5-Mar-2024	CRS - 100%.	115J10	Active
38	YC64930	VIK	38	5-Mar-2024	CRS - 100%.	115J10	Active
39	YC64931	VIK	39	5-Mar-2024	CRS - 100%.	115J10	Active
40	YC64932	VIK	40	5-Mar-2024	CRS - 100%.	115J10	Active
41	YC64933	VIK	41	5-Mar-2024	CRS - 100%.	115J10	Active
42	YC64934	VIK	42	5-Mar-2024	CRS - 100%.	115J10	Active
43	YC64935	VIK	43	5-Mar-2024	CRS - 100%.	115J10	Active
44	YC64936	VIK	44	5-Mar-2024	CRS - 100%.	115J10	Active
45	YC64937	VIK	45	5-Mar-2024	CRS - 100%.	115J10	Active
46	YC64938	VIK	46	5-Mar-2024	CRS - 100%.	115J10	Active
47	YC64939	VIK	47	5-Mar-2024	CRS - 100%.	115J10	Active
48	YC64940	VIK	48	5-Mar-2024	CRS - 100%.	115J10	Active
49	YC64941	VIK	49	5-Mar-2024	CRS - 100%.	115J10	Active
50	YC64942	VIK	50	5-Mar-2024	CRS - 100%.	115J10	Active
51	YC64943	VIK	51	5-Mar-2024	CRS - 100%.	115J10	Active
52	YC64944	VIK	52	5-Mar-2024	CRS - 100%.	115J10	Active
53	YC64945	VIK	53	5-Mar-2024	CRS - 100%.	115J10	Active
54	YC64946	VIK	54	5-Mar-2024	CRS - 100%.	115J10	Active
55	YC64947	VIK	55	5-Mar-2024	CRS - 100%.	115J10	Active
56	YC64948	VIK	56	5-Mar-2024	CRS - 100%.	115J10	Active
57	YC64949	VIK	57	5-Mar-2024	CRS - 100%.	115J10	Active
58	YC64950	VIK	58	5-Mar-2024	CRS - 100%.	115J10	Active
59	YC64951	VIK	59	5-Mar-2024	CRS - 100%.	115J10	Active
60	YC64952	VIK	60	5-Mar-2024	CRS - 100%.	115J10	Active
61	YC64953	VIK	61	5-Mar-2024	CRS - 100%.	115J10	Active
62	YC64954	VIK	62	5-Mar-2024	CRS - 100%.	115J10	Active
63	YC64955	VIK	63	5-Mar-2024	CRS - 100%.	115J10	Active
64	YC64956	VIK	64	5-Mar-2024	CRS - 100%.	115J10	Active
65	YC64957	VIK	65	5-Mar-2024	CRS - 100%.	115J10	Active
66	YC64958	VIK	66	5-Mar-2024	CRS - 100%.	115J10	Active
67	YC64959	VIK	67	5-Mar-2024	CRS - 100%.	115J10	Active
68	YC64960	VIK	68	5-Mar-2024	CRS - 100%.	115J10	Active
69	YC64961	VIK	69	5-Mar-2024	CRS - 100%.	115J10	Active
70	YC64962	VIK	70	5-Mar-2024	CRS - 100%.	115J10	Active
71	YC64963	VIK	71	5-Mar-2024	CRS - 100%.	115J10	Active
72	YC64964	VIK	72	5-Mar-2024	CRS - 100%.	115J10	Active
73	YC64965	VIK	73	5-Mar-2024	CRS - 100%.	115J10	Active
74	YC64966	VIK	74	5-Mar-2024	CRS - 100%.	115J10	Active
75	YC64967	VIK	75	5-Mar-2024	CRS - 100%.	115J10	Active
76	YC64968	VIK	76	5-Mar-2024	CRS - 100%.	115J10	Active
77	YC64969	VIK	77	5-Mar-2024	CRS - 100%.	115J10	Active
78	YC64970	VIK	78	5-Mar-2024	CRS - 100%.	115J10	Active
79	YC64971	VIK	79	5-Mar-2024	CRS - 100%.	115J10	Active

#### "VIK" MINERAL CLAIMS (188) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
80	YC64972	VIK	80	5-Mar-2024	CRS - 100%.	115J10	Active
81	YC64973	VIK	81	5-Mar-2024	CRS - 100%.	115J10	Active
82	YC64974	VIK	82	5-Mar-2024	CRS - 100%.	115J10	Active
83	YC64975	VIK	83	5-Mar-2024	CRS - 100%.	115J10	Active
84	YC64976	VIK	84	5-Mar-2024	CRS - 100%.	115J10	Active
85	YC64977	VIK	85	5-Mar-2024	CRS - 100%.	115J10	Active
86	YC64978	VIK	86	5-Mar-2024	CRS - 100%.	115J10	Active
87	YC64979	VIK	87	5-Mar-2024	CRS - 100%.	115J10	Active
88	YC64980	VIK	88	5-Mar-2024	CRS - 100%.	115J10	Active
89	YC64981	VIK	89	5-Mar-2024	CRS - 100%.	115J10	Active
90	YC64982	VIK	90	5-Mar-2024	CRS - 100%.	115J10	Active
91	YC64983	VIK	91	5-Mar-2024	CRS - 100%.	115J10	Active
92	YC64984	VIK	92	5-Mar-2024	CRS - 100%.	115J10	Active
93	YC64985	VIK	93	5-Mar-2024	CRS - 100%.	115J10	Active
94	YC64986	VIK	94	5-Mar-2024	CRS - 100%.	115J10	Active
95	YC64987	VIK	95	5-Mar-2024	CRS - 100%.	115J10	Active
96	YC64988	VIK	96	5-Mar-2024	CRS - 100%.	115J10	Active
97	YC64989	VIK	97	5-Mar-2024	CRS - 100%.	115J10	Active
98	YC64990	VIK	98	5-Mar-2024	CRS - 100%.	115J10	Active
99	YC64991	VIK	99	5-Mar-2024	CRS - 100%.	115J10	Active
100	YC64992	VIK	100	5-Mar-2024	CRS - 100%.	115J10	Active
101	YC64993	VIK	101	5-Mar-2024	CRS - 100%.	115J10	Active
102	YC64994	VIK	102	5-Mar-2024	CRS - 100%.	115J10	Active
103	YC64995	VIK	103	5-Mar-2024	CRS - 100%.	115J10	Active
104	YC64996	VIK	104	5-Mar-2024	CRS - 100%.	115J10	Active
105	YC64997	VIK	105	5-Mar-2024	CRS - 100%.	115J10	Active
106	YC64998	VIK	106	5-Mar-2024	CRS - 100%.	115J10	Active
107	YC64999	VIK	107	5-Mar-2024	CRS - 100%.	115J10	Active
108	YC65000	VIK	108	5-Mar-2024	CRS - 100%.	115J10	Active
109	YC65001	VIK	109	5-Mar-2024	CRS - 100%.	115J10	Active
110	YC65002	VIK	110	5-Mar-2024	CRS - 100%.	115J10	Active
111	YC65003	VIK	111	5-Mar-2024	CRS - 100%.	115J10	Active
112	YC65004	VIK	112	5-Mar-2024	CRS - 100%.	115J10	Active
113	YC65005	VIK	113	5-Mar-2024	CRS - 100%.	115J10	Active
114	YC65006	VIK	114	5-Mar-2024	CRS - 100%.	115J10	Active
115	YC65007	VIK	115	5-Mar-2024	CRS - 100%.	115J10	Active
116	YC65008	VIK	116	5-Mar-2024	CRS - 100%.	115J10	Active
117	YC65009	VIK	117	5-Mar-2024	CRS - 100%. CRS - 100%.	115J10	Active
118	YC65010 YC65011	VIK	118	5-Mar-2024	CRS - 100%.	115J15	Active
119	YC65011 YC65012	VIK	119	5-Mar-2024	CRS - 100%.	115J15	Active
120	YC65012 YC65013	VIK	120	5-Mar-2024	CRS - 100%.	115J15	Active
121	YC65013	VIK	121	5-Mar-2024	CRS - 100%.	115J15	Active
122	YC65014 YC65015	VIK	122	5-Mar-2024	CRS - 100%.	115J15	Active
123	1000010	VIIX	123	5-Mar-2024	010 - 100 /0.	115J15	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
124	YC65016	VIK	124	5-Mar-2024	CRS - 100%.	115J15	Active
125	YC65017	VIK	125	5-Mar-2024	CRS - 100%.	115J15	Active
126	YC65018	VIK	126	5-Mar-2024	CRS - 100%.	115J15	Active
127	YC65019	VIK	127	5-Mar-2024	CRS - 100%.	115J15	Active
128	YC65020	VIK	128	5-Mar-2024	CRS - 100%.	115J15	Active
129	YC65021	VIK	129	5-Mar-2024	CRS - 100%.	115J15	Active
130	YC65022	VIK	130	5-Mar-2024	CRS - 100%.	115J15	Active
131	YC65023	VIK	131	5-Mar-2024	CRS - 100%.	115J15	Active
132	YC65024	VIK	132	5-Mar-2024	CRS - 100%.	115J15	Active
133	YC65025	VIK	133	5-Mar-2024	CRS - 100%.	115J15	Active
134	YC65026	VIK	134	5-Mar-2024	CRS - 100%.	115J15	Active
135	YC65027	VIK	135	5-Mar-2024	CRS - 100%.	115J15	Active
136	YC65028	VIK	136	5-Mar-2024	CRS - 100%.	115J15	Active
137	YC65029	VIK	137	5-Mar-2024	CRS - 100%.	115J15	Active
138	YC65030	VIK	138	5-Mar-2024	CRS - 100%.	115J15	Active
139	YC65031	VIK	139	5-Mar-2024	CRS - 100%.	115J15	Active
140	YC65032	VIK	140	5-Mar-2024	CRS - 100%.	115J15	Active
141	YC65033	VIK	141	5-Mar-2024	CRS - 100%.	115J15	Active
142	YC65034	VIK	142	5-Mar-2024	CRS - 100%.	115J15	Active
143	YC65035	VIK	143	5-Mar-2024	CRS - 100%.	115J15	Active
144	YC65036	VIK	144	5-Mar-2024	CRS - 100%.	115J15	Active
145	YC65037	VIK	145	5-Mar-2024	CRS - 100%.	115J15	Active
146	YC65038	VIK	146	5-Mar-2024	CRS - 100%.	115J15	Active
147	YC65039	VIK	147	5-Mar-2024	CRS - 100%.	115J15	Active
148	YC65040	VIK	148	5-Mar-2024	CRS - 100%.	115J15	Active
149	YC65041	VIK	149	5-Mar-2024	CRS - 100%.	115J15	Active
150	YC65042	VIK	150	5-Mar-2024	CRS - 100%.	115J15	Active
151	YC65043	VIK	151	5-Mar-2024	CRS - 100%.	115J15	Active
152	YC65044	VIK	152	5-Mar-2024	CRS - 100%.	115J15	Active
153	YC65045	VIK	153	5-Mar-2024	CRS - 100%.	115J15	Active
154	YC65046	VIK	154	5-Mar-2024	CRS - 100%.	115J15	Active
155	YC65047	VIK	155	5-Mar-2024	CRS - 100%.	115J15	Active
156	YC65048	VIK	156	5-Mar-2024	CRS - 100%.	115J15	Active
157	YC65049	VIK	157	5-Mar-2024	CRS - 100%.	115J15	Active
158	YC65050	VIK	158	5-Mar-2024	CRS - 100%.	115J15	Active
159	YC65051	VIK	159	5-Mar-2024	CRS - 100%.	115J15	Active
160	YC65052	VIK	160	5-Mar-2024	CRS - 100%.	115J15	Active
161	YC65053	VIK	161	5-Mar-2024	CRS - 100%.	115J15	Active
162	YC65054	VIK	162	5-Mar-2024	CRS - 100%.	115J15	Active
163	YC65055	VIK	163	5-Mar-2024	CRS - 100%.	115J15	Active
164	YC65056	VIK	164	5-Mar-2024	CRS - 100%.	115J15	Active
165	YC65057	VIK	165	5-Mar-2024	CRS - 100%.	115J15	Active
166	YC65058	VIK	166	5-Mar-2024	CRS - 100%.	115J15	Active
167	YC65059	VIK	167	5-Mar-2024	CRS - 100%.	115J15	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
168	YC65060	VIK	168	5-Mar-2024	CRS - 100%.	115J15	Active
169	YC65061	VIK	169	5-Mar-2024	CRS - 100%.	115J15	Active
170	YC65062	VIK	170	5-Mar-2024	CRS - 100%.	115J15	Active
171	YC65063	VIK	171	5-Mar-2024	CRS - 100%.	115J15	Active
172	YC65064	VIK	172	5-Mar-2024	CRS - 100%.	115J15	Active
173	YC65065	VIK	173	5-Mar-2024	CRS - 100%.	115J15	Active
174	YC65066	VIK	174	5-Mar-2024	CRS - 100%.	115J15	Active
175	YC65067	VIK	175	5-Mar-2024	CRS - 100%.	115J15	Active
176	YC65068	VIK	176	5-Mar-2024	CRS - 100%.	115J15	Active
177	YC65069	VIK	177	5-Mar-2024	CRS - 100%.	115J15	Active
178	YC65070	VIK	178	5-Mar-2024	CRS - 100%.	115J15	Active
179	YC65071	VIK	179	5-Mar-2024	CRS - 100%.	115J15	Active
180	YC65072	VIK	180	5-Mar-2024	CRS - 100%.	115J15	Active
181	YC65073	VIK	181	5-Mar-2024	CRS - 100%.	115J15	Active
182	YC65074	VIK	182	5-Mar-2024	CRS - 100%.	115J15	Active
183	YC65075	VIK	183	5-Mar-2024	CRS - 100%.	115J15	Active
184	YC65076	VIK	184	5-Mar-2024	CRS - 100%.	115J15	Active
185	YC65077	VIK	185	5-Mar-2024	CRS - 100%.	115J15	Active
186	YC65078	VIK	186	5-Mar-2024	CRS - 100%.	115J15	Active
187	YC65079	VIK	187	5-Mar-2024	CRS - 100%.	115J15	Active
188	YC65080	VIK	188	5-Mar-2024	CRS - 100%.	115J15	Active

