NORTHWEST REGION

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SUMMARY AND TRENDS

The year was characterized by robust mine performance, great strides toward new mines and a frenetic pace of exploration, all fueled by the continuing high price for molybdenum, copper, gold, silver and zinc. There were announcements of increased ore reserves and construction of new mines. Owners of the Endako molybdenum mine are considering a major upgrade of its 42 year-old mill by a new facility with nearly twice the capacity. Even at the proposed higher mining rate, reserves at Endako are sufficient to 2024. With reserves until 2010, operations continued normally at the Huckleberry copper-molybdenum mine despite a major slide in the East pit, as mining switched to a new pit. Gold and silver production declined at Eskay Creek as ore reserves near exhaustion and the mine moves toward closure in early 2008. Mine production and reserves are listed in Table 1.1.

Four new mines and one temporarily closed mine were in development in 2007. Total development expenditure on these five projects, separate from exploration spending, is estimated at C$385 million. The Galore Creek copper-gold mine began construction on June 5 and up to 700 people were employed, chiefly building the access road and related construction camps. On November 26 Galore Creek construction was suspended by the operating partners due to escalating costs. A comprehensive review began to evaluate alternative development strategies. A production decision for the Ruby Creek molybdenum mine was announced on September 19. Limited construction activities began on the Tulsequah Chief copper-lead-zinc-silver-gold mine pending an amendment to its environmental approval certificate. The Swamp Point aggregate pit on the Portland Canal, which began development in late 2006, commenced barge shipments to Prince Rupert for construction of a new container port facility. Underground development began to re-open the Table Mountain gold mine but was put on hold while its owner merges with another junior company. A host of other projects progressed through Environmental Assessment, the mine approval process. These include the Kutcho Creek copper-zinc, Morrison copper-gold, Davidson molybdenum, Mount Klappan coal and Schaft Creek copper-molybdenum-gold projects. Looking forward to 2008, up to four more projects are expected to begin the approval process; Kerr-Sulphurets gold-copper, Turnagain nickel, Lucky Ship molybdenum and Berg copper-molybdenum.

Mineral exploration expenditures reached a new high of $170 million, a 30% increase over 2006 (Figure 1.1). Sixty-three projects exceeded $500 000 in expenditure. There were 82 drilling projects. Several new diamond drilling contractors had successful start-up years as drill rigs were in high demand; a number of projects used two, three or even four machines. Total exploration drilling in the region increased once again to about 374 000 m (Figure 1.2). Most projects now have resource estimates that are compliant with current Securities Commission standards. Major exploration projects are listed in Table 1.2.

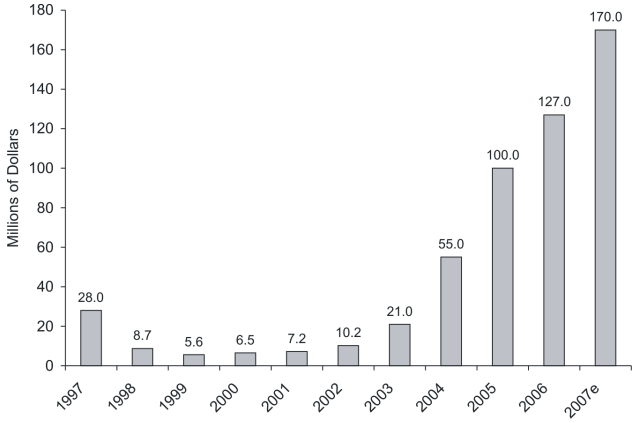

Figure 1.1. Annual exploration spending, Northwest Region.

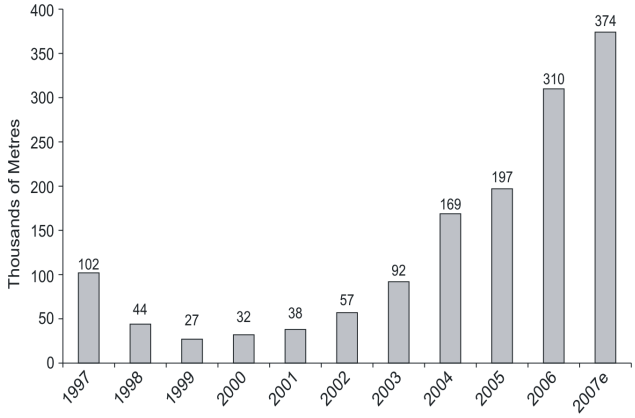

Figure 1.2. Annual exploration drilling, Northwest Region.

TABLE 1.1. MINE PRODUCTION AND RESERVES, NORTHWEST REGION

Mine	Operator	Employment (2007)	Production (2006)	Reserves (effective date)
Endako	Thompson Creek Metals Company & Sojitz Corporation	288	5160 tonnes Mo	112 MT at 0.053% Mo (Proven); 164 MT at 0.049% Mo (Probable) on April 30, 2007
Eskay Creek	Barrick Gold Corp	168	3324 kg (106 880 oz) Au, 216 235 kg Ag	123 000 T at 25.9 g/t Au, 1329 g/t Ag on Dec 31, 2006
Huckleberry	Huckleberry Mines Ltd (50% Imperial Metals Corp)	250	32 126 tonnes Cu, 139 tonnes Mo	21.9 MT at 0.400% Cu, 0.007% Mo (Probable) on Dec 31, 2006
Fireside	Fireside Minerals Inc		12 000 tonnes barite	Not available

Porphyry copper-gold, copper-molybdenum and molybdenum deposits were the most popular exploration targets and occur mainly in the Stikine district and the Skeena Arch. Gold and silver were targeted in a variety of epithermal, mesothermal and orogenic vein deposits mainly in the 'Golden Triangle' near Stewart and near Atlin. Polymetallic volcanogenic massive sulphide deposits were sought in several areas. The high volume of core drilling delayed analytic results even more than in 2006 so that the significance of many programs is unknown or incomplete at the time of writing. Exploration highlights include:

- Kerr-Sulphurets and Snowfields (adjoining properties on a continuous mineral zone that is emerging as a huge bulk-tonnage gold-copper resource)
- Red Chris (a one kilometre intercept grading 1% Cu and more than 1 g/t Au)
- Ball Creek (long drill intercept suggests a new gold-copper porphyry prospect)
- Ajax (significant increase in molybdenum deposit size and grade indicated)
- Lone Pine (extensive 'new' molybdenum mineralization intersected)
- Treaty Creek (two new gold and silver showings discovered following glacial recession)
- Dilworth (newly recognized gold and silver zones)
- Porcher Island (new gold vein discovered near old mine workings)
- Iskut (new 'Besshi-type' copper massive sulphide discovery)
- Jade at Provencher Lake (block of exceptional quality recovered)

The Rossing uranium project is noteworthy because it is a large, truly grass-roots reconnaissance program, unusual in recent decades. Employing a dedicated helicopter and a wide-ranging field crew of geochemical samplers and prospectors, it is the type of program that was commonly conducted by major companies until the early 1980s that can lead to discovery of new showings.

MINES AND QUARRIES

METAL MINES

The **Eskay Creek** mine (MINFILE 104B 008), owned by Barrick Gold Corporation, produced 3324 kg (106 880 oz) of gold and 216 235 kg of silver in 2006. The total amount mined was 141 777 tonnes of which 18 128 tonnes was direct-to-smelter ore. Ore supply in 2007 was from pillar recovery and the draw-down of a low-grade stockpile. The reserve grade at the beginning of 2007 was 25.9 g/t Au and 1329 g/t Ag. Only milling ore was produced in 2007; the supply of direct-to-smelter ore was exhausted in 2006. Eskay Creek mine is scheduled to close in early 2008. Since start-up in 1995 Eskay Creek has produced more than 100 tonnes of gold and 5000 tonnes of silver. The labour force at the mine was gradually reduced and at year-end was less than half than was required at the peak of production.

Eskay Creek is a volcanogenic massive sulphide deposit with exceptional gold and silver content and occurs at the top of the early Jurassic Hazelton Group. Higher-grade ore is stratabound and occurs in a contact mudstone. It is underlain by a rhyolite flow-dome complex and overlain by basalt and sedimentary rocks in the west limb of a north-plunging fold. Lower grade ore occurs in discordant zones in the underlying rhyolite and dacite. Sphalerite, pyrite, tetrahedrite and galena are the most abundant ore minerals. Gold occurs mainly as microscopic grains between and within sulphide minerals, or locked in pyrite. The mine is an underground trackless operation which utilizes a drift-and-fill mining method with cemented rock backfill. The gravity and flotation mill has a capacity to treat 330 tonnes of ore per day.

TABLE 1.2. MAJOR EXPLORATION PROJECTS, NORTHWEST REGION

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Ajax	Tenajon Resources Corp	103P 223	Mo	Porphyry	DD (2639 m, 12 holes)
Barbara Anne	Mountain Boy Minerals Ltd	104A 178	Pb, Zn, Ag	VMS	DD (4245 m, 31 holes)
Ball Creek	Paget Resources Corp	104G 018	Cu, Au	Porphyry	G; P; GC; DD (2920 m, 15 holes)
Berg	Terrane Metals Corp	093E 046	Cu, Mo	Porphyry	IP; DD (11 289 m, 29 holes); EN
Big Onion	Eagle Peak Resources Ltd	093L 124	Cu, Mo	Porphyry	A; DD (16 632 m, 62 holes)
Bronson Slope	Skyline Gold Corp	104B 077	Au, Cu	Porphyry	R; DD (4000 m, 11 holes); MS
Coastal Copper (Double Ed)	Kenrich-Eskay Mining Corp	103P 025	Cu, Zn	VMS	GC; DD (2583 m, 7 holes)
Coles Creek	Callinan Mines Ltd	093E 042	Cu, Mo, Au	Porphyry	DD (2644 m, 8 holes)
Copper Canyon	NovaGold Resources Inc	104G 017	Cu, Au	Porphyry	DD (4940 m, 12 holes)
Copper Creek	Firesteel Resources Inc	104J 035, 018, 005	Cu, Au	Porphyry	R; DD (1006 m, 4 holes)
Copper Pendant	SNL Enterprises Ltd		Cu, Zn	VMS	G; GC; DD (1164 m, 4 holes)
Corey	Kenrich-Eskay Mining Corp	104B 240, 387	Au, Ag	Epithermal VMS	GC; DD (5754 m, 21 holes)
Davidson (Yorke-Hardy)	Thompson Creek Metals Company	093L 110	Mo	Porphyry	EN; FS; DD (5306 m, 18 holes)
Del Norte / Midas	Sabina Resources Limited	104A 176, 161	Au, Ag	Epithermal Vein	DD (1600 m, 9 holes)
Dilworth (Helen)	Ascot Resources Ltd	104B 039, 142	Au, Ag	Epithermal	G; P; TR; DD (4855 m, 36 holes)
Eaglehead	Carmax Explorations Ltd	104I 008	Cu, Au	Porphyry	IP; DD (4098 m, 12 holes)
Electrum	American Creek Resources Ltd	104B 033	Au	Vein	DD (12 500 m, 45 holes)
Endako	Thompson Creek Mining Ltd	093K 006	Mo	Porphyry	G; AB-EM & RD; DD (10 928 m, 66 holes)
Galore Creek	Galore Creek Mining Corp	104G 090-099	Cu, Au	Alkalic Porphyry	G; P; DD (5656 m, 16 holes)
GJ (Kinaskan)	Canadian Gold Hunter Corp	104G 034, 086	Cu, Au	Porphyry	IP; MG; DD (15 833 m, 80 holes)
Grace	Galore Creek Mining Corp	104G 067	Cu, Au	Porphyry	CD; GD (7056 m, 20 holes)
Grace	Pioneer Metals Corp	104G 088	Cu, Au	Porphyry	G; GC; IP; P; DD (5207 m, 13 holes)
Homestake Ridge	Bravo Venture Group Inc	103P 216, 082, 093	Au, Ag, Zn	Vein or stratabound	DD (9320 m, 28 holes)
Huckleberry Mine	Huckleberry Mines Ltd	093E 037	Cu, Mo	Porphyry	GC; RC (74 holes); EM; MG; DD (3600 m, 25 holes)
Iskut (Johnny Mountain)	Spirit Bear Minerals Inc	104B 107, 264	Au	Vein, Porphyry	G; P; GC; DD (3000 m, 5 holes)
Jack Wilson	Romios Mines Inc	104G 021	Cu, Au	Porphyry, vein	AB-EM & MG; DD (484 m, 3 holes)
Kerr-Sulphurets	Seabridge Gold Inc	104B 103, 176, 182	Au, Cu	Porphyry	MS; DD (15 300 m, 37 holes)
Kutcho Creek	Western Keltic Mines Inc (Sherwood Copper Corp)	104I 060	Cu, Zn	VMS	EN; FS; GD; OB

