

# EXPLORATION AND MINING IN COAST AREA, BRITISH COLUMBIA

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## SUMMARY AND TRENDS

This report covers the provincial government's new natural resource sector Coast Area, comprising the South Coast and West Coast Regions including Haida Gwaii. The Coast Area corresponds to the former Southwestern Mining Region plus the islands of Haida Gwaii. As the level of exploration activity on Haida Gwaii is low, the addition has had little impact on the statistics collected for this report. Data for the former mining region and the new area are compared without adjustment.

The Coast Area has one major metal mine and one coal mine, both of which report increases in production in 2010 over 2009. Myra Falls Operations produces zinc, copper, gold and silver in concentrates and the Quinsam mine produces thermal coal. Quinsam is now within the Vitol Group of companies and exports account for the majority of its shipments. Myra Falls reports throughput similar to or higher than the previous year, lower costs and recent exploration successes, which, together with stronger zinc prices, places the mine in a vastly better position than two years ago.

The major industrial minerals and aggregate operations also remained in production, although many have found the period of reduced demand since 2008 to be challenging. Construction activity is well off 2005-2008 peaks, and with it demand for construction materials. Several quarries reported increases in volume over 2009, though these were generally on the order of a few percent. One major quarry indicated that they will close indefinitely at the end of the year.

Exploration activity was tracked at over 50 exploration projects in the region in 2010 for a total of approximately \$15 million in exploration expenditures (Figure 1). With two major projects in the evaluation stages, this figure includes significant post-exploration mine evaluation expenditures. Total exploration drilling is estimated at approximately 38 000 m (Figure 2). The majority of projects (Figure 3) were of a preliminary or grass roots nature with relatively modest expenditures (Figure 4). There were however at least four projects with 2010 expenditures in excess of \$1 million.

Orogenic gold veins were attractive targets in 2010 with significant programs at Mineral Creek, Valentine Mountain and Ladner Creek, however more exploration spending focused on porphyry targets (Figure 5). Among these, porphyry mineralization associated with Tertiary intrusions got the most attention. Catface, Okeover and

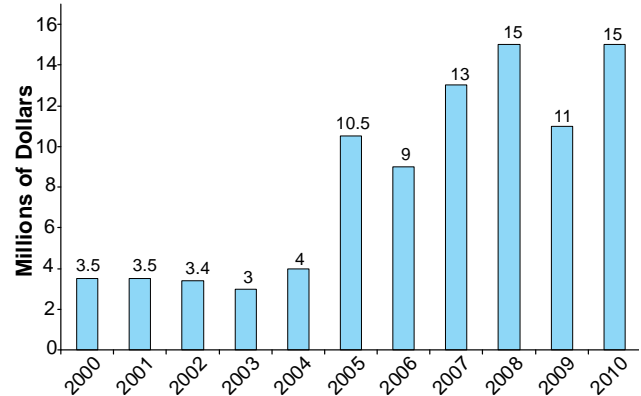


Figure 1. Exploration spending estimates 2000-2010. The addition of Haida Gwaii to the region in 2010 had negligible impact on the statistics.

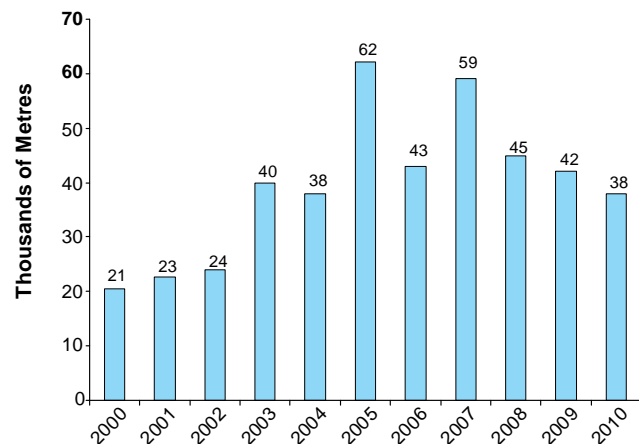


Figure 2. Exploration drilling in the southwestern region (Coast Area) 2000-2010.

Salal Creek are among the better known examples. Also active were some recently discovered or recently reactivated porphyry prospects such as Rogers Creek and NIC.

Renewed interest in iron skarns continued in 2010. These are considered not only as sources of magnetite for coal washing plants, but as potential sources of direct shipping iron ore. The largest of these projects has for several years been the Pearson project near Port Renfrew. Since the 1970s or 80s this deposit type has been considered uneconomic as a source of iron ore, however, recent prices supported by demand from Asia and

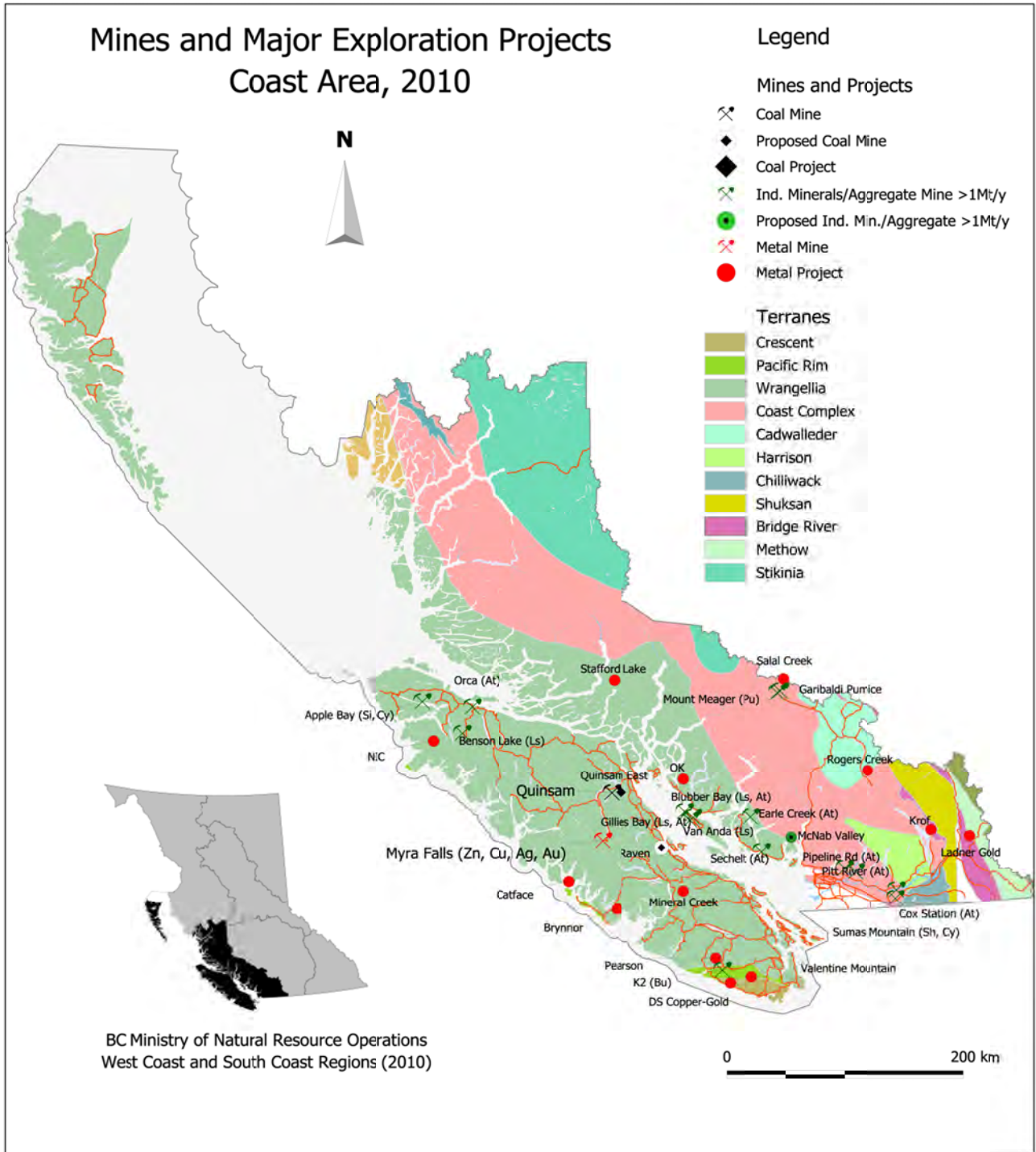


Figure 3. Operating mines and selected major exploration projects in the Coast Area, 2010.

consolidation of iron resources elsewhere in the world are causing some to re-evaluate magnetite skarn deposits on the British Columbia coast.