#### "JOE" MINERAL CLAIMS (23) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	Y 51849	CAT (F)	26	25-Mar-2024	CRS 100%	115J10	Active
2	Y 10693	JOE	89	5-Mar-2024	CRS 100%	115J10	Active
3	Y 10694	JOE	90	5-Mar-2024	CRS 100%	115J110	Active
4	Y 51850	JOE (F)	91	5-Mar-2024	CRS 100%	115J10	Active
5	Y 10695	JOE	91	5-Mar-2024	CRS 100%	115J10	Active
6	Y 10696	JOE	92	5-Mar-2024	CRS 100%	115J10	Active
7	Y 51851	JOE (F)	92	5-Mar-2024	CRS 100%	115J10	Active
8	Y 10697	JOE	93	5-Mar-2024	CRS 100%	115J10	Active
9	Y 51852	JOE (F)	93	5-Mar-2024	CRS 100%	115J10	Active
10	Y 10698	JOE	94	5-Mar-2024	CRS 100%	115J10	Active
11	Y 51853	JOE (F)	94	5-Mar-2024	CRS 100%	115J10	Active
12	Y 10699	JOE	95	5-Mar-2024	CRS 100%	115J10	Active
13	Y 51854	JOE (F)	95	5-Mar-2024	CRS 100%	115J10	Active
14	Y 10700	JOE	96	5-Mar-2024	CRS 100%	115J10	Active
15	Y 51855	JOE (F)	96	5-Mar-2024	CRS 100%	115J10	Active
16	Y 10702	JOE	98	5-Mar-2024	CRS 100%	115J10	Active
17	Y 10703	JOE	99	5-Mar-2024	CRS 100%	115J10	Active

#### "JOE" MINERAL CLAIMS (23) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
18	Y 10705	JOE	101	5-Mar-2024	CRS 100%	115J10	Active
19	Y 10706	JOE	102	5-Mar-2024	CRS 100%	115J10	Active
20	Y 10707	JOE	103	5-Mar-2024	CRS 100%	115J15	Active
21	Y 10708	JOE	104	5-Mar-2024	CRS 100%	115J15	Active
22	Y 35192	MOUSE	1	5-Mar-2024	CRS 100%	115J10	Active
23	Y 35193	MOUSE	2	5-Mar-2024	CRS 100%	115J10	Active

#### CASINO "A" MINERAL CLAIMS (83) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	Y 10701	JOE	97	25-Mar-2024	CRS 100%	115J10	Active
2	Y 10704	JOE	100	25-Mar-2024	CRS 100%	115J10	Active
3	56983	#1 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
4	56990	#2 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
5	56984	#3 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
6	56991	#4 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
7	56985	#5 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
8	56992	#6 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
9	56993	#8 AIRPORT GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
10	56979	#1 BOMBER GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
11	56987	#2 BOMBER GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
12	56980	#3 BOMBER GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
13	56981	#5 BOMBER GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
14	56988	#6 BOMBER GROUP	-	25-Mar-2024	CRS 100%	115J10	Active
15	Y 35585	LOST FR.	1	25-Mar-2024	CRS 100%	115J10	Active
16	Y 35586	LOST FR.	2	25-Mar-2024	CRS 100%	115J10	Active
17	Y 35587	LOST FR.	3	25-Mar-2024	CRS 100%	115J10	Active
18	92201	CAT	1	25-Mar-2024	CRS 100%	115J10	Active
19	Y 51846	CAT (>F)	1	25-Mar-2024	CRS 100%	115J10	Active
20	92202	CAT	2	25-Mar-2024	CRS 100%	115J10	Active
21	Y 51847	CAT (F)	2	25-Mar-2024	CRS 100%	115J10	Active
22	92203	CAT	3	25-Mar-2024	CRS 100%	115J10	Active

No	Grant	Claim Name	Claim	Expiry Date		NTS Map	Status
No.	Number		No.		Owner	Sheet	Status
23	Y 39601	CAT (F)	3	25-Mar-2024	CRS 100%	115J10	Active
24	92204	CAT	4	25-Mar-2024	CRS 100%	115J10	Active
25	Y 39602	CAT (F)	4	25-Mar-2024	CRS 100%	115J10	Active
26	92205	CAT	5	25-Mar-2024	CRS 100%	115J10	Active
27	92206	CAT	6	25-Mar-2024	CRS 100%	115J10	Active
28	92207	CAT	7	25-Mar-2024	CRS 100%	115J10	Active
29	92208	CAT	8	25-Mar-2024	CRS 100%	115J10	Active
30	92209	CAT	9	25-Mar-2024	CRS 100%	115J10	Active
31	92210	CAT	10	25-Mar-2024	CRS 100%	115J10	Active
32	92211	CAT	11	25-Mar-2024	CRS 100%	115J10	Active
33	92212	CAT	12	25-Mar-2024	CRS 100%	115J10	Active
34	92213	CAT	13	25-Mar-2024	CRS 100%	115J10	Active
35	92214	CAT	14	25-Mar-2024	CRS 100%	115J10	Active
36	92215	CAT	15	25-Mar-2024	CRS 100%	115J10	Active
37	92216	CAT	16	25-Mar-2024	CRS 100%	115J10	Active
38	92217	CAT	17	25-Mar-2024	CRS 100%	115J10	Active
39	92218	CAT	18	25-Mar-2024	CRS 100%	115J10	Active
40	92219	CAT	19	25-Mar-2024	CRS 100%	115J10	Active
41	92220	CAT	20	25-Mar-2024	CRS 100%	115J10	Active
42	92221	CAT	21	25-Mar-2024	CRS 100%	115J10	Active
43	92222	CAT	22	25-Mar-2024	CRS 100%	115J10	Active
44	92764	CAT	23	25-Mar-2024	CRS 100%	115J10	Active
45	Y 36686	CAT (F)	22	25-Mar-2024	CRS 100%	115J10	Active
46	Y 39603	CAT (F)	23	25-Mar-2024	CRS 100%	115J10	Active
47	92765	CAT	24	25-Mar-2024	CRS 100%	115J10	Active
48	92766	CAT	25	25-Mar-2024	CRS 100%	115J10	Active
49	92776	CAT	35	25-Mar-2024	CRS 100%	115J10	Active
50	92777	CAT	36	25-Mar-2024	CRS 100%	115J10	Active
51	92778	CAT	37	25-Mar-2024	CRS 100%	115J10	Active
52	92779	CAT	38	25-Mar-2024	CRS 100%	115J10	Active
53	92780	CAT	39	25-Mar-2024	CRS 100%	115J10	Active
54	92781	CAT	40	25-Mar-2024	CRS 100%	115J10	Active
55	92782	CAT	41	25-Mar-2024	CRS 100%	115J10	Active
56	92783	CAT	42	25-Mar-2024	CRS 100%	115J10	Active
57	95724	CAT	47	25-Mar-2024	CRS 100%	115J10	Active
58	Y 36687	CAT (F)	47	25-Mar-2024	CRS 100%	115J10	Active
59	95725	CAT	48	25-Mar-2024	CRS 100%	115J10	Active
60	Y 36688	CAT (F)	48	25-Mar-2024	CRS 100%	115J10	Active
61	95726	CAT	49	25-Mar-2024	CRS 100%	115J10	Active
62	95727	CAT	50	25-Mar-2024	CRS 100%	115J10	Active
63	95728	CAT	51	25-Mar-2024	CRS 100%	115J10	Active
64	95729	CAT	52	25-Mar-2024	CRS 100%	115J10	Active
65	95730	CAT	53	25-Mar-2024	CRS 100%	115J10	Active
66	95731	CAT	54	25-Mar-2024	CRS 100%	115J10	Active
67	95732	CAT	55	25-Mar-2024	CRS 100%	115J15	Active
68	95733	CAT	56	25-Mar-2024	CRS 100%	115J15	Active

### CASINO "A" MINERAL CLAIMS (83) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
69	95734	CAT	57	25-Mar-2024	CRS 100%	115J10	Active
70	Y 36689	CAT (F)	57	5-Jun-2024	CRS 100%	115J10	Active
71	95736	CAT	59	25-Mar-2024	CRS 100%	115J10	Active
72	95735	CAT	58	25-Mar-2024	CRS 100%	115J10	Active
73	95737	CAT	60	25-Mar-2024	CRS 100%	115J10	Active
74	95738	CAT	61	25-Mar-2024	CRS 100%	115J10	Active
75	Y 36690	CAT (F)	62	25-Mar-2024	CRS 100%	115J10	Active
76	95739	CAT	62	25-Mar-2024	CRS 100%	115J10	Active
77	Y 35582	MOUSE (F)	161	25-Mar-2024	CRS 100%	115J10	Active
78	Y 35583	MOUSE (F)	162	25-Mar-2024	CRS 100%	115J10	Active
79	Y 35584	MOUSE (F)	163	25-Mar-2024	CRS 100%	115J10	Active
80	YB37280	F	29	25-Mar-2024	CRS 100%	115J10	Active
81	YB37282	F	31	25-Mar-2024	CRS 100%	115J10	Active
82	YB37284	F	33	25-Mar-2024	CRS 100%	115J10	Active
83	4252	HELICOPTER	-	25-Mar-2024	CRS 100%	115J10	Active

