

EXPLORATION AND MINING IN THOMPSON-OKANAGAN-CARIBOO REGION, BRITISH COLUMBIA

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SUMMARY AND TRENDS

Exploration activity in Thompson-Okanagan-Cariboo Region¹ in 2010 amounted to approximately \$50 million (Figure 1). This cannot be directly compared to levels of previous years, but an approximation is shown in Figure 1 of the net increase resulting from the boundary changes. On a property by property basis the worst of the financial crisis seems to be behind the industry. A slow start to 2010 exploration budgets eased as the year advanced and companies began undertaking financings as the markets began to improve. New funding has meant that programs cut short in 2008-2009 are being restarted and in several cases untested core that has been stored is now being sent for analyses. It is predicted that significant late 2010 expenditures will be reported in 2011 and they will be reflected in that years' expenditures.

This year's total for drilling at 163 000 m (Figure 2) also reflects an increase due to the boundary change and should not be interpreted as a large increase over 2009. It can be stated though, that there were several more very large resource definition drill programs compared to last year.

Evaluating the exploration expenditures by project stage (Figure 3) provides an overview of where projects lie along a path to production. This is the third year of reporting expenditures in this manner and trends are appearing. Grassroots exploration spending has ranged from 3-7% and the 4% this year reflects what appears to be a typical investment level. Early stage spending this year at 22% is typical with the previous years' range of 22-30%. Advanced exploration project spending this year has dipped for the third consecutive year to 20% (from 51 and 44% consecutively in the two previous years) and reflects projects maturing to mine evaluation stages. The mine evaluation stage is characterized as 37% of this year's expenditures: a near doubling from previous years' results. A large increase to 17% is seen at onsite mine lease exploration as operating mines look for more resources to support either ongoing mining or expansion plans. Previous mine lease exploration has been between 1-2%. Characterizing exploration expenditures by project stage in this region over the three previous years

¹ Government reorganization of British Columbia natural resource sector ministries in late 2010 resulted in changes to the regional boundaries used for the Exploration and Mining volume. The South-Central Region is now part of the Thompson-Okanagan-Cariboo Region and this new boundary is utilized in this paper.

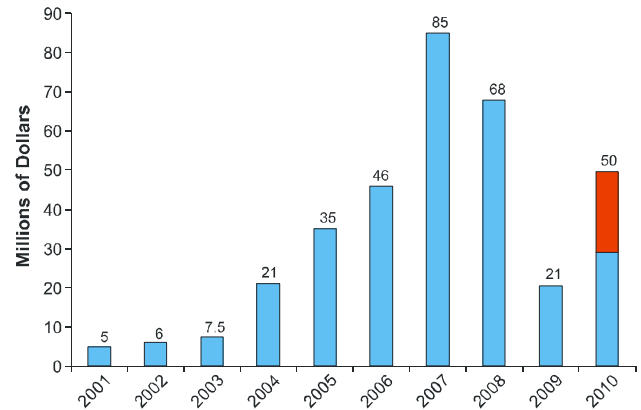


Figure 1. Annual exploration spending, in millions of dollars, Thompson-Okanagan-Cariboo Region (Note: Boundary changes have led to this figure being higher as more projects are now reflected in the data: pre-2010 boundary expenditures in blue and impact of additional projects in red).

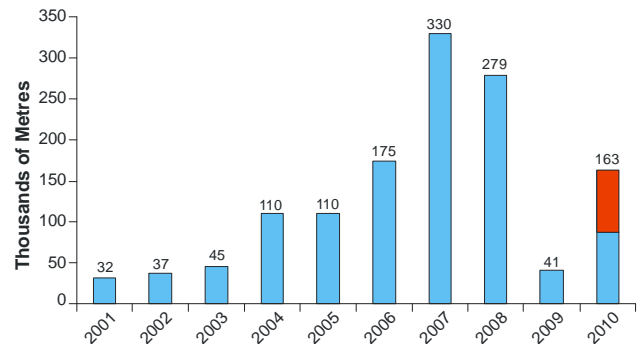


Figure 2. Annual exploration and development drilling, in thousands of metres, Thompson-Okanagan-Cariboo Region (see note in Figure 1 regarding this data).

shows significant projects advancing to subsequent evaluation stages such as pre-feasibility and feasibility studies. It will bode well for the future of the mining industry if several of these projects advance to become the next producers in the province.

The Thompson-Okanagan-Cariboo region saw significant capital investment at mine and mine development projects. At **Highland Valley Copper** the mine life extension to 2020 involves a pit expansion which this year alone consumed over \$130 million costs

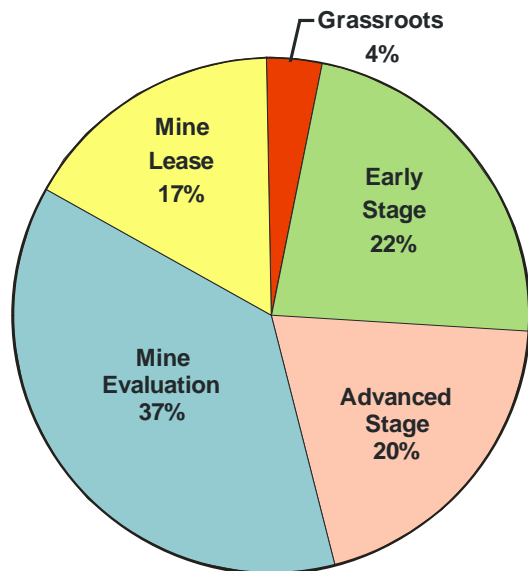


Figure 3. Annual exploration expenditures divided by exploration stage, Thompson-Okanagan-Cariboo Region (see note in Figure 1 regarding this data).

in preparatory stripping. Mine development at the **New Afton** project continued with an investment of approximately \$70-80 million onsite with full production anticipated in late 2012. Development at the **Copper Mountain** project is progressing rapidly with an estimated \$240 million capital investment this year to complete the mill, purchase mining equipment and for pre-mining stripping. The **Gibraltar** mine has nearly completed a \$300 million modernization that started 5 years ago. The **Mount Polley** mine has invested in intense exploration for resources aimed at extending its mine life which might include some underground mining. The **QR** mine is operational again and investing in exploration, mill process upgrades and bringing the **Bonanza Ledge** project into production.

Three projects are in the permitting process: **Harper Creek** (copper), **Ruddock Creek** (zinc, lead, silver) and **Bonanza Ledge** (gold) projects. Both the Harper and Ruddock Creek projects have undertaken new financial arrangements this year and are being advanced. The Bonanza Ledge project is moving through permitting and may see mining start in late winter 2011. Work at the **Prosperity** project (copper-gold) is underway to address a federal decision to not allow the project to proceed as proposed.

Metal prices are driving exploration trends with gold and copper attracting most of the exploration budgets. Zinc and lead are seeing some renewed interest, but prices and exploration interest seems to be lagging behind that of copper. Rising silver prices are not always reflected in an uplift in expenditures for silver-yielding projects in this region because silver is more commonly a by-product of the mines, but this may change.

Owing to this region's blessing of high quality, bulk mineable, porphyry-style deposits this target remains a

favorite. Copper-gold projects remained the most significant of these, with major programs being undertaken at the **Ajax**, **Woodjam North**, and **Woodjam South** projects. Significant exploration programs were undertaken as well at the **Lac La Hache**, **Miner Mountain**, and **Tas/Verde** projects. At the **Newton Mountain** project epithermal gold mineralization is the current target at this property which has traditionally been characterized as a porphyry-style deposit. Copper-molybdenum and molybdenum targets were more active this year. The Highland Valley camp was very active with significant programs being completed at the **Rateria**, **Logan Copper**, and **Dot** projects. The **Luxor** project discovered new molybdenum-porphyry mineralization in the North Thompson River area where several other molybdenum projects are relatively idle.

Development of high-grade gold-silver veins occurred at the **Bralorne** Mine project where the company is test mining the BK and North zones and stockpiling ore in preparation for restarting its mill. Preliminary economic assessments of the **Elk** and **Blackdome/Elizabeth** projects have set a proposed pathway to resume mining at these past producers of gold and silver. Both projects saw large programs aimed at improving resource confidence and quantity. At the **Thunder Ridge**, **Bonanza Ledge**, **Golden Ledge**, and **Prospect Valley** properties, higher grade gold-silver veins are present within broad zones of low-grade gold mineralization that are under exploration for bulk tonnage gold mineralization. High grade gold-silver veins were explored for at the **Cariboo Gold Quartz** and **Bonaparte Gold** properties.

Relatively new styles of gold mineralization for British Columbia are under exploration at the **Spanish Mountain** and **Spanish Mountain (Acrex)** projects where low-grade gold is hosted in near-surface sedimentary rocks. At the **Raft** project intrusive-hosted gold has been discovered following progressive grassroots exploration.

It remained a quieter year for stratiform polymetallic massive sulphide deposits in the Shuswap and North Thompson River areas, but accelerated activity at the Harper Creek project may change this. A modest program was completed at the **Moore** whilst many other worthy projects were idle.

At the **Treasure Mountain** project, silver-lead-zinc veins are the target for a proposed seasonally operated high-grade, low-tonnage, underground operation.

Rare metals continue to be of keen interest to the industry this year. At the **Blue River Carbonatite** project (tantalum and niobium) a significant drilling program will support a preliminary economic assessment which is anticipated shortly.

MINES AND QUARRIES

All of the operating mines in the region are listed in Table 1 and their locations are shown on Figure 4.

Metal Mines

Highland Valley Copper, a partnership of Teck (97.5%) and Highmont Mining Company Ltd (2.5%), continues to execute a two-phase mine life extension to facilitate mining until 2020. This includes push backs of the east and west walls of the Valley pit. The company has been fully engaged in preparatory stripping for the last two years, increasing its fleet of equipment and staff complements to manage the expansion (Figure 5).

The mine has encountered slope stability issues on the east wall as they exposed the apparent trace of the Lornex fault, a property scale feature named after the Lornex pit located roughly 3 km to the south where it was first observed. The potential slope stability issues have led to production constraints as the company has not been able to fully access the ore in the east wall. Measures to address these include expanded overburden waste stripping and installation of a dewatering system. The installation of a buttress is expected to finalize these efforts and allow the mining of higher grade ore from this zone later in 2011. Combined with west pit overburden stripping the company will likely spend over \$130 million in preparatory stripping in 2010.

Average mill throughput is estimated to be slightly less than 2009 levels at 115 000 t/d or approximately 42 Mt for the year (Table 1). Copper production is estimated at 100 000 tonnes compared to an actual production of 118 200 tonnes for 2009. Molybdenum production is forecast at around 2950 tonnes which roughly equals the actual production of 2993 tonnes in 2009. The company forecasts a similar production level for copper and an increase of up to 4000 tonnes of molybdenum in 2011.

The Gibraltar mine of Taseko Mines Limited and Cariboo Copper Corp is nearing completion of a \$300 million modernization that has occurred over the last 5 years. Most recently this includes a new in-pit crusher, tailings systems improvements, filter press and direct mill feed system that collectively will boost production levels by 50% over historical levels. Production is from a copper-molybdenum sub-alkalic porphyry locally called “mine series tonalite”. Aggressive exploration has increased the mine’s resources significantly and given the operation a mine life of 25 years. The companies sold a 25% interest in the mine to a Japanese consortium (Sojitz Corporation, Dowa Metals & Mining Co. Ltd and Furukawa Co. Ltd) for approximately \$187 million.