The Raven coal project continued its progress through federal and provincial environmental assessment

pre-application processes and released a pre-feasibility study, concurrent with work on a full feasibility study. Under consideration is an approximately 2 million tonne-per-year underground metallurgical coal mine.

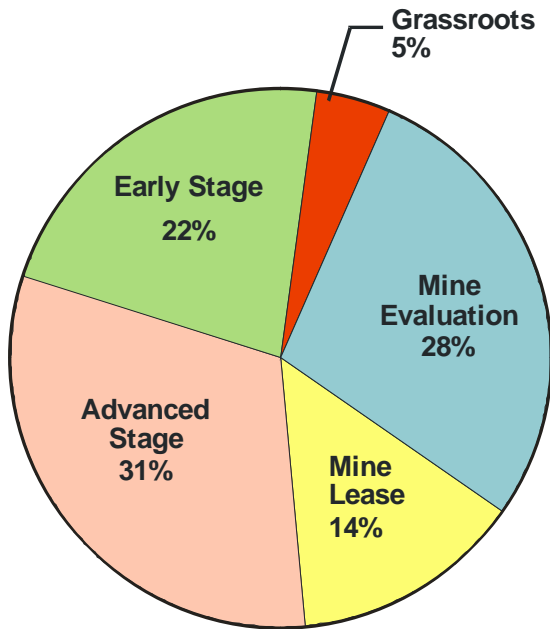


Figure 4. Coast Area exploration spending by exploration stage, 2010. Work at Myra Falls represents most of the on-lease exploration. The Raven coal project represents most of the mine-evaluation stage work.

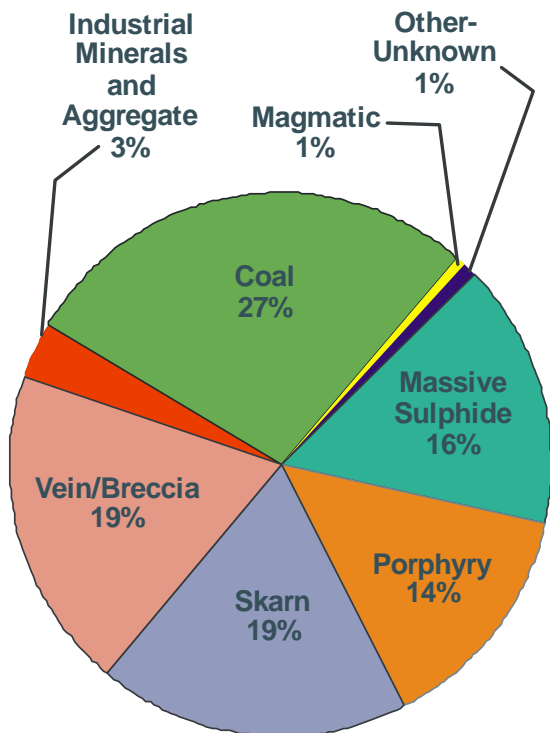


Figure 5. Coast Area exploration spending by primary target type. The Pearson project represents the majority of the skarn exploration spending, the Raven project feasibility, environmental and public consultation work a majority of the coal total.

## MINES AND QUARRIES

The location of operating mines and selected exploration projects are shown in Figure 3. Mine production and reserves statistics are given in Table 1.

### METAL

Breakwater resources Ltd, through its subsidiary NVI Mining owns and operates an underground polymetallic mine on central Vancouver Island. By the end of the third quarter, **Myra Falls** Operations (MINFILE 092F 330) had milled 380 192 tonnes of 7.6% Zn, 1.3% Cu, 1.8 g/t Au, 58 g/t Ag. This equated to 25 842 tonnes Zn, 3947 tonnes Cu, 15 638 oz Au, 548 873 oz Ag in concentrate. The mine is on track to mill roughly half a million tonnes in 2010. Work is ongoing to improve metallurgical recoveries in the mill. Total cash costs per pound of zinc were reported at 31 cents, net of by product credits. This is down from 56 cents in 2009 and a dollar in 2008.

Proven and probable reserves as of December 31, 2009 were 6.2 Mt of 5.1% Zn, 0.5% Pb, 0.9% Cu, 44 g/t Ag, 1.3 g/t Au. As of January 2010 the mine had 254 employees.

The 2010 capital expenditure budget at the mine is \$10.2 million, with major expenditures including work on a tailings disposal area, ramp development and mill improvements (Figure 6). Drifting on 24-level toward the Marshall zone and in the Price mine is to be used initially for exploration purposes.

The Myra Falls camp comprises a number of Kuroko type, or bimodal felsic type VMS deposits, mined since 1966, mostly by underground methods. The Myra Falls camp has a history of replacing reserves through exploration. Although mid-year estimates were not released, the company did indicate that it had “substantially replaced reserves” mined in 2009 through exploration peripheral to existing infrastructure. This would provide for a 13-year mine life.

The deposits are hosted by the Paleozoic Sicker Group, which also hosts among others, past producers in the Mount Sicker area (MINFILE 092B 001-003) and the Lara project (MINFILE 092B 129), a developed prospect a few km northwest of Mount Sicker. Myra Falls is in the Buttle Lake uplift, where Sicker Group basement is exposed along a northwest trending antiform roughly in the centre of Vancouver Island. Ore bodies are found in two horizons in the Myra Formation.

### COAL

**Quinsam** coal mine (MINFILE 092F 319) is expected to produce approximately 445 000 tonnes of clean coal in 2010. This is up from 390 000 tonnes in 2009. Quinsam is an underground room and pillar