#### CASINO "A" MINERAL CLAIMS (83) - WHITEHORSE MINING DISTRICT

#### CASINO "B" MINERAL CLAIMS (55) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	YB36618	CAS	31	25-Mar-2016	CRS 100%	115J10	Active
2	YB36619	CAS	32	25-Mar-2016	CRS 100%	115J10	Active
3	YB36620	CAS	33	25-Mar-2016	CRS 100%	115J15	Active
4	YB36621	CAS	34	25-Mar-2016	CRS 100%	115J15	Active
5	YB36622	CAS	35	25-Mar-2016	CRS 100%	115J15	Active
6	YB36623	CAS	36	25-Mar-2016	CRS 100%	115J15	Active
7	95740	CAT	63	25-Mar-2016	CRS 100%	115J10	Active
8	95741	CAT	64	25-Mar-2016	CRS 100%	115J10	Active
9	95742	CAT	65	25-Mar-2016	CRS 100%	115J10	Active
10	95743	CAT	66	25-Mar-2016	CRS 100%	115J10	Active
11	95744	CAT	67	25-Mar-2016	CRS 100%	115J10	Active
12	95745	CAT	68	25-Mar-2016	CRS 100%	115J10	Active
13	95746	CAT	69	25-Mar-2016	CRS 100%	115J10	Active
14	95747	CAT	70	25-Mar-2016	CRS 100%	115J10	Active
15	YB37242	E	23	25-Mar-2016	CRS 100%	115J15	Active
16	YB37243	E	24	25-Mar-2016	CRS 100%	115J15	Active
17	YB37244	E	25	25-Mar-2016	CRS 100%	115J15	Active
18	YB37246	E	27	25-Mar-2016	CRS 100%	115J10	Active
19	YB37247	E	28	25-Mar-2016	CRS 100%	115J10	Active
20	YB37248	E	29	25-Mar-2016	CRS 100%	115J15	Active
21	YB37249	E	30	25-Mar-2016	CRS 100%	115J15	Active
22	YB37250	E	31	25-Mar-2016	CRS 100%	115J15	Active
23	YB37251	E	32	25-Mar-2016	CRS 100%	115J15	Active
24	YB37278	F	27	25-Mar-2016	CRS 100%	115J10	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
25	YB37279	F	28	25-Mar-2016	CRS 100%	115J10	Active
26	YB37640	I	1	25-Mar-2016	CRS 100%	115J10	Active
27	YB37641	I	2	25-Mar-2016	CRS 100%	115J10	Active
28	YB37642	I	3	25-Mar-2016	CRS 100%	115J10	Active
29	YB37643	I	4	25-Mar-2016	CRS 100%	115J10	Active
30	YB37658	I	19	25-Mar-2016	CRS 100%	115J10	Active
31	YB37659	I	20	25-Mar-2016	CRS 100%	115J10	Active
32	Y 35194	MOUSE	3	25-Mar-2016	CRS 100%	115J10	Active
33	Y 35195	MOUSE	4	25-Mar-2016	CRS 100%	115J10	Active
34	Y 35196	MOUSE	5	25-Mar-2016	CRS 100%	115J10	Active
35	Y 35197	MOUSE	6	25-Mar-2016	CRS 100%	115J10	Active
36	Y 35198	MOUSE	7	25-Mar-2016	CRS 100%	115J10	Active
37	Y 35199	MOUSE	8	25-Mar-2016	CRS 100%	115J10	Active
38	Y 35200	MOUSE	9	25-Mar-2016	CRS 100%	115J10	Active
39	Y 35201	MOUSE	10	25-Mar-2016	CRS 100%	115J10	Active
40	Y 35202	MOUSE	11	25-Mar-2016	CRS 100%	115J10	Active
41	Y 35203	MOUSE	12	25-Mar-2016	CRS 100%	115J10	Active
42	Y 35204	MOUSE	13	25-Mar-2016	CRS 100%	115J10	Active
43	Y 35205	MOUSE	14	25-Mar-2016	CRS 100%	115J10	Active
44	Y 35206	MOUSE	15	25-Mar-2016	CRS 100%	115J10	Active
45	Y 35207	MOUSE	16	25-Mar-2016	CRS 100%	115J10	Active
46	Y 35483	MOUSE	89	25-Mar-2016	CRS 100%	115J10	Active
47	Y 35484	MOUSE	90	25-Mar-2016	CRS 100%	115J10	Active
48	Y 35491	MOUSE	97	25-Mar-2016	CRS 100%	115J10	Active
49	Y 35492	MOUSE	98	25-Mar-2016	CRS 100%	115J10	Active
50	Y 35517	MOUSE	123	25-Mar-2016	CRS 100%	115J10	Active
51	Y 35518	MOUSE	124	25-Mar-2016	CRS 100%	115J10	Active
52	Y 35519	MOUSE	125	25-Mar-2016	CRS 100%	115J10	Active
53	Y 35520	MOUSE	126	25-Mar-2016	CRS 100%	115J10	Active
54	Y 35521	MOUSE	127	25-Mar-2016	CRS 100%	115J10	Active
55	Y 35522	MOUSE	128	25-Mar-2016	CRS 100%	115J10	Active

#### CASINO "B" MINERAL CLAIMS (55) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	YC81379	CC	1	5-Mar-2022	CRS 100%	115J10	Active
2	YC81380	CC	2	5-Mar-2022	CRS 100%	115J10	Active
3	YC81381	CC	3	5-Mar-2022	CRS 100%	115J10	Active
4	YC81382	CC	4	5-Mar-2022	CRS 100%	115J10	Active
5	YC81383	CC	5	5-Mar-2022	CRS 100%	115J10	Active

"CC" M	INERAL CLAIMS	6 (94) - WHITEHORSE MINING	<b>JISTRICT</b>
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No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
6	YC81384	CC	6	5-Mar-2022	CRS 100%	115J10	Active
7	YC81385	CC	7	5-Mar-2022	CRS 100%	115J10	Active
8	YC81386	CC	8	5-Mar-2022	CRS 100%	115J10	Active
9	YC81387	CC	9	5-Mar-2022	CRS 100%	115J10	Active
10	YC81388	CC	10	5-Mar-2022	CRS 100%	115J10	Active
11	YC81389	CC	11	5-Mar-2022	CRS 100%	115J10	Active
12	YC81390	CC	12	5-Mar-2022	CRS 100%	115J10	Active
13	YC81391	CC	13	5-Mar-2022	CRS 100%	115J10	Active
14	YC81392	CC	14	5-Mar-2022	CRS 100%	115J10	Active
15	YC81393	CC	15	5-Mar-2022	CRS 100%	115J10	Active
16	YC81394	CC	16	5-Mar-2022	CRS 100%	115J10	Active
17	YC81395	CC	17	5-Mar-2022	CRS 100%	115J10	Active
18	YC81396	CC	18	5-Mar-2022	CRS 100%	115J10	Active
19	YC81397	CC	19	5-Mar-2022	CRS 100%	115J10	Active
20	YC81398	CC	20	5-Mar-2022	CRS 100%	115J10	Active
21	YC81399	CC	21	5-Mar-2022	CRS 100%	115J10	Active
22	YC81400	CC	22	5-Mar-2022	CRS 100%	115J10	Active
23	YC81401	CC	23	5-Mar-2022	CRS 100%	115J10	Active
24	YC81402	CC	24	5-Mar-2022	CRS 100%	115J10	Active
25	YC81403	CC	25	5-Mar-2022	CRS 100%	115J10	Active
26	YC81404	CC	26	5-Mar-2022	CRS 100%	115J10	Active
27	YC81405	CC	27	5-Mar-2022	CRS 100%	115J10	Active
28	YC81406	CC	28	5-Mar-2022	CRS 100%	115J10	Active
29	YC81407	CC	29	5-Mar-2022	CRS 100%	115J10	Active
30	YC81408	CC	30	5-Mar-2022	CRS 100%	115J10	Active
31	YC81409	CC	31	5-Mar-2022	CRS 100%	115J10	Active
32	YC81410	CC	32	5-Mar-2022	CRS 100%	115J10	Active
33	YC81411	CC	33	5-Mar-2022	CRS 100%	115J10	Active
34	YC81412	CC	34	5-Mar-2022	CRS 100%	115J10	Active
35	YC81413	CC	35	5-Mar-2022	CRS 100%	115J10	Active
36	YC81414	CC	36	5-Mar-2022	CRS 100%	115J10	Active
37	YC81415	CC	37	5-Mar-2022	CRS 100%	115J10	Active
38	YC81416	CC	38	5-Mar-2022	CRS 100%	115J10	Active
39	YC81417	CC	39	5-Mar-2022	CRS 100%	115J10	Active
40	YC81418	CC	40	5-Mar-2022	CRS 100%	115J10	Active
41	YC81419	CC	41	5-Mar-2022	CRS 100%	115J10	Active
42	YC81420	CC	42	5-Mar-2022	CRS 100%	115J10	Active
43	YC81421	CC	43	5-Mar-2022	CRS 100%	115J10	Active
44	YC81422	CC	44	5-Mar-2022	CRS 100%	115J10	Active
45	YC81423	CC	45	5-Mar-2022	CRS 100%	115J10	Active
46	YC81424	CC	46	5-Mar-2022	CRS 100%	115J10	Active
47	YC81425	CC	47	5-Mar-2022	CRS 100%	115J10	Active
48	YC81426	CC	48	5-Mar-2022	CRS 100%	115J10	Active
49	YC81427	CC	49	5-Mar-2022	CRS 100%	115J10	Active
50	YC81428	CC	50	5-Mar-2022	CRS 100%	115J10	Active
51	YC81429	CC	51	5-Mar-2022	CRS 100%	115J10	Active
52	YC81430	CC	52	5-Mar-2022	CRS 100%	115J10	Active
53	YC81431	CC	53	5-Mar-2022	CRS 100%	115J10	Active
54	YC81432	CC	54	5-Mar-2022	CRS 100%	115J10	Active

"CC"	MINERAL	CLAIMS (94)	WHITEHORSE MINING DISTRICT
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No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
55	YC81433	CC	55	5-Mar-2022	CRS 100%	115J10	Active
56	YC81434	CC	56	5-Mar-2022	CRS 100%	115J10	Active
57	YC81435	CC	57	5-Mar-2022	CRS 100%	115J10	Active
58	YC81436	CC	58	5-Mar-2022	CRS 100%	115J10	Active
59	YC81437	CC	59	5-Mar-2022	CRS 100%	115J10	Active
60	YC81438	CC	60	5-Mar-2022	CRS 100%	115J10	Active
61	YC81439	CC	61	5-Mar-2022	CRS 100%	115J10	Active
62	YC81440	CC	62	5-Mar-2022	CRS 100%	115J10	Active
63	YC81441	CC	63	5-Mar-2022	CRS 100%	115J10	Active
64	YC81442	CC	64	5-Mar-2022	CRS 100%	115J10	Active
65	YC81443	CC	65	5-Mar-2022	CRS 100%	115J10	Active
66	YC81444	CC	66	5-Mar-2022	CRS 100%	115J10	Active
67	YC81445	CC	67	5-Mar-2022	CRS 100%	115J10	Active
68	YC81446	CC	68	5-Mar-2022	CRS 100%	115J10	Active
69	YC81447	CC	69	5-Mar-2022	CRS 100%	115J10	Active
70	YC81448	CC	70	5-Mar-2022	CRS 100%	115J10	Active
71	YC81449	CC	71	5-Mar-2022	CRS 100%	115J10	Active
72	YC81450	CC	72	5-Mar-2022	CRS 100%	115J10	Active
73	YC81451	CC	73	5-Mar-2022	CRS 100%	115J10	Active
74	YC81452	CC	74	5-Mar-2022	CRS 100%	115J10	Active
75	YC81453	CC	75	5-Mar-2022	CRS 100%	115J10	Active
76	YC81454	CC	76	5-Mar-2022	CRS 100%	115J10	Active
77	YC81455	CC	77	5-Mar-2022	CRS 100%	115J10	Active
78	YC81456	CC	78	5-Mar-2022	CRS 100%	115J10	Active
79	YC81457	CC	79	5-Mar-2022	CRS 100%	115J10	Active
80	YC81458	CC	80	5-Mar-2022	CRS 100%	115J10	Active
81	YC81459	CC	81	5-Mar-2022	CRS 100%	115J10	Active
82	YC81460	CC	82	5-Mar-2022	CRS 100%	115J10	Active
83	YC81461	CC	83	5-Mar-2022	CRS 100%	115J10	Active
84	YC81462	CC	84	5-Mar-2022	CRS 100%	115J10	Active
85	YC81463	CC	85	5-Mar-2022	CRS 100%	115J10	Active
86	YC81464	CC	86	5-Mar-2022	CRS 100%	115J10	Active
87	YC81465	CC	87	5-Mar-2022	CRS 100%	115J10	Active
88	YC81466	CC	88	5-Mar-2022	CRS 100%	115J10	Active
89	YC81467	CC	89	5-Mar-2022	CRS 100%	115J10	Active
90	YC81468	CC	90	5-Mar-2022	CRS 100%	115J10	Active
91	YC81469	CC	91	5-Mar-2022	CRS 100%	115J10	Active
92	YC81470	CC	92	5-Mar-2022	CRS 100%	115J10	Active
93	YC81471	CC	93	5-Mar-2022	CRS 100%	115J10	Active
94	YC81472	CC	94	5-Mar-2022	CRS 100%	115J10	Active

#### "BRIT" MINERAL CLAIMS (63) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	YC81316	BRIT	1	5-Mar-2022	CRS 100%	115J15	Active
2	YC81317	BRIT	2	5-Mar-2022	CRS 100%	115J15	Active
3	YC81318	BRIT	3	5-Mar-2022	CRS 100%	115J15	Active
4	YC81319	BRIT	4	5-Mar-2022	CRS 100%	115J15	Active