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Lone Pine	Bard Ventures Ltd	093L 027, 028	Mo, Cu	Porphyry	IP; MG, DD (~7300 m, 23 holes)
Louise Lake	North American Gem Inc	093L 079	Cu, Mo, Au	Porphyry	MS; DD (6278 m, 20 holes)
Lucky Ship	New Cantech Ventures Inc	093L 053	Mo	Porphyry	DD; GD; CD (15 139 m, 50 holes); EN; PF
Morrison	Pacific Booker Minerals Inc	093M 007	Cu	Porphyry	EN; MS; PF; GD (898 m, 31 holes)
Mount Klappan	Fortune Minerals Limited	104H 020-022	Anthracite	Coal	EN; PF
Mountain Boy	Mountain Boy Minerals Ltd	104A 011	Ag, Au, Cu, Zn	Vein	DD (2179 m, 27 holes)
Nass Bay (Kincolith)	Nass Valley Gateway Ltd		Granite	Aggregate	DD (3000 m, 23 holes); MK
Newmont Lake	Romios Gold Resources Inc	104B 281, 282	Au, Ag	Skarn, VMS	G; AB-EM; IP; MG; DD; (1215 m, 9 holes)
New Moon	Anglo Columbia Mines Inc	093E 011	Cu, Zn, Ag, Au	Vein, skarn, VMS	AB-EM & MG; G; P
New Polaris	Canarc Resource Corp	104K 003	Au	Mesothermal Vein	EN; PF
Peak	Grizzly Diamonds Ltd	093M 015	Au, Ag	Vein, replacement	EM; DD (2293 m, 22 holes)
Porcher Island	Cross Lake Minerals Ltd	103J 017	Au	Vein	DD (11 998 m, 39 holes)
Red Bird	Torch River Resources Ltd	093E 026	Mo	Porphyry	GC; DD (2645 m, 10 holes)
Red Chris	Imperial Metals Corp	104H 005	Cu, Au	Porphyry	G; MG; MS; DD (4834 m, 6 holes)
Red Cliff	Mountain Boy Minerals Ltd	104A 037	Au	Vein	DD (8570 m, 41 holes)
Rocher de Boule	Rocher Deboule Minerals Corp	093M 071	Cu, Au	IOCG	DD (1106 m, 6 holes)
Rossing	Garnet Point Resources Corp	104O 010	U, Mo, REE	Intrusion-related	G; GC
Ruby Creek	Adanac Molybdenum Corp	104N 052	Mo	Porphyry	DD (2269 m, 6 holes); OB (478 m); RC (162 m); CD
Schaft Creek	Copper Fox Metals Inc	104G 015	Cu, Mo, Au	Porphyry	G; MG; IP; CD, GD (6300 m, 41 holes)
Seel & Ox Lake	Gold Reach Resources Ltd	093E 105	Cu, Au	Porphyry	IP; A; DD (9373 m, 38 holes)
Shan	BCM Resources Corp	103I 114	Mo	Porphyry	AB-MG; DD (9238 m, 31 holes)
Silver Coin	Pinnacle Mines Ltd	104B 095	Au, Ag, Pb, Zn	Vein	DD (2764 m, 15 holes)
Snip North	Newcastle Minerals Ltd	104B 089	Au	Vein	DD (1200 m, 6 holes)
Snowfield	Silver Standard Resources Inc	104B 179	Au, Mo	Porphyry	DD (8500 m, 29 holes)
Storie	Columbia Yukon Explorations Inc	104P 069	Mo	Porphyry	IP & MG; DD (23 066 m, 76 holes)
Surprise Creek	Pinnacle Mines Ltd		Au, Ag, Cu, Zn	VMS	DD (1995 m, 4 holes)
Tag	CZM Capital Corp	104M 079, 080	Au, Ag	Epithermal Vein	GC; P; AB-MG; DD (4650 m, 26 holes)

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Taurus	Cusac Gold Mines Ltd	104P 010, 011	Au	Orogenic vein	G; MS; DD (2623 m, 15 holes)
Tide	American Creek Resources Ltd	104B 129	Au, Ag	Intrusion-related	G; TR; DD (1835 m, 8 holes)
TJ Ridge	Roxgold Inc	094D 031	Au, Ag	Epithermal vein	A; TR; AB-EM & MG; DD (2900 m, 18 holes)
Todd Creek	Goldeye Explorations Limited & Polar Resources Ltd	104A 001	Cu, Au	Vein, Porphyry	G; GC; IP & MG; DD (2815 m, 12 holes)
Treaty Creek	American Creek Resources Ltd	104B 078, 372	Au	Epithermal	G; GC; P; DD (5470 m, 30 holes)
Tulsequah Chief	Redfern Resources Ltd	104K 002	Cu, Zn, Ag, Au	VMS	A; EN; FS; R; DD (12 484 m, 36 holes)
Turnagain	Hard Creek Nickel Corp	104I 119, 120	Ni	Magmatic	MS; DD (24 500 m, 74 holes)
Voigtberg	BC Gold Corp	104G 146	Au	Porphyry	G; AB-EM; P; DD (587 m, 4 holes)
Yellow Jacket	Prize Mining Corp	104N 043	Au	Orogenic Vein	G; BU (10 000 t); PP

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 totaling 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 (X m) = X metres of underground development; UG-BU = underground bulk sample; UT = UTEM; VLF; WT = washability test (coal)

The **Endako** open-pit molybdenum mine (MINFILE 093K 006) is operated by Thompson Creek Metals Company (formerly Blue Pearl Mining Ltd) which owns 75% interest. Sojitz Corporation, a major Japanese-based molybdenum trading company, holds 25% interest. Molybdenum production for 2006 was 5160 tonnes from 9 526 000 tonnes of ore with an average grade of 0.069% Mo. The mill normally processes 28 000 tonnes per day and recovers about 78% of the molybdenum sulphide, all of which is converted to molybdic oxide in an on-site roaster.

The company commissioned a review of ore reserves at cut-off grades of 0.02, 0.03 and 0.04% Mo. At a 0.03% cut-off, the measured and indicated resource totals 331.2 million tonnes grading 0.051% Mo. At the same average grade, proven and probable reserves total 276 million tonnes. Next, based on the new resource estimate, Thompson Creek commissioned a feasibility study of building a new 50 000 tonnes per day mill. Capital cost of the project is estimated at C$373 million. The project shows a favourable economic return based on a long-term molybdenum price of US$14 per pound starting in 2012. An expected increase in molybdenum recovery to about 82% contributes to the positive feasibility analysis. At time of writing a decision by the joint owners had not been made.

Endako is a porphyry molybdenum deposit within the early Cretaceous Francois Lake granite batholith. Mineralization is related to an aplitic phase that intrudes an older coarse-grained variety. The ore body is a 3.5-kilometre long stockwork zone that is elongated to the west-northwest and dips about 50º south to a depth of 330 m. The hanging wall of the ore zone is delineated by the South Basalt fault. Post-mineral cross faults segment the ore zone into three pits; the principal Endako pit, the smaller Denak pit and, furthest to the west, the partially developed Denak West pit. In the long-term mine plan these will merge into a large 'superpit'. Instability on the south wall of the Endako pit has been problematic since 2001. According to the 2007 mine plan, all ore was to be supplied from the Endako pit but a large slide on November 12 resulted in a temporary cessation of work (Figure 1.3). Mining was relocated to Denak West, supplemented by recovery of ore from a low-grade stockpile. Wall instability in the Endako pit results from two mechanisms; shallow-dipping, molybdenite-bearing faults that trend across the face of the south wall and the wedge-shaped intersection of close-spaced fractures with several cross faults (see *EMBC-2002*, page 5). The wedge-shaped intersection(s) have a moderate dip and are undercut by the pit benches. Susceptibility of the wedge blocks to move is enhanced by the molybdenite-lubricated faults.

Figure 1.3. Mining equipment was trapped temporarily but not damaged by the Nov. 12 slide in the Endako Pit.

Figure 1.4. Wall failure ended mining in the East pit at Huckleberry mine.

A 1340-kilometre airborne magnetic and radiometric survey was flown over the mining lease. The ore zone corresponds to a broad magnetic 'low' over the Endako and Denak pits but weakens to an indistinct pattern over Denak West (J. Schroff, pers. comm., 2007). The ore-controlling South Boundary fault does not have a magnetic signature but the northwesterly Casey fault is well defined. Right lateral offset of about 4-5 km is interpreted. The Casey Lake anomaly is a 400 m wide, 1000 m long, magnetic 'low' near the eastern projection of the South Boundary fault, and is where 2006 exploration drillholes intersected interesting levels of molybdenum. The Casey Lake zone, 500-1000 m east of the plant site, was explored by an 11 000-metre drilling program in 2007. The Casey Lake target extends under the tailings impoundment. An area near the West Denak pit was also tested.

The **Huckleberry** copper mine (MINFILE 093E 037) is operated by Huckleberry Mines Ltd and is owned 50% by Imperial Metals Corp and 32% by Mitsubishi Material Corp. The remaining 18% is shared equally among Dowa Mining Ltd, Furakawa Company Ltd and Marubeni Corp. The mine is located 123 km by road south of Houston at the foot of Huckleberry Mountain and employs 250 people including contractors. Copper production for 2007 is forecast at 30 000 tonnes, slightly less than 2006. In 2006 the mill processed 6 646 200 tonnes of ore grading 0.556% Cu and 0.015% Mo. Copper recovery in 2006 averaged 86.9% but molybdenum recovery was just 26.8%. Copper concentrate is trucked to the port of Stewart for shipment to Japan and molybdenum concentrate is trucked to Vancouver.