**TABLE 1. FORECAST MINE PRODUCTION, COAST AREA, 2010**

<b>MINE</b>	<b>OPERATOR</b>	<b>COMMODITY</b>	<b>MINE WORK- FORCE</b>	<b>FORECAST PRODUCTION 2010</b>	<b>PRODUCTION 2009</b>	<b>RESERVES as of Dec 31, 2009</b>
<b>Metals</b>						
<b>Myra Falls Operations</b>	NVI Mining Ltd (Breakwater Resources Ltd)	Zn-Cu-Au-Ag	254	To end of Q3: 25 842 t Zn 3 947 t Cu 486.4 kg Au 17 072 kg Ag metal in concentrate)	30 900 t Zn 3 349 t Cu 482.9 kg Au 17 978 kg Ag (metal in concentrate)	6.2 Mt 5.1% Zn 0.5% Pb 0.9% Cu 1.3 g/t Au 44 g/t Ag (proven+ probable)
<b>Coal</b>						
<b>Quinsam</b>	Quinsam Coal Corp (Hillsborough Resources Ltd)	Thermal coal	Approx 130 (2009)	445 000 t clean coal	390 000 t clean coal	22.073 Mt proven+ probable in situ reserves 2008)
<b>Industrial Minerals</b>						
<b>Apple Bay (PEM 100)</b>	Electra Gold Ltd	Chalky geyserite	8	80-90 000 t	90 000 t	~5 million t
<b>Benson Lake</b>	Imasco Minerals Inc	White marble	4	29 000 t	26 000 t	100+ years
<b>Blubber Bay</b>	Ash Grove Cement Company	Limestone aggregate, dolomitic limestone	19	270 000 t (incl up to 90 000 t dolomite)	221 000 t (incl. 13 000 t dolomite)	100+ years
<b>Garibaldi Pumice</b>	Garibaldi Pumice Ltd	Pumice	4	30 000 m3	20 000 m3	100+ years
<b>Gillies Bay</b>	(Lafarge North America Inc)	Limestone, aggregate	65	3.5 Mt	3.4 Mt	100+ years
<b>K2</b>	K2 Stone Quarries Inc	Building Stone	4	16 000 t	14 000 t	
<b>Monteith Bay</b>	Lehigh Northwest Cement Limited	Geyserite		Care and Maintenance 2008-2010		
<b>Mount Meager</b>	Great Pacific Pumice Ltd	Pumice	2	5 500 m3	3000 m3	100+ years
<b>Sumas Mountain</b>	Sumas Shale Ltd (Clayburn Industrial Group and cement manufacturer partners)	Shale and clay	10	365 000 t	285 000 t	~70 years
<b>Van Anda</b>	Imperial Limestone Company Ltd (JA Jack & Sons Inc)	Limestone	8	230 000 t	209 000 t	~50 years





Figure 6. Mill improvements accounted for part of the capital expenditures at Myra Falls in 2010.

operation, producing thermal coal near Campbell River since 1986. Operator Hillsborough Resources Limited is now a part of the privately-owned Vitol Group, and as such they no longer release current reserve estimates. Vitol is an international energy trading company that entered the coal market in 2006. International markets (North and South America and around the Pacific Rim) now account for approximately 2/3 of Quinsam's shipments, with approximately 1/3 going to local cement plants.

An application to mine a new area, the 7-South, remains under review (Figure 7). This is a higher sulphur coal (1.5-2% as compared to 0.5% mined to present) and storage of potentially acid generating rejects is a key consideration in the mine plan.

The coal measures exploited at Quinsam are within the Comox Formation, part of the Upper Cretaceous Nanaimo Group.

## INDUSTRIAL MINERALS AND AGGREGATES

Industrial minerals and aggregates are major components of the mining industry in the Coast Area and are for the most part linked to the construction industry. They experienced a marked decrease in demand beginning in the last quarter of 2008 which continued through 2010 with monthly variations. While there are modest improvements over 2009, a major producer reports demand is 15-20% below normalized volumes for recent years. Those depending on the western US market have definitely felt the effects of the decline in the housing market there. Production from government-run gravel pits are thought have a small but significant impact on the market. Dredged river sand is also used for some applications such as construction pre-loading. Quarries with active permits number in the hundreds. Only a



Figure 7. View of the 7-South area at Quinsam. The mine plan is for an underground operation.

selection of the largest is profiled below to establish an overall trend.

## INDUSTRIAL MINERALS

### Central Coast

Glacial marine clay is found in several locations on the central coast. It has applications in medicine and cosmetics. Ironwood Clay Company Inc has a permitted quarry at **DeCosmos Lagoon** on Hunter Island. There was no mining at the quarry in 2010, however they expect to resume early in 2011. Ironwood did extract a bulk sample from Hvidsten Inlet in 2010. The clay is used in the manufacture of cosmetics and skin care products. The company has manufacturing facilities in Richmond.

There are other smaller, intermittent producers of glacial clay, for example King Island clay is sold through Aviva Natural Health Solutions Inc. Precision Labs Ltd also markets glacial clay products.

### Northern Vancouver Island

The **Apple Bay** chalky geysirite quarry (MINFILE 092L 150) on northern Vancouver Island is expected to produce and ship volumes similar to the previous year (80 000 to 90 000 tonnes). The silica-alumina products are sold to Ash Grove and Lafarge cement plants in Seattle and Richmond.

Imasco Minerals Inc mines a high-brightness white calcium carbonate at its **Benson Lake** mine (MINFILE 092L 295) on northern Vancouver Island. A typical analysis is 95% CaCO<sub>3</sub>, 4.4% MgCO<sub>3</sub>, 0.1% Fe<sub>2</sub>O<sub>3</sub>. Most of the product finds application as high-brightness white filler in paints, coating and PVC among other products. They expect to produce approximately 29 000 tonnes in 2010 and have shipped somewhat more (32 000

tonnes). The quarry has been in operation for over 25 years. It has three employees plus contractors.

### **Texada Island**

The largest quarry in British Columbia is Lafarge North America's limestone operation near **Gillies Bay** (MINFILE 092F 395) on Texada Island. It is operated by subsidiary Texada Quarrying Ltd and is expected to ship approximately 3.5 Mt in 2010, very similar to 2009. The operation recalled some laid-off workers and the number employed now stands at 65. The large majority of its limestone product (approximately 90%) is used in cement manufacture and shipped to area cement plants. Some limestone and dike-rock are sold as aggregate. The out-loading facility can accommodate Panamax freighters in addition to barges, and they continue to make shipments to western North America and Hawaii. This port facility also handles the thermal coal from the Quinsam mine that is loaded onto freighters.

Ash Grove Cement Company's **Blubber Bay** quarry (MINFILE 092F 479) expects to produce and ship approximately 270 000 tonnes in 2010 (Figure 8). The majority of this is limestone aggregate. Up to 90 000 tonnes is dolomite, shipped to Oregon. The quarry is scheduled to suspend production indefinitely at the end of 2010. It employed 17 hourly workers and 2 staff through November 2010. The quarry has a history dating back to 1907, when the Blubber Bay Syndicate constructed a lime kiln.

The **Imperial Limestone** quarry near Van Anda (MINFILE 092F 394) is owned by J.A. Jack & Sons Inc of Seattle. It expects to produce and ship approximately 230 000 tonnes in 2010. At current rates of production, reserves are sufficient for approximately 50 years. Nearly all shipments go to the Seattle parent company, a processor and supplier of industrial and agricultural calcium carbonate products. The majority is used in the construction industry, but a significant amount of the product is also used in the manufacture of glass containers. There are a number of other applications. Their chemical grade products have a CaCO<sub>3</sub> content of 97% or better. Sulphide mineralization has in the past been observed and sampled by quarry staff around the edges of the quarry, returning zinc, silver, lead, copper and gold values. Recently Northstar Mining Ltd has investigated reported gold concentrations in the limestone.

### **Mainland**

Two quarries produce pumice in the **Mount Meager** area. Great Pacific Pumice Inc was active, with 5500 cubic metres mined and 2500 cubic metres trucked. The product is sold as lightweight aggregate. Garibaldi Pumice Ltd mined approximately 30 000 cubic metres, with the majority also sold as lightweight aggregate.



Figure 8. The Blubber Bay limestone quarry on Texada Island.

Garibaldi Pumice has entered the lightweight concrete market as well. They also hope to develop a market for the washed out fines, which can be used as filler or as a polishing medium. Transportation costs are significant for both of these operations. These might be mitigated somewhat if they can develop an effective, efficient means of drying the product on site.