"BRIT" MINERAL CLAIMS (63) - WHITEHORSE MINING DISTRICT
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	"BRIT" MINERAL CLAIMS (63) - WF						
No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
5	YC81320	BRIT	5	5-Mar-2022	CRS 100%	115J15	Active
6	YC81321	BRIT	6	5-Mar-2022	CRS 100%	115J15	Active
7 `	YC81322	BRIT	7	5-Mar-2022	CRS 100%	115J15	Active
8 `	YC81323	BRIT	8	5-Mar-2022	CRS 100%	115J15	Active
9 `	YC81324	BRIT	9	5-Mar-2022	CRS 100%	115J15	Active
10	YC81325	BRIT	10	5-Mar-2022	CRS 100%	115J15	Active
11	YC81326	BRIT	11	5-Mar-2022	CRS 100%	115J15	Active
12	YC81327	BRIT	12	5-Mar-2022	CRS 100%	115J15	Active
13	YC81328	BRIT	13	5-Mar-2022	CRS 100%	115J15	Active
14	YC81329	BRIT	14	5-Mar-2022	CRS 100%	115J15	Active
15	YC81330	BRIT	15	5-Mar-2022	CRS 100%	115J15	Active
16	YC81331	BRIT	16	5-Mar-2022	CRS 100%	115J15	Active
17	YC81332	BRIT	17	5-Mar-2022	CRS 100%	115J15	Active
18	YC81333	BRIT	18	5-Mar-2022	CRS 100%	115J15	Active
19	YC81334	BRIT	19	5-Mar-2022	CRS 100%	115J15	Active
20	YC81335	BRIT	20	5-Mar-2022	CRS 100%	115J15	Active
21	YC81336	BRIT	21	5-Mar-2022	CRS 100%	115J15	Active
22	YC81337	BRIT	22	5-Mar-2022	CRS 100%	115J15	Active
23	YC81338	BRIT	23	5-Mar-2022	CRS 100%	115J15	Active
24	YC81339	BRIT	24	5-Mar-2022	CRS 100%	115J15	Active
25	YC81340	BRIT	25	5-Mar-2022	CRS 100%	115J15	Active
26	YC81341	BRIT	26	5-Mar-2022	CRS 100%	115J15	Active
27	YC81342	BRIT	27	5-Mar-2022	CRS 100%	115J15	Active
28	YC81343	BRIT	28	5-Mar-2022	CRS 100%	115J15	Active
29	YC81344	BRIT	29	5-Mar-2022	CRS 100%	115J15	Active
30	YC81345	BRIT	30	5-Mar-2022	CRS 100%	115J15	Active
31	YC81346	BRIT	31	5-Mar-2022	CRS 100%	115J15	Active
32	YC81347	BRIT	32	5-Mar-2022	CRS 100%	115J15	Active
33	YC81348	BRIT	33	5-Mar-2022	CRS 100%	115J15	Active
34	YC81349	BRIT	34	5-Mar-2022	CRS 100%	115J15	Active
35	YC81350	BRIT	35	5-Mar-2022	CRS 100%	115J15	Active
36	YC81351	BRIT	36	5-Mar-2022	CRS 100%	115J15	Active
37	YC81352	BRIT	37	5-Mar-2022	CRS 100%	115J15	Active
38	YC81353	BRIT	38	5-Mar-2022	CRS 100%	115J15	Active
39	YC81354	BRIT	39	5-Mar-2022	CRS 100%	115J15	Active
40	YC81355	BRIT	40	5-Mar-2022	CRS 100%	115J15	Active
41	YC81356	BRIT	41	5-Mar-2022	CRS 100%	115J15	Active
42	YC81357	BRIT	42	5-Mar-2022	CRS 100%	115J15	Active
43	YC81358	BRIT	43	5-Mar-2022	CRS 100%	115J15	Active
44	YC81359	BRIT	44	5-Mar-2022	CRS 100%	115J15	Active
45 <sup>\</sup>	YC81360	BRIT	45	5-Mar-2022	CRS 100%	115J15	Active
46	YC81361	BRIT	46	5-Mar-2022	CRS 100%	115J15	Active
47	YC81362	BRIT	47	5-Mar-2022	CRS 100%	115J15	Active
48	YC81363	BRIT	48	5-Mar-2022	CRS 100%	115J15	Active
49	YC81364	BRIT	49	5-Mar-2022	CRS 100%	115J15	Active
50	YC81365	BRIT	50	5-Mar-2022	CRS 100%	115J15	Active
51	YC81366	BRIT	51	5-Mar-2022	CRS 100%	115J15	Active
52	YC81367	BRIT	52	5-Mar-2022	CRS 100%	115J15	Active
53	YC81368	BRIT	53	5-Mar-2022	CRS 100%	115J15	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
54	YC81369	BRIT	54	5-Mar-2022	CRS 100%	115J15	Active
55	YC81370	BRIT	55	5-Mar-2022	CRS 100%	115J15	Active
56	YC81371	BRIT	56	5-Mar-2022	CRS 100%	115J15	Active
57	YC81372	BRIT	57	5-Mar-2022	CRS 100%	115J15	Active
58	YC81373	BRIT	58	5-Mar-2022	CRS 100%	115J15	Active
59	YC81374	BRIT	59	5-Mar-2022	CRS 100%	115J15	Active
60	YC81375	BRIT	60	5-Mar-2022	CRS 100%	115J15	Active
61	YC81376	BRIT	61	5-Mar-2022	CRS 100%	115J15	Active
62	YC81377	BRIT	62	5-Mar-2022	CRS 100%	115J15	Active
63	YC81378	BRIT	63	5-Mar-2022	CRS 100%	115J15	Active

#### "BRIT" MINERAL CLAIMS (63) - WHITEHORSE MINING DISTRICT

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
1	YD17559	AXS	1	25-Mar-2015	CRS - 100%.	115J15	Active
2	YD17560	AXS	2	25-Mar-2015	CRS - 100%.	115J15	Active
3	YD17561	AXS	3	25-Mar-2015	CRS - 100%.	115J15	Active
4	YD17562	AXS	4	25-Mar-2015	CRS - 100%.	115J15	Active
5	YD17563	AXS	5	25-Mar-2015	CRS - 100%.	115J15	Active
6	YD17564	AXS	6	25-Mar-2015	CRS - 100%.	115J15	Active
7	YD17565	AXS	7	25-Mar-2015	CRS - 100%.	115J10	Active
8	YD17566	AXS	8	25-Mar-2015	CRS - 100%.	115J10	Active
9	YD17567	AXS	9	25-Mar-2015	CRS - 100%.	115J10	Active
10	YD17568	AXS	10	25-Mar-2015	CRS - 100%.	115J10	Active
11	YD17569	AXS	11	25-Mar-2015	CRS - 100%.	115J10	Active
12	YD17570	AXS	12	25-Mar-2015	CRS - 100%.	115J10	Active
13	YD17571	AXS	13	25-Mar-2015	CRS - 100%.	115J10	Active
14	YD17572	AXS	14	25-Mar-2015	CRS - 100%.	115J10	Active
15	YD17573	AXS	15	25-Mar-2015	CRS - 100%.	115J10	Active
16	YD17574	AXS	16	25-Mar-2015	CRS - 100%.	115J10	Active
17	YD17575	AXS	17	25-Mar-2015	CRS - 100%.	115J10	Active
18	YD17576	AXS	18	25-Mar-2015	CRS - 100%.	115J10	Active
19	YD17577	AXS	19	25-Mar-2015	CRS - 100%.	115J10	Active
20	YD17578	AXS	20	25-Mar-2015	CRS - 100%.	115J10	Active
21	YD17579	AXS	21	25-Mar-2015	CRS - 100%.	115J10	Active
22	YD17580	AXS	22	25-Mar-2015	CRS - 100%.	115J10	Active
23	YD17581	AXS	23	25-Mar-2015	CRS - 100%.	115J10	Active
24	YD17582	AXS	24	25-Mar-2015	CRS - 100%.	115J10	Active
25	YD17583	AXS	25	25-Mar-2015	CRS - 100%.	115J10	Active
26	YD17584	AXS	26	25-Mar-2015	CRS - 100%.	115J10	Active
27	YD17585	AXS	27	25-Mar-2015	CRS - 100%.	115J10	Active
28	YD17586	AXS	28	25-Mar-2015	CRS - 100%.	115J10	Active
29	YD17587	AXS	29	25-Mar-2015	CRS - 100%.	115J10	Active
30	YD17588	AXS	30	25-Mar-2015	CRS - 100%.	115J10	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
31	YD17589	AXS	31	25-Mar-2015	CRS - 100%.	115J10	Active
32	YD17590	AXS	32	25-Mar-2015	CRS - 100%.	115J10	Active
33	YD17591	AXS	33	25-Mar-2015	CRS - 100%.	115J10	Active
34	YD17592	AXS	34	25-Mar-2015	CRS - 100%.	115J10	Active
35	YD17593	AXS	35	25-Mar-2015	CRS - 100%.	115J10	Active
36	YD17594	AXS	36	25-Mar-2015	CRS - 100%.	115J10	Active
37	YD17595	AXS	37	25-Mar-2015	CRS - 100%.	115J10	Active
38	YD17596	AXS	38	25-Mar-2015	CRS - 100%.	115J10	Active
39	YD17597	AXS	39	25-Mar-2015	CRS - 100%.	115J10	Active
40	YD17598	AXS	40	25-Mar-2015	CRS - 100%.	115J10	Active
41	YD17599	AXS	41	25-Mar-2015	CRS - 100%.	115J10	Active
42	YD17600	AXS	42	25-Mar-2015	CRS - 100%.	115J10	Active
43	YD17601	AXS	43	25-Mar-2015	CRS - 100%.	115J10	Active
44	YD17602	AXS	44	25-Mar-2015	CRS - 100%.	115J10	Active
45	YD17603	AXS	45	25-Mar-2015	CRS - 100%.	115J10	Active
46	YD17604	AXS	46	25-Mar-2015	CRS - 100%.	115J10	Active
47	YD17605	AXS	47	25-Mar-2015	CRS - 100%.	115J10	Active
48	YD17606	AXS	48	25-Mar-2015	CRS - 100%.	115J10	Active
49	YD17607	AXS	49	25-Mar-2015	CRS - 100%.	115J10	Active
50	YD17608	AXS	50	25-Mar-2015	CRS - 100%.	115J10	Active
51	YD17609	AXS	51	25-Mar-2015	CRS - 100%.	115J10	Active
52	YD17610	AXS	52	25-Mar-2015	CRS - 100%.	115J10	Active
53	YD17611	AXS	53	25-Mar-2015	CRS - 100%.	115J10	Active
54	YD17612	AXS	54	25-Mar-2015	CRS - 100%.	115J10	Active
55	YD17613	AXS	55	25-Mar-2015	CRS - 100%.	115J10	Active
56	YD17614	AXS	56	25-Mar-2015	CRS - 100%.	115J09	Active
57	YD17615	AXS	57	25-Mar-2015	CRS - 100%.	115J10	Active
58	YD17616	AXS	58	25-Mar-2015	CRS - 100%.	115J10	Active
59	YD17617	AXS	59	25-Mar-2015	CRS - 100%.	115J10	Active
60	YD17618	AXS	60	25-Mar-2015	CRS - 100%.	115J10	Active
61	YD17619	AXS	61	25-Mar-2015	CRS - 100%.	115J09	Active
62	YD17620	AXS	62	25-Mar-2015	CRS - 100%.	115J09	Active
63	YD17621	AXS	63	25-Mar-2015	CRS - 100%.	115J09	Active
64	YD17622	AXS	64	25-Mar-2015	CRS - 100%.	115J09	Active
65	YD17623	AXS	65	25-Mar-2015	CRS - 100%.	115J09	Active
66	YD17624	AXS	66	25-Mar-2015	CRS - 100%.	115J09	Active
67	YD17625	AXS	67	25-Mar-2015	CRS - 100%.	115J09	Active
							Active
							Active
							Active
							Active
			1				Active
			1				Active
67           68           69           70           71           72           73           74	YD17626 YD17627 YD17628 YD17629 YD17630 YD17631 YD17632	AXS AXS AXS AXS AXS AXS AXS AXS	68 69 70 71 72 73 74	25-Mar-2015 25-Mar-2015 25-Mar-2015 25-Mar-2015 25-Mar-2015 25-Mar-2015 25-Mar-2015	CRS - 100%.         CRS - 100%.	115309         115J09         115J09	Act Act Act Act Act