Mining in the East pit ended abruptly on June 22 when overburden and rock at the top of the north wall slid to the bottom of the pit (Figure 1.4). Total volume is estimated at 2 million cubic metres (5.4 million tonnes). All major equipment was removed from the pit on June 18 when open fissures were seen. It was planned to mine another 500 000 tonnes of ore from benches in the East pit and up to 700 000 tonnes from the pit walls, the latter dependent on wall stability. Due to the size of the slide the company chose to abandon the remaining East pit ore. The mill was supplied from a low-grade stockpile and the company accelerated its plan to produce ore from the Main zone extension pit. Stripping of waste material in the Main zone extension was already well advanced in preparation for mining ore. At the start of production, reserves in this new pit were 17.4 million tonnes at 0.366% Cu, above a cut-off grade of 0.22%, sufficient to maintain the mine to 2010.

Huckleberry is a porphyry copper deposit related to the late Cretaceous Bulkley intrusions. Copper mineralization occurs in two zones (Main and East) one kilometre apart and is developed within a granodiorite stock and in adjacent hornfelsed and fractured Hazelton Group volcanic rocks. The ore is a stockwork of quartz, pyrite and chalcopyrite, crosscut by gypsum-filled fractures. The Main and East zones are disrupted by the 105 Fault which resulted in 100 m of right lateral offset. The East zone is also disrupted by a younger structure, the 150 Fault which resulted in 200 m of right lateral displacement. The Main Zone Extension, outlined by drilling in 2004-06, is the faulted portion of the Main zone north of the 105 Fault. In the Main zone extension pit, the fault marks the sharp footwall truncation of high copper grade ore (P. Ogryzlo, pers. comm., 2007). Despite lower than mine-average molybdenum grade, recovery and consequent production of molybdenum are good. Flat drain holes are drilled into the high wall from pit benches immediately after they are mined, to reduce the risk of rock movement due to water pressure within the wall (Figure 1.5).

Exploration drilling focused on the 'saddle' between the Main zone and its northwest extension. Ability to mine this area will depend on the geotechnical characteristics of waste material (rock and tailings) in the Main zone pit, and this was investigated by drilling. An

Figure 1.5. Drain holes are drilled in the highwall of the Main Zone Extension pit at Huckleberry mine.

airborne EM survey over the property identified a target 2 km west of the Main zone and three targets to the east of the mine, near Kilometre 103, 107 and 113 on the 122 km mine access road. Drilling of the western target found graphite below a conglomerate at the base of the Hazelton Group (P. Ogryzlo, pers. comm., 2007). Exploration of the eastern targets is on-going.

Cusac Gold Mines Ltd attempted to reopen the **Table Mountain** gold mine (MINFILE 104P 070), closed since 1997, but encountered structural complexity in the Rory vein that resulted in down-grading of reserves. Production amounted to 19.7 kg (634 oz) of gold from 5615 tonnes of ore. Mine development refocused on the Bain vein where a probable reserve of 25 000 tonnes grading 17 g/t Au was identified. The company advanced a decline to 150 m from intersecting the East Bain vein when it intersected high water flow that resulted in a halt to mining on October 1. From surface, Cusac widened 205 m of the West Bain decline to the required 4.3 m width by 2.7 m height, and drove 306 m in the new underground heading. Various surface infrastructure upgrades were completed; refurbishing the mill, shops and office, improvements to the access road and restoration of the property power line. At time of writing, merger of Cusac Gold Mines with Hawthorne Gold Corporation was in progress. Exploration of the Taurus II bulk-tonnage gold zone is described in a subsequent section of this report.

INDUSTRIAL MINERAL QUARRIES

No mining took place in 2007 at the **Fireside** barite quarry (MINFILE 094M 003), located 125 km east of Watson Lake. Fireside Minerals Ltd of Calgary did, however, produce 4000 tonnes of barite from ore that was stockpiled in 2006. There was reduced demand for the product, which is used in the western Canadian oil and gas drilling industry. The geology and mining of the Fireside property is described by Wojdak in *GSB Geological Fieldwork – 2007* (in press).

Three jade properties were active in the Dease Lake and Cassiar areas; Cassiar, Polar Jade, and Provencher Lake. In the district, nephrite jade is found at the contact between tectonically emplaced serpentinite and argillite within both Cache Creek and Slide Mountain oceanic terranes. Cassiar Jade Contracting Ltd is the principal operator which furnished the following production data. The company produced 22 tonnes of high-quality jade by sorting rock in the waste dump at the closed **Cassiar** chrysotile asbestos mine (MINFILE 104P 005), employing up to 5 people. Cassiar Jade also produced about 10 tonnes from **Polar Jade** (MINFILE 104I 083) near Serpentine Lake. Glenpark Resources Ltd contracted Cassiar Jade to explore and mine jade at **Provencher Lake** (MINFILE 104I 073, 092). Jade boulders are entrained in glacial till. About 35 tonnes were produced, including a 12.5 tonne single piece of exceptional quality and high value (Figure 1.6); it is a jade-mining career highlight for Ernest Hatzl, principal of Cassiar Jade Contracting. A further 35 tonnes of jade was produced by re-cutting of stockpiled material from the **Kutcho Creek** jade deposit (MINFILE 104I 078). Trenching conducted at the **Jade Empress** property (MINFILE 104J 057) by Dynasty Jade Ltd found only poor quality material.

A private company, 24/7 Timber Limited, produced crushed granite rock from a quarry at **Tyee**, 25 km east of Prince Rupert on the Skeena River. The rock is from the Ecstall hornblende quartz diorite pluton and is being used in high-strength asphalt required for the Prince Rupert container port.

MINE DEVELOPMENT PROJECTS

Four new mines and one shut-down mine were under development in 2007. Construction began on the Galore Creek copper-gold mine on June 5. Adanac Moly Corp announced a production decision for the Ruby Creek molybdenum mine on September 19. Limited construction activities began on the Tulsequah Chief copper-lead-zinc-silver-gold mine pending an amendment to its environmental approval certificate. The Swamp Point aggregate pit on the Portland Canal, which began development in late 2006, commenced barge shipments to Prince Rupert for construction of a new container port facility. Efforts to re-open the Table Mountain gold mine are described in the preceding section. Total development

Figure 1.6. Jade of exceptional quality is prepared for marketing in China.

expenditure on these five projects, separate from exploration spending, is estimated at Cdn$385 million.

NovaGold Resources Inc received approval to develop its **Galore Creek** property (MINFILE 104G 090, Figure 1.7) from the BC Environmental Assessment office on February 23. Federal approval under the Canadian Environmental Assessment process was given on June 4. A year earlier NovaGold entered into a comprehensive agreement with the Tahltan First Nation to support mine development. On May 23, 2007 NovaGold announced a 50-50 partnership with Teck Cominco to build the Galore Creek copper-gold mine. With all these necessary steps complete, NovaGold's Board of Directors approved the start of construction on June 5.

Construction accomplishments in 2007 include the helicopter-supported set up of 6 construction camps along the 130 km access route, the building of 40 km of driveable road, 25.5 km of pioneered road, 8 permanent bridges, including a major span of the Iskut River and 19 temporary bridges. Final access to the mine site will be through an 8-metre diameter, 4.5 kilometre-long tunnel (Figure 1.8). The northern portal of the tunnel, armored against snow avalanches, was completed and 80 m of the tunnel was excavated. The Galore Creek Mining Corporation (the name of the NovaGold – Teck Cominco partnership) and Barrick Corporation separately completed substantial drilling programs to evaluate mineral potential of the **Grace** claims (MINFILE 104G 067, 088). The tailings impoundment for the Galore Creek mine is largely on the Grace property and the two companies disputed its ownership. A negotiated settlement was announced on November 8, clearing any legal challenge to mine development. However, on November 26, NovaGold and Teck Cominco suspended mine construction. A review of the feasibility study and completion of the first construction season indicated substantially higher capital costs and a longer construction schedule that would render the project, as presently conceived and permitted, uneconomic at current consensus long-term metal prices. A comprehensive review to evaluate alternative development strategies was begun.

Based on work in 2006, the Galore Creek Measured and Indicated resource was revised upwards to 928.4 million tonnes grading 0.50% Cu, 0.28 g/t Au and 4.7 g/t Ag. Proven and probable reserves contained within this resource total 540.7 million tonnes grading 0.56% Cu and 0.30 g/t Au, at a 0.25% Cu equivalent cut-off.

Exploration drilling in 2007 focused on **Copper Canyon** (MINFILE 104G 017, Figure 1.9) where 4940 m was completed, and the **Butte** zone (MINFILE 104G 094). Drilling extended the strike length of the Butte zone to 500 m. The Copper Canyon holes tested areas where previous work detected significant gold associated with low copper content (S. Morris, pers. comm., 2007). All holes intersected significant mineralization, many in areas outside the current inferred resource boundary. Prior to

Figure 1.7. View of development area in Galore Creek valley.

Figure 1.8. North portal of the Galore Creek access tunnel, entrance to the mine site in development.

the program, inferred resources at Copper Canyon stood at 164.8 million tonnes at 0.35% Cu, 0.54 g/t Au and 7.2 g/t Ag, at a 0.35% Cu equivalent cut-off. The third component to the program was initiation of district-scale grassroots exploration using detailed knowledge of mineralization controls at Galore Creek. The presence of pseudoleucite-bearing porphyritic rocks (Figure 1.10) is recognized to be one of the most important features.

The **Ruby Creek** molybdenum project received a BC

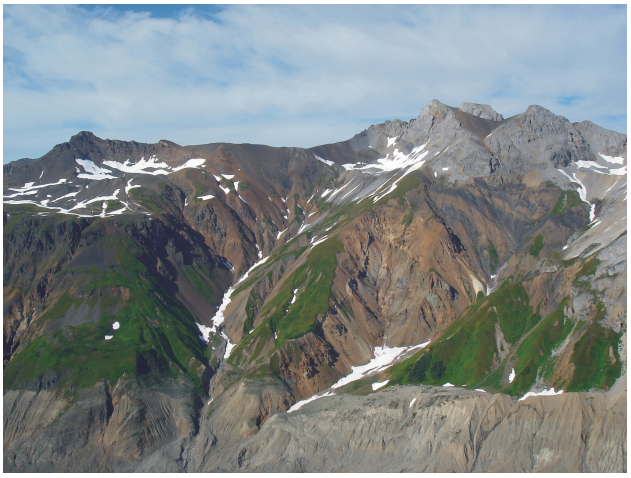

Figure 1.9. Copper Canyon copper-gold deposit; drill area is on the lower slope above the moraine.

Figure 1.10. Zoned, hexagonal crystals of pseudoleucite in a volcanic rock at Galore Creek.