The **Sumas Shale** quarry on Sumas Mountain (MINFILE 092GSE024, 092GSE004) is owned by Clayburn Industrial Group Ltd, operated by contractor Fraser Pacific Enterprises Inc and delivers most of its sandstone and shale product to cement plants in Richmond and Seattle through a joint venture with Lafarge North America (Sumas Shale Ltd). The quarry is on track to produce approximately 365 000 tonnes in 2010. Approximately 3-4% of the material mined is used to manufacture brick and refractory products at Clayburn's plant in Abbotsford.

### **MARBLE, BUILDING AND LANDSCAPING STONE**

Adera Natural Stone Supply Ltd supplies **Haddington Island** andesite (MINFILE 092L 146) from a historic quarry that re-opened in 2004. The product is a durable, resistant Miocene volcanic rock (70.5% silica) with a dry crushing strength of 18 428 psi. They shipped approximately 900 tonnes from stockpiles in 2010. The stone can be found on many prominent buildings (notably the British Columbia Legislative Buildings) and is being used for several restoration projects in Vancouver: City Hall, Sinclair Centre, Hotel Vancouver and the Via Rail Building.

Matrix Marble and Stone quarries marble on Vancouver Island to produce value-added products such as countertops, sinks, tiles and slabs at their Duncan shop. They currently have two quarries producing three colours: Black Carmanah (MINFILE 092C 086) from the **Gordon River** quarry, and Tlupana Blue and Island White from the **Hisnet** quarry (MINFILE 092E 020, 070). This year's

total production is approximately 230 tonnes. They mainly serve the local market (Figure 9).

The **K2 Quarry** near Port Renfrew on Vancouver Island is expected to ship over 16 000 tonnes in 2010 (18 000 short tons). The product is a fine metasediment with slaty partings used as building stone and as landscaping stone

There are other smaller producers making use of the Leech River Complex slates. For example, Van Isle Slate has a small quarry approximately 21 km east of Port Renfrew.

**Hardy Island Granite**, like Haddington, is a historic quarry that was reopened in 1999. It shipped approximately 3800 tonnes in 2010, mainly for residential and commercial construction. The product is a uniform grey Coast Plutonic Complex granodiorite with widely spaced fractures. It is distributed through Bedrock Granite Sales Ltd.

Northwest Landscape and Stone Supply Ltd continues to quarry Garibaldi volcanic rock for landscaping stone at several locations in the Squamish-Whistler Corridor. The **Spumoni** quarry operates on a mining lease and has a quarry permit. Other nearby quarry locations are operating on bulk sample permits, although there are plans to upgrade another site to regular production.

There are other small-scale and intermittent producers in the sea-to-sky corridor, including Mountain High Properties Ltd, Corridor Masonry and Alpine Mining Ltd. Bedrock Granite Sales Ltd began test quarrying in the area.

## MAJOR AGGREGATE MINES

Polaris Minerals Corporation's large **Orca** sand and gravel quarry (MINFILE 092L 220) is located near Port McNeill. The company's business model targets the California construction market, which has been severely affected by the recent recession. Consequently, the quarry is expected to produce and sell approximately 1.3-1.4 Mt in 2010, below its permitted capacity of 6 Mt. In addition to California, the quarry has also shipped to the Lower Mainland, Hawaii and recently for the first time to Alaska. The company anticipates a modest increase in demand in 2011. Orca has reserves of approximately 125 Mt and port facilities both at the quarry and in northern California capable of accommodating Panamax class ships.

Jack Cewe Ltd does not wish to publish individual production figures here, but its **Jervis Inlet** operation ranks among the larger producers in the region. Sand and gravel and crushed product are shipped by barge to the Lower Mainland market.

The **Earle Creek** operation of Lafarge North America remains among the largest producers in British Columbia, with roughly one million tonnes expected in



Figure 9. Matrix Marble and Stone's Hisnet marble quarry.

2010, similar to last year's 970 000 tonnes. Sand and gravel are shipped by barge from the location near Skookumchuck Narrows on Sechelt Inlet.

The **Sechelt Mine** of Lehigh Materials is the region's largest sand and gravel operation and will produce and ship approximately 3 Mt in 2010. The majority of the product goes to the Lower Mainland and Victoria, roughly 20% was exported to California and less than 5% goes to the local Sunshine Coast market. Employment is approximately 80 including contractors. The operation won the 2010 Jake McDonald Annual Mine Reclamation Award for a 50 hectare project which enhanced biodiversity and lessened the effects of noise, dust and light on the local community. The Sechelt Mine was the first sand and gravel operation to win the award, recipients of which are chosen by provincial government, academic and industry association members representing the British Columbia Technical and Research Committee on Reclamation.

The combined **Pipeline Road** Coquitlam sand and gravel operations of Allard Contractors Ltd, Jack Cewe Ltd and Lafarge North America are expected to have combined production similar to last year, over 1 Mt. They estimate an average volume of 750 000 cubic metres per year over three years.

Lafarge's **Pitt River** Quarry will produce approximately 1 Mt in 2010, up slightly from last year's 930 000 tonnes. This operation produces crushed rock products and ships both by truck and by barge. An expansion project is planned.

Mainland Sand and Gravel Ltd is a family-owned local business and the third largest aggregate producer in the Coast Area. **Cox Station** Quarry, the largest of Mainland's operations, is expected to ship approximately 2.1 Mt in 2010. Located on the north side of Sumas Mountain, it employs 41 people directly and ships the large majority of product by barge on the Fraser River. The product is a crushed quartz diorite. They estimate very roughly 50+ years of reserves within the current land holdings and at current rates of production.



## MINE DEVELOPMENT AND MINE EVALUATION PROJECTS

### Projects in Environmental Assessment

The **Raven** coal project (MINFILE 092F 333), a proposed underground metallurgical coal mine 20 km south of Courtenay, is in both federal and provincial environmental assessment processes. The BC Environmental Assessment Office issued a section 11 Order under the Environmental Assessment Act in March of this year and the Canadian Environmental Assessment Agency commenced an assessment in May. Majority joint venture partner Compliance Energy Corporation submitted a draft project description. Plans include construction of facilities at Port Alberni to handle loading of freighters up to Panamax class. Application Information Requirements had not been finalized at the time of writing but are anticipated shortly. The first CEAA public comment period concluded in 2010. The Agency determined that the project would continue to be assessed through a comprehensive study, as they identified no significant adverse environmental effects that could not be addressed using standard mitigation measures.

The recent phase of exploration drilling at the Raven coal project ended in 2009. This year the company released coal quality data, an updated resource estimate and results of a pre-feasibility study. The 2010 estimate has measured and indicated resources of 72.0 Mt and a further 59.4 Mt in the inferred category. The proposed mine would produce a semi soft metallurgical coal (High Volatile Bituminous A coking coal) and thermal middlings. The pre-feasibility study considers an underground room and pillar operation with a 16 year life and calculates a pre-tax net present value of \$201.9 million at an 8% discount rate. This assumes a realized price of \$142/tonnes free on board Port Alberni. A full feasibility study is ongoing. 2010 field work consisted of reclamation of the 2009 drill sites, boring and geophysical logging of one new well, installation of a nest of vibrating wire piezometers and ongoing environmental baseline monitoring.

BURNCO Rock Products Ltd's **McNab Valley Aggregate** project on Howe Sound received a section 11 Order from the provincial authorities in June. Fisheries and Oceans Canada is also required to ensure that a comprehensive study is conducted pursuant to section 5 of the Canadian Environmental Assessment Act. There was a 230 m Becker drill program, seismic survey and environmental monitoring at the site in 2010 (Figure 10).