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
75	YD17633	AXS	75	25-Mar-2015	CRS - 100%.	115J09	Active
76	YD17634	AXS	76	25-Mar-2015	CRS - 100%.	115J09	Active
77	YD17635	AXS	77	25-Mar-2015	CRS - 100%.	115J09	Active
78	YD17636	AXS	78	25-Mar-2015	CRS - 100%.	115J09	Active
79	YD17637	AXS	79	25-Mar-2015	CRS - 100%.	115J09	Active
80	YD17638	AXS	80	25-Mar-2015	CRS - 100%.	115J09	Active
81	YD17639	AXS	81	25-Mar-2015	CRS - 100%.	115J09	Active
82	YD17640	AXS	82	25-Mar-2015	CRS - 100%.	115J09	Active
83	YD17641	AXS	83	25-Mar-2015	CRS - 100%.	115J09	Active
84	YD17642	AXS	84	25-Mar-2015	CRS - 100%.	115J09	Active
85	YD17643	AXS	85	25-Mar-2015	CRS - 100%.	115J09	Active
86	YD17644	AXS	86	25-Mar-2015	CRS - 100%.	115J09	Active
87	YD17645	AXS	87	25-Mar-2015	CRS - 100%.	115J09	Active
88	YD17646	AXS	88	25-Mar-2015	CRS - 100%.	115J09	Active
89	YD17647	AXS	89	25-Mar-2015	CRS - 100%.	115J09	Active
90	YD17648	AXS	90	25-Mar-2015	CRS - 100%.	115J09	Active
91	YD17649	AXS	91	25-Mar-2015	CRS - 100%.	115J09	Active
92	YD17650	AXS	92	25-Mar-2015	CRS - 100%.	115J09	Active
93	YD17661	AXS	93	25-Mar-2015	CRS - 100%.	115J16	Active
94	YD17660	AXS	94	25-Mar-2015	CRS - 100%.	115J16	Active
95	YD17659	AXS	95	25-Mar-2015	CRS - 100%.	115J16	Active
96	YD17658	AXS	96	25-Mar-2015	CRS - 100%.	115J16	Active
97	YD17657	AXS	97	25-Mar-2015	CRS - 100%.	115J16	Active
98	YD17656	AXS	98	25-Mar-2015	CRS - 100%.	115J16	Active
99	YD17655	AXS	99	25-Mar-2015	CRS - 100%.	115J16	Active
100	YD17654	AXS	100	25-Mar-2015	CRS - 100%.	115J16	Active
101	YD17653	AXS	101	25-Mar-2015	CRS - 100%.	115J16	Active
102 103	YD17652 YD17651	AXS AXS	102	25-Mar-2015	CRS - 100%.	115J16 115J09	Active
103	YD17651	AXS	103 104	25-Mar-2015 25-Mar-2015	CRS - 100%.	115J09	Active Active
104	YD17663	AXS	104	25-Mar-2015	CRS - 100%. CRS - 100%.	115J09	Active
105	YD17664	AXS	105	25-Mar-2015	CRS - 100%.	115J09	Active
100	YD17665	AXS	100	25-Mar-2015	CRS - 100%.	115J09	Active
107	YD17666	AXS	107	25-Mar-2015	CRS - 100%.	115J09	Active
109	YD17667	AXS	100	25-Mar-2015	CRS - 100%.	115J09	Active
110	YD17668	AXS	110	25-Mar-2015	CRS - 100%.	115J09	Active
111	YD17669	AXS	110	25-Mar-2015	CRS - 100%.	115J09	Active
112	YD17670	AXS	112	25-Mar-2015	CRS - 100%.	115J09	Active
113	YD17671	AXS	112	25-Mar-2015	CRS - 100%.	115J09	Active
114	YD17672	AXS	114	25-Mar-2015	CRS - 100%.	115J09	Active
115	YD17673	AXS	115	25-Mar-2015	CRS - 100%.	115J09	Active
116	YD17674	AXS	116	25-Mar-2015	CRS - 100%.	115J09	Active
117	YD17675	AXS	117	25-Mar-2015	CRS - 100%.	115J09	Active
118	YD17676	AXS	118	25-Mar-2015	CRS - 100%.	115J09	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
119	YD17677	AXS	119	25-Mar-2015	CRS - 100%.	115J09	Active
120	YD17678	AXS	120	25-Mar-2015	CRS - 100%.	115J09	Active
121	YD17679	AXS	121	25-Mar-2015	CRS - 100%.	115J09	Active
122	YD17680	AXS	122	25-Mar-2015	CRS - 100%.	115J09	Active
123	YD17681	AXS	123	25-Mar-2015	CRS - 100%.	115J09	Active
124	YD17682	AXS	124	25-Mar-2015	CRS - 100%.	115J09	Active
125	YD17683	AXS	125	25-Mar-2015	CRS - 100%.	115J09	Active
126	YD17684	AXS	126	25-Mar-2015	CRS - 100%.	115J09	Active
127	YD17685	AXS	127	25-Mar-2015	CRS - 100%.	115J09	Active
128	YD17686	AXS	128	25-Mar-2015	CRS - 100%.	115J09	Active
129	YD17687	AXS	129	25-Mar-2015	CRS - 100%.	115J09	Active
130	YD17688	AXS	130	25-Mar-2015	CRS - 100%.	115J09	Active
131	YD17689	AXS	131	25-Mar-2015	CRS - 100%.	115J09	Active
132	YD17690	AXS	132	25-Mar-2015	CRS - 100%.	115J09	Active
133	YD17691	AXS	133	25-Mar-2015	CRS - 100%.	115J09	Active
134	YD17692	AXS	134	25-Mar-2015	CRS - 100%.	115J09	Active
135	YD17693	AXS	135	25-Mar-2015	CRS - 100%.	115J09	Active
136	YD17694	AXS	136	25-Mar-2015	CRS - 100%.	115J09	Active
137	YD60030	AXS	137	25-Mar-2016	CRS - 100%.	115J09	Active
138	YD60031	AXS	138	25-Mar-2016	CRS - 100%.	115J09	Active
139	YD60032	AXS	139	25-Mar-2016	CRS - 100%.	115J09	Active
140	YD60033	AXS	140	25-Mar-2016	CRS - 100%.	115J09	Active
141	YD60034	AXS	141	25-Mar-2016	CRS - 100%.	115J09	Active
142	YD60035	AXS	142	25-Mar-2016	CRS - 100%.	115J09	Active
143	YD60036	AXS	143	25-Mar-2016	CRS - 100%.	115J10	Active
144	YD60037	AXS	144	25-Mar-2016	CRS - 100%.	115J10	Active
145	YD60038	AXS	145	25-Mar-2016	CRS - 100%.	115J10	Active
146	YD60039	AXS	146	25-Mar-2016	CRS - 100%.	115J10	Active
147	YD60040	AXS	147	25-Mar-2016	CRS - 100%.	115J10	Active
148	YD60041	AXS	148	25-Mar-2016	CRS - 100%.	115J10	Active
149	YD60042	AXS	149	25-Mar-2016	CRS - 100%.	115J10	Active
150	YD60043	AXS	150	25-Mar-2016	CRS - 100%.	115J10	Active
151	YD60044	AXS	151	25-Mar-2016	CRS - 100%.	115J10	Active
152	YD60045	AXS	152	25-Mar-2016	CRS - 100%.	115J10	Active
153	YD60047	AXS	153	25-Mar-2016	CRS - 100%.	115J10	Active
154	YD60046	AXS	154	25-Mar-2016	CRS - 100%.	115J10	Active
155	YD60048	AXS	155	25-Mar-2016	CRS - 100%.	115J10	Active
156	YD60049	AXS	156	25-Mar-2016	CRS - 100%.	115J10	Active
157	YD60050	AXS	157	25-Mar-2016	CRS - 100%.	115J10	Active
158	YD60051	AXS	158	25-Mar-2016	CRS - 100%.	115J10	Active
159	YD60052	AXS	159	25-Mar-2016	CRS - 100%.	115J10	Active
160	YD60053	AXS	160	25-Mar-2016	CRS - 100%.	115J10	Active
161	YD60054	AXS	161	25-Mar-2016	CRS - 100%.	115J10	Active
162	YD60055	AXS	162	25-Mar-2016	CRS - 100%.	115J10	Active

No.	Grant Number	Claim Name	Claim No.	Expiry Date	Owner	NTS Map Sheet	Status
163	YD60056	AXS	163	25-Mar-2016	CRS - 100%.	115J10	Active
164	YD60057	AXS	164	25-Mar-2016	CRS - 100%.	115J10	Active
165	YD60058	AXS	165	25-Mar-2016	CRS - 100%.	115J10	Active
166	YD60059	AXS	166	25-Mar-2016	CRS - 100%.	115J10	Active
167	YD60060	AXS	167	25-Mar-2016	CRS - 100%.	115J10	Active
168	YD60061	AXS	168	25-Mar-2016	CRS - 100%.	115J10	Active
169	YD60062	AXS	169	25-Mar-2016	CRS - 100%.	115J10	Active
170	YD60063	AXS	170	25-Mar-2016	CRS - 100%.	115J10	Active
171	YD60064	AXS	171	25-Mar-2016	CRS - 100%.	115J10	Active
172	YD60065	AXS	172	25-Mar-2016	CRS - 100%.	115J10	Active
173	YD60066	AXS	173	25-Mar-2016	CRS - 100%.	115J09	Active
174	YD60067	AXS	174	25-Mar-2016	CRS - 100%.	115J09	Active
175	YD60068	AXS	175	25-Mar-2016	CRS - 100%.	115J09	Active
176	YD60069	AXS	176	25-Mar-2016	CRS - 100%.	115J09	Active
177	YD60070	AXS	177	25-Mar-2016	CRS - 100%.	115J09	Active
178	YD60071	AXS	178	25-Mar-2016	CRS - 100%.	115J09	Active
179	YD60072	AXS	179	25-Mar-2016	CRS - 100%.	115J09	Active
180	YD60073	AXS	180	25-Mar-2016	CRS - 100%.	115J09	Active
181	YD60074	AXS	181	25-Mar-2016	CRS - 100%.	115J09	Active
182	YD60075	AXS	182	25-Mar-2016	CRS - 100%.	115J09	Active
183	YD60076	AXS	183	25-Mar-2016	CRS - 100%.	115J09	Active
184	YD60077	AXS	184	25-Mar-2016	CRS - 100%.	115J09	Active
185	YD60078	AXS	185	25-Mar-2016	CRS - 100%.	115J09	Active
186	YD60079	AXS	186	25-Mar-2016	CRS - 100%.	115J09	Active
187	YD61120	AXS	187	25-Mar-2016	CRS - 100%.	115J10	Active
188	YD61121	AXS	188	25-Mar-2016	CRS - 100%.	115J10	Active
189	YD61122	AXS	189	25-Mar-2016	CRS - 100%.	115J10	Active
190	YD61123	AXS	190	25-Mar-2016	CRS - 100%.	115J10	Active
191	YD61124	AXS	191	25-Mar-2016	CRS - 100%.	115J10	Active
192	YD61125	AXS	192	25-Mar-2016	CRS - 100%.	115J10	Active
193	YD61126	AXS	193	25-Mar-2016	CRS - 100%.	115J10	Active
194	YD61127	AXS	194	25-Mar-2016	CRS - 100%.	115J10	Active
195	YD61129	AXS	195	25-Mar-2016	CRS - 100%.	115J10	Active
196	YD61128	AXS	196	25-Mar-2016	CRS - 100%.	115J10	Active
197	YD61130	AXS	197	25-Mar-2016	CRS - 100%.	115J10	Active
198	YD61131	AXS	198	25-Mar-2016	CRS - 100%.	115J10	Active
199	YD61132	AXS	199	25-Mar-2016	CRS - 100%.	115J10	Active