Environmental Assessment certificate on September 11 and Adanac Moly Corp announced the start of construction on September 19. A construction camp was erected 18 km east of Atlin at the outlet of Surprise Lake, to facilitate upgrading of the 15 km access road up Ruby Creek to the mine site. The Ruby Creek deposit (MINFILE 104N 052) has a measured and indicated resource of 212.9 million tonnes with a grade of 0.063% Mo, above a 0.04% Mo cut-off. Proven and probable reserves stand at 157 685 000 tonnes at an average grade of 0.058% Mo. Capital cost to build the mine and 23 000 tonne per day mill is estimated at C$640 million.

The Ruby Creek deposit is a wide-spaced, coarse-grained molybdenite-quartz stockwork in a multi-phase satellite stock of the Surprise Lake granite batholith. Flat-lying molybdenite veins occur mainly in coarse grained quartz monzonite (Figure 1.11) which is located above and peripheral to a flat-lying fine-grained phase, sparse quartz monzonite porphyry. The tabular, 150 to 200-metre thick, molybdenum zone underlies the floor of the valley near the head of Ruby Creek. The mineral zone is thought to be controlled by three steeply dipping faults; the north-trending Boulder Creek fault, the east-northeast Adera fault and the northwest Ruby Mountain fault (R. Pinsent, pers. comm., 2007).

Exploration drillholes in 2007 targeted the deposit's western extent north of the Adera fault. Fluorite is prominent in these holes, confirming geochemical characterization of the Ruby Creek deposit as a high-fluorine molybdenum system. Exploration holes also stepped to the southwest where the dip of the 'moly blanket' increases from flat to southwest. This gives rise to a deep exploration target in the nearby Hobo zone (R. Pinsent, pers. comm., 2007). Two kilometres southwest, the Black Diamond fault is parallel to the Adera fault. The Hobo zone, situated between these two structures, consists of quartz-wolframite veins in granite. Float rock near the Hobo trenches is an unusual phase of the granite, a diatreme breccia comprised of milled feldspar phenocrysts, hornblende and accessory fluorite. Tungsten, as wolframite, is known to occur above and peripheral to molybdenum deposits.

Redfern Resources Ltd completely revised proposed development access to the **Tulsequah Chief** and **Big Bull** copper-lead-zinc-gold-silver deposits (MINFILE 104K 002, 003). The project has a BC development certificate and federal environmental approval but construction of a 160 km access road from Atlin to the mine site was staunchly opposed by the Taku River Tlingit (TRT) first nation. The new plan is based on an air cushion barge that will be towed by an amphibious tug and operate year-round on the Taku River. The shipment of equipment and supplies during construction and operation, and the shipment of concentrate would all be done using this system, via Juneau Alaska. The revised plan led to signing of a letter agreement with the TRT to complete a joint study of the barging plan and to evaluate the scope and content of an Impact and Benefits agreement, should development of the 2000 tonne per day underground mine proceed. Capital cost is estimated at C$201.5 million.

Conventional ocean and river barges brought heavy equipment and material to assemble a temporary construction camp (Figure 1.12). The equipment began building the 17 km road from the barge unloading site near Big Bull to the new mill site situated at the historic Tulsequah Chief mine. This work was on-going at year

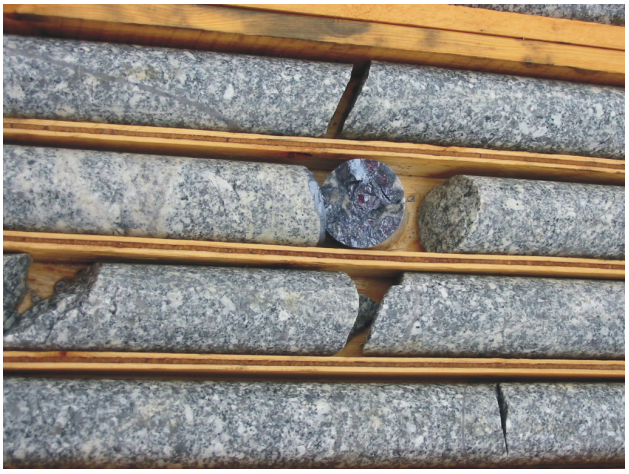

Fig 1.11. Molybdenite vein in coarse-grained granite, Ruby Creek deposit.

Figure 1.13. Megan O'Donnell and Mike Allen, project managers at Tulsequah Chief, share a lighter moment while examining drill core.

Figure 1.12. Construction camp near Big Bull, also the barge unloading point on a side channel of the Taku River.

Figure 1.14. Big Bull 60-62 zone drill core that grades 26% Zn and 20 g/t Au.

end, and included construction of bridges and an airstrip. Earlier in the year, geotechnical assessment of the plant site and the tailings impoundment, a detailed topographic survey (LIDAR) and several environmental programs were completed.

The Tulsequah deposits are strataform massive sulphide layers in Devonian felsic volcanic rocks. The Tulsequah Chief deposit contains an indicated resource of 5 819 910 tonnes grading 1.43% Cu, 1.25% Pb, 6.58% Zn, 2.68 g/t Au and 97.2 g/t Ag, and an inferred resource of 950 000 tonnes at slightly lower grade. Probable reserves stand at 5 378 788 tonnes at an average grade of 1.40% Cu, 1.20% Pb, 6.33% Zn, 2.59 g/t Au and 93.7 g/t Ag. At Big Bull, the indicated resource is 211 000 tonnes at a grade of 0.40% Cu, 1.25% Pb, 3.33% Zn, 3.04 g/t Au and 161.7 g/t Ag. The Big Bull inferred resource has an appreciably higher precious metal grade; 669 000 tonnes at 0.35% Cu, 2.59% Pb, 5.97% Zn, 4.14 g/t Au and 194.8 g/t Ag. In 2007, twenty core holes at Big Bull focused on the exceptionally high grade 60-62 zone discovered in 2006 (Figure 1.13 and Figure 1.14). Fifteen core holes at Tulsequah Chief explored up-dip of the G-zone and A-zone extension. A total of 12 484 m was drilled.

Western Keltic Mines Inc continued to fulfill requirements of the Envirnomental Assessment process for the **Kutcho Creek** project during 2007. The work focused on road design, extensive fish studies, continued investigation of acid rock drainage, assessment of overburden and wildlife and bull trout and more fish studies. Submission of the Kutcho Creek Project Report is anticipated in early 2008. Western Keltic and the Kaska first nation (Dease River band) agreed to a funding arrangement whereby the Kaska will review the Project Report, and will negotiate a socio-economic participation agreement. A pre-feasibility study showed a favourable return for a 6000 tonne per day mine with an estimated capital cost of C$299 million. Late in the year, Western Keltic signed a letter of agreement by which it would be

acquired by Sherwood Copper Corporation. The deal is scheduled to close on January 29, 2008. Sherwood Copper is an operating company with a new open pit copper mine in Yukon.

Kutcho Creek is a volcanogenic massive sulphide deposit (MINFILE 104I 060) located 100 km east of Dease Lake. Three elongate sulphide lenses are arranged en echelon over a strike length of 3.5 km within schistose felsic volcanic rocks of early Triassic age. Measured and indicated resources in the three deposits total 17 690 703 tonnes grading 1.71% Cu, 2.36% Zn, 27.5 g/t Ag and 0.34 g/t Au. The inferred resource is estimated at 11 858 639 tonnes at 1.00% Cu, 1.58% Zn, 15.6 g/t Ag and 0.17 g/t Au.

On the **Mount Klappan** anthracite coal project Fortune Minerals Limited commissioned a preliminary economic assessment for the transportation of coal through a buried slurry pipeline. Three different routes are under consideration but the preferred route is thought to be south from the mine along the existing railway right-of-way to Minaret (about 150 km), and then southwest a further 150 km to New Hazelton where a coal loading facility would be built on the CN mainline for shipment to the under-utilized coal-loading facility at Ridley Island near Prince Rupert. This scheme would offset the high operating cost of trucking coal, and the attendant risk of escalating fuel cost, and reduce the project's environmental impact. Submission of the Project Report to the Environmental Assessment office is expected in the third quarter of 2008. The project contemplates a 1.5 to 3 million tonnes per year open pit mine.

The Klappan-Groundhog coalfield is in the northern Bowser Basin, a mid to late Jurassic marine basin filled with clastic sediments that culminated in a deltaic environment including coal measures. Anthracite is a premium coal with the highest rank, carbon and energy content, and lowest moisture and volatile content of all coals. It can be used in a wide variety of specialty applications including water purification, briquettes, as a metallurgical reductant in steel manufacture, and as an ultra-low volatile PCI coal (pulverized coal injection). Coal resources at Mount Klappan (MINFILE 104H 020-022) occur in four deposits which contain 107.9 million tonnes classified as measured, 123 million tonnes as indicated and 2.572 billion tonnes classified as inferred and speculative. These are compliant with current Securities Commission standards.

Imperial Metals Corporation was the successful bidder to acquire the **Red Chris** copper-gold property, 80 km south of Dease Lake, at the close of 2006. The Red Chris project has a BC Environmental Assessment Certificate. A federal court overturned the project approval under the Canadian Environmental Act on the basis that the federal environmental assessment was procedurally incorrect. This ruling is under appeal by the Minister of Fisheries and Oceans, the Minister of Natural Resources, the Attorney General of Canada and by bcMetals Corporation (a wholly owned subsidiary of Imperial Metals Corp).

Red Chris (MINFILE 104H 005) is a porphyry copper-gold deposit. Measured plus indicated resources in the Main and East zones, estimated in 2004, are 446.1 million tonnes grading 0.36% Cu and 0.29 g/t Au, at a cut-off grade of 0.2% Cu. The inferred resource in the Main and East zones is 268.7 million tonnes grading 0.30% Cu and 0.27 g/t Au. There is an additional inferred resource in the Far West and Gully zones of 116.0 million tonnes grading 0.32% Cu and 0.30 g/t Au, also at a 0.2% Cu cut-off. Open pit mine reserves at Red Chris, determined in 2004, are estimated at 276 million tonnes at 0.349% Cu and 0.266 g/t Au.

Imperial Metals drilled six deep holes at Red Chris in 2007, four in the East zone and two in the Main zone (Figure 1.15). The highlight of the program is an East zone hole that intersected 1024.1 m grading 1.01% Cu, 1.26 g/t Au and 3.92 g/t Ag and bottomed in strong mineralization. The results show the potential for a high grade mining resource extending 700 metres below the current pit design. The company reports that the horizontal area of high grade in the East zone, and the gold to copper ratio, both appear to increase with depth. Additional deep drilling at the East zone is planned for 2008.

At **Schaft Creek,** Copper Fox Metals Inc evaluated three site options for tailings impoundment and complementary plant sites, by geologic mapping, geophysical surveys and by drilling overburden and bedrock holes (Figure 1.16). Limestone was intersected at the preferred tailings site in the valley east of Mount LaCasse, which previous mapping inferred to be underlain by Stuhini Group volcanic rocks. The proposed pit wall was drilled to recover oriented core for geotechnical study. A 30 km access route was surveyed, to connect with the Galore Creek access road at the 65 km mark. The Environmental Assessment Project Report is expected in late 2008.