BURNCO's proposal is for initial extraction of approximately 400 000 tonnes of sand and gravel per year from a glacial alluvial fan in the McNab Valley. Production would ramp up to between 1 and 1.6 Mt, with



Figure 10. A Becker hammer drill at McNab Creek. Photo courtesy BURNCO Rock Products Ltd.

possible temporary increases to 4 Mt for special projects. The product would be barged from a marine loading facility on the site to BURNCO's ready mix concrete plants in the Lower Mainland. They currently obtain material from the Orca quarry, among others.

Several other projects remain in the EA process but are currently dormant, or have no progress reported in 2010. One major project, the **Eagle Rock** quarry of Polaris Minerals Corporation, has a BC certificate and is substantially permitted. Completion of a feasibility study is deferred pending improvement in conditions in the target US market.

### EXPLORATION HIGHLIGHTS

A common approach to organization of exploration highlights in BCGS publications has been to move through the summaries geographically in north-to-south and west-to-east direction. There was activity on Haida Gwaii in 2010, and exploration coverage begins there. Significant exploration projects are given in Table 2.

#### *Haida Gwaii*

There was exploration at the **Sandspit Gold** prospect (MINFILE 103G 005) south of Sandspit on Moresby



**TABLE 2. SIGNIFICANT EXPLORATION PROJECTS, COAST AREA, 2010**

Property	Operator	MINFILE (NTS ref.)	Commodity	Deposit Type	Work Program	Meters Drilled
<b>Brynnor</b>	Logan Resources Ltd	092F 001	Fe (magnetite)	Fe skarn	G; MG (5.5 km)	n/a
<b>Catface</b>	Imperial Metals Corporation	092F 120, 231, 251	Cu, Mo, Ag	porphyry Cu	DD; A; G	3548 m (13 holes)
<b>DS Copper-Gold</b>	New Shoshoni Ventures Ltd	(092C.050)	Cu, Au	breccia	G; MG; IP, UTEM; DD	~1900 (13 holes)
<b>Krof</b>	Nomad Ventures Inc	092HWN070	Cu, Zn, Ag, Au	VMS	GC (soil); DD	585 m
<b>Ladner Gold</b>	Module Resources Incorporated	092HWN007, 003, 018	Au	veins	A; DD; MS	900 m (5 holes)
<b>McNab Valley</b>	BURNCO Rock Products Ltd	(092G.053)	Aggregate	sand and gravel	PD; EN; FS	230 m
<b>Mineral Creek</b>	Bitterroot Resources Ltd / Mineral Creek Ventures Inc	092F 078, 079, 331	Au, Ag	veins	AB-EM (400 km); GC (soil); UG-BU	n/a
<b>Myra Falls</b>	NVI Mining Ltd (Breakwater Resources Ltd)	092F 330	Zn, Cu, Pb, Au, Ag	VMS	DD; UG (1000+ m)	15 000 m
<b>NIC</b>	Compliance Energy Corporation	092L 266	Cu, Mo	porphyry Cu-Mo	AB; G; GC (silt, soil)	n/a
<b>OK</b>	Eastfield Resources Ltd/Prophecy Resource Corp	092K 008, 057, 155	Cu, Mo	porphyry Cu-Mo	GC (740 soil); IP (linecutting)	n/a
<b>Pearson</b>	Pacific Iron Ore Corporation	092C 022, 023, 025, 027, 091	Fe (magnetite)	Fe skarn	DD; EN	9100 m (32 holes)
<b>Quinsam East</b>	Hillsborough Resources Ltd	(092F.094)	Coal	sedimentary	A; DD; PD;	1400 m (12 holes)
<b>Raven</b>	Comox Joint Venture (Compliance Energy Corporation, Itochu Corporation, LG International Corp)	092F 333	Coal	sedimentary	R; CQ; EN; FS	n/a
<b>Rogers Creek</b>	Miocene Metals Limited	(092J.008, 009)	Cu, Au, Ag, Mo	porphyry Cu	AB; DD	1100 m (2 holes)
<b>Salal Creek</b>	Miocene Metals Limited	092JW 005	Mo	porphyry Mo	AB; GC (rock channel); DD; P	~800 m (2 holes)
<b>Stafford Lake</b>	Dentonia Resources Ltd	(092K.073, 074, 083, 084)	W	W skarn	AB-MG (565 km); GC (rock panel); G	n/a
<b>Valentine Mountain</b>	Mill Bay Ventures Inc	092B 108	Au	veins	DD; TR	1775 m (10 holes)

**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)

Island. Mega Copper Ltd drilled 335 m. The program extended a zone of gold mineralization identified in the 1980's. Also on Haida Gwaii, Tasu Global Resources Inc reported results of a late 2009 trench sampling program in the **Discovery zone** of their property on Tasu Sound. High grade gold assays are reported from epithermal (transitional to mesothermal) quartz veins up to 30 cm wide. Forty channel samples ranged from 0.18 g/t Au over 109 cm to 744.1 g/t Au over 9 cm. The best-known undeveloped epithermal gold deposit on Haida Gwaii is the Specogna deposit (MINFILE 103F 034) part of the **Harmony** project on Graham Island, owned by Taseko Mines Ltd. A 2001 resource estimate has 64 Mt grading 1.35 g/t in measured and indicated categories. Taseko has not reported any recent work.

### Central Coast

A small amount of activity was reported on the central coast, including a bulk sample by Ironwood Clay Company at Hvidsten Inlet. Prospector Dave Javorsky has done preliminary work at the **Rose** (MINFILE 092M 015), rhodonite past producer at Rivers Inlet and is considering further work. Pacific Topaz Resources Ltd has recently optioned the **Nugget Queen** (MINFILE 092L 178) with the intention of exploring in 2011.

### Northern Vancouver Island

Kobex Minerals Inc terminated its **Island Copper** option with Western Copper Corporation in 2010, following an internal scoping study. There was no 2010 exploration work. Western Copper's large land package covers the Hushamu, Red Dog and NW Expo deposits (MINFILE 092L 240, 092L 200) among a number of other occurrences.

Electra Gold Ltd is upgrading water the water treatment facility at the **Apple Bay**, or **PEM 100** quarry. They also report extending the chalky geysirite deposit by an unspecified amount. In other industrial minerals exploration activity on the North Island, Graymont Western Canada Inc conducted a small prospecting and sampling program on its **MQ**, **Nimpkish** and **Bonanza Lake** Limestone properties. The MQ is located northeast of Rupert Inlet. The other properties are east of Nimpkish Lake.

In the Klaskish Inlet area, Compliance Energy Corporation funded an exploration program at the **NIC** property (MINFILE 092L 266 and others), a copper-molybdenum porphyry prospect associated with the Klaskish granodiorite pluton, recently found to be Late Miocene in age (Figure 11). The 2010 program consisted of mapping, airborne geophysics and geochemistry. A drill program is planned as the next phase, based on results. A few km to the south, on the same land package is a recent discovery, the **Berkshire** showing, with pods



Figure 11. Mineralization exposed in a roadcut at the NIC Cu-Mo porphyry project helped renew interest in the area, explored sporadically from the 1960s to 1990s.

of massive magnetite and chalcopyrite exposed in a roadcut. Initial chip samples reportedly averaged 0.6% Cu.

Grande Portage Resources Ltd reported results of initial metallurgical testing of a bulk sample taken from the Copper Knob area at its **Merry Widow** copper gold skarn project. Gold recovery was 95.1%, silver 88.9% and copper 88.0%. Head grades were 9.9 g/t Au, 74.0 g/t Ag and 5.9% Cu. The company has a permit in place for a 10 000 tonne sample.