Average mill throughput for 2010 is roughly estimated to be 40 000 t/d or approximately 15 Mt for the year (Table 1). Copper concentrate and cathode production is estimated at 42 000 tonnes compared to an

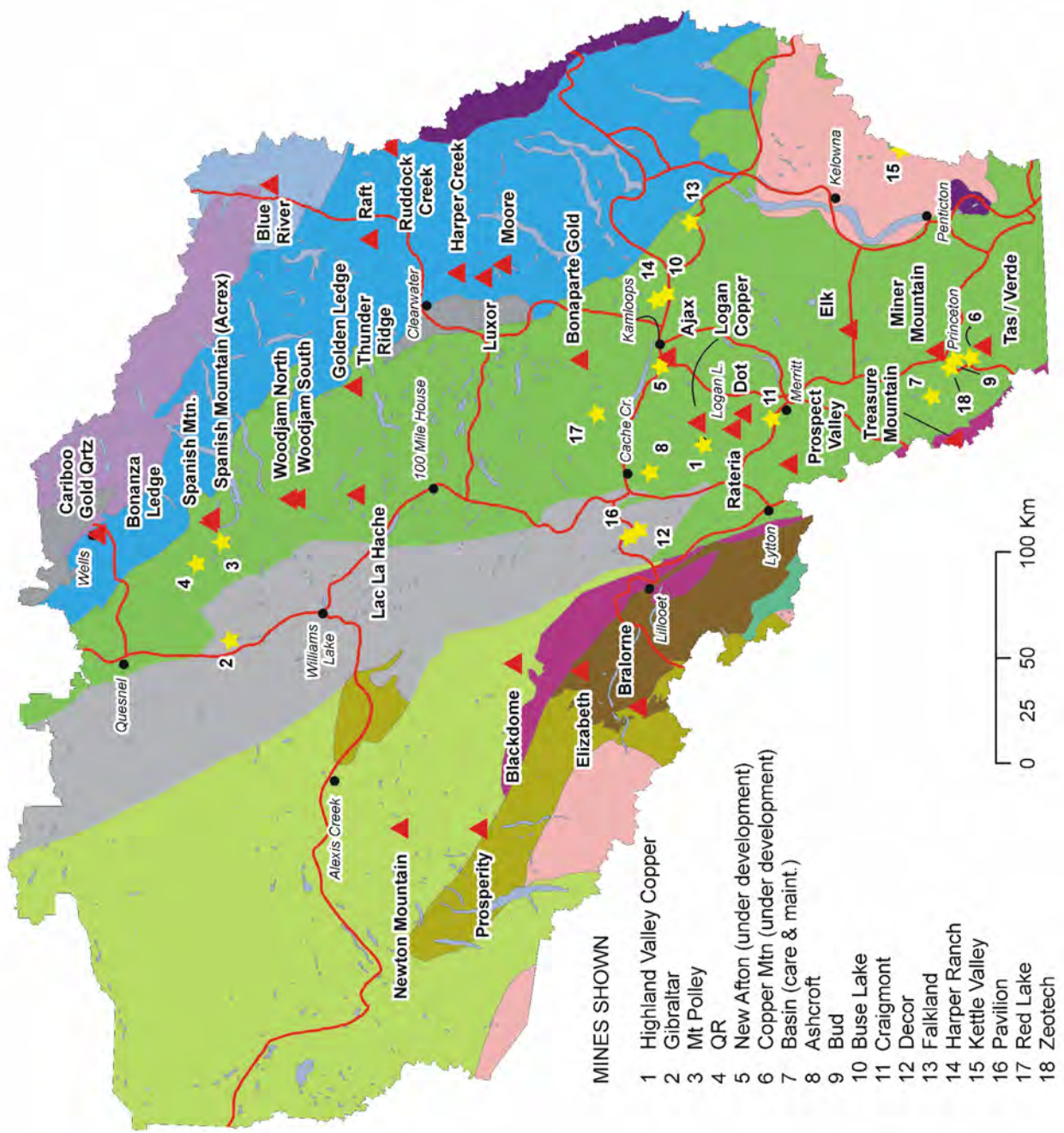
actual production of 31 888 tonnes for 2009. Molybdenum production is forecast at around 400 tonnes, substantially greater than the actual production of 285 tonnes in 2009. The company has forecasted continued increases in output for 2011 with annual production levels for copper to approach 52 000 tonnes and molybdenum 635 tonnes. Mill throughput levels are expected to approach 55 000 t/d.

At the **Mount Polley** mine, 56 km northeast of Williams Lake, Imperial Metals Corporation produced copper, gold and silver from an alkalic porphyry-related orebody. The operation is forecast to produce 16 150 Mt of copper in 2010 compared to an actual production figure of 15 358 Mt in 2009. Production levels for gold are estimated to be 1516 kg compared to 1537 kg for the previous year while silver levels will be down somewhat at an estimated 5897 kg compared to 6314 kg. Mill throughput is likely to average almost 22 000 t/d at the operation with an annual milled total of almost 8 Mt. Most of the production comes from the Springer pit (Figure 6) which is currently under consideration for an expansion. Minor amounts are also mined from the Southeast and Pond zones, a more skarn-like area of the operation, where recoveries are hampered by additional sulphides in the ore.

Barkerville Gold Mines Ltd restarted the **QR** mine in the middle of the year after it acquired the operation in early 2010. The underground gold mine is located about 17 km north of the Mount Polley mine and 58 km southeast of Quesnel. The deposit is hosted in propylitically-altered basaltic fragmental rocks primarily of the Late Triassic Nicola Group associated with an Early Jurassic diorite stock. The majority of the gold occurs in propylitically altered carbonate-rich rocks associated with pyrite mineralization and the deposit is generally thought of as a skarn. The company moved quickly to resume mining operations and poured the first gold bar on September 8 (Figure 7). Current production levels are at about 2/3 of the mill capacity of 900 t/d with ore being delivered from various headings including the West zone and North zone. The company has been drilling the North zone to delineate more ore and bring the operation closer to full production. A *Mines Act* permit has been applied for to develop an open pit at the company’s **Bonanza Ledge** project. Ore would be trucked around 100 km to the QR mill for processing. The company envisions a 4 year supply of ore from Bonanza Ledge at a mining rate of 70 000 t/y. Of note at the QR operation is an effort to eliminate the use of the cyanide and carbon-in-pulp circuit and extract gold by simple gravity separation. The company is installing new plant facilities to further enhance recoveries by this method: early indications are that high recovery rates are achievable while lower chemical costs could help reduce production costs.

TABLE 1. THOMPSON-OKANAGAN-CARIBOO REGION FORECAST MINE PRODUCTION, 2010

Mine	Operator	Deposit Type / Commodity	Forecast Production in 2010 (tonnes or kilograms)	Number of Employees	Proven and Probable Reserves (at Jan. 1, 2010)
Metals					
Highland Valley Copper	Teck / Highmont Mining Company Lt	Sub-alkalic porphyry Cu, Mo	100 000 Mt Cu, 2950 Mt Mo, minor Au and Ag	1015	440 000 000 Mt at 0.35% Cu and 0.008% Mo
Gibraltar	Taseko Mines Limited / Cariboo Copper Corp	Sub-alkalic porphyry Cu, Mo	42 000 Mt Cu, 400 Mt Mo	~325	459 000 000 Mt at 0.32% Cu and 0.008% Mo
Mount Polley	Imperial Metals Corporation	Alkalic porphyry, Skarn Cu, Au, Ag	16 150 Mt Cu, 1516 kg Au, 5897 kg Ag	~350	40 500 000 Mt at 0.32% Cu, 0.28 g/t Au and 0.61 g/t Ag
QR	Barkerville Gold Mines Ltd	Skarn Au		60	193 470 tonnes at 4.84 g/t Au (West zone)
Coal					
Basin	Compliance Energy Corp	Thermal coal	0	On care and maintenance	
Industrial Minerals					
Ashcroft	IG Machine and Fiber Ltd (IKO Industries Ltd)	Basalt (roofing granules)	~350 000 Mt	55 (plant & quarry)	
Bud	Absorbent Products Ltd	Bentonite		see Red Lake	
Buse Lake	Lafarge Canada Inc	Volcanic ash (alumina-silica)		see Harper Ranch	
Craigmont	Craigmont Mines Joint Venture	Magnetite tailings	60 - 70 000 Mt	~30 (plant; seasonal)	
Decor	Pacific Bentonite Ltd	Alumina, landscape rock		~2 (including trucking)	
Falkland	Lafarge Canada Inc	Gypsum	6 000 Mt	see Harper Ranch	
Harper Ranch	Lafarge Canada Inc	Limestone	~220 000 Mt	32 (plant & 3 quarries)	
Kettle Valley quarries	Kettle Valley Stone Company	Ashlar, flagstone, thin veneer		~40 (plant & quarries)	
Pavilion	Graymont Western Canada Inc	Limestone	190 000 Mt	~34 (plant & quarry)	
Red Lake	Absorbent Products Ltd	Diatomaceous earth		40 (plant & 3 quarries)	
Zeotech Bromley Creek	Heemskirk Canada Ltd	Zeolite			



LEGEND

- ▲ Major Exploration Project
- ★ Mine / Quarry

TERRANE

- Bridge River
- Cache Creek
- Cadwaller
- Cariboo
- Coast Complex
- Cratonal North America
- Kootenay
- Methow
- Monashee
- Post Acretionary Plutons
- Quesnellia
- Shuksan
- Slide Mountain
- Stikinia

MINES SHOWN

- 1 Highland Valley Copper
- 2 Gibraltar
- 3 Mt Polley
- 4 QR
- 5 New Afton (under development)
- 6 Copper Mtn (under development)
- 7 Basin (care & maint.)
- 8 Ashcroft
- 9 Bud
- 10 Buse Lake
- 11 Craigmont
- 12 Decor
- 13 Falkland
- 14 Harper Ranch
- 15 Kettle Valley
- 16 Pavilion
- 17 Red Lake
- 18 Zeotech

Figure 4. Mines, quarries and major exploration projects, Thompson-Okanagan-Cariboo Region, 2010.



Figure 5. Break time for a 240-tonne haul truck driver at Canada's largest metal mine, the Highland Valley copper mine near Logan Lake.

Coal Mines

There is one potential coal producer in the Thompson-Okanagan-Cariboo region, the **Basin** mine of Compliance Energy Corporation near Coalmont. The mine contains thermal coal but has been on care and maintenance since 2007. Jameson Resources Limited of Australia has not continued with an option to purchase the

property and the project will be returned to private company Pacific West Coal (U.K.) Ltd. Feasibility studies by Jameson reported resources of 87 Mt in the measured and indicated category plus 36.7 Mt in the inferred category.

Industrial Mineral Quarries and Aggregates

There are more than fifteen industrial mineral quarries and processing plants employing over 250 people in the region. These operations provide stable jobs in many small to medium-sized communities including Kamloops, Kelowna, Lillooet, Cache Creek, Ashcroft, Princeton and Merritt. There are very good opportunities for additional growth in this sector due to the wide variety of rock types and deposits in the region, excellent transportation infrastructure, proximity to growing markets in western North America, and the relative ease of permitting.

The **Kamloops** cement plant and **Harper Ranch** limestone quarry of Lafarge Canada Inc continue to supply cement to meet demand in western Canada. Lafarge also draws materials from the **Falkland** and **Buse Lake** quarries, which provide gypsum and alumina-silica rock respectively.

The **Decor** pit of Pacific Bentonite Ltd supplies alumina-rich burnt shale to the Lafarge cement plant in Kamloops. The shale beds occur directly above the Hat Creek coal deposit, located west of Cache Creek. Although most of the material is sold to Lafarge, other uses exist such as the surfacing of baseball diamonds. The property is also known to host a large bentonite deposit which is being investigated for municipal engineering and tile manufacturing applications.

Also near Cache Creek, Graymont Western Canada Inc operates the **Pavilion** limestone quarry and lime plant on the Pavilion Indian Reserve. Graymont has a forty-year lease with the Ts'kw'aylaxw First Nation who form the bulk of the employees at the mine.



Figure 6. The Springer Pit at the Mount Polley copper-gold mine east of Williams Lake produces most of the mine's current ore and is under review for a significant expansion.



Figure 7. Production resumed at the QR gold mine southeast of Quesnel in the summer of 2010 and viewing a pour is always an exciting event at a mine.

East of Ashcroft, IG Machine and Fiber Ltd, a subsidiary of IKO Industries Ltd, operates the **Ashcroft** basalt quarry and roofing granule plant. The granules are sized and coated with one of several distinct colours on site, and then shipped by rail and truck to IKO asphalt shingle plants in Calgary, Alberta; Sumas, Washington; Chicago, Illinois and elsewhere in North America.

Imperial Metals Corporation has installed a recovery plant at its **Mount Polley** concentrator to capture magnetite from its tailings stream (Figure 8). The operation is expected to commence late in 2010 and provide dense media for coal washing operations. Craigmont Mines Joint Venture operates the **Craigmont** magnetite operation located near Merritt where tailings from the old Craigmont copper mine are processed. These are forecast to be exhausted shortly.