Figure 1.15. Geologists Lee Ferriera and Chris Rees at Red Chris.

Figure 1.16. Teresa Quock (left) is in charge of core sampling at Schaft Creek.

Schaft Creek (MINFILE 104G 015) is a large porphyry copper deposit that also contains molybdenum, gold and silver. Measured and indicated resources, at a 0.25% Cu equivalent cut-off, are 768 million tonnes grading 0.35% Cu, 0.020% Mo, 0.25 g/t Au and 1.41 g/t Ag. The measured and indicated open pit resource is estimated to be 717.8 million tonnes at a grade of 0.30% Cu, 0.020% Mo, 0.22 g/t Au and 1.8 g/t Ag. The deposit occurs in volcanic rocks adjacent to the same Triassic batholith with which the Galore Creek deposit is associated, though not with an alkalic phase. However, the deposit shares some characteristics with the Galore Creek copper-gold deposits that are unusual among porphyry deposits; copper grade contours are sub-horizontal and quartz is largely absent as a stockwork mineral. Another attribute of the Schaft Creek is that the order of abundance of ore minerals is chalcopyrite, pyrite, bornite, molybdenite. This is both significant and unusual. In most porphyry copper deposits pyrite is much more abundant than copper minerals contributing to risk of acid rock drainage.

Preparation of a Project Report continued for the **Davidson** molybdenum project located 10 km west of Smithers. The proponent, Blue Pearl Mining Limited is a wholly-owned subsidiary of Thompson Creek Metals Company. The company proposes to develop an underground mine at Davidson and ship the molybdenum ore to Endako, which it operates, for processing. This development is linked with the proposed new mill at Endako (described above) which would have a separate circuit to treat Davidson ore. Plans were cancelled to drill a pilot hole for a new adit near the base of Hudson Bay Mountain at 700 m elevation.

The Davidson molybdenum deposit (MINFILE 093L 110) contains a resource of 75.3 million tonnes grading 0.177% molybdenum. The Davidson deposit is related to a small intrusion of quartz porphyry, interpreted as the offshoot of a granite stock in the core of Hudson Bay Mountain. The principal molybdenum ore zone (Figure 1.17) occurs 300 m above the quartz porphyry plug in an older, unrelated intrusion that is both silicified and texturally transformed into a spotted (‘appaloosa’) rock. Exploration drilling was completed in early 2007 to define better a lower mineralized zone at the top of quartz porphyry plug. Results have not been announced.

Activity resumed on the **Morrison** copper-gold project after a one year hiatus. Pacific Booker Minerals Inc completed geotechnical drilling to assess tailings impoundment sites, metallurgical and engineering work, all related to a feasibility study expected to be complete by year-end. The Project Report for a 30 000 tonnes per day open pit mine is expected in mid-2008. Morrison (MINFILE 093M 007) is a porphyry copper deposit with a measured plus indicated resource of 206 869 000 tonnes grading 0.39% Cu, 0.20 g/t Au and 0.005% Mo. Projected metal recoveries are about 86-88% for copper, 60% for gold and 50% for molybdenum (E. Tornquist, pers. comm., 2007).

MINERAL EXPLORATION

PORPHYRY COPPER PROJECTS

Porphyry copper projects comprise copper-gold and copper-molybdenum prospects. Few projects contain economically significant copper, gold and molybdenum. Figure 1.18 shows that most copper-gold deposits are located in the Stikine district and most copper-molybdenum deposits are in the Skeena district. The Stikine district includes Galore Creek, Red Chris and Schaft Creek, and the Skeena district includes Huckleberry mine and Morrison, all of which are described above. Geologically, projects in the Stikine district shown on Figure 1.18 are in Stikine terrane except for Eaglehead which is in a post-accretion intrusion. Skeena district porphyry projects appear to be in Stikine

Figure 1.17. Banded molybdenite vein cutting altered and fractured granodiorite in the Davidson deposit.

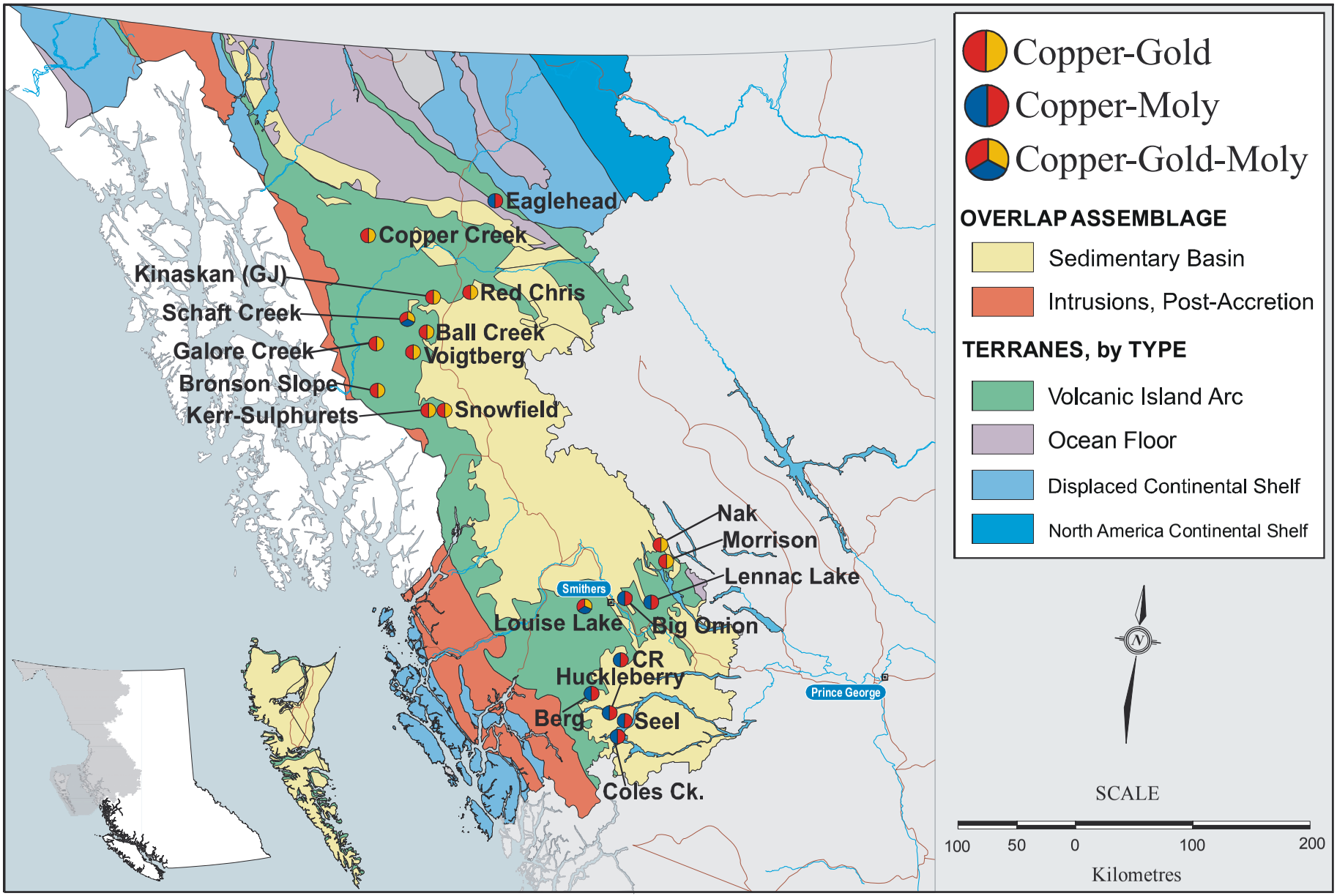

Figure 1.18. Map of porphyry copper projects in Northwest Region.

Terrane but are actually in younger, post-accretion intrusions that are abundant along a transverse geologic feature known as the Skeena Arch. Some of the copper-gold projects in the Stikine district have a high gold to copper ratio, *i.e.* greater than 1 g/t gold for 1% copper. Depending on metal recoveries, especially for gold and relative prices, gold may be more important economically than copper so that some deposits can be referred to as porphyry gold-copper deposits.

The Stikine terrane copper-gold porphyries are generally associated with late Triassic to early Jurassic igneous rocks. These are sub-alkalic, potassium-rich and of intermediate composition, typically monzonite and their volcanic equivalent. K-feldspar porphyritic rocks are common. Alkalic rocks, syenite and pseudoleucite-bearing trachyte that characterize the Galore Creek deposit, represent an end-member composition. The Skeena Arch copper-molybdenum porphyries are generally associated with Cretaceous to Tertiary, calc-alkalic intrusions. These are intermediate to siliceous in composition, typically granodiorite to quartz-feldspar porphyry granite or rhyolite. Mineralization is developed in the intrusion and in adjacent biotite hornfels.

The most significant exploration project in the region is the **Kerr-Sulphurets** project of Seabridge Gold Inc. The site is 40 km north of Stewart and 18 km southeast of Eskay Creek mine (Figure 1.19). Work up to 2006 in the Mitchell zone (MINFILE 104B 176, 275) identified an inferred resource of 564 million tonnes containing 0.72 g/t Au and 0.18% Cu. The district-scale Mitchell and Sulphurets thrust faults are paired flat structures that displaced the top of the Mitchell deposit. The 2007 drill program (15 000 m in 37 holes) was designed to upgrade and expand the resource. Mineralized intercepts yield consistent and uniform gold and copper grade. Although visual copper estimates are difficult, a hand-held XRF analyzer gives a reliable indication of copper grade. Gold correlates closely with copper enabling core loggers to reasonably estimate gold grade in the field (Figure 1.20, M. Savell, pers. comm., 2007). Seabridge is confident of a substantial increase to a new resource estimate, scheduled for early 2008, to initiate a preliminary economic assessment and to declare the project will enter Environmental Assessment. Two historic resources, the **Kerr** copper-gold deposit (MINFILE 104B 191) and the **Sulphurets** gold deposit (MINFILE 104B 182), will be reviewed to bring them into compliance with NI 43-101 so they can be included in the preliminary assessment.

Silver Standard Resources Inc continued to explore the **Snowfields** gold prospect (MINFILE 104B 179), the southeasterly continuation of the Mitchell zone. Further east, the zone is cut off by a north-south fault. Gold is associated with pyrite and molybdenite in a quartz stockwork. Like the Mitchell zone on the Kerr-Sulphurets property, ore-related alteration is overprinted by a strong foliation so that identity of the progenitor, whether volcanic or intrusive, is difficult. Core drilling at

Figure 1.19. Mike Savell on the Mitchell copper-gold zone, Kerr-Sulphurets property.

Figure 1.20. Portable XRF analyzer gives immediate indication of copper, and by inference the gold grade of Mitchell zone drill core.