Homegold Resources Ltd carried out follow-up geochemistry and proposed a bulk sample at its **Bonanza River** Project where a 100 m magnetite exposure is reported at the end of a branch logging road.

On the west coast of the Island, near Harvey Cove, Homegold reports further rock geochemistry at the **Le Mare** property, following a 2009 program of prospecting soil sampling and mapping for New Destiny Mining Corp. The property has porphyry copper, molybdenum and hydrothermal clay-silica (chalky geysirite) targets. Just to the south, they also report a geochemical survey at **Lawn Point** (MINFILE 092L 184), a gold showing.

Homegold also reports work at the **Scrutor Gold** project (MINFILE 092L 100) 20 km northwest of Zeballos, where a program of rock and soil geochemistry identified three previously unreported gold showings.

Near Tahsis, Compliance Energy Corporation funded another program of airborne geophysics, mapping and geochemistry at the **Hisnit** property. Targets are porphyry and skarn deposits. This is the site of a 2004 discovery of massive magnetite and chalcopyrite, not reported until 2010. To the east, Compliance Energy also explored the **Tower** property (MINFILE 092K 124), a copper porphyry prospect near Sayward, with another program of airborne geophysics, geology and geochemistry.

## Central Vancouver Island

Compliance Energy Corporation is evaluating massive magnetite at **Camp Lake** (MINFILE 092F 571) near Campbell River for suitability as a coal washing medium (Figure 12). Possible porphyry-style base metal mineralization was also found in outcrop. The 2010 program followed up a previous airborne geophysical survey with mapping and geochemistry, including Davis Tube testing to determine the content of magnetic material. Compliance is considering a drill program as the next phase of exploration.

Late in the year, coal miner Hillsborough Resources Limited began exploration drilling 8 km to the east of the Quinsam mine site. The planned 12-hole, 1400 m program will represent a departure from recent exploration efforts located much closer to existing workings.

Western Gateway Minerals Inc drilled the **Beavertail** property in 2010, with five short holes in a 500 m program. Two short massive sulphide intersections are reported. Core had not been logged at the time of writing and the nature of mineralization not described. There are several skarns in the area. The nearest recorded is the **Blue Grouse** (MINFILE 092F 358) copper-silver lead prospect 4 km to the west. Also near Campbell River, Western Gateway Minerals Inc conducted an airborne magnetometer survey over the **Bacon Lake** iron skarn (MINFILE 092F 038).

Including drifting which is to be used initially for exploration purposes, Myra Falls had the largest exploration program in the region. A track drift extended toward the Marshall zone, to act as a base for exploration drilling. Depending upon results, the drift would be modified for production. There was also development in the **Price mine**, to be used for establishing drill platforms to explore between the west end of the Price and the east end of the South Flank lens. Another potential target is the Trumpeter lens to the north. In total, the amount of drilling for exploration purposes will be approximately 15 000 m, representing roughly 90% of 2010 drilling at the mine (Figure 13).

At Mount Washington, there was some further test assaying of a 168-tonne bulk sample taken at the **NinaGayle** last year. The average grade is 51 g/t Au. The property belongs to Cibetre Resources. A larger bulk sample is under consideration, depending on the outcome of metallurgical testing.

Imperial Metals Corporation drilled the **Catface** property (MINFIL E 092F 120, 231, 251) in 2010 (Figure 14). The 3548 m 13-hole program tested north-south continuity of the Cliff zone with a sub-horizontal hole as well as resource expansion the north and south of the zone. The Irishman Creek zone was also drilled to confirm the existence of a high-grade breccia zone. The north-south hole through the Cliff zone returned 755 m grading 0.46% Cu and 0.006% Mo. This included



Figure 12. Ron Johnston and Dan Berkshire at the Camp Lake property. Magnetite outcrop and subcrop have been mapped and sampled over a significant area and drilling is proposed in the next exploration phase.



Figure 13. Part of a copper-rich intersection at Myra Falls, evidence of the success of near-infrastructure exploration.



Figure 14. Geologists Jaime Pascoe and Jason Corlazzoli at work in the core shack at Catface Copper.



275.5 m of 0.60% Cu, 0.014% Mo and 3.52 g/t Ag. Some of the other holes in the 2010 program did not reach target depths due to ground conditions. 2009-2010 work also included re-activation of 8.4 km of road access, construction of core facilities and a program of geological mapping. Equipment is barged from Tofino to Hecate Bay, where it proceeds by road.

Catface is a copper-molybdenum porphyry deposit located approximately 15 km north of Tofino. Mineralization is associated with Eocene felsic intrusions (quartz diorite to granodiorite) intruding quartz diorite and Triassic Karmutsen volcanic rocks, both of which are mineralized. Mineralized zones include the Cliff, Irishman Creek and Hecate Bay prospects. Selkirk Metals Corp (now merged with Imperial Metals) published a resource estimate in 2009, based largely on historical drilling and results which did not incorporate molybdenum and silver. Total sulphide and mixed sulphide-oxide ore was estimated at 58.863 Mt at 0.40% Cu indicated and 262.448 Mt at 0.38% inferred resources. Oxide copper over 66% CuO/Cu is not included in the estimate.

Following a substantial drill program in 2009, Bitterroot Resources Ltd's 2010 program at **Mineral Creek** (MINFILE 092F 078, 079, 331) included compiling a GIS database of recent and historical exploration data which identified untested soil anomalies. These were ground-truthed in 2010, in addition to stream sediment and moss-mat sampling. Late in the season, an airborne VTEM survey (400 km, 100 m line spacing) was conducted over the northern part of the property. This work has identified targets for future exploration. A 2008 airborne survey to the southeast covered the area of known, drill-tested gold in quartz vein mineralization. Mineral Creek Ventures Inc continued bulk sampling of the Linda vein at Mineral Creek in 2010. The amount of gold and silver produced in 2010 are unreported at the time of writing. Monetary proceeds are shared with Bitterroot. To date the Mineral Creek property has at least 6 known high-grade gold bearing structures (en-echelon veins and shear-hosted veins) hosted in Sicker Group volcanic and sediments (Figure 15). There are also VMS targets on the property, including zinc and copper soil anomalies within the area of the 2010 VTEM survey.

G4G Resources Ltd announced plans for geophysics and mapping at the Port Alberni properties **Macktush** (MINFILE 092F 012, 221) and **Dauntless** (MINFILE 092F 168) in December. Gonzaga Resources Ltd reported 2010 work at its Kennedy River gold property (MINFILE 092F 032, 392, 448) in 2010, consisting of soil and rock geochemistry and a 3D IP survey.

Logan Resources Ltd returned to the **Brynnor** Iron Deposit on its Redford property in 2010 with a 5.5 km ground-based magnetic survey, augmenting a 2009 survey. Logan subsequently signed an option agreement with Ridgemont Capital Corp regarding the **Redford** property, intended as Ridgemont's Qualifying Transaction. The optionee Ridgemont does not report a



Figure 15. The portal of Westmin's 1989 exploration adit at Mineral Creek. It now houses a gravity mill used to process a bulk sample.

magnetite resource in their filing statement.

### *Southern Vancouver Island*

Nitinat Minerals Corporation explored the **Jasper** property (MINFILE 092C 037, 080, 081, 088) northeast of Nitinat Lake in 2010. In 2008, Inspiration Mining Corporation commissioned an airborne geophysical survey. The 2010 program consisted of prospecting and rock and soil sampling, in part following-up 2004 and 2008 work. A number of targets for further exploration have been generated. Drilling was permitted, but not begun in 2010. Despite a history dating back to the 1950's, it appears most of the work in the area has been of a preliminary nature, although some drilling was reported in the 1980's. Historically identified showings on various parts of the property have characteristics consistent with VMS, skarn and porphyry styles of mineralization (Figure 16). The property is underlain mainly by Jurassic Bonanza Group volcanics and sedimentary rocks. Strata of the Vancouver Group underlie the northeastern portion where skarn showings are documented.