American Creek Resources Ltd reported on further test work on its **Iron Mist** property located 60 km north of Kamloops. The company is evaluating the iron content of what appears to be a magnetite skarn at the contact of a gabbro-diorite intrusion and metamorphosed sedimentary rocks of the Harper Ranch Group. Drilling last year produced results such as IM09-05 that intersected 23.1 m grading 36.2% Fe₂O₃, 2.7% TiO₂ and 0.3% V₂O₅ and IM09-07 that intersected 43.9 m grading 31.6% Fe₂O₃, 2.4% TiO₂ and 0.3% V₂O₅. Metallurgical testing to date has indicated that a clean magnetite concentrate could be produced as the silica is not bound with magnetite and there are low levels of phosphorous, titanium and sulphur.

At its plant in Kamloops, Absorbent Products Ltd manufactures cat litter, barn deodorizer, industrial absorbents, and carriers for agricultural products. These are prepared from diatomaceous earth mined from the **Red Lake** quarry northwest of Kamloops, and bentonite mined from the **Bud** quarry at Princeton.

Heemskirk Canada Ltd continues to market agricultural and absorbent products, produced from a stockpile at the **Zeo-Tech/Bromley Creek** zeolite quarry



Figure 8. A newly installed magnetite recovery circuit at the Mount Polley mine will provide magnetite for a variety of uses, including the cleaning of coal.

near Princeton. The material is transported to its plant in Lethbridge.

Opal Resources Canada Inc produces attractive fire opal gemstones and jewelry from the **Klinker** property, located west of Vernon. Opal occurs as fracture and vesicle-fillings in andesitic to basaltic laharc breccia of the basal Kamloops Group (Eocene). Presently, the gemstone jewelry is marketed from a retail store in Vernon and is aimed at the British Columbia tourist market.

Decorative rock and dimension stone are produced at numerous small quarries throughout the region. The best known producer is the Kettle Valley Stone Company of Kelowna which sells flagstone, ashlar, facing stone and landscape rock mined from the **Nipple Mountain, Kettle Valley, Canyon** and **Gemini** quarries. Kettle Valley's workforce has grown to about 40 people year round, mainly employed in the Kelowna processing facility. The products include dacite ash, gneiss and basalt, and are mainly used in high-end residential and commercial developments in the western United States of America (U.S.A.) and central and western Canada.

MINE DEVELOPMENT PROJECTS

The locations of mine development projects in the region are shown on Figure 4.

The **New Afton** mine development project of New Gold Inc continues on a schedule that will see production in 2012. Minor surface work was undertaken during the year and most of the work occurred underground. The mill building is completed and some mill components are installed (Figure 9). The company expected to complete around 3000 m of underground development this year and by the third quarter 2479 m were completed. This included the ongoing development of five conveyor legs, conveyor transfer stations, boring of ventilation raises and the development of the first extraction drift in the orebody



Figure 9. A partially installed 28 foot SAG mill at the New Afton gold-copper project near Kamloops awaits a mid-2012 start-up.

at the mining level horizon. Having two access points (base of Afton pit and from the surface) to the underground workings has helped increase productivity as extraction work can occur at the bottom and top of some of the developments (Figure 10). The total underground development at the site is expected to be approximately 20 000 m, and the company has approximately 11 000 m completed at year end – a steady, focused, effort will be required to accomplish the remaining work prior to production.



Figure 10. The Afton pit access to almost 11 km of underground development at the New Afton gold-copper project near Kamloops.

The capital expenditures on the project were estimated by the company to be \$119 million for the year. Given they did not undertake some of the proposed surface work the final numbers will likely be closer to \$70-80 million. They anticipate being able to bring the project into production from internal funding (likely to approach \$350 million).

Currently stated measured and indicated resources are 65.6 Mt at 1.02% Cu and 0.77 g/t Au. Probable reserves are 44.4 Mt of 0.98% Cu and 0.72 g/t Au that contain approximately 435 million kilograms of copper and 32 million grams of gold. The company has yet to release updated resources for the property from previous years' drilling of zones beneath the currently blocked out reserves.

The plans for resumption of mining at the **Copper Mountain** project of Copper Mountain Mining Corporation and Mitsubishi Materials Corporation continued on schedule in 2010. The project involves the development of a super pit which incorporates three former pits and the construction of a new 35 000 t/d mill. Following the receipt of an amended *Mines Act* permit in April, the company has completed the mill building (Figure 11a), the truck maintenance shop, begun assembling the SAG and ball mills (Figures 11b, c), commissioned a Komatsu shovel (Figure 12) and seven haul trucks . The company has begun stripping in Pit 3 as part of a push-back on the west wall which will liberate ore for the anticipated June 2011 mill start-up. This year's capital expenditures to the third quarter were \$158.7 million dollars on the project and final expenditures for the year are yet to be reported but are likely to be in excess of \$240 million. The company estimates the capital cost for the project will be \$438 million and a debt financing of \$322 million in the summer of this year finalized all the funding requirements for the project.

Reported proven and probable reserves are 211 Mt of 0.36% Cu and anticipated gold and silver credits at April 2009. The mine plan forecasts copper production at 47 600 t/y for the first 12 years and a 17-year mine life.



Figure 11a. Flying steel for the new mill building at the Copper Mountain copper-gold project near Princeton started in April 2010.



Figure 11b. By the fall of the year major mill components were installed at Copper Mountain (photo courtesy of Copper Mountain Mining Corporation).



Figure 11c. Fitting a bearing on a mill (photo courtesy of Copper Mountain Mining Corporation).



Figure 12. The first massive Komatsu PC 8000 production shovel was commissioned at the Copper Mountain mine development site in November, 2010 (photo courtesy of Copper Mountain Mining Corporation).

MINERAL EXPLORATION HIGHLIGHTS

Major exploration projects are listed in Table 2 and their locations are shown on Figure 4.

The 2009 announcement of the Geoscience BC QUEST-South Project signaled a major investment in public geoscience and has provided a huge amount of new information to guide exploration in the region. The \$2.5 million program of geophysics and geochemistry spans from Williams Lake to the U.S.A. border and incorporates the Kamloops, Merritt and Princeton regions (Figure 13).

In 2010 significant data releases were made. The results of a 45 000 square km airborne gravity survey, which included 25 010 km of flight lines at a 2000 m spacing, were published. The reanalysis of 8256 archived drainage samples by inductively coupled plasma mass spectrometry to give 37 new analytical attributes and improved detection levels was completed. Analytical results for 800 new stream sediment and water samples and 200 new basal till samples collected over a 1000 square km area were published.

TABLE 2. MAJOR EXPLORATION PROJECTS, THOMPSON-OKANAGAN-CARIBOO REGION, 2010

Property	Operator	MINFILE (NTS ref.)	Commodity	Deposit Type	Work Program
Afton Area (West Ajax, East Ajax)	Abacus Mining and Exploration Corp. / KGHM	092INE012, 013, 028, 030	Cu, Au, Ag, Pd	Porphyry	FS, ES, DD (~20 000 m), GD
Blackdome Mine	Sona Resource Corp.	092O 053, 051, 052	Au, Ag	Vein / Breccia	DD, G, GC, PFS
Blue River Tantalum/Niobium (Upper Fir)	Commerce Resources Corp.	083D 005, 035	Ta, Nb	Magmatic	DD (~7000 m), G, PFS, MS
Bonanza Ledge	Barkerville Gold Mines Ltd.	093H 019	Au	Vein / Breccia	ES, DD (~3000 m), TR, MS,
Bonaparte Gold	Encore Renaissance Resources Corp	092P 050	Au	Vein / Breccia	UG, BS
Bralorne Camp	Bralorne Gold Mines Ltd.	092JNE164, 001	Au, Ag	Vein / Breccia	UG, G
Cariboo Gold Quartz	Barkerville Gold Mines Ltd.		Au	Vein / Breccia	DD
Copper Mountain (Exploration)	Copper Mountain Mining Corporation	092HSE001, 024	Cu, Au	Porphyry	DD (~10 000 m)
Dot	Dot Resources Ltd.	092ISE023, 019, 063, 156	Cu, Au, Ag	Porphyry	DD (~1000 m)
Elizabeth	Sona Resources Corp.	092O 012	Au, Ag, Cu, Mo	Vein / Breccia	R, DD (~3000 m), UG
Elk (Siwash North)	Almaden Minerals Ltd.	092HNE096	Au, Ag	Vein / Breccia	DD (~8000 m), PEA
Golden Ledge (Art-DL, Deception Ledge)	Happy Creek Minerals Ltd.		Au, Ag	Vein / Breccia	G, GC, DD (11 holes ~2000 m)
Harper Creek	Yellowhead Mining Inc.	082M 008, 009	Cu, Ag, Au, Zn, Mo	Massive Sulphide	PFS, ES, DD (~4000 m)
Highland Valley Mine (Exploration)	Teck Highland Valley Copper Partnership	092ISE013	Cu, Mo	Porphyry	DD (~7000 m)
Lac La Hache (Aurizon, Peach L)	GWR Resources Inc.	092P 001, 002, 034, 035	Cu, Au, Fe, Ag	Porphyry	DD (~7000 m), TR, GC, GP-MAG, G
Logan Copper (Dansey)	Logan Copper Inc.	092ISE012, 190	Cu, Mo, Ag	Porphyry	DD (~1500 m)
Luxor	Kingsman Resources Inc.	082M 062,	Mo	Porphyry	R, TR, DD (1066 m), P, GC
Miner Mountain	Sego Resources Inc	092HSE078, 203	Cu, Au, Ag	Porphyry	TR; DD (~1500 m)

TABLE 2. CONTINUED

Property	Operator	MINFILE (NTS ref.)	Commodity	Deposit Type	Work Program
Moore	Almo Capital Corp	082M 051	Cu, Pb, Zn, Ag, Mo	Massive Sulphide	DD (~3500 m)
Mount Polley (Exploration)	Mount Polley Mining Corporation	093A 008, 164	Cu, Au	Porphyry	DD (~45 000 m), TR, G, UG
Newton Mountain	Amarc Resources Ltd	092O050	Au, Cu	Porphyry	DD, GC, GP-AB
Prospect Valley (Discovery South)	Altair Ventures Incorporated		Au, Ag	Vein / Breccia	DD (~3000 m), G, P
Prosperity (Exploration)	Taseko Mines Ltd	092O 041	Cu, Mo, Au	Porphyry	FS, ES, MS
QR (Exploration)	Barkerville Gold Mines Ltd	093A 121	Au	Skarn	DD:UG, DD, FS
Raft (Ready Mix)	Newmac Resources Inc	082M 056	Au, Ag, W	Magmatic	GC, P, GP-EM, TR, DD (1500 m)
Rateria	Happy Creek Minerals Ltd	092ISE092, 150, 060	Cu, Mo	Porphyry	DD (~3000 m)
Ruddock Creek (Exploration)	Imperial Metals Corp	082M 082, 83	Zn, Pb, Ag	Massive Sulphide	DD (~1800 m), UG (400 m)
Spanish Mountain	Spanish Mountain Gold Ltd	093A 043	Au	Vein / Breccia	DD (~5000 m), MS, GD
Spanish Mountain (Acrex)	Acrex Ventures Ltd		Au	Vein / Breccia	TR (6), DD (~1500 m), GC
Tas / Verde	Supreme Resources Ltd	092HSE193, 192	Cu, Ag, Au, Zn	Porphyry	DD (~662 m); GC, G, TR, GP-IP
Thunder Ridge (Spanish Creek)	Spanish Mountain Gold Ltd		Au	Vein / Breccia	DD (1797 m)
Treasure Mountain (Exploration)	Huldra Silver Inc	092HSW016 , 018	Ag, Pb, Zn	Vein / Breccia	TR, PFS, DD (~600 m)
Woodjam North	Gold Fields Horsefly Exploration Corporation		Cu, Au	Porphyry	DD (14 613 m), GP-IP,
Woodjam South	Gold Fields Horsefly Exploration Corporation	093A 078	Cu, Au	Porphyry	DD (7295 m), GP- IP, GP-MAG

Work Program Abbreviations:

A = access (trail, road construction on claims); AB-EM = airborne electromagnetics; AB-MG = airborne magnetics; AB-RD = airborne radiometrics; BU (X tonnes) = bulk sample (weight in tonnes if known); CD = condemnation drilling; CQ = coal quality testing; CT = carbonization test (coal); DD (Xm) = diamond drilling totalling X metres; EN = environmental baseline studies/monitoring, remediation work; FS = feasibility studies; G = geology, mapping etc.; GC = geochemical sampling (rock, soil, silt etc.); GD = geotech drilling; GP = geophysics (general); IP = Induced Polarization; 3D-IP; MG = magnetics; MK = marketing (primarily for industrial mineral products); MS = metallurgical studies; OB = overburden drilling; OP-BU = open-pit bulk sample; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; PP = Pilot Plant; R = reclamation; RC = reverse circulation drilling; TR = trenching; UG (Xm) = X metres of underground development; UG-BU= underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

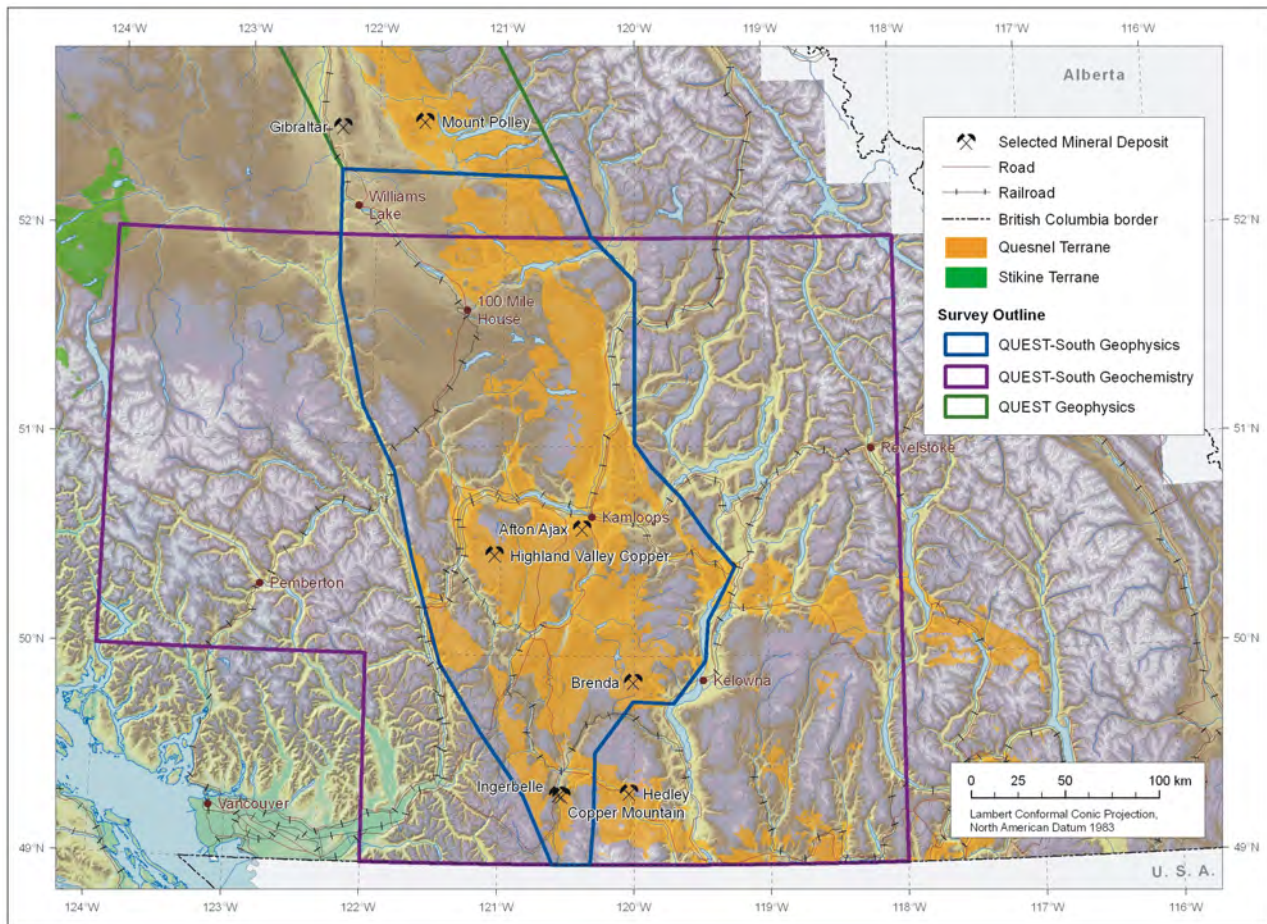


Figure 13. Location of Geoscience BC's QUEST-South geophysical and geochemical surveys: a major addition to the province's information databases (image courtesy of Geoscience BC).

Porphyry Projects

THOMPSON RIVERS AND SHUSWAP LAKE

Abacus Mining and Exploration Corp welcomed its new joint venture partner this year at the **Ajax** copper-gold porphyry project near Kamloops. Looking to expand its business outside continental Europe, KGHM Polska Miedz S.A. is the world's ninth largest copper producer and second largest silver producer. The company's success has been won from the Kupferschiefer shales of southwestern Poland where it produced almost 500 000 Mt of copper in 2009. The joint venture will see the companies take the project through to a bankable feasibility study at which point KGHM can increase its share in the project and continue through to production (Figure 14). Currently field work and engineering studies in support of the feasibility study are underway and include drilling to further define resources, process plant milling circuit, mine haulage, in pit crushing and tailings disposal studies. The current pre-feasibility study contemplates a 60 000 t/d operation exploiting the

measured and indicated resource of 442 Mt at 0.30% Cu and 0.19 g/t Au.

Drilling at project was aimed at continued testing of the Ajax East extension where near-surface resources are the target. Hole AM-10-066 supports this effort with 72 m grading 0.61% Cu and 0.35 g/t Au starting at 27 m down the hole. Other holes east of the Ajax East pit are testing displacements of prospective Sugarloaf diorite along both the East Pit fault and other postulated offsetting structures. Infill drilling has also been significant in and around the Ajax East and West pits in order to upgrade resources (Figure 15). Holes, such as AE-10-065, show the potential of these deposits with an intersection of 382 m grading 0.36% Cu and 0.3 g/t Au.

Mine site exploration occurred during the year at the **Highland Valley Copper** mine, which is centered in the Guichon Creek batholith. The Teck Highland Valley Partnership conducted a 7000 m drilling program in the vicinity of the Lornex pit to provide additional information for the purposes of further delineating the resources of the Lornex Extension.



Figure 14. Exciting projects attract tours. Here, a large group from a tour organized by the Geological Association of Canada is hosted at the Ajax East pit.



Figure 15. Abacus Mining and Exploration Corp and partner KGHM Polska Miedz S.A. are advancing the Ajax copper-gold project near Kamloops through to a feasibility study. Photo of drilling in the previously mined Ajax East pit which will be incorporated into a larger pit (file photo).

Happy Creek Minerals Ltd continued its successful exploration at the **Rateria** porphyry copper-molybdenum property, strategically located about 12 km southeast of the Highland Valley mine (Figure 16). Results this year from drilling Zone 1 continued to define mineralization over an area of 700 by 100 m and to depths of 300 m. Hole R10-12 almost started in mineralization and yielded 254 m grading 0.26% Cu - which compares favorably to production grades at Highland Valley. Similar grades were reported from Hole R10-18 where 248 m grading 0.19% Cu was intersected with mineralization starting at the surface. The northernmost hole, by 100 m, was R10-25 which intersected 177.5 m grading 0.18% Cu. Drilling at Zone 2 has encountered mineralization over an area of 1000 by 600 m and appears enriched in rhenium where molybdenum values are elevated. A selection of drill results over the last 3 years has given intersections of 1.5-6.4 m where rhenium values have ranged from 2.25-19.37



Figure 16. Geologists Sassan Liaghat and Dan Meldrum looking over plans at the Rateria property of Happy Creek Minerals Ltd. The project is located south of the Highland Valley mine and has produced numerous long copper and molybdenum drill intersections in prospective phases of the Guichon batholith.

g/t. Prospecting has discovered mineralization beyond the currently explored areas: grab samples from mineralized quartz veins located 1.5 km southwest of Zone 1 gave results between 1.04-3.34% Cu and 500 m northeast of Zone 2 other grab samples over a 200 by 300 m area gave results that ranged from 0.05-3.21% Cu.

The company also explored around last season's discovery at the **West Valley** property. Drillholes were completed at the NTP and Nord prospects where positive gold results were reported, such as in hole WV10-1 that intersected 1.2 g/t Au over 2.5 m. The West Valley property is crossed by the Lornex fault, considered by some as an important control on mineralization at the Lornex and Valley pits in the Highland Valley camp. The company undertook grassroots-level exploration around its **Sho** prospect located in the southern extents of the Rateria property. A combination of historical results and this year's success at the prospect has encouraged the company to plan further exploration in the area.

Just north of the Highland Valley mine, Getty Copper Inc announced it has brought on joint venture partner Effisolar Energy Ltd to advance its **Getty North** and **Getty South** porphyry copper project. The companies have in hand a pre-feasibility study that contemplates a 15 000 t/d operation that would produce cathode copper and molybdenum trioxide over a period of 17 years. Current plans are to undertake a comprehensive Titan 24 geophysical survey of the key portions of the properties.

Further south in the Guichon batholith and 17 km south of the Highland Valley mine, Dot Resources Ltd completed a winter drill program at the **Dot** property, which contains the former producing Aberdeen Mine and Vimy showings. Drilling tested extensions and continuity of porphyry copper-gold-silver mineralization at the Southeast and Northwest zones as well as induced polarization chargeability anomalies. A highlight hole

was DOT-09-SE-09 which cut 50.35 m grading 0.71% Cu, 0.092 g/t Au and 7.24 g/t Ag. The company included the results of this program to update its resources at project: indicated resources are reported to be 5.33 Mt of 0.54% Cu and inferred resources are reported to be 4.28 Mt of 0.49% Cu, both at a 0.2% Cu cut-off.

SNL Enterprises Ltd drilled at the **Logan Copper** project located 6 km east of the Highland Valley Copper mine again this year. This 55 000 ha property covers the eastern flanks of the Guichon batholith and is reported to include the Bethsaida phases of the intrusion. Results from last year's drilling at the Midway zone produced a deep intersection in hole 09-SND-14 which yielded 168.3 m grading 0.17% Cu including 85 m grading 0.24% Cu. Zinc values from a variety of intervals in the hole ranged from 0.02-0.28% Zn.

This year's drilling was focused at the Dansey and Midway areas and completed late in the season; results are not released yet. The company also completed a ground magnetic and VLF-EM survey over key areas of the project.

At the **Luxor** project northeast of Barriere, Kingsman Resources Inc encountered a new area of molybdenum mineralization in a road construction effort (Figure 17). This prompted the company to prospect a broadened area and a series of grab samples gave assays that ranged from 0.063-0.278% Mo. Molybdenite mineralization was found in quartz veinlets, stockworks, fractures, as rosettes and disseminations in altered granitic rocks that are likely part of the Cretaceous Baldy batholith. The company drilled the new zone late in the fall and have not received results.

CARIBOO-CHILCOTIN PLATEAU

The **Prosperity** gold-copper porphyry project of Taseko Mines Ltd attained a mix of milestones during the year. In January it received the provincial government environmental assessment certificate. In June it was granted a 25 year mining lease: the tenure security for the project to proceed. In November, however, the federal Minister of Environment did not grant federal authorization to proceed with the project as proposed. The company reports it is proceeding with discussions with both levels of governments in an effort to find an appropriate next step. As proposed the Prosperity project would have involved a capital expenditure of \$815 million to develop a 70 000 t/d mine that would provide roughly 500 jobs over the 20 plus year mine life. Stated proven and probable reserves are 831 Mt at 0.23% Cu and 0.41 g/t Au. The company is well financed to see this project through to production with its operating Gibraltar mine, a "gold stream" agreement with Franco-Nevada Corporation for 22% of the gold produced, and financial assets from other business arrangements.