Snowfield amounted to 8500 m and included some step-out holes. Work in 2006 led to a measured plus indicated resource estimate of 49.4 million tonnes at a grade of 1.48 g/t Au and 0.012% Mo above a cut-off of 0.05 g/t Au. This occurs in a flat, near-surface zone. The inferred resource was 14.7 million tonnes at a slightly lower grade.

Canadian Gold Hunter Corporation continued to

delineate the Donnelly copper-gold zone (MINFILE 104G 086) on the **GJ** property located 25 km southwest of Iskut. Eighty holes totaling 15 800 m were drilled. A small amount of work was done in the North zone (5 holes) and the GJ zone (1 hole). The Donnelly deposit is 1670 m long, 700 m wide and has been intersected 600 m below surface. It trends east-west across a grass-covered alpine plateau (Figure 1.21) at an elevation of 1650 m, almost wholly covered by a thin veneer of till. Donnelly mineralization is zoned south to north from a pyrite-rich margin to a chalcopyrite-dominant core (D. Mehner and J. Bellamy, pers. comm., 2007). The core is truncated by a post-mineral, 65º dipping fault. K-feldspar and magnetite are closely associated with copper mineralization. The North Donnelly zone parallels the Donnelly zone but the two are separated by a 50-200 m distance of non-mineralized rock. North Donnelly is lower grade and pyrite is far more abundant than chalcopyrite but the gold to copper ratio is higher. Sericite is the dominant alteration mineral. Prior to the 2007 program, the Donnelly indicated resource stood at 172.15 million tonnes grading 0.274% Cu and 0.312 g/t Au, at a cut-off of 0.15% Cu. The North Donnelly zone contains an inferred resource of 22.67 million tonnes grading 0.245% Cu and 0.362 g/t Au, also at a 0.15% Cu cut-off.

The **Bronson Slope** gold-copper project was the subject of a 4000 m drilling program by Skyline Gold Corporation. The Red Bluff zone (MINFILE 104B 077) was estimated, prior to the 2007 program, to contain a measured plus indicated resource of 129.8 million tonnes at a grade of 0.44 g/t Au and 0.16% Cu. The inferred resource is 45.2 million tonnes at similar grade. The Red Bluff stock is a megacrystic K-feldspar porphyry of granodiorite to monzonite composition. A quartz-magnetite breccia and an intense sheeted vein stockwork of quartz, specularite and chalcopyrite occurs near the contact of the stock with chlorite phyllite country rocks.

A private company, Paget Resources Corporation continued to explore the **Ball Creek** porphyry copper prospect 10 km west of Highway 37, north of Bob Quinn. Drilling (Figure 1.22) focused in a 250 m wide mineralized zone that could be 1500 m long if further drilling substantiates an interpretation based on geologic mapping, IP and magnetics that the Mary (MINFILE 104G 018) and DM zones are linked. A quartz-pyrite-chalcopyrite stockwork is associated with a monzonite stock (J. Bradford, pers. comm., 2007). Fifteen holes (2900 m) were completed. Bradford states that BC07-12 intersected, from the top of the hole, 231 m that assayed 0.208% Cu, 0.535 g /t Au and 0.005% Mo. Associated minerals include biotite, magnetite and sericite. This is a substantial intersection that may lead to definition of a gold-copper resource.

Paget Resources tested three other porphyry targets between Ball Creek and Schaft Creek. Five holes (1016 m) were drilled at **North More** (MINFILE 104G 120), three holes (662 m) at **Mess Creek** (MINFILE 104G 040) and two holes (459 m) on **Schaft North,** 3 km north of

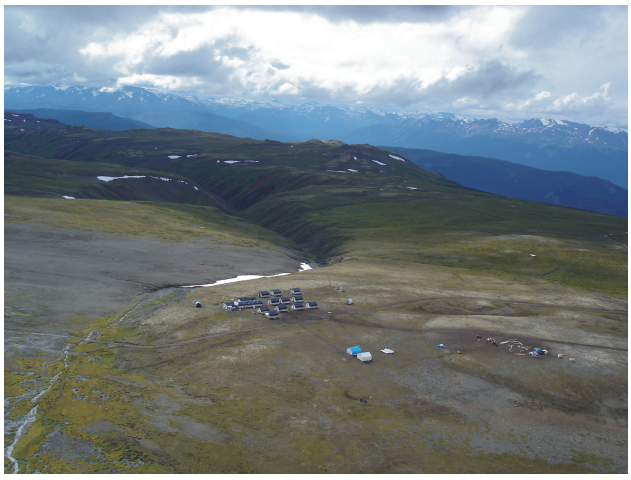

Figure 1.21. GJ camp on alpine plateau west of Kinaskan Lake.

Figure 1.22. Henry Marsden, Ball Creek project manager, reviews historic core at Ball Creek with Dave Lefebure (BCGS) and Agatha Soful (geology student).

Schaft Creek. At North More, dikes of megacrystic orthoclase porphyry syenite intrude limy volcaniclastic rocks of the Stuhini Group, resulting in copper-bearing skarn. At Mess Creek, chalcopyrite and hematite occur with pink iron carbonate alteration in a 300-600 m wide monzonite.

At **Copper Creek**, Firesteel Resources Inc reclaimed trenches that were excavated in 2006 and drilled four core holes in the DK zone (MINFILE 104J 035). The DK zone includes a 20-60 m thick supergene enrichment blanket. Hole 2007-2 obtained the best intersection of the program; 18.25 m from surface that graded 0.71% Cu and 0.22 g/t Au in the supergene zone followed by 33.75 m grading 0.45% Cu and 0.29 g/t Au. Geology of the property is described in recent issues of *Exploration and Mining in BC*.

BC Gold Corporation conducted airborne geophysics, infill soil geochemistry and drilled four holes on the **Voigtberg** property (MINFILE 104G 146) located 20 km northwest of Bob Quinn. The program followed up on a

2006 drill intersection of 51.1 m containing 1.03 g/t Au. The intercept and overlying gold soil anomaly are thought to represent a gold-rich halo peripheral to a porphyry copper-molybdenum system. Rocks containing pseudoleucite, indicative of an alkalic igneous system, were intersected by the 2007 drilling.

On the adjoining **Grizzly** property, Rimfire Minerals Corporation explored an alkalic copper-gold system (MINFILE 104G 079). Syenite dikes and sills intrude mafic volcanic and clastic sedimentary rocks and are attended by intense potassic alteration (orthoclase and biotite). Quartz is notably absent, as it is at Galore Creek. A 38 m chip sample returned 0.73% Cu and 1.1 g/t Au. More work is planned in 2008 on this promising target.

The **Eaglehead** porphyry copper prospect (MINFILE 104I 008) 50 km east of Dease Lake was drilled by Carmax Explorations Ltd. Mineralization is developed in a pink, biotite-hornblende granodiorite for a 10 km distance of its faulted contact. The Thibert fault is a regional-scale terrane-bounding structure. Twelve holes (4100 m) were completed, testing IP anomalies along the projected southeast trend of the copper-molybdenum zone. Chalcopyrite and molybdenite fracture fillings have up to metre-wide K-feldspar alteration envelopes. Carmax reported 0.257% Cu, 0.009% Mo and 0.059 g/t Au over a 334.4 m core length in its second hole of the program. Results from 10 holes remain to be reported.

The long-dormant **Berg** porphyry copper-molybdenum prospect (MINFILE 093E 046) was reactivated by Terrane Metals Corporation. The property is 84 km southwest of Houston and 22 km northwest of Huckleberry mine in the richly mineralized Tahtsa district. Mineralization occurs in a composite quartz monzonite stock as an annular zone around a barren core (Figure 1.23). A major drilling program (11 300 m in 29 holes) will bring the historic resource estimate of 238 million tonnes grading 0.40% Cu and 0.031% Mo into compliance with current standards. An interesting feature of the deposit is a 70-150 m thick supergene zone in which copper is present as chalcocite and covellite. This is capped by a 10-40 m thick leached zone in which copper is depleted but molybdenum is preserved as the yellow oxide, ferromolybdite.

Definition drilling continued at the **Big Onion** porphyry copper prospect (MINFILE 093L 124) by Eagle Peak Resources, a private company. The property is 16 km east of Smithers. Mineralization is developed in composite quartz diorite and quartz-feldspar porphyry intrusions. A major core drilling program was done, comprised of 62 holes totaling more than 16 600 m. No results have been disclosed but Lloyd Tattersall, director and Chief Operating Officer of Eagle Peak, states that the historic resource of 94 million tonnes grading 0.42% copper is expected to be increased in size and grade (pers. comm., 2007).

North American Gem Inc conducted another winter drilling campaign at the **Louise Lake** porphyry prospect

Figure 1.23. Berg porphyry copper-molybdenum deposit, the barren core of the deposit underlies the low ridge in the middle distance.

(MINFILE 093L 079) west of Smithers. Twenty holes (more than 6200 m) were completed that led to a revised resource estimate of 26 million tonnes (indicated) at 0.231% Cu, 0.008% Mo and 0.22 g/t Au and 125 million tonnes (inferred) at 0.239% Cu, 0.008% Mo and 0.23 g/t Au. The Louise Lake deposit has an unusual mineralogy – copper occurs as fine grained chalcopyrite and enargite – and unusual geometry, occurring as a 170 m thick, gently-dipping tabular body. Metallurgical study is on-going and further drilling is scheduled in early 2008.

At the **Seel** (MINFILE 093E 105) and adjoining **Ox Lake** (MINFILE 093E 004) porphyry prospects, Gold Reach Resources Ltd completed winter and summer drilling that totaled 9373 m in 38 holes. An additional 88 km of IP surveying was also completed, to guide the drilling. The properties are 110 km south of Houston, and just 7 km from Huckleberry copper mine. New resource estimates for both deposits are expected in early 2008. Ox Lake is a copper-molybdenum system and Seel, unusual for the Tahtsa district, is a copper-gold system.

Callinan Mines Limited continued its exploration of the **Coles Creek** porphyry copper prospect (MINFILE 093E 042) with a 2650 metre drilling program. The property is underlain by a Cretaceous-aged Bulkley granodiorite stock, typical of the Tahtsa district, and hornfelsed volcanic rocks. The hornfels is strongly fractured and healed by gypsum. Results of drilling were not available.

The **Lennac Lake** porphyry copper property (MINFILE 093L 190, 191) 45 km east of Smithers was acquired by Dentonia Resources Ltd with the aim of testing a target that had been trenched but never drilled. The Southeast zone lies 1-2 km from two mineralized zones previously explored by drilling. Fracture-controlled molybdenite in quartz porphyry and a chalcopyrite-bearing intrusive breccia were discovered in the Southeast zone by prospector Pat Suratt in 1991. The first phase of drilling used a light, hand-portable drill that achieved 30

to 110 m deep holes (Figure 1.24). These intersected fine grained, silica-clay altered intrusive rocks with patchy disseminations of fine grained pyrite-chalcopyrite. Core analyses revealed significant enrichment in silver, *e.g.* 2777 ppb Ag over a 37.7 m interval. The Southeast zone is interpreted to be a porphyry copper-molybdenum system exposed at a relatively high level (D. MacIntyre, pers. comm., 2007). A second drilling program is on-going.