# Appendix B: Drill Holes used in Estimation

		NODENNIC			VEAD
HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
92-123	611493.35	6958657.64	1168.33	452.93	9293
92-124	<u>611484.70</u> 611119.60	6958572.68	1157.85	485.24	9293
92-125		6958675.83	1249.85	558.39	9293
92-126	611044.49	6958583.35	1321.96	596.49	9293
92-127	610960.79	6958672.16	1318.22	402.34	9293
92-128	610965.76	6958593.04	1343.74	535.53	9293
92-129	611125.98	6958746.83	1227.63	514.50	1992
92-130	611320.53	6958663.33	1180.11	140.36	1992
92-131	610885.38	6958754.82	1292.17	361.49	9293
92-132	610964.63	6958511.95	1367.00	481.28	9293
92-133	610877.95	6958426.88	1360.60	475.49	9293
92-134	610793.37	6958340.21	1350.67	569.06	1992
92-135	610608.16	6958089.19	1382.29	407.52	9293
92-136	610871.63	6958242.13	1381.28	648.31	9293
92-137	610955.45	6958320.02	1353.14	578.21	9293
92-138	611047.08	6958405.42	1323.55	575.16	9293
92-139	611132.94	6958488.43	1315.72	742.80	9293
92-140	610885.90	6958584.45	1346.66	389.23	9293
92-141	610818.95	6958662.72	1314.27	498.96	9293
92-142	610795.04	6958754.86	1291.08	387.40	1992
92-143	611042.37	6958754.69	1259.66	424.89	9293
93-144	611568.01	6958653.25	1163.89	390.75	1993
93-145	610963.41	6958752.96	1287.46	456.29	1993
93-146	611399.64	6958665.37	1173.86	666.60	1993
93-147	610875.04	6958325.68	1370.70	623.93	1993
93-148	610360.62	6958704.65	1249.73	597.41	1993
93-149	611228.90	6958669.57	1208.70	696.62	1993
93-150	610963.04	6958409.92	1361.58	547.12	1993
93-151	610790.88	6958251.68	1362.47	545.29	1993
93-152	611047.58	6958502.36	1349.25	578.06	1993
93-153	610565.06	6958205.10	1337.93	392.28	1993
93-154	610956.65	6958245.66	1372.55	581.25	1993
93-155	610362.16	6958303.95	1304.17	387.10	1993
93-156	611047.65	6958319.79	1305.44	797.66	1993
93-157	610360.15	6958102.75	1340.98	380.09	1993
93-158	610163.26	6958102.27	1340.65	150.88	1993
93-159	611040.53	6958667.72	1287.54	517.25	1993
93-160	610162.37	6958702.37	1234.02	291.69	1993
93-161	610885.39	6958671.02	1318.94	441.05	1993
93-162	610563.39	6958701.80	1274.45	425.81	1993
93-163	611161.54	6958401.93	1276.56	320.34	1993
93-164	611134.75	6958574.61	1290.51	795.53	1993
93-165	610962.20	6958101.73	1380.32	468.48	1993

## The holes used in the resource estimate are highlighted blue

HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
93-166	610362.11	6959099.38	1254.04	303.28	1993
93-167	609959.33	6959104.74	1207.66	303.89	1993
93-168	611062.01	6958202.21	1338.33	569.06	1993
93-169	610156.48	6958108.54	1339.73	352.65	1993
93-170	610136.85	6959501.61	1234.48	316.08	1993
93-171	611160.49	6958302.87	1258.60	550.77	1993
93-172	610761.00	6959202.93	1262.26	316.08	1993
93-173	610662.85	6958200.84	1344.25	617.22	1993
93-174	611230.58	6958568.60	1244.48	781.81	1993
93-175	610458.42	6958205.30	1352.71	413.61	1993
93-176	611478.81	6958732.91	1179.14	474.57	1993
93-177	610363.93	6958203.96	1331.58	252.07	1993
93-178	610763.26	6958102.55	1395.28	465.43	1993
93-179	610462.17	6958103.47	1363.68	648.31	1993
93-180	611563.00	6958573.03	1153.52	410.57	1993
93-181	611226.66	6958502.96	1268.26	186.12	1993
93-182	610661.79	6958002.62	1393.46	422.76	1993
93-183	610863.47	6958152.84	1405.19	651.36	1993
93-184	610961.68	6958837.70	1244.93	447.14	1993
93-185	611225.40	6958505.20	1268.46	810.77	1993
93-186	611479.54	6958499.04	1155.76	670.56	1993
93-187	610562.48	6957901.95	1398.56	319.73	1993
93-188	610261.70	6958102.34	1329.84	434.95	1993
93-189	610362.89	6957902.73	1395.62	328.27	1993
93-190	611228.49	6958670.55	1207.98	440.74	1993
93-191	610662.72	6958302.96	1325.55	493.47	1993
93-192	611230.40	6958566.50	1244.33	455.07	1993
93-193	610762.85	6958182.96	1374.14	649.83	1993
93-194	610885.33	6958512.92	1357.13	447.14	1993
93-195	610162.51	6958002.38	1362.35	380.39	1993
93-196	610562.16	6958001.80	1411.54	483.72	1993
93-197	610885.74	6958843.87	1249.48	398.37	1993
93-198	610762.70	6958703.24	1299.69	392.28	1993
93-199	611564.51	6958742.76	1175.83	449.58	1993
93-200	611311.05	6958576.45	1198.45	522.12	1993
93-201	610801.54	6958430.20	1345.11	388.01	1993
93-202	611192.72	6958738.40	1197.88	264.26	1993
93-203	610762.13	6958803.76	1272.45	357.23	1993
93-204	611045.69	6958830.48	1231.93	450.80	1993
93-205	611663.65	6958704.65	1164.49	620.88	1993
93-206	610800.90	6958502.41	1333.17	370.94	1993
93-207	611319.65	6958488.62	1217.04	397.76	1993
93-208	610812.47	6958867.41	1252.05	380.08	1993
93-209	611463.44	6958804.02	1190.01	418.19	1993
93-210	611043.69	6958831.36	1231.89	235.61	1993
93-211	610803.64	6958582.40	1326.44	367.89	1993
93-212	611308.22	6958577.19	1198.57	579.12	1993

HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
93-213	610861.47	6958935.30	1236.85	529.44	1993
93-214	611400.74	6958572.20	1167.69	656.23	1993
93-215	611109.30	6958839.03	1212.52	444.09	1993
93-216	611125.34	6958749.48	1227.65	87.48	1993
93-217	611662.06	6958602.00	1151.64	573.33	1993
93-218	611394.00	6958730.38	1182.00	435.86	1993
93-219	610961.66	6958937.17	1225.56	383.74	1993
93-220	611313.16	6958732.18	1186.39	407.52	1993
93-221	611560.50	6958501.28	1147.21	507.80	1993
93-222	611409.03	6958489.95	1174.42	367.89	1993
93-223	611321.33	6958672.46	1180.20	553.82	1993
93-224	611361.72	6958404.32	1211.63	243.84	1993
93-225	610665.11	6958705.01	1283.44	320.65	1993
93-226	611463.22	6958402.18	1171.45	252.98	1993
93-227	610660.88	6958804.57	1271.65	335.58	1993
93-228	610261.66	6958606.54	1245.60	331.32	1993
93-229	610659.99	6958407.61	1309.95	270.36	1993
93-230	609961.26	6958702.36	1230.02	246.89	1993
93-231	610062.62	6958602.58	1243.11	268.22	1993
93-232	610462.69	6958701.60	1263.23	397.76	1993
93-233	610662.27	6958601.79	1292.49	215.80	1993
93-234	610263.08	6958703.35	1236.58	343.51	1993
93-235	611262.79	6958804.10	1194.82	313.03	1993
93-236	611361.95	6958801.42	1193.03	337.41	1993
93-237	610063.48	6958803.50	1223.21	233.17	1993
93-238	610462.65	6958802.82	1260.64	352.65	1993
93-239	610262.18	6958801.42	1237.55	366.98	1993
93-240	610464.54	6958602.45	1265.46	316.08	1993
93-241	610063.07	6958701.55	1233.92	237.74	1993
93-242	609962.65	6958904.86	1210.91	271.62	1993
93-243	610362.51	6958802.40	1249.70	349.61	1993
93-244	610162.14	6959102.22	1230.01	236.83	1993
93-245	610362.17	6958602.80	1249.00	299.92	1993
93-246	609963.11	6958602.76	1239.36	234.70	1993
93-247	610162.29	6958802.76	1226.73	249.02	1993
93-248	609963.10	6958801.77	1220.72	252.07	1993
93-249	609863.06	6958700.97	1229.10	282.55	1993
93-250	610162.05	6958603.12	1247.09	258.17	1993
94-251	611363.72	6958900.52	1207.03	199.95	1994
94-252	611263.80	6958902.53	1207.14	120.09	1994
94-253	611460.38	6958900.78	1202.45	239.88	1994
94-254	611563.09	6958902.79	1198.04	229.82	1994
94-255	611161.69	6958953.57	1214.98	189.89	1994
94-256	611662.76	6958803.82	1177.88	210.01	1994
94-257	611062.41	6958935.25	1216.54	154.84	1994
94-258	611559.73	6958742.02	1175.06	199.95	1994
94-259	611762.72	6958603.20	1173.00	210.31	1994

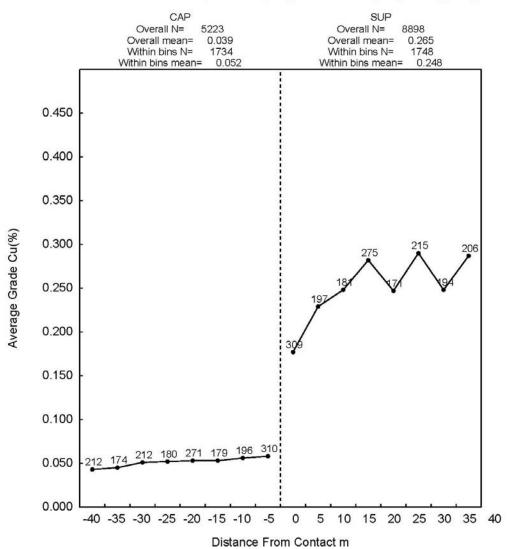
HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
94-260	610764.34	6958900.52	1249.42	124.97	1994
94-261	611662.71	6958502.41	1137.75	144.78	1994
94-262	611763.41	6958702.39	1154.73	200.25	1994
94-263	611438.85	6958572.67	1161.42	198.42	1994
94-264	611561.86	6958653.30	1162.92	299.92	1994
94-265	611691.06	6958646.60	1152.39	349.91	1994
94-266	611561.24	6958573.14	1152.84	299.92	1994
94-267	611323.23	6958493.46	1214.65	235.00	1994
94-268	611141.10	6958682.62	1239.84	195.07	1994
94-269	611431.53	6958746.79	1182.32	199.95	1994
94-270	610999.39	6958549.09	1351.08	185.01	1994
94-271	611332.09	6958421.21	1223.48	264.87	1994
94-272	611021.25	6958687.59	1290.01	210.01	1994
94-273	610922.48	6958552.70	1358.18	199.95	1994
94-274	611039.79	6958755.98	1259.47	174.96	1994
94-275	610932.79	6958799.75	1268.97	149.96	1994
94-276	611002.16	6958711.57	1290.08	160.02	1994
94-277	611003.21	6958559.29	1345.54	259.08	1994
94-278	610848.94	6958620.65	1328.68	164.90	1994
94-279	611228.79	6958572.60	1242.19	189.89	1994
94-280	611217.77	6958512.36	1270.08	249.94	1994
94-281	611085.09	6958623.86	1285.54	145.08	1994
94-282	610808.40	6958666.25	1312.69	214.88	1994
94-283	610837.41	6958382.83	1357.63	170.08	1994
94-284	610907.15	6958808.08	1262.43	179.22	1994
94-285	610932.58	6958532.84	1362.81	274.93	1994
94-286	610917.33	6958372.67	1367.26	189.89	1994
94-287	610847.86	6958712.18	1303.63	160.02	1994
94-288	610892.28	6958673.20	1319.41	270.05	1994
94-289	611162.87	6958402.57	1276.49	249.94	1994
94-290	610876.89	6958387.16	1365.90	249.94	1994
94-291	610923.31	6958713.99	1306.94	180.14	1994
94-292	610842.91	6958547.14	1300.94	155.14	1994
94-293	611197.72	6958433.56	1283.67	264.87	1994
94-294	610832.63	6958287.26	1366.45	155.14	1994
94-295	610910.98	6958713.41	1307.06	210.01	1994
94-296	610842.75	6958467.39	1348.07	155.14	1994
94-297	610912.85	6958282.68	1374.14	155.14	1994
94-297	611427.29	6958652.47	1171.03	199.95	1994
94-298	611078.08	6958377.52	1297.99	214.88	1994
94-299	610156.28	6958209.26	1320.51	152.40	<u> </u>
94-301	611023.59	6958442.55	1355.44	259.99	1994
94-302	610925.43	6958626.35	1340.95	189.89	1994
94-303	611060.67	6958300.20	1303.60	220.07	1994
94-304	610056.72	6958108.95	1332.15	152.40	1994
94-305	611211.28	6958453.86	1285.06	144.78	1994
94-306	611002.47	6958628.68	1320.55	167.94	1994

HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
94-307	610462.59	6958302.71	1313.96	185.01	1994
94-308	611062.86	6958202.79	1337.91	230.12	1994
94-309	611002.75	6958457.47	1357.23	214.88	1994
94-310	610800.71	6958503.09	1332.84	291.39	1994
94-311	611021.38	6958608.11	1319.63	255.12	1994
94-312	610562.46	6958302.69	1315.65	160.02	1994
94-313	610663.20	6958102.57	1383.08	305.10	1994
94-314	611102.26	6958467.80	1323.02	270.05	1994
94-315	610967.41	6958297.80	1353.24	235.00	1994
94-316	611085.82	6958537.41	1325.73	164.90	1994
94-317	610922.66	6958462.69	1366.32	199.95	1994
94-318	611121.23	6958508.31	1318.92	259.99	1994
94-320	610763.32	6958002.76	1382.08	359.97	1994
94-321	610833.47	6958786.24	1280.53	149.96	1994
94-322	611121.76	6958592.16	1286.37	210.01	1994
94-324	610987.92	6958373.00	1343.02	245.06	1994
94-326	611002.44	6958791.52	1259.49	139.90	1994
94-327	611182.88	6958537.92	1281.04	124.97	1994
94-329	610917.46	6958447.83	1366.18	280.10	1994
94-330	611161.94	6958303.24	1258.41	210.62	1994
94-331	611103.35	6958449.69	1317.04	155.14	1994
94-332	611006.49	6958361.40	1331.02	169.77	1994
94-333	610862.50	6958053.04	1390.70	104.24	1994
94-334	611412.98	6958803.24	1191.55	122.53	1994
94-335	611361.51	6959053.02	1229.57	49.99	1994
94-336	611663.45	6958952.34	1199.92	60.05	1994
94-337	611533.13	6958502.99	1149.79	122.53	1994
94-338	611562.40	6958402.22	1156.22	99.97	1994
94-339	611063.65	6958103.24	1340.62	99.97	1994
94-341	611362.44	6958302.62	1203.46	74.98	1994
94-346	612506.08	6954056.54	778.03	34.14	1994
CAS-002	611110.11	6958601.29	1278.60	648.00	2008
CAS-003	610567.96	6957997.51	1403.76	449.58	2008
CAS-004	611393.46	6958399.34	1189.35	344.42	2009
CAS-005	610761.39	6959004.54	1232.89	123.44	2009
CAS-006	610858.73	6958999.49	1225.28	81.32	2009
CAS-007	611264.55	6958303.08	1212.64	486.17	2009
CAS-008	610962.19	6959002.47	1218.97	94.49	2009
CAS-009	611157.71	6958998.65	1213.71	289.56	2009
CAS-010	611159.00	6959100.00	1236.00	109.00	2009
CAS-011	611131.87	6958404.68	1278.15	798.58	2009
CAS-012	611161.29	6959100.32	1231.09	246.89	2009
CAS-013	611061.59	6959100.53	1228.13	144.78	2009
CAS-014	611177.94	6959201.25	1249.26	408.43	2009
CAS-015	611357.38	6959290.06	1265.35	355.09	2009
CAS-016	611751.67	6958854.74	1171.66	345.95	2009
CAS-017	611714.70	6959470.67	1276.81	283.46	2009

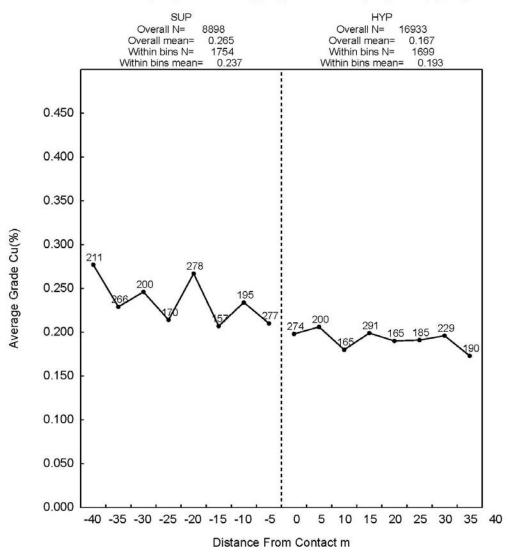
HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
CAS-018	611763.50	6958800.75	1162.79	416.05	2009
CAS-019	610061.37	6958898.59	1209.12	268.22	2009
CAS-020	611814.39	6958515.19	1117.08	443.48	2009
CAS-022	609861.65	6958900.63	1200.09	160.09	2009
CAS-023	610563.54	6958798.85	1261.64	164.59	2009
CAS-024	610562.32	6958501.29	1280.14	247.80	2009
CAS-025	610359.60	6958499.54	1250.94	211.84	2009
CAS-026	610463.69	6958501.56	1262.76	184.40	2009
CAS-028	610264.30	6958497.34	1255.50	214.88	2009
CAS-029	610060.77	6958199.92	1307.22	323.09	2009
CAS-030	610165.76	6958302.96	1294.66	262.13	2009
CAS-032	609965.31	6958497.05	1243.77	281.03	2009
CAS-033	610063.41	6958501.53	1250.54	182.88	2009
CAS-034	609957.80	6958001.38	1329.97	211.53	2009
CAS-035	609624.79	6958755.79	1222.90	239.27	2009
CAS-036	611760.35	6958699.05	1146.96	115.82	2009
CAS-037	610561.86	6958402.46	1289.92	214.88	2009
CAS-038	609742.78	6959142.20	1216.43	432.30	2009
CAS-039	610358.59	6958399.28	1267.97	238.35	2009
CAS-040	610463.81	6958398.50	1282.25	197.21	2009
CAS-041	611563.28	6958305.11	1165.10	236.22	2010
CAS-042	611365.04	6958301.13	1203.45	248.51	2010
CAS-043	610859.46	6959000.08	1233.19	243.84	2010
CAS-044	610664.50	6959000.20	1250.44	224.03	2010
CAS-045	610761.68	6959106.75	1249.69	198.12	2010
CAS-046	610659.91	6958903.82	1259.31	211.23	2010
CAS-047	610364.75	6959025.68	1253.18	193.55	2010
CAS-048	610365.88	6958926.65	1251.40	208.18	2010
CAS-049	610160.97	6958926.89	1229.43	244.18	2010
CAS-050	610263.49	6958919.09	1240.15	219.46	2010
CAS-051	609962.95	6959001.05	1206.22	268.22	2010
CAS-052	610160.45	6959027.69	1229.22	248.11	2010
CAS-053	609971.14	6959195.47	1207.76	236.22	2010
CAS-054	609859.05	6959004.33	1210.61	249.92	2010
CAS-055	610057.33	6959185.24	1218.75	201.50	2010
CAS-056	610059.77	6959013.43	1217.42	199.64	2010
CAS-057	609763.79	6958937.74	1222.79	249.94	2010
CAS-059	610063.71	6959088.01	1218.33	210.31	2010
CAS-060	609763.72	6958744.47	1219.85	249.94	2010
CAS-061	609865.56	6958802.16	1219.33	249.94	2010
CAS-062	609861.92	6958599.96	1239.46	250.24	2010
CAS-063	609963.87	6958599.28	1238.42	201.17	2010
CAS-064	610062.02	6958504.39	1257.02	203.33	2010
CAS-065	609964.63	6958400.03	1265.95	249.94	2010
CAS-066	609767.82	6958547.08	1244.67	201.17	2010
CAS-067	610162.81	6958401.00	1286.98	249.94	2010
CAS-068	610561.46	6958602.66	1279.56	304.80	2010

HOLE	EASTING	NORTHING	ELEVATION	LENGTH	YEAR
CAS-069	610164.30	6958488.33	1265.35	250.25	2010
CAS-070	610169.79	6958300.70	1301.97	295.66	2010
CAS-071	610468.66	6958436.09	1280.80	251.42	2010
CAS-072	610665.69	6958505.21	1300.47	198.12	2010
CAS-073	610262.87	6958330.88	1285.90	330.71	2010
CAS-074	610263.99	6958228.59	1301.09	379.84	2010
CAS-075	610357.83	6957998.98	1385.59	309.98	2010
CAS-076	609761.76	6958850.65	1215.31	263.65	2010
CAS-077	610561.47	6958902.27	1263.76	170.69	2010
CAS-078	610562.92	6958999.94	1261.22	150.27	2010
CAS-079	610461.83	6958905.35	1259.58	153.31	2010
CAS-080	610660.05	6959108.57	1259.40	156.97	2010
CAS-081	610462.39	6958001.98	1404.77	451.10	2010
CAS-082	610562.69	6958097.50	1384.83	460.21	2010
CAS-083	610562.49	6958302.63	1315.10	374.90	2010
CAS-084	610660.69	6958099.91	1383.56	448.67	2010
CAS-085	610863.43	6958056.88	1391.95	365.76	2010
CAS-086	610462.64	6958303.34	1313.89	385.57	2010
CAS-087	610964.93	6958149.46	1384.60	397.46	2010
DH10-18	611482.63	6958134.93	1171.29	426.72	2010
DH10-19	610285.00	6958014.00	1359.00	68.58	2010
DH10-19B	610287.35	6958014.62	1359.24	376.50	2010
DH10-20	610213.00	6958872.10	1233.95	298.70	2010
HG10-01	611502.71	6958166.08	1167.87	91.44	2010
HG10-02	611504.38	6958167.84	1167.37	45.72	2010
HG10-04	611684.00	6958225.47	1138.73	18.29	2010
HG10-05	611421.29	6958185.97	1182.20	45.72	2010
HG10-06	611423.20	6958187.85	1182.03	22.86	2010
HG10-07	611144.75	6958944.06	1213.11	34.75	2010
HG10-10	610523.44	6958554.63	1277.60	260.30	2010
Total Used in Resource	Total Used in Resource Estimate = 305			95,655.17	

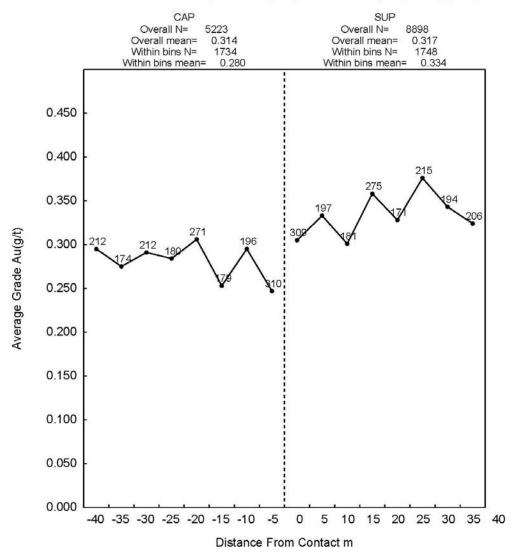
### **APPENDIX C: CONTACT PLOTS**



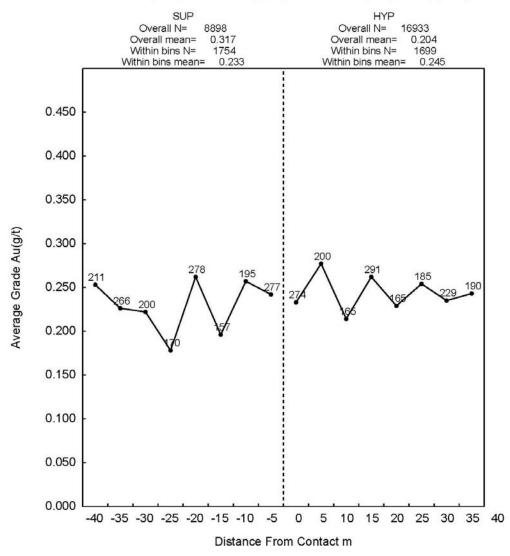
### Cu - Leached Cap VS Supergene - Assays (Uncapped)



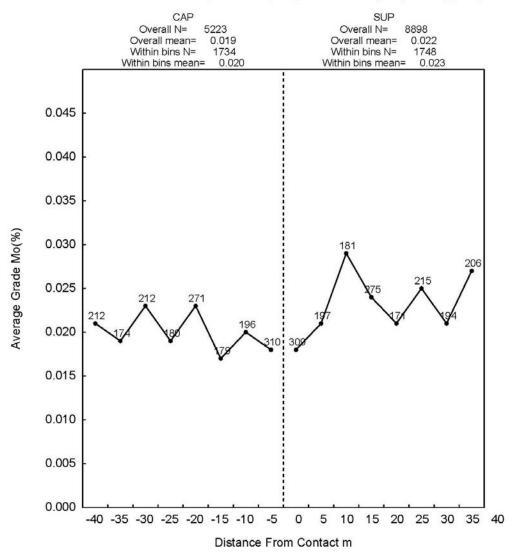
### Cu - Supergene VS Hypogene - Assays (Uncapped)