At the **Mount Polley** Mine Imperial Metals Corporation was very aggressively exploring its properties with a large surface drill campaign. Exploration



Figure 17. Checking out new molybdenite mineralization discovered during a trail building program at the Luxor property northeast of Barriere.

was conducted at the Junction, WX/C2 Springer, Pond and Southeast zones. The Junction zone is located northwest of the main producing Springer pit and boasts higher gold-to-copper ratios, such as those seen in hole JZ10-46 which intersected 109 m grading 0.19% Cu and 0.28 g/t Au. Similarly the company encountered gold-enriched mineralization at the WX and C2 zones, which are located immediately to the south of the Springer pit. At the WX zone, hole WX10-06 cut 190 m grading 0.53% Cu and 0.86 g/t Au. Drilling at the Springer zone is demonstrating strong vertical continuity of mineralization: a feature of many of the alkalic porphyry copper-gold deposits of the province. This year's exploration of the Junction, Springer, WX and C2 zones is testing for possible expansions of the Springer pit. At the Pond and Southeast zones the company drilled near these currently producing skarn-style mineralized bodies. Hole PZ10-55 intersected 90 m grading 1.23% Cu and 0.6 g/t Au. The company is reporting success in delineating offsetting structures at these zones using a Titan induced polarization survey completed in 2009, particularly at the south end of the Pond zone which appears to be offset.

A 500 m underground ramp is being driven from the exhausted Wight pit to allow underground drilling of the Boundary and Zuke zones (Figure 18). The Boundary zone currently has a measured and indicated resource of 517 066 tonnes grading 2.45% Cu, 1.5 g/t Au and 14.00 g/t Ag. The ramp is expected to be completed late in 2010 and will allow the company to evaluate the feasibility of bulk underground mining. This is the first time that the company has undertaken underground development at the mine. Surface drillhole ND10-102 at the Boundary zone cut 111.4 m grading 0.97% Cu and 0.7 g/t Au.

Gold Fields Horsefly Exploration Corporation undertook the largest exploration program in the Cariboo where approximately 22 000 m of drilling was completed at the **Woodjam South** and **Woodjam North** properties 45 km east of Williams Lake. These properties cover



Figure 18. The bottom of the Wight pit at the Mount Polley copper-gold mine was used to start a decline to facilitate testing the Boundary and Zuke zones where the potential for underground mining is being considered.

56 150 ha (Figure 19). The properties are optioned from Fjordland Exploration Inc (60%) and Cariboo Rose Resources Ltd (40%).

At Woodjam South, the Southeast zone has been successfully drill tested over an area of 1300 by 900 m and to a depth of 700 m. Within this large area, a core area of mineralization has a footprint of 800 by 630 m. The zone underlies a portion of an induced polarization anomaly measuring 2000 by 1000 m. Vein, fracture and disseminated porphyry-style mineralization consisting of chalcopyrite, molybdenite, minor pyrite and trace bornite associated with potassic and phyllic alteration zones is hosted by Takomkane quartz monzonite intrusive rocks and related aplite dikes (Figure 20). In 2008 Hole WJ08-84, which intersected 359.1 m grading 0.69% Cu and 0.27 g/t Au and 0.006% Mo, including 200.8 m grading 1.01% Cu, 0.44 g/t Au and 0.002% Mo, was pivotal in demonstrating the significance of this zone. Highlight holes from this year's drilling at the Southeast zone include: SE10-14 which was collared 200 m north-northwest of WJ08-84 and intersected 244 m grading 0.50% Cu, 0.04 g/t Au and 0.015% Mo and SE10-01 which was collared 200 m south-southwest of WJ08-84 and intersected 401 m grading 0.30% Cu, 0.07 g/t Au and 0.006% Mo. Other prospective targets at Woodjam South



Figure 19. The view from higher points at the Woodjam copper-gold project reveal it is within sight of the Mount Polley mine.



Figure 20. Potato-sized clots of epidote and tourmaline replacing bleached and altered volcanic rocks adjacent to the Takomkane batholith at the Woodjam property.

were tested with induced polarization and ground magnetometer surveys.

A significant portion of this year's drilling at Woodjam North focused on the Deerhorn zone, where gold-copper mineralization associated with a monzonite porphyry has been traced along northern portions of the zone over a strike length of about 700 m. Notable holes include DH10-09 that intersected 90.8 m grading 0.58 g/t Au and 0.39% Cu, including 30.4 m grading 1.10 g/t Au and 0.72% Cu, and DH10-14 that intersected 115.9 m grading 0.29 g/t Au and 0.32% Cu. The fall phase of drilling targeted a new southern mineralized zone. Hole DH10-21 (a step out hole from DH09-03, a significant gold-enriched intersection) bettered its result by intersecting 156.6 m grading 1.14 g/t Au and 0.29% Cu, including 64 m grading 1.92 g/t Au and 0.39% Cu.

Roughly one-third of the 2010 drilling at Woodjam North was centred on the Takom zone where copper-gold mineralization is associated with diorite, similar to the

Megabuck and Deerhorn zones. Hole TK09-001 returned 208.8 m grading 0.35% Cu and 0.4 g/t Au including 101 m grading 0.43% Cu and 0.58 g/t Au. Hole TK10-12 intersected 61.6 m grading 0.41% Cu and 0.82 g/t Au. These two holes are part of a northeasterly mineralized trend measuring over 500 m in strike length. Several other drillholes at Takom intersected strongly altered (epidote and tourmaline) and variably mineralized sections.

Other reconnaissance drilling was completed on the Spellbound and Deerhorn-Corner Lake areas at Woodjam North. The best assay interval from Spellbound was hole SB10-10 which intersected 7.7 m grading 0.34% Cu and 0.28 g/t Au.

Elsewhere at Woodjam North, reconnaissance surveys, including induced polarization, were completed on the Tisdall Lake, Antoine Lake and Horsefly Mountain areas. The company has been noted by the author as being an excellent steward of the land on which its operating (Figure 21).

Southeast of the Woodjam projects, Capstone Mining Corp optioned the **Tak** properties from Fjordland Exploration Inc and Fjordland itself undertook a grassroots exploration program targeting copper-gold porphyry mineralization within and around the Takomkane batholith. They report two new discoveries of copper-gold-molybdenum mineralization on the Moffat property. Five grab samples from two areas approximately 800 m apart gave encouraging results with the best result being MR-10-05 which assayed 0.36% Cu, 0.29 g/t Au, 6.94 g/t Ag and 11 ppm Mo.

Candorado Operating Company Ltd holds ground south of the Woodjam South project at the **Murphy Lake** property and prepared for an induced polarization and resistivity survey with the establishment of 80 km of cut lines. Also active in the area is Tiex Inc with its very large holdings at the **Horsefly** property where the company is conducting grassroots-level work and identifying prospective copper-gold targets.

Amarc Resources Ltd undertook a major grassroots program at its holdings in the newly coined **Plateau Gold Copper Belt** project which includes its flagship **Newton** property. The Newton property is located 40 km north of the Prosperity project and southwest of Williams Lake. The current focus is on epithermal gold bulk tonnage-style mineralization. Late in 2009, the company announced vertical hole 9004 on the Newton property that cut 189 m of mineralization that graded 1.56 g/t Au, 7.9 g/t Ag, 0.08% Cu and 0.17% Zn starting at a core depth of 6 m. The company recognized it had a significant discovery and acquired 3300 square km of mineral tenure thereby solidifying its position in the area. An extensive grassroots level program was launched early in the year and a 7000 line km ZTEM and high-resolution magnetic airborne survey has been completed. This was followed by extensive prospecting, the collection of 12 000 soil samples and 170 line km of induced polarization survey.



Figure 21. Ongoing reclamation of drill pads at the Woodjam project is an important undertaking for the operator, especially for such large programs that can go on for several years.

This program has produced three new prospective porphyry copper-style targets that the company is pursuing. At the Newton property, the induced polarization survey and related surface programs have highlighted an area of approximately 8 km² where further efforts will be targeted. The company received drilling permits very late in the season and immediately began a program to explore the structure and extent of mineralization.

Strongbow Exploration Inc explored its **Piltz Mountain, Mons Creek** and **Raven** properties located 90 km southwest of Williams Lake. These grassroots prospects cover government regional geochemical survey multi-element anomalies and were acquired for their potential similarities to the Newton Mountain project.

At the **Taseko** porphyry copper, gold and molybdenum property, located 15 km south of the Prosperity project, Galore Resources Inc released results from two holes drilled in 2009 that confirmed a southwestern extension of mineralization at the Hub property. They reported long, low-grade, intersections for hole 09TSK-13, where 380.2 m graded 0.093% Cu and 0.0076% Mo, and 09-TSK-14 where 387 m graded 0.087% Cu, and 0.0058% Mo. This season the company undertook large airborne ZTEM geophysical survey over current exploration targets and under-explored alteration zones. Also completing an airborne survey and prospecting program in the area was private company Highpoint Exploration Inc on the **Tasco** property where they were searching for porphyry-style mineralization.

At the **Lac La Hache** porphyry copper-gold property, GWR Resources Inc continues to better its understanding of the geological environment through consistent and diligent reevaluation of its wealth of historical information as well as ongoing exploration. At the Aurizon South zone, now recast as the Aurizon South SuperGold zone, a gold-rich deep zone is being tested. Hole AZS10-21 extended previous hole AZS08-04 and

intersected 137 m grading 1.36 g/t Au and 0.31% Cu starting at a depth of 477 m. Mineralization is reported as disseminated, fracture-filling and massive chalcopyrite, fine grained bornite, gold-cobalt bearing pyrite and magnetite in hairline and thicker stringers.

The company completed a MMI survey over most of the project adding another 2300 sample sites to its existing database. The survey revealed a large gold anomaly centered over the Aurizon Central zone and extending across the Aurizon South SuperGold zone and beyond by a substantial distance.

At the historical Spout Lake Skarn zone GWR announced the discovery of substantial new mineral potential largely reflected in very high amplitude ground magnetometer anomalies. Previous work focused largely on copper values and excluded the significance of the iron content. This year the iron potential attracted more interest. The skarn is magnetite-rich with hand sample assays ranging as high 66% Fe, 0.53 g/t Au and 3.05% Cu. The company undertook a large program of shallow holes to test the extent and grade of the zone. Assays are not yet reported.

Happy Creek Minerals Ltd continued to evaluate its extensive holdings northeast of Lac La Hache. At the **Fox** property, 30 km east of the past producing Boss Mountain mine, the company drilled the Nightcrawler-Discovery zone and trenched the Ridley Creek zone. The property geology comprises deformed, Paleozoic age, deformed metasediments and limestone that have been intruded by Cretaceous two-mica quartz-monzogranite. Skarn alteration assemblages include quartz, garnet, pyroxene, vesuvianite and variable concentrations of scheelite, pyrite, pyrrhotite, sphalerite and locally molybdenite. The primary target is tungsten-molybdenum mineralization but anomalous levels of zinc, cadmium, indium, silver, gold and bismuth are also reported. At the Nightcrawler-Discovery zone a small wide spaced drilling program had a highlight intersection at hole F10-1 of 0.2 m grading 1.37% WO₃. Hand trenching in the Ridley Creek zone along a 2 km trend produced chip sample intervals that ranged from 0.12-5.83% WO₃ with a highlight sample in BK-2 of 7.3 m grading 1.25% WO₃. The property continues to demonstrate potential for a sizeable mineralized body owing to the widespread occurrence of tungsten-molybdenum skarn mineralization.

GOLD BRIDGE-BRALORNE-LILLOOET

Cresval Capital Corp continued with grassroots-level geochemical surveys at its **Bridge River Copper** project, located 40 km west-northwest of Goldbridge. The property contains the Nichol, Russnor and BR showings which are calcalkaline porphyry copper-molybdenum-gold targets within the Bridge River pluton. Encouraging results are reported for the area around Windy Copper showing, a 300 by 150 m copper-mineralized area 3 km northwest of the Russnor showing.

Cresval completed an airborne ZTEM survey at the **Yalco** property near the Yalakom River and northwest of Lillooet. The property surrounds the Poison Mountain copper-gold-molybdenum porphyry deposit on three sides. Three target types are sought at the property: buried felsic intrusions similar to those that host the Poison Mountain deposit, peripheral base metal veins and replacement zones within host metasediments and high level precious metals zones in either intrusive rocks or metasediments.