The **CR** porphyry copper-molybdenum property (MINFILE 093L 007) was drilled by Manson Creek Resources Ltd in a 7-hole (2000 m) program. The best hole in the 'South Porphyry' zone (07CR-14) intersected 0.447% Cu and 0.014% Mo over an interval of 94.5 m. However, drillholes 300-500 m west of this hole indicate the mineralized intrusions, fine grained felsic porphyry and a crowded feldspar-quartz-biotite porphyry, narrow and terminate to the west.

The **Nak** (MINFILE 093M 010) and nearby **Dorothy** (MINFILE 093M 009) porphyry copper prospects in the Babine district, 85 km northeast of Smithers, were acquired by Copper Ridge Explorations Inc. Porphyry copper mineralization in the district is associated with a distinctive biotite-feldspar porphyry of granodiorite composition and early Tertiary age. Copper Ridge worked late in the year to complete an 85 km IP survey, with intent to drill in 2008.

Eastfield Resources Ltd was encouraged by its discovery of a new area of porphyry mineralization on the **Zymo** property (MINFILE 093L 324) northwest of Smithers.

Figure 1.24. Gary Thompson's unimog used in first phase of drilling at Lennac Lake.

PORPHYRY MOLYBDENUM PROJECTS

Porphyry molybdenum projects are displayed on Figure 1.25. Molybdenum prospects occur in Cretaceous to Tertiary age intrusions in Northwest BC. These intrusions post-date terrane accretion and therefore molybdenum prospects may be present anywhere in the region. However, there is a marked concentration in the Skeena Arch. Molybdenum mineralization found in granite batholiths is preferentially associated with a fine-grained border or high-level phase. Examples are Endako mine, Ruby Creek, Storie and the new Shan prospect. Molybdenum mineralization is also associated with small, highly silicic intrusions where it typically occurs in a quartz stockwork above the intrusion or as a vertical annular zone around it. Examples include the Davidson, Lucky Ship, Red Bird and Alice Arm deposits including Ajax. Endako, Ruby Creek and Davidson are described in previous sections of this report.

Columbia Yukon Resources Inc continued to drill the **Storie** deposit (MINFILE 104P 069) near Cassiar to upgrade the molybdenum resource. A major drilling program was conducted, 23 000 m in 76 holes (Figure 1.26). From work in 2006, an inferred resource was calculated of 101.59 million tonnes containing 0.067% Mo, at a cut-off of 0.035% Mo, a maximum open-pit depth of 325 m and a 1.5:1 stripping ratio. Mineralization is near the border of the Cassiar batholith and forms a flat, 150-200 metre thick zone. Columbia Yukon signed an agreement with the Dease River Indian band that extends through the anticipated two-year exploration phase of the project. In an interesting study to evaluate loss of molybdenite in the core-sawing process twin holes were drilled, with core from one hole being sawn in the usual manner and one-half assayed, while whole-core was assayed from the second hole. The sawn core returned 0.093% MoS_2 from 27 to 114 m (an interval of 87 m). The whole-core returned 0.125% MoS_2 from 23 to 101 m (an interval of 78 m), roughly 30% higher molybdenum grade over a 10% shorter interval. This suggests that cutting the core results in both a loss of molybdenite and a 'smearing' of the soft mineral down the core length.

Drilling by Tenajon Resources Corporation on the **Ajax** prospect (MINFILE 103P 223) promises to yield a significant upgrade to the molybdenum resource. Ajax is 14 km north of Alice Arm on the north coast. Prior to 2007, the most recent geological work on the property occurred in 1967. Based on geological mapping, A. Takeha recommended a drilling orientation of 315º, instead of 235º as was being drilled at the time, so as to cross mineralized structures and dike-shaped intrusions (R. L'Heureux, pers. comm., 2007). This recommendation was enacted in 2007 and resulted in well-mineralized intercepts from the twelve-hole, 2300 m program (Figure 1.27). For example 2007-3, the westernmost hole drilled to date on the deposit, intersected 0.091% Mo over 236.2 m including a higher grade interval of 0.126% Mo over 109.5 m. Inferred resources stood at 448.8 million tonnes grading 0.063% Mo prior to the 2007 program.

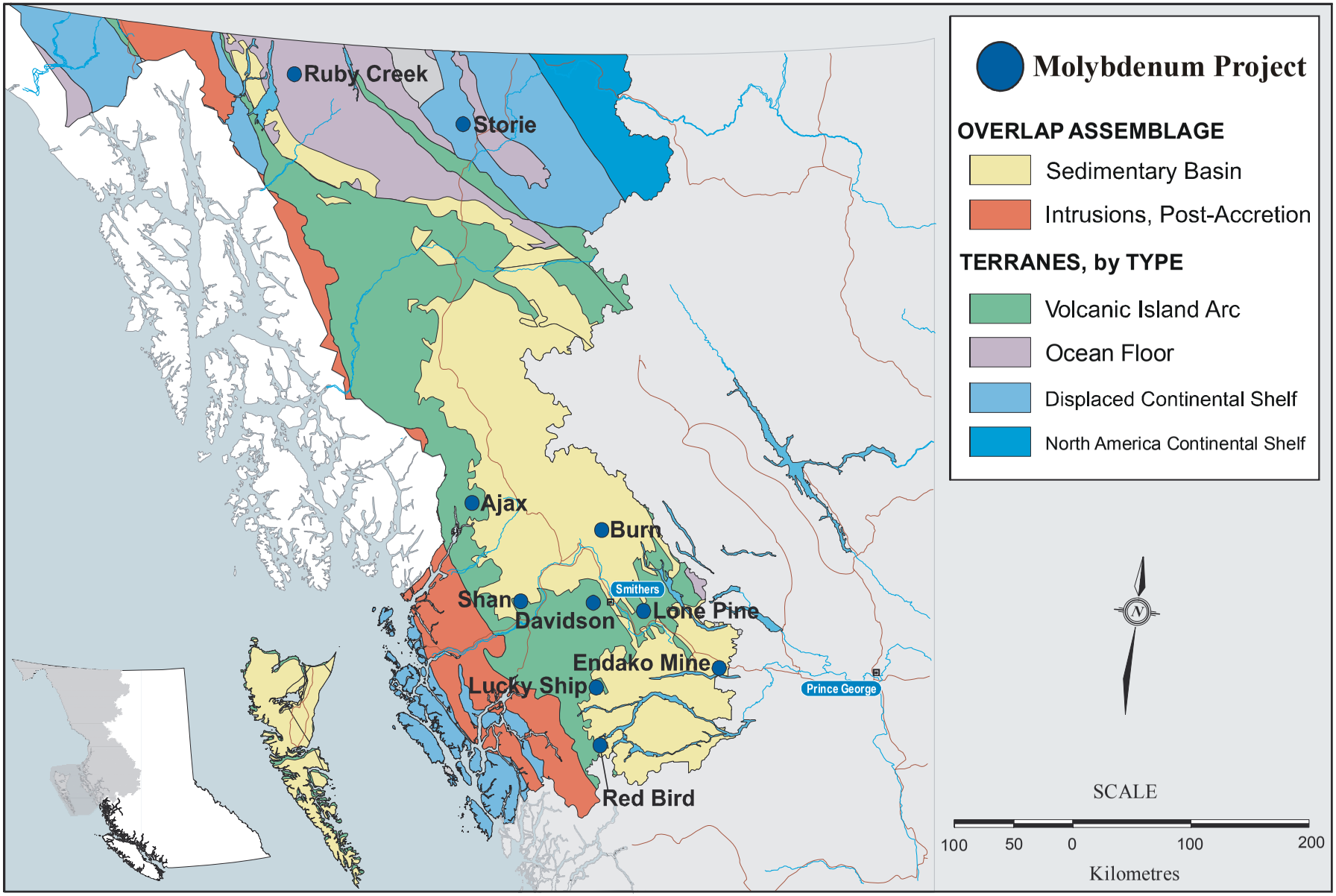

Figure 1.25. Map of molybdenum projects in Northwest Region.

Figure 1.26. Storie molybdenum deposit.

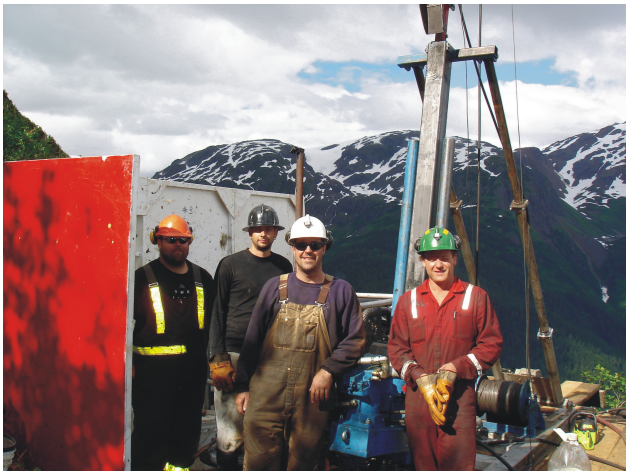

Figure 1.27. Diamond drilling crew on the Ajax molybdenum project.

BCM Resources Ltd continued to explore the **Shan** property (MINFILE 103I 114) 20 km northeast of Terrace. An airborne magnetic survey and more than 9200 m of drilling were completed. Core intersections in the Las Margaritas zone are up to 0.107% Mo over 112.7 m (in LM007) and 0.103% Mo over 190 m (in LM027) with a higher grade intercept further down the hole of 0.152% Mo over 17.3 m. This latter hole contained a purple mineral tentatively identified as fluorite. No resource estimate has been calculated yet, but mineralization is interpreted to occur in gently dipping bodies fed by steeply dipping feeder zones. The largest of these, based on drilling to mid-August, was estimated to be 150 m by 350 m in plan and up to 50-60 m thick. Fine-grained granite is the preferred hostrock, which is underlain by coarse biotite granite. Hazelton Group volcanic rocks overlie the mineralized granite. An unusual feature of the Shan deposit is significant chalcopyrite; 1.7% Cu in one remarkable 3 m core sample. However, copper and molybdenum are not directly correlated. Molybdenum mineralization is thought to be controlled by a northeast fault that dips 50º southeast and an intersecting series of NNW structures that dip about 70º east (M. Venables, pers. comm., 2007)

New Cantech Ventures Inc completed definition of the molybdenum resource on the **Lucky Ship** project (MINFILE 093L 053) 65 km southwest of Houston. Fifty holes totaling more than 15 000 m were drilled and the focus of work shifted to geotechnical, engineering and environmental studies required for feasibility analysis and regulatory approval of mine development. A preliminary economic assessment was done for a 10 000 tonnes per day open pit mine based on an open pit resource of 55 million tonnes grading 0.062% Mo. The indicated resource is 52.6 million tonnes at 0.071% Mo, plus an inferred resource of 8.3 million tonnes grading 0.070% Mo.