Pacific Iron Ore Corporation's **Pearson** project was among the larger programs in the region again in 2010 with a 9100 m, 32-hole drill program focused on enhancing the current magnetite resource in the **Bugaboo Creek** area (MINFILE 092C 022, 023, 025, 027). A revised estimate is in preparation incorporating 2009 and 2010 results. Baseline environmental monitoring began in the fall. Pacific Iron Ore's goal is to export magnetite iron ore concentrate directly to the worldwide steel industry (Figure 17).

There are several occurrences of iron skarn on the Pearson property, some outside the Bugaboo Creek area, notably at points several km to the southeast (e.g. MINFILE 092C 030) and approximately 15 km east (MINFILE 092C 090, 091, 146).





Figure 16. Geologist Jacques Houle examining a massive sphalerite occurrence at the Jasper project.



Figure 17. Geologists Alexis Eapen and Tim Norris at Pacific Iron Ore's Pearson project core storage area at Port Renfrew.

The majority of British Columbia's iron skarns occur in the Wrangellia terrane, associated with Triassic Vancouver Group or Kunga Group limestones and with dioritic to gabbroic intrusive rocks, typically Early to mid Jurassic in age. Generally deposits are not much larger than 20 Mt magnetite ore. Some of the past-producing examples include **Tasu** (MINFILE 103C 003), **Jessie** (MINFILE 103B 026, 027, 029), **Merry Widow** (MINFILE 092L 044-050), **Ford** (MINFILE 092L 028), **Yellow Kid** (MINFILE 092F 258) and **Brynnor** (MINFILE 092F 001) among hundreds of occurrences recorded in MINFILE. Since the 1970s the world's iron production has been dominated by large Precambrian iron formations, however, there is a market in the steel industry for high grade magnetite concentrate, and some industry players expect that smaller deposits near tidewater could again become economic. Magnetite is also used as a heavy medium in coal washing plants.

New Shoshoni Ventures Ltd generated a new project in the Jordan River area. The 2010 program at the **DS** copper-gold project consisted of geology, geophysics (magnetics, IP, UTEM) and an initial drill program of

1800-2000 m in 13 holes. The initial showing that prompted the current investigation is copper-gold mineralization in breccia exposed in a borrow pit, with first recorded sampling in the 1990s. Highlights of initial drilling confirmed the copper-gold mineralization and include 39 m of 0.93% Cu and 0.71 g/t Au, 26 m of 1.2% Cu and 0.9 g/t Au, 22 m of 1.06% Cu and 0.79% Au in siliceous breccia with pyrite, chalcopyrite, bornite and minor native copper (Figure 18). The project is in the Paleocene-Eocene Crescent terrane. Country rocks are basaltic volcanic and intrusive rocks of the Metchosin Complex, which hosts the past producing **Sunro Mine** (MINFILE 092C 073) 5 km to the east. The mine produced copper, silver and gold between 1962 and 1978. New Shoshoni plans further exploration at the DS.

A drilling and trenching program occurred late in the year at the **Valentine Mountain** (MINFILE 092B 108) gold project northwest of Sooke on southern Vancouver Island. Mill Bay Ventures drilled 10 holes totalling 1775 m in the Discovery zone (Figure 19). Visible gold is reported in one of the holes, although analytical results are not yet available. Existing trenches were partially re-opened for sampling and mapping (Figure 20). Initial highlights from grab samples in the "B" vein trench were 25.7 g/t Au over 0.23 m and 57.4 g/t Au over 0.22 m. A comprehensive GIS compilation and a remote sensing project were recently completed. A 1990 (historical) resource estimate for the "C" structure in the Discovery zone has 30 660 tonnes averaging 14.7 g/t Au. Current work in combination with geo-referenced historical data is intended to assist estimation of a resource according to modern best practices. The Valentine Mountain property is underlain by metasediments and amphibolites of the Leech River Complex. Cretaceous and Eocene intrusive rocks are also mapped in the area. Two phases of deformation and amphibolite metamorphism have been attributed to Eocene events. Gold bearing quartz veins in the metamorphic rocks are the targets of current exploration.

### *Inside Coast*

Dentonia Resources Ltd continued early-stage exploration at its **Stafford Tungsten** (no MINFILE) project, a 2009 discovery of tungsten-rich skarn along a logging road 11 km from Fraser Bay in Loughborough Inlet. The 2010 program included panel sampling and an airborne magnetometer survey covering 11 000 ha of the property. A drill program at the main showing is proposed.

AZ Copper returned to its grass roots stage **Mount Hayes** property (no MINFILE) briefly in 2010 following 2007 and 2008 programs of mapping prospecting and geochemistry. The chalcopyrite and molybdenite showing is interpreted as porphyry-related.

Prophecy Resource Corp and Eastfield Resources Ltd resumed activity at the **Okeover** or **OK** project



Figure 18. Copper mineralization in siliceous breccia at the DS project on southern Vancouver Island.



Figure 19. Sampling drill core from the Valentine Mountain project.



Figure 20. A trench to be re-opened for mapping and sampling at the Valentine Mountain Gold project.

(MINFILE 092K 008, 057, 155) 20 km north of Powell River. The 2010 program included 20 km of cut line and soil geochemistry. An IP survey is planned and permitted on the same grid. The work is intended to identify step-out targets at the North Lake zone, for which there is an inferred resource of 86.8 Mt grading 0.31% Cu and 0.014% MoS<sub>2</sub>. The work identified three strong new soil anomalies. A drill program is also permitted.

The Okeover property hosts several copper-molybdenum occurrences spread over approximately five kilometres in a north-northwest direction. The North Lake zone is the most-explored of these, and it is the surrounding area that is currently targeted. Mineralization at Okeover is associated with multiphase Tertiary granodiorite or quartz diorite and quartz feldspar porphyry intrusions in Coast Plutonic Complex granodiorites and quartz diorites.

### *Sea-to-Sky*

Exploration activity between Squamish and Whistler was mainly bulk sampling of natural stone for landscaping and building purposes. A bulk sample permit may allow collection and test marketing of up to 10 000 tonnes of material on a smaller scale than fully permitted quarrying, which requires a mining lease and mine plan in order to receive a quarry permit.

There was a drill program consisting of three HQ holes totalling 175.5 m at the **Brandywine** (MINFILE 092JW 001) property of Auramex Resource Corp, designed to verify historical gold results in the Dave's Pond area. The property is a past producer of silver, gold, lead, zinc and copper in the 1970s (Figure 21).

### *Northern Cascades*

Miocene Metals Limited is a private company formed to explore Wallbridge Mining Company Limited's Southern British Columbia properties. Primary targets are occurrences of porphyry style mineralization spatially associated with Miocene intrusions in the northern Cascades magmatic arc. The company has seven projects: the **MacKenzie** and **Shulaps** are located in the Thompson-Okanagan Region, 30 km west and east of Gold Bridge, respectively. The **Salal Creek** property (MINFILE 092JW 005), northwest of Pemberton, and **Rogers Creek** northwest of Harrison Lake are located on Figure 3. **Mount Barr**, **Sunshine** and **Custer Ridge** are East and south of Chilliwack.