SIMILKAMEEN RIVER

Despite most of the corporate efforts being focused on mine development, exploration resumed at the Copper Mountain project after a hiatus last year. Much of the work was directed at future production activity with infill and condemnation holes forming much of the announced 10 000 m campaign. At the Oriole zone, previously drilled percussion holes showed potential for a high-grade zone in an area planned for waste rock storage. Twelve diamond-drill holes were completed to test the area's potential for valuable mill feed at the start-up of the operation. Additional drilling was completed east of Pit 2, in the saddle zones between the existing pits and adjacent to and below Pit 3. At the time of writing most results were pending and the drills were still completing the program.

Supreme Resources Ltd trenched and drilled its **TAS** and **Verde** properties located south and east of the Copper Mountain project. Trenching at the TAS South area produced an average of 0.2% Cu and 2.2 g/t Ag from 43 channel samples and at the TAS North area produced an average of 0.1% Cu and 1.5 g/t Ag from 45 channel samples. At the Verde property trench 1 yielded a 14.5 m interval of 0.3% Cu, 4.5 g/t Ag and 0.3 g/t Au. Soil sampling programs were completed over both properties and an induced polarity survey is proposed for the TAS North, Central and South areas. The company also drilled both properties in a modest program and results are forthcoming. Last year's drill results were reported from the TAS property – although copper values were low, unexpectedly high zinc levels were encountered with lengths of 2.2-4.0 m and grades of 1049-14 000 ppm.

Approximately 5 km south of the Copper Mountain project, Anglo-Canadian Uranium Corp worked its **Princeton Copper** project this year. An area has been identified through historical data and recent soil surveys for an announced drill program to test the contact between Nicola Group rocks and the Copper Mountain stock.

Sego Resources Inc remained active at its **Miner Mountain** property located just 4 km to the northeast of Princeton. Mineralization is generally hosted within microdiorite of the Nicola Group and there may be a genetic link to Deer Valley fault to the west which juxtaposes these volcanic rocks with sedimentary rocks of the Eocene Princeton Group. The company released results from 2009 drilling that were not available at

publication time last year: one of the better results being hole DDH-MM-09 which intersected 96.6 m grading 0.31% Cu, 0.08 g/t Au and 1.76 g/t Ag at the Granby zone. A terrain study was completed at the property to better understand the source of the Regal zone, a gravity slide block of oxidized and sulphide mineralization that overlies younger Princeton Group rocks. The zone has traditionally been thought to have been sourced from the Granby zone owing to its position down slope from that area. Ministry records from the 1970s suggest several hundred thousand tonnes of up to 0.5% Cu, may exist at the Granby zone. The company has trenched to verify the terrain study results. The company also announced a late season program of further trenching and drilling at the Granby, Upper Regal, South and Miner zones.

Goldcliff Resource Corporation was active at its **Copper Mountain-Tulameen** project this year where it undertook grassroots level exploration at three targets: Whipsaw, Lamont and 15 Mile. A large airborne multi-sensor survey completed over the area in previous programs has indicated that favorable intrusive rocks found at the Copper Mountain mine development site continue southwest onto this property.

East of Kentucky Lake and 30 km southeast of Merritt, Victory Resources Corporation drilled the Wen prospect at the **Toni** property. The company has been trying to extend mineralization defined by historical hole W96-1 which cut 6.55 m grading 16.58 g/t Au and 0.75% Cu as well as the Adit zone which was discovered in 2008. The current target is mesothermal gold-copper mineralized quartz veins. Significant assay results from the program include hole 10-4 which intersected 1.22 m grading 240.5 ppb Au and 1.88% Cu and hole 10-5 which had two intersections (not true widths): 5.5 m grading 159.9 ppb Au and 2.62% Cu and 3.0 m grading 178.5 ppb Au and 1.36% Cu.

Candorado Operating Company Ltd announced a drill program for its **Man-Prime** property located 36 km north of Princeton. The company undertook a review and re-interpretation of previous geophysical data in order to better understand structures and mineralized zones at the project in preparation for this year's work.

OKANAGAN

Jasper Mining Corp has re-activated work at its **Isintok** molybdenum-copper-silver project after several busy years were interrupted by falling metal prices and weak markets. Located southwest of Summerland, the property has an historical resource of 23 Mt of 0.161% Cu and 0.04% Mo. The company reports the area of mineralization is approximately 1000 by 500 m and last year the near-surface nature of the mineralization was drilled on coincident IP and soil survey anomalies. The core was stored until this summer when it was finally prepared for analyses and results are pending.

Skarn Projects

OKANAGAN

Goldcliff Resources Corp reported results from a major drilling program it undertook at **Panorama Ridge** in 2008. The project is located just east of the historic Nickel Plate-Mascot mine which produced 2.5 million ounces of gold up to 1996. The target is bulk-mineable gold hosted in upper Triassic Nicola Group sedimentary and volcanic rocks that have been subject to pervasive silica-iron alteration. In this the 10th year of exploration at the project, the company has to date recognized 10 gold showings and 4 zones with significant potential: the York-Viking, Nordic, Thor and Tower zones (Figure 22). The 2008 program yielded highlight holes at the York-Viking zone where 28-190 intersected 44.2 m grading 1.55 g/t Au, at the Nordic zone where 28-121 intersected 25.62 m grading 1.54 g/t Au and at the Thor zone where the first holes ever drilled into the zone gave results such as hole 28-149 that intersected 1.36 m grading 6.35 g/t Au. Encouraging results at the Thor zone establish a continuity over 1 km length between the four significant zones at the project.

The company reports it has discovered a new zone this year called Winters East that is 2 km south of the other zones at the project. The company combined historical information, a 2009 airborne geophysical survey and ground work to generate three targets: the King, Queen and Prince. Early work at the King target has given grab sample results that range from 0.195 to 0.410 g/t Au.

At the **Gold Hill** project near Hedley, Vega Resources Inc, trenched for shear-hosted, vein-hosted gold mineralization along extensions of the Hed zone.

Vein and Breccia Projects

THOMPSON RIVERS AND SHUSWAP LAKE

Encore Renaissance Resources Corp has a permit to remove high-grade quartz vein material from its **Bonaparte Gold** property located 35 km north of Kamloops. The property is underlain by sedimentary and volcanic rocks of the late Paleozoic Harper Ranch Group and intruded by Triassic and/or Jurassic granodiorite, quartz monzonite and diorite that are believed to form part of the Thuya batholith. Mineralization primarily occurs in a series of north trending quartz veins hosted mainly by quartz diorite intrusive rocks. Locally, the massive white quartz veins contain up to several per cent sulphides consisting of pyrite with lesser chalcopyrite, pyrrhotite and molybdenite. Native gold is also evident and generally associated with silver-grey tellurides.



Figure 22. Aerial view showing the relationship of the numerous zones at the Panorama Ridge gold project near Hedley (courtesy of Goldcliff Resource Corporation website).

The company previously shipped ore to the Kinross mill in Washington State, U.S.A. where this year, 330 tonnes was processed yielding 5037 grams of Au at a recovery rate of 93.51%. At the exploration site, the company resumed activities in late September and reports it is progressing toward the Eagle vein where high-grade gold intercepts have been reported. Along the way they exploited around 180 tonnes from the #20 vein where an average grade from 8 grab samples was 7.55 g/t.

Newmac Resources Inc optioned the Ready-Mix property 35 northeast of Clearwater and now calls it the **Raft** property, given its proximity to its current Raft Molybdenum project. The property's history began in 1999 with the discovery of a highly oxidized boulder of intrusive breccia that assayed 29.3 g/t Au and 202 g/t Ag. Follow up surveys outlined further encouraging VLF-EM and gold-silver-in-soil anomalies. The company reports the target is intrusion-related gold, perhaps related to Cretaceous granites in the area. There are also several tungsten skarns in the area, and anomalous gold, tungsten, molybdenum and arsenic values are found in area stream sediments. Additional geophysical and geochemical surveys were completed this year that led to trenching. The company reports it has located a source for the gold anomalies at the property in Trench E where grab samples taken at 2 metre intervals assayed 46.9 g/t Au, 59.9 g/t Ag and 1.56 g/t Au and 3.9 g/t Ag. Buoyed by these results a drill program was started this fall aimed at the VLF-EM conductor associated with mineralization discovered in Trench E.

CARIBOO-CHILCOTIN PLATEAU

Barkerville Gold Mines Ltd has been very active at the **Bonanza Ledge** project at Wells where the company is proposing to open-pit mine the orebody and truck the ore to its QR mill for processing (Figure 23). The Bonanza Ledge property occurs within an overturned, northeast dipping sequence of metamorphosed turbidites, carbonates and tuffaceous rocks of the Hadrynian (?) to Paleozoic Snowshoe Group. Disseminated gold-sulphide mineralization is contained in the footwall of the historical BC vein and consists of multiple, semimassive to massive bands of fine to medium-grained pyrite that has preferentially replaced the carbonate layers within laminated, tan coloured muscovite-rich phyllite. The company completed 22 holes in a summer program that confirmed the attractive tenor of the mineralization, such as hole BC10-10 which cut 22.6 m grading 6.93 g/t Au. The company reports the discovery of a new zone located just beyond the current targeted area. In this zone, a channel sample from Trench #1 yielded an assay of 8.7 m grading 80.78 g/t Au.

Nearby at the **Cariboo Gold Quartz** mine on Cow Mountain, Barkerville Gold Mines Ltd was also drilling to expand current resources and define a new gold mineralized zone discovered northwest of the proposed open pit mine. Early in the new year the company reported it had discovered a different style of mineralization which involved replacement textures in grey blocky quartzite with 1-3% pyrite found as



Figure 23. The location of the proposed Bonanza Ledge open pit near Wells in the Barkerville Camp. Ore would be trucked to Barkerville Gold Mines' QR mill for processing.

disseminations and blebs. This rock type has not previously been recognized as being auriferous in this camp. In the new zone 2009 hole CM09-07 intercepted 13.5 m grading 5.06 g/t gold in the deeper portion of the hole.

To facilitate mining of its many resources in the camp Barkerville Gold Mines Ltd has signed a letter of intent to purchase the Goldstream mill, currently located north of Revelstoke. If completed the company would relocate it to Cow Mountain, refurbish it and increase the capacity to 2000 t/d with an eye to bringing it onstream in 2013.

Next door to the Bonanza Ledge project is the Gemco Minerals Inc Burns Mountain property where the company planned on completing some trenching, geological and geophysical surveying this year.

Noble Metal Group Incorporated explored its holdings northwest of Cariboo Lake at the Cariboo Mineral Gold Property. Centered on the historical Keithly Creek area, the company is exploring for gold-bearing quartz veins hosted in Hadrynian (?) to Paleozoic aged metasedimentary rocks of the Snowshoe Group. This year the company focused on the Weaver Creek area where it completed trenching, geochemical and geophysical surveys.

Sona Resources Corp had an aggressive year at its complementary **Elizabeth** and **Blackdome** properties. Kicking off the season was the completion of a preliminary economic assessment which evaluated restarting the Blackdome mine, mining the Elizabeth deposits and processing the ore at the Blackdome mine. In late season the company announced it had entered a business partnership agreement with the Stswecem'c Xgat'tem Development Limited Partnership of Dog Creek; a wholly owned and independently operated economic development corporation of the Canoe Creek Indian Band.

The idle **Blackdome** gold-silver mine and mill anchors this duo and is located northwest of Clinton. This underground mine operated primarily between 1986-1991 and processed 340 000 tonnes of ore at a mill head grade of 20 g/t Au to produce almost 7 million grams of Au. Mineralization consists of narrow, high-grade epithermal quartz veins. The 200 t/d mill is intact and the property has a restated indicated resource of 144 500 tonnes grading 11.9 g/t Au and 50.01 g/t Ag and inferred resources of 90 600 tonnes of 8.79 g/t Au and 18.61 g/t Ag. The company has also reported that an average grade of 1.47 g/t Au is contained within the tailings impoundment facility which is holding 298 389 tonnes of tails.