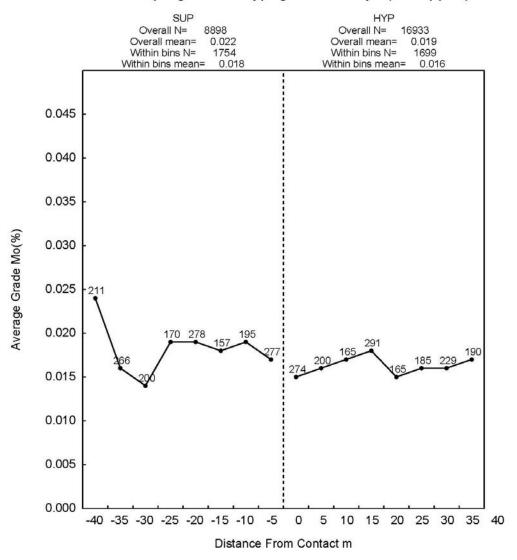
### Au - Leached Cap VS Supergene - Assays (Uncapped)



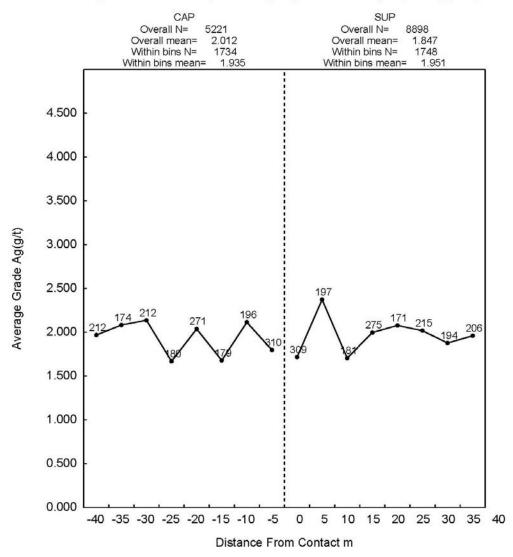
## Au - Supergene VS Hypogene - Assays (Uncapped)



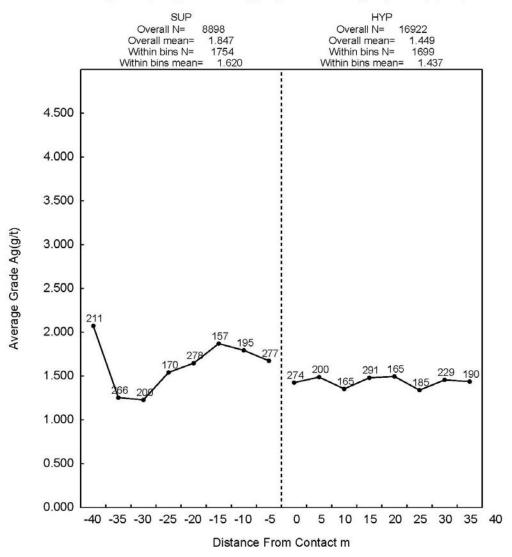
### Mo - Leached Cap VS Supergene - Assays (Uncapped)



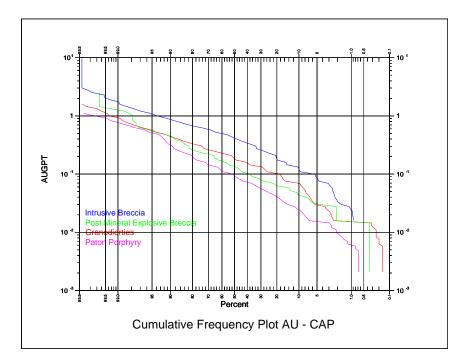
### Mo - Supergene VS hypogene - Assays (Uncapped)



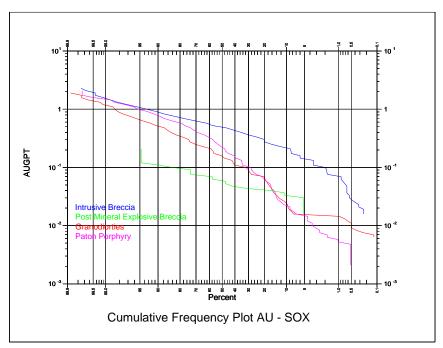
### Ag - Leached Cap VS Supergene - Assays (Uncapped)

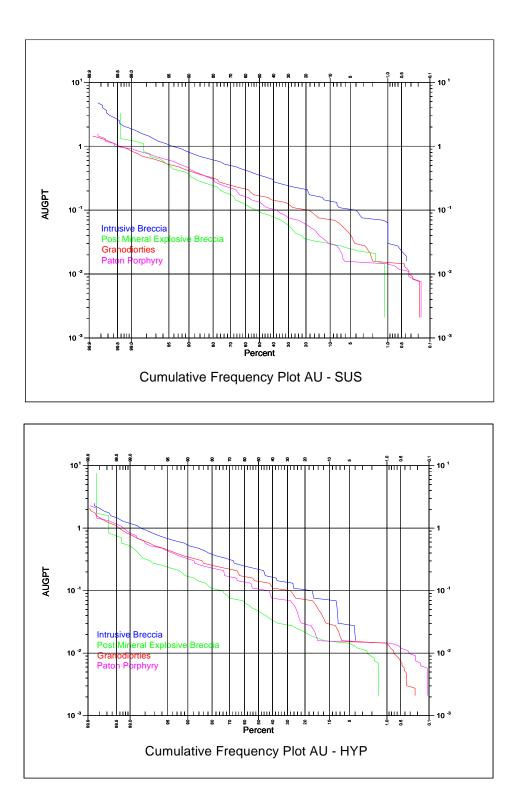


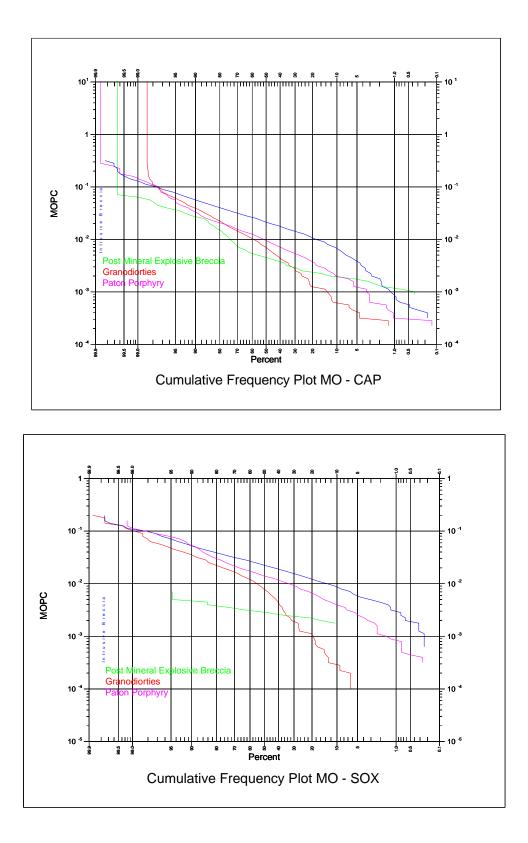
### Ag - Supergene VS hypogene - Assays (Uncapped)

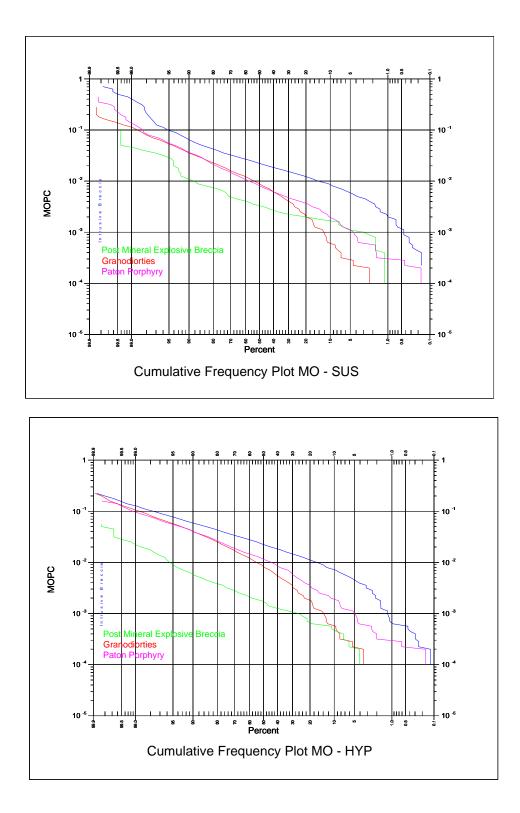


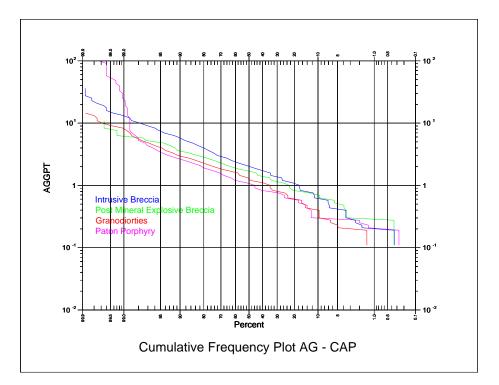
### APPENDIX D: CUMULATIVE FREQUENCY PLOTS

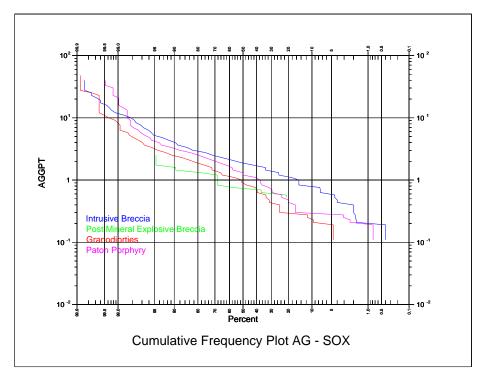


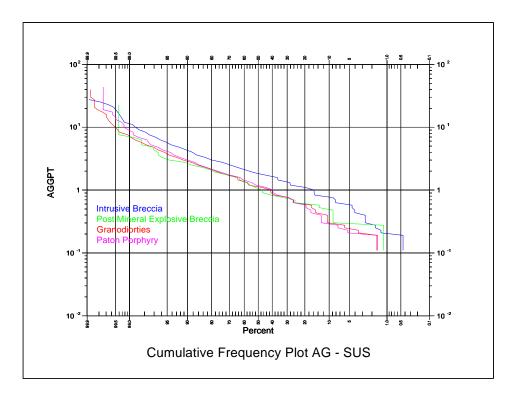


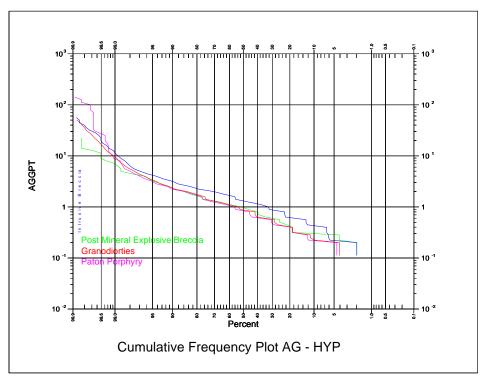


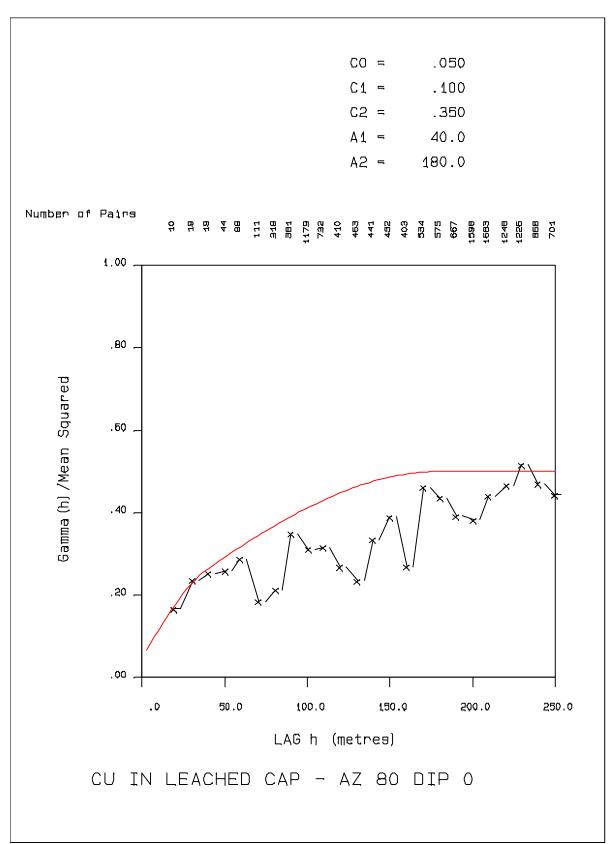












**APPENDIX E – SEMIVARIOGRAMS** 