Preliminary prospecting and sampling were done on the MacKenzie and Shulaps properties. At Salal Creek molybdenum porphyry prospect, there was a program of airborne geophysics, prospecting, channel sampling and a 2-hole late season drill program. The first hole reached a target depth of 450 m in the Float Creek area, whereas the second hole was terminated early in the Plug Creek area





Figure 21. The Tedi Pit and Silver Tunnel at the Brandywine property were mined for silver, gold, lead, zinc and copper in the 1970s.

due to technical difficulty. There was also a two-hole 1100 m program in addition to silt and soil geochemistry at Rogers Creek, a copper-molybdenum porphyry prospect. In the southwestern portion of that property, near Fire Mountain, there was an airborne geophysical survey (magnetic, electromagnetic, radiometric). Stream sediment surveys were conducted at the grass roots southern properties Mount Barr, Sunshine and Custer Ridge. Encouraging gold results are reported at Mount Barr where anomalous results are focused along a north-south trend apparently coincident with the Hope fault.

Salal Creek has a history of intermittent exploration that dates back to 1958. Topography has presented challenges to drill programs in the Float Creek area, the most-developed prospect on the property (Figure 22). There are a number of other molybdenum occurrences associated with a quartz-monzonitic pluton (Salal Creek stock) roughly 8-10 km in diameter (Figure 23).

The Rogers Creek prospect is a more recent discovery, reported in late 2007 and explored 2008-2010. This is also spatially associated with an intrusive body believed to be Miocene in age.

At the **Sylvan** gold prospect (MINFILE 092JSE020, 029) 18 km north-northeast of Pemberton, Sean Morriss obtained a bulk sample permit (10 000 tonnes) and began work in the fall. The plan is to drift from an existing



Figure 22. A helicopter slings a rig in for a setup on Float Creek at the Salal Creek project. Photo courtesy Miocene Metals Limited.



Figure 23. Previously unreported molybdenum mineralization was noted near the foot of a retreating glacier at the Salal Creek project.

portal. Historically, samples of massive pyrrhotite and pyrite have yielded significant gold values, up to 46.6 g/t. In the area there are several vein and skarn showings in a pendant of Upper Triassic Cadwallader Group rocks in Coast Plutonic Complex intrusives.

International Millennium Mining Corp conducted a two-hole drill program at the **Jason** Ni-Cu-PGE prospect (MINFILE 092HNW076, 040) east of Harrison Lake. The target was a self potential anomaly under deep overburden in the Hut Creek area. No mineralization was reported in drill core. Access issues appear to have discouraged testing of other targets, including a Cu-Ni-PGE-Au geochemical anomaly and another area of pyrrhotite-chalcopyrite-pentlandite mineralization in pyroxenite.

There was also a two-hole drill program by Nomad Ventures at the **Krof** property (MINFILE 092HNW070) a few km to the west (Figure 24). They drilled electromagnetic anomalies identified in an airborne survey, targeting blind massive sulphides bodies south of



Figure 24. A low-impact drill program at the Krof project east of Harrison Lake.

the Krof occurrence. That showing, discovered by prospectors in 1981, consists of stratabound sulphide lenses of massive or banded sulphides interpreted as Besshi type VMS mineralization. Wallrocks are Cogburn Schist, consisting of chlorite-actinolite schist, biotite-quartz schist, graphitic phyllites and meta-chert.

Module Resources Incorporated had an exploration program at the **Ladner Gold** project (MINFILE 092HNW003, 007, 018) consisting of an approximately 900 m 5-hole surface drill program at the McMaster zone, stepping out to the north of late 2009 drilling, which extended the zone to the east. Hole McM-32-09 intercepted 2.86 g/t Au over 43.6 m including 27.6 m grading 3.96 g/t Au. The target is a potentially open-pit gold resource. An airborne geophysical survey is planned but not flown at the time of writing. Also planned is underground exploration from re-habilitated **Carolyn Mine** workings, though not by year end. A third aspect of the Ladner project is the potential gold resource in tailings of the former Carolyn Mine. Gold recovery during the 1982-1984 operating period was roughly 50%, leaving an average 1.68 g/t Au in tailings, according to recent sampling (consistent with historical results). Module commissioned preliminary metallurgical testing on composite tailings samples. An intensive whole ore cyanide leach test yielded 87.2% gold recovery and a flotation test returned an initial 63% recovery (Figure 25).

There are a number of gold showings and past producers in the Coquihalla Gold Belt, all situated close to and to the east of a zone of serpentinite and gabbro following the Hozameen fault. Significant gold mineralization is found not in the fault or the serpentinite, but in lesser structures within mixed lithologies to the east of the major fault. The common characteristic of the hostrocks appears to be the ability to support open fractures which can host mineralization. This setting has led to comparisons with the Mother Lode district of California.

Roughly 70 km to the northwest, Electra Gold Ltd



Figure 25. The Carolyn mine mill site at the Ladner gold project. The conveyor brought ore from an underground crusher.

optioned the **Dot-Apex** property, also called **Nahatlatch Gold** (MINFILE 092ISW055, 065, 090). Preliminary geochemical soil and rock sampling was encouraging (4.33 g/t in a grab sample), and the company re-habilitated access and began a follow-up program in November. There are two previously-reported gold occurrences on the property, roughly 8 km apart along the northwest trending Kwoiek Creek fault system, spatially associated with a discontinuous belt of serpentinized Bridge River ultramafic rocks. Exploration trenching and drilling are permitted. The property straddles the boundary with the Thompson-Okanagan region.

Homegold Resources Ltd restored road access and secured underground workings at the **Silver Peak** (MINFILE 092HSW011) project beginning in 2009 (Figure 26). Proposed bulk sampling had not begun at the time of writing. Main orebodies are the Eureka, Victoria and Victoria West zones, among other smaller bodies. High grade silver veins were first discovered in 1869 and mined until 1874. Veins are characterized by siderite, quartz and silver-lead rich tetrahedrite. The conglomerate host has been assigned an Eocene age.

## OUTLOOK FOR 2011

The region's metal mine, Myra Falls, overcame a period of poor profitability that threatened mine closure and is now reporting positive revenue. Consequently, increasingly ambitious exploration efforts have followed. Quarter-to-quarter profitability depends on zinc prices, but with lower costs the operations is somewhat less sensitive. The camp has good exploration potential and the mine has been able to replace reserves historically and in the current year through near-infrastructure drilling. Exploration may accelerate in 2011 as, for example, drilling of the Marshall zone proceeds from underground stations.

Quinsam coal mine now releases less information as a privately owned operation, but higher production and





Figure 26. Abe Reimer stands (hangs) by the Eureka vein and old workings. The Eureka-Victoria mine was the first Crown-granted mineral property in British Columbia.

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sales and greater access to the international market are positives. The near term plan depends on success of the application to mine the 7-South area, and the ability to market a higher sulphur product expected there. Exploration is in progress several km to the east of the mine site, whereas past exploration was much closer.

The industrial minerals and aggregates producers informally surveyed for this report do not expect drastic changes in demand in 2011, but rather are looking for gradual improvement.

The local exploration community feel that the Raven coal project is a bellwether for the industry in the region. To date the project has achieved exploration success, attracted financial partners and produced a positive pre-feasibility study. Federal and provincial environmental reviews are in progress. Located in the relatively populous Comox Valley, there is support from those looking forward to the possibility of new employment and a boost to the local economy, but also concern for potential or perceived negative impacts on the environment, the community or other industries such as tourism. The location of the proposed mine is an area open to mining activity under the province's two-zone system, subject to applicable legislation, such as that concerning permitting and environmental certification. Quinsam coal, which began operations in 1986 was the last major mine to open in the region.