At the nearby **Elizabeth** property, bonanza-grade gold is hosted within northeast trending, steeply northwest dipping mesothermal veins that cross cut the Blue Creek diorite intrusion. Current inferred resources at the property include 522 900 tonnes of 12.3 g/t Au at a 5.0 g/t Au cut-off. The company focused most of its attention here this year drilling the Southwest and No. 9 veins, rehabilitating the Upper adit, trenching the West vein at surface and assembling supplies for a second adit to drift and raise along the Southwest zone (Figure 24). Drilling the Southwest zone produced some high-grade intersections such as hole E10-69 which cut 85.4 g/t Au



Figure 24. Drilling the Southwest zone at the Elizabeth project near the Yalakom River, northwest of Lillooet. Note the burned area related to a 2009 fire which threatened the camp.

over 4.03 m and E10-65 which cut 6.5 g/t Au over 6.7 m. This season's drilling has extended the zone over a strike length of 325 m with most significant intersections being cut within 200 m of the surface. The No. 9 vein is located approximately 500 m north of the Southwest vein and has never been explored by the company. A small drill program yielded an intersection of 1.04 m grading 2.63 g/t Au in hole E10-70. At the Upper adit the company accessed the West vein and resampled it to confirm its tenor. Where the West vein outcrops the company trenched the Jewelry Box vein and collected grab samples that ran 144 and 51.1 g/t Au. When the company reaches the Southwest zone with the new adit sometime in 2011, it should be able to collect more representative sample from this zone which has produced spectacular bonanza-grade results.

FRASER RIVER

Altair Ventures Incorporated was active at the **Prospect Valley** property located 30 km west of Merritt. The target is bulk-mineable epithermal gold, hosted in silicified volcanic rocks that appear to be confined to the hangingwall of a normal fault. Pervasive stringers and veinlets of quartz host fine-grained disseminated pyrite reported to carry increasing gold values with depth, down dip along the fault. The company completed an initial campaign of drilling in the South Discovery zone whereby several holes are reported to have intersected similar grades to those encountered in extensive drilling in 2006-07.

A prospecting campaign this year may have discovered a highly significant northeastern extension of the controlling structure in the area – giving it a potential strike length of up to 3 km length. Called the Northeastern Extension zone, and discovered by Ed Ballon on behalf of the company, it has yielded chip sample values of 0.12-

4.55 g/t Au and 0.7-3.1 g/t Ag with elevated molybdenum values (Figure 25). The discovery is topographically lower than the South Discovery zone, teasing out a concept that it may be an exposure of deeper portions of the mineralizing system: a concept that is yet to be confirmed.

Fairmont Resources Inc have completed their first of work on the **Nicoamen River** and completed geological and geophysical surveys in anticipation of drilling. The property is located at the headwaters of the Nicoamen River where some of the first gold in the province was discovered. Previous work has identified gold values in float and outcrop hosted by the Spences Bridge Group.

Strongbow Exploration Inc continued to work on the **Shovelnose** property 30 km south of Merritt where it completed more trenching, soil surveying and ground magnetic surveying. Three areas are being explored: the Line 6 and Mik showings and the Anomaly B. In 2009 trenching at the Mik produced a chip sample of 2.9 m grading 2.7 g/t Au and 18.1 g/t Ag with a high grade interval of 12 cm grading 66.9 g/t Au and 75 g/t Ag. Gold mineralization is reported to be epithermal-style and related to shallow to moderately west dipping, colloform-banded quartz veins hosted within silicified and clay altered felsic volcanic rock of the Cretaceous Spences Bridge Group. Nearby at the **Gillis** property, Kiska Metals Corporation has proposed to trench the project in search of similar epithermal gold-silver mineralization. This grassroots discovery was made in 2008 by following up government regional geochemical survey data. The property hosts three areas of interest, the most significant to date being the Fort showing where a 30 cm grab sample assayed 19.65 g/t Au and 201 g/t Ag. At the Sav and South Side areas float and outcrop samples gave values ranging from 1-4 g/t Au and 65-213 g/t Ag.



Figure 25. Sample of silicified breccia from the 2010 discovery of the Northeastern extension at the Prospect Valley epithermal gold project west of Merritt – giving it a potential strike length of up to 3 km (photo courtesy of Warner Gruenwald).

GOLD BRIDGE-BRALORNE-LILLOOET

The most advanced project in the famous Gold Bridge mesothermal gold-quartz vein camp is at the **Bralorne** mine of Bralorne Gold Mines Ltd. It operated continuously from 1928 to 1971 and was the dominant contributor to the approximately 4.15 million ounces of gold produced at this camp. Infrastructure on the property includes extensive underground workings, a partially completed tailings pond and a 100 t/d gravity/flotation pilot mill.

The company was focused this year on preparing sufficient ore on surface and underground to restart the mill. Trial mining at the BK zone and North vein is close to stockpiling adequate tonnages of material to feed the mill for approximately one year (Figures 26, 27). In mid-September the company reported it had 5800 tonnes on the surface grading 12.1 g/t Au and another 4700 tonnes broken underground. The company is currently awaiting waste management permitting prior to proceeding with mill start up.

Drilling from the surface continued at the upper BK zone this year as well with some very encouraging results. Results were reported that ranged from 0.96–140.46 g/t Au over intervals from 0.2–1.2 m with the best result being Hole 169 which cut the 140.64 g/t Au over 0.6 m. This potentially significant zone can be accessed from the unfinished BK zone adit which was started at the 575-level in 2009.

OKANAGAN

Almaden Minerals Ltd continues to evaluate the **Elk** mesothermal gold-quartz vein project 45 km southeast of Merritt, and just 2 km south of Highway 97. In the 1990s, 1.6 million grams of gold were produced from 16 700 tonnes of ore extracted from the B vein system in open pit and underground operations.

After releasing new resource estimates last year, the company set out to test portions of the deposit where more definition was required. This included grid-style drilling in the Siwash North vein zone where the WD and B veins were the principle targets. Results were supportive of the high-grade, bulk tonnage potential of the deposit and will be integrated into a preliminary economic assessment. The WD and B veins can contain bonanza-grade intersections such as seen in hole SND10-011 which cut 6.52 m grading 23.74 g/t Au. The company explored some of the other targets on the property as well, including at the South zone located roughly 2.5 km south of the Siwash North zone. At that zone, near surface intersections such as hole SSD 10-003 which intersected 3.2 m grading 1.14 g/t Au and hole SSD 10-004 that cut 7.81 m grading 1.04 g/t Au, have shown the property has significant potential outside the current focus area.

Bitterroot Resources Ltd was active on the **North Brenda** property near Peachland where the company is



Figure 26. Mining ore from the BK and North veins at the Bralorne underground gold mine in an effort to stockpile a year's feed and restart the mill.



Figure 27. Loading explosives into an ore cart at the Bralorne mine.

exploring for two styles of mineralization: porphyry copper-molybdenum mineralization similar to the closed Brenda Mine and structurally-hosted epithermal gold similar to the nearby Elk deposit. This year the company completed a high-resolution airborne magnetic survey and expanded its property to the west, acquiring ground with geological similarities to the Elk project which is located 6 km to the southwest. The company maintains a Memorandum of Understanding with the Westbank First Nation in support of establishing a positive long-term

relationship founded on respect, consultation and accommodation of the Nation's Aboriginal rights.

Partners Molycor Gold Corp and Goldrea Resources Corp released drill results from a late 2009 program at the **Flap** gold project located 45 km northwest of Kelowna. Previous work on the property in the late 1980s yielded erratic grades of gold mineralization within a quartz stockwork hosted in agglomerates and tuffs of the Devonian to Triassic Harper Ranch Group. Large diameter reverse circulation drilling was employed to reduce some of the nugget effect that seems to characterize the mineralization at the property. Results ranged from 0.31-1.47 g/t Au over intervals of 1.52-4.57 m and are being used to evaluate the potential for underground vat leach extraction.

SIMILKAMEEN RIVER

Southwest of the village of Tulameen and along the Tulameen River, Huldra Silver Inc reinvigorated its effort at the **Treasure Mountain** vein silver-lead-zinc project. The company hopes to re-submit an application for a 135 t/d underground mine operating on a seasonal basis and involving on-site gravity concentration. The Main zone at the project currently hosts an indicated resource of 33 Kt of 830 g/t Ag, 4.16% Pb and 3.8% Zn at a 311 g/t cut-off and an inferred resource of 120 Kt of 926 g/t Ag, 2.79% Pb and 4.36% Zn. The company confirmed grades this year by sampling a 6000 tonnes stockpile which gave averaged results of 645 g/t Ag, 5.05% Pb and 3.2% Zn. There is currently 2750 m of underground development and this year the company reconstructed a portal and completed a vent raise in preparation for more development.

The company had an exciting year in exploration as it discovered a new area of mineralization upwards of a kilometre away from its Main zone. Called the East zone extension, the company trenched historical soil anomalies to discover high-grade mineralization. This gave a highlight chip sample result of 30.5 cm grading 2920 g/t Ag, 38.5% Pb and 0.5% Zn. The company completed a series of shallow drillholes in an effort to better understand the potential of the discovery. Results are pending.

Sediment-hosted Gold Projects

SOUTH CARIBOO-CHILCOTIN PLATEAU

Spanish Mountain Gold Ltd (formerly Skygold Ventures Ltd) made strides this year in bringing its **Spanish Mountain** project closer to feasibility stage. The company is exploring for bulk-mineable gold mineralization in a series of Triassic black phyllites and siltstones nearby the town of Likely. Positive results were reported for gold recovery test work whereby an optimized gravity concentration, flotation and cyanidation

process could produce recoveries of 90%. Early challenges to this work included the fineness of the associated sulphides and carbonaceous nature of the hostrocks. Work is ongoing to test the recovery of gold from concentrates using cyanidation. The company also released the results of a preliminary economic assessment of the project. This study contemplated a 40 000 t/d operation producing up to 6 650 000 g/y (213 800 oz/y) for the first 5 years at a cash cost of \$18.30/g (\$570/oz). A 10 year mine life is estimated at an initial capital cost of \$447 million (excluding leased mining equipment). A key assumption is the use of a gold value of US\$1100 /oz for this study. The mineral inventory for the project is stated at 77.4 Mt at a grade of 0.55 g/t Au in the measured and indicated category and 39.5 Mt at a grade of 0.48 g/t in the inferred resource category: both the Main and North zones are included in these estimates.

The company completed a drill program this year to explore for more resources and for geotechnical and metallurgical purposes. Some encouraging results from a series of holes yielded intersections of 26.5 to 82 m and grades of 0.62 to 1.21 g/t Au in areas outside the current resource area. In particular, hole 10-DDH-912 was collared 150 m west of the Main zone and intersected 26.5 m grading 1.18 g/t Au. This collection of results has demonstrated mineralization at the property can extend up to 350 m away from the Main and North zones. The company plans on following up these areas in 2011, as well as at its recently acquired Cedar Creek property, in an effort to expand known resources and confirm resources that lie within inferred category. Further metallurgical work and review of the proposed tailings storage facility will also be conducted in a push toward pre-feasibility and feasibility studies.

Northwest of the Spanish Mountain Gold Ltd project is another **Spanish Mountain** gold property under exploration by Acrex Ventures Ltd. The company, along trend from its name sake neighbor, has extended a significant gold-in-soil and geophysical anomaly that was drilled this year. The company reports it has confirmed the presence of a gold-bearing structure with the best drill result being found in hole SpM1007 that intersected 15.7 m grading 0.677 g/t Au with a higher grade interval of 3.0 m grading 1.14 g/t Au. To the northwest of this project, and along a regional trend, is the Tiex Inc **Gold Creek** project that was drilled this year utilizing a sonic drilling method that boasts better recoveries than in previous programs. Two holes were completed near previous drillholes; an improved intersection of 82.29 m grading 0.559 g/t Au was returned in hole GC 10-02.

Spanish Mountain Gold Ltd also drilled the **Thunder Ridge** (Spanish Creek) property this year as part of its search for gold in similar geological settings to its flagship Spanish Mountain property. Located northeast of Canim Lake, the company has been exploring within a 1500 m by 500-600 m wide gold-in-soil anomaly. Gold mineralization appears to be associated with northeast dipping quartz veins, wallrock silicification, pyrite and

sphalerite. Highlight holes include 10-SC-31 which intersected 0.77 g/t Au over 54 m and 10-SC-27 which intersected 0.77 g/t Au over 20 m. In those same holes, there were high-grade intercepts of 19.15 g/t Au and 83.80 g/t Ag over 1.0 m and 1.97 g/t Au and 100.0 g/t Ag over 1.0 m, respectively. The anomalous high-grade silver values at this property and may differentiate it from the Spanish Mountain property.

Nearby, Happy Creek Minerals Ltd continued grassroots-level work at its **Golden Ledge** (Art-DL) property where the underlying geology is similar to the Thunder Ridge zone and the company reports positive gold and silver values in soil and rock samples over an expanded 5 km trend. Historical results at the property include a 1.0 m interval of 42.9 g/t Au and 34.7 g/t Ag reported near a 19th century adit. An eleven hole drill program tested the concept that it may be a northern extension of the Thunder Ridge mineralized trend. No significant values were encountered in this program and the company is returning the property to the optionor.

Massive Sulphide Projects

THOMPSON RIVERS AND SHUSWAP LAKE

Imperial Metals Corporation got a late start this season at its **Ruddock Creek** project, located within the Script Ranges about 100 km north of Revelstoke (Figure 28). Activities commenced after the company signed a Memorandum of Understanding with Itochu Corporation and Mitsui Mining and Smelting Co Ltd where these two companies can earn a 50% interest in the project by providing financing. The company drilled the Creek zone this season, a 2006 discovery that was subject to wide-spaced drilling in 2007 and found to be very similar in character to the E zone – the primary focus at the project. Results for this drilling are pending. The company dewatered the decline to the E zone this fall and anticipates extending the workings by 400 m to drill test the E zone to depth. Current resources for the E zone include an indicated resource of 2.3 Mt of 7.8% Zn and 1.6% Pb and an inferred resource of 1.5 Mt of 6.5% Zn and 1.3% Pb, both at a cut-off of 4% combined Pb plus Zn.

At the **Harper Creek** copper project, located 10 km southwest of Vavenby, Yellowhead Mining Inc roared back after a relatively quiet year in 2009 (Figure 29). The company completed a public listing and undertook new financings. Prior to listing, the company closed the sale of a 15% interest to Anthill Resources, a private British Columbia company that is building a portfolio of resource-based investments. A new resource estimate has been prepared for the project with an indicated resource of 569 Mt of 0.32% Cu at a 0.2% Cu cut-off. The deposit comprises tabular shaped zones of volcanogenic sulphide

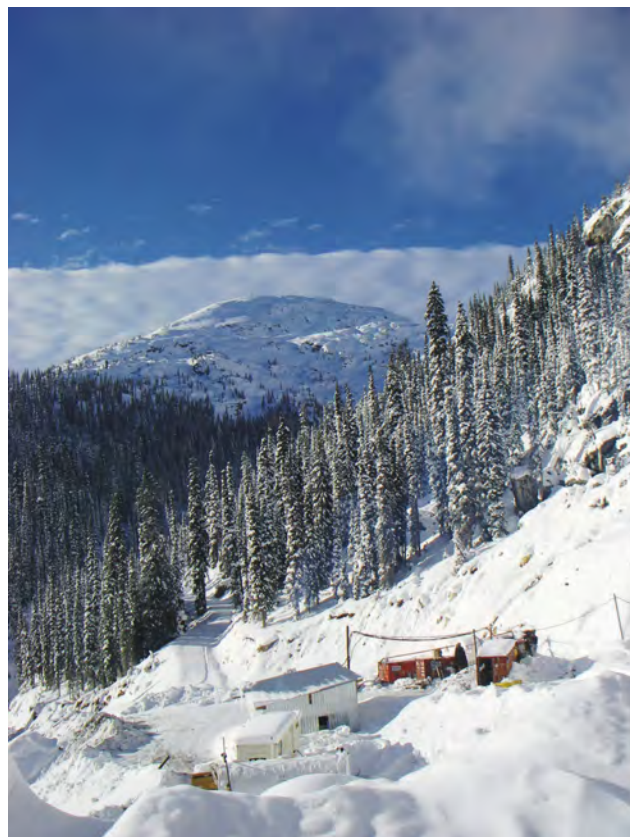


Figure 28. A fall start to operations this year at the Ruddock Creek zinc-lead project north of Revelstoke means working under snowy conditions.



Figure 29. An aerial view of the Harper Creek deposit, east of Clearwater, showing the North Thompson River valley in the background - and proximity to rail, road and power infrastructure (image courtesy of Yellowhead Mining Inc website).

mineralization hosted within highly deformed Late Devonian metavolcanic rocks of the Eagle Bay Assemblage. A preliminary economic assessment is currently underway which will update the resource again and include precious metals for the first time. This may

place this deposit among the larger undeveloped resources within the province. The assessment will model a 70 000 t/d mine producing up to 83 000 t/y of copper over a 20 year mine life. The project is very well located near necessary infrastructure and is currently within the British Columbia Environmental Assessment (EA) process. A feasibility study is proposed to start soon after the completion of the preliminary economic assessment.

A fall program of drilling is currently underway to expand the open pit resources. The company reports the deposit is open ended to the north and that the central sections are sparsely drilled. A program of re-logging core from the 1960s and 1970s continues.

Several other projects were active in the Adams Plateau with most exploring for volcanogenic massive sulphide mineralization within the highly prospective Eagle Bay Assemblage. Shenul Capital Inc drilled the **Chu Chua** property this year on coincident airborne EM and VLF-EM geophysical targets; however, no significant mineralization was encountered. On the **Moore** property near East Barriere Lake, Almo Capital Corp drilled sixteen holes in search of mineralization within metamorphosed andesite and felsic volcanic rocks of the Eagle Bay Assemblage. Southeast of Barriere, Bitterroot Resources Ltd completed geological mapping and gravity surveys on its **SPN** project this year. Eagle Plains Resources Ltd completed grassroots level work on its **Acacia** property near Adams Lake.

Geologist Leo Lindinger discovered new mineralization on his **Argent** property located near the Raft River and northeast of Clearwater. Described as a manto-type volcanogenic massive sulphide occurrence within a skarn host the mineralization gave some of the best zinc results ever sampled by Leo with chip samples 905692 grading 40.5% Zn, 12% Pb and 160 g/t Ag and 905693 grading 13% Zn, 5.1% Pb and 75 g/t Ag (Figure 30).

SIMILKAMEEN RIVER

Supreme Resources Ltd acquired the **Law's Camp** property located around 10 km west-northwest of Tulameen. The property hosts the historical Liverpool, Shelley and Chicago prospects which are described as stratabound massive sulphide occurrences containing copper, lead, zinc, silver and gold. The sulphide horizons are contained within Triassic schist and limestone of the Nicola Group near the contact of the Eagle Plutonic Complex. Subsequently the company also picked up the St Lawrence and St George claims giving it control over a majority of properties in this historical camp. Nearby, prospector Edgar Mosley continues exploring his **Spar** property in a similar setting.

CARIBOO

Southeast of Cariboo Lake and 35 km northeast of Likely, Barker Minerals Ltd trenched the **Cariboo Zinc**

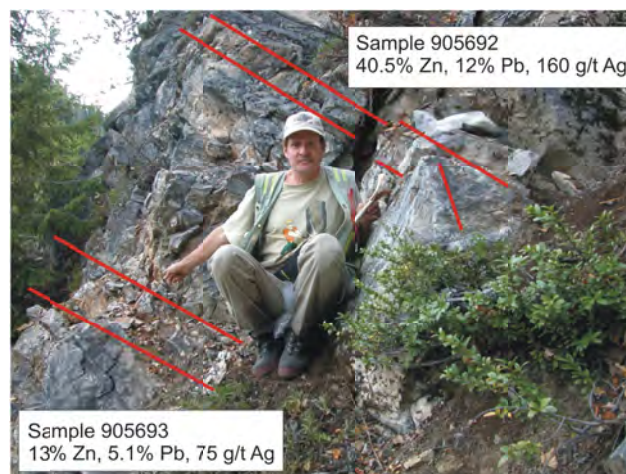


Figure 30. Geologist Leo Lindinger discovered new volcanogenic massive sulphide mineralization on his Argent property located near the Raft River and northeast of Clearwater.

project. The prospect has been previously described as a Kuroko-style polymetallic sulphide (VMS) deposit hosted by felsic volcanic rocks. Most of the work was completed around the Main zone which has been drilled in past programs, yet more remains to be learned about the deposit's geological orientation and extent. The company also trenched the **Blackbear** project which is located approximately 15 km to the south of the Cariboo Zinc property and 5 km northeast of the Spanish Mountain project. The property has historically been explored for high-grade silver and gold veins and in this program the company also tested the hostrocks for their metals contents. Zincore Metals Inc optioned another **Cariboo Zinc** property from Pembroke Mining Corp early in the year. Some permitting delays prevented them from completing a proposed drill program this year. The company reported a chip sample from the Gunn zone graded 7.8% Zn over 17 m including 10.12% Zn over 10 m and 21.8% Zn over 2.8 m.

Magmatic Projects

THOMPSON RIVERS AND SHUSWAP LAKE

At the **Blue River** tantalum and niobium project, 30 km north of Blue River, Commerce Resources Corp spent the year completing definition drilling aimed at upgrading resources. Work continues on the preliminary economic assessment which will present for the first time solids modeling, preliminary metallurgy and a flow sheet design. Current resource estimates are reported for the Upper Fir carbonatite and give an indicated resource of 7.38 Mt at 217 g/t Ta₂O₅ and 1202 g/t Nb₂O₅ and inferred resource of 16.49 Mt of 213 g/t Ta₂O₅ and 1222 g/t Nb₂O₅ at a 175 g/t Ta₂O₅ cut-off. Most of the resources are contained within a series of north-south trending, sill-like, carbonatite bodies within a 91 m thick geological package that extends roughly 1450 m in length and over 800 m

width. The minerals containing the tantalum and niobium are primarily pyrochlore and ferrocolumbite.

In October the company and the Simpcw First Nation signed an innovative mineral exploration agreement. The agreement will ensure the Simpcw First Nation's concern about the environmental health of their traditional territory is honored during all phases of mineral exploration as well as there will be a focus on training and hiring people from their community.

SIMILKAMEEN RIVER

Near Tulameen, private company Magnetite Ridge Metals and Minerals Ltd of Kamloops, continued to investigate its large magnetite deposit located at its **Magnetite Ridge** project and within the Tulameen Ultramafic Complex, while preparing to advance an application for small scale mining, including on-site pilot scale magnetic separation. The company engaged UBC to perform testing on core samples, and is investigating metallurgical processes that may facilitate the production of by-product ferro-V, ferro-Ti, and PGM's.

OUTLOOK FOR 2011

The Thompson-Okanagan-Cariboo region of British Columbia is set to lead the province in developing new mines over the next two years with scheduled openings at the Copper Mountain and New Afton mines in 2011 and 2012 respectively. These mines have benefitted greatly from existing infrastructure, geography and previous mine operations at the sites. With the Ajax project and Harper Creek being evaluated at an accelerated pace, it should follow suit that they enjoy many of these advantages as they approach mine development. The development of the Prosperity project has significant potential provincial and national benefits alongside the opportunities it could create for local communities and First Nations if a new mine plan could resolve current concerns. Given the company's long term investment in the project and attractive commodity prices, there is reason to be optimistic that the company will consider revising their plans.

Recent capital investments at operating mines seem to be well timed for the recovery of international economies and most of these operations should have very positive times ahead of them. The Highland Valley and Gibraltar operations have mine lives to 2020 and beyond. The Mount Polley mine is aggressively exploring to extend its mine life beyond the middle of this decade and current pit expansion plans suggest this may occur.

The attraction to find gold deposits will likely continue through 2011 as the values of the precious metal are high enough to potentially place a host of deposits into a favorable economic window. Near-surface, bulk-mineable deposits with gold grades in the single gram or less range share some economic parameters at current

metal prices with open pit copper-porphyry deposits. Higher grade veins also remain attractive, but developing tonnages and controlling mining costs will affect these operations more so than the volatility of gold prices.

Expenditures for volcanogenic-hosted zinc, lead and copper should see an increase as demands for zinc, in particular, tracks global recoveries in a fashion more similar to copper. If silver values continue to increase as they have recently, this metal may singularly drive a resurgence in exploration for deposit types rich in the metal. With a lead-zinc smelter in the province, and the overall high value of multi-commodity deposits, these should be attractive targets to the industry.

The high-technology sector will consume increasing amounts of rare metals such as tantalum, niobium, lithium, zirconium, *etc.* Asia's dominance in the production and distribution of rare metals will remain a key to the supply, demand and pricing of this metal group. Meeting global supply shortages from provincial resources is uncharted territory for the industry and represents an exciting opportunity.