The **Lone Pine** project 35 km south of Smithers was explored by Bard Ventures Ltd (Figure 1.28). Four molybdenum zones are identified on the property; Alaskite, Mineral Hill, Quartz Breccia and Granby (MINFILE 093L 027, 028). These were covered by a 38 km three-dimensional IP survey. A first phase drill program returned 0.054% Mo over 231.4 m in the Quartz Breccia zone. The on-going second phase program is focused in the Alaskite zone. Quartz-feldspar-biotite microporphyry and adjacent hornfels are cut by a quartz stockwork that contains pyrrhotite, pyrite and molybdenite.

Tenajon Resources Corporation performed a 23 km IP and magnetic survey on the **Burn** property (MINFILE 093M 147) and drilled five holes totaling 1500 m (Figure 1.29). The property is located near Kispiox, 14 km north of Hazelton. A quartz-molybdenite stockwork occurs in bleached and fractured biotite hornfels and in dark biotite-feldspar porphyry, similar in composition to copper-bearing intrusions in the Babine district. Results were not available at time of writing but follow-up drilling is being considered.

Figure 1.28. Lone Pine molybdenum property, viewed from Highway 16.

Figure 1.29. Aligning the drill at the Burn molybdenum project.

Torch River Resources Ltd completed ten core holes (2645 m) on the **Red Bird** molybdenum prospect located 125 km south of Houston (MINFILE 093E 026). Based on work until the end of the 2006 season, the indicated resource is estimated to be 43.3 million tonnes at a grade of 0.064% Mo. An additional 70.5 million tonnes is inferred grading 0.058% Mo. The resources are distributed in three zones, Main, Southwest and Southeast, which lie around the margin of a quartz monzonite stock. Torch River investigated the rhenium content of the deposit by selective sampling of drill core. RB-06-132 contains 128 ppb (0.128 g/t) Re and 0.137% Mo over 116 m.

POLYMETALLIC MASSIVE SULPHIDE PROJECTS

Polymetallic massive sulphide projects are shown in Figure 1.30. These are all volcanic-hosted; sediment-hosted massive sulphide deposits occur in strata of the North American continental shelf and are not well represented in Northwest region. Volcanic hosted deposits are found primarily in Triassic and Jurassic volcanic rocks of Stikine terrane and in its Paleozoic basement. Eskay Creek mine is an example of the former; Tulsequah Chief is representative of the latter. Eskay Creek mine, Tulsequah Chief and Kutcho Creek projects are described in previous sections of this report.

Spirit Bear Minerals Ltd discovered copper-bearing massive sulphide on the **Iskut** project at Johnny Mountain while exploring for gold. Stratiform massive sulphide mineralization was known to occur on the property at the SMC showing (MINFILE 104B 264, Figure 1.31) but two 700-metre holes were drilled at a perpendicular orientation to all previous holes to test the gold-bearing Zephrin zone far below the workings of the Johnny Mountain mine. The target was the transition of deformation from brittle to ductile with the attendant possibility of intersecting a 'Snip-type' vein containing high gold grade (G. Richards and P. Metcalfe, pers. comm., 2007). Drillhole SB-07-03 intersected stratiform massive and semi-massive pyrrhotite, pyrite, magnetite and chalcopyrite over widths of 1.2, 14.3, 2.1 and 1.4 m over a 105 m core interval. Most of the interval consists of mafic volcanic tuff and/or flow rock, metamorphosed to chlorite-grade and altered with epidote and biotite, but a 3 m thick rhyolite horizon occurs near the top. A total of 3000 m was drilled in 5 holes. Mobile metal ion geochemistry is reported to be effective in target selection.

Kenrich-Eskay Mining Corporation continued to explore the **Corey** property (MINFILE 104B 240, 387) for an Eskay Creek-type deposit. Corey is located 12 km south of Eskay Creek mine and covers directly correlative stratigraphy. Twenty-one drillholes recovered more than 5700 m of core and tested geologic targets and anomalies from an airborne EM survey. Drillhole RL-2 intersected 1.6 g/t Au, 352 g/t Ag, 0.43% Cu and 1.86% Zn over 0.5 m.

Kenrich-Eskay Mining Corporation also continued its exploration in the Anyox district on the **Coastal Copper** project. Work focused on the **Double Ed** deposit (MINFILE 103P 025) with the drilling of 7 holes (2580 m). Double Ed comprises vertically dipping lenses of massive pyrite, pyrrhotite and chalcopyrite and contains a resource of 1.85 million tonnes grading 1.6% Cu and 1.0% Zn. The deposit occurs near the top of a pillow basalt sequence several hundred metres below a thick accumulation of argillite. Kenrich-Eskay struck an agreement with Teck Cominco Metals Ltd to purchase certain historical data pertaining to the Coastal Copper project.

Also in the Anyox copper-massive sulphide district, SNL Enterprises Ltd explored the **Copper Pendant** property. The property adjoins both the Crown-granted claims at the core of the district and claims comprising the Coastal Copper project. Targets from an airborne EM and magnetic survey flown in 2006 were tested by drilling (1164 m in 4 holes) in 2007.

Bell Resources Corporation is contemplating a 1000-metre underground drift at the **Granduc** deposit (MINFILE 104B 021) to position exploration drilling. Engineering and other planning activities were carried out but development was deferred until 2008. Granduc is a volcanogenic massive sulphide deposit with a total mineral inventory of 29.03 million tonnes grading 1.83% Cu, which includes 15.4 million tonnes of production (Bell Resources website). The copper deposit is part of a sulphide facies banded iron formation that occurs near the contact between mafic pillow lava and tuff with overlying chert, argillite and tuff.

Barbara Anne (or **BA**) is a project (MINFILE 104A 178) of Mountain Boy Minerals Ltd located south of Bear Pass and 30 km from Stewart (Figure 1.32). A recently recognized sequence of well-bedded iron-rich mudstone, chert and jasper is associated with spheroidal rhyolite.

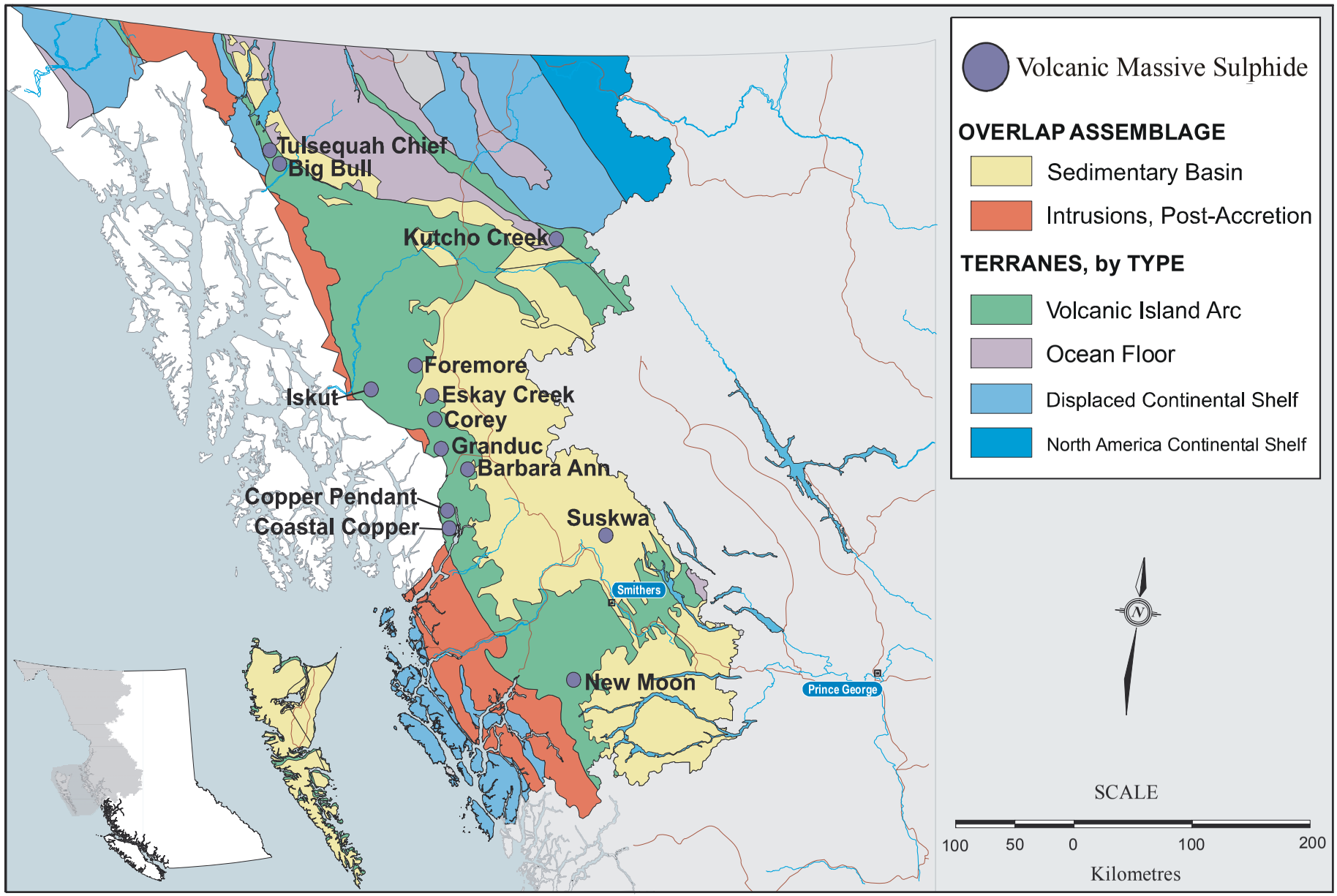

Figure 1.30. Map of volcanic massive sulphide projects in Northwest Region.

Figure 1.31. Iskut property; Gord Richards, project manager, shows a VMS occurrence to geologists from BC Geological Survey.

Figure 1.32. Drilling near the Bear Glacier on the Barbara Anne (BA) property.

Stratigraphy is thought to correlate with the ore horizon at Eskay Creek. Drilling was done on a 20 m grid and totaled 4245 m in 31 holes. Highlights include an intersection of 29.0 m that graded 203.5 g/t Ag, 2.5% Pb and 1.0% Zn. Drillhole orientation and an estimate of true thickness are not stated. Mineralization is described as being associated with replacement-style barite and hematite alteration.

Amarc Resources Ltd conducted a major exploration project of the Sitlika volcanic belt, prompted by its work` on the Bodine project in North-Central region. The belt continues into Northwest region, north of Burns Lake, where the company explored felsic volcanic rocks on the **Megamine** property (MINFILE 093K 052).

The **New Moon** project (MINFILE 093E 011) is shown in Figure 1.30 but is not a volcanic massive sulphide. A volcanogenic model has been considered at New Moon but polymetallic mineralization, including the source of glacial boulders, is thought to be veins and skarn. New Moon is near Morice Lake, 100 km south of Smithers. Anglo Columbia Mines Inc conducted an airborne EM and magnetic survey, heavy mineral silt geochemistry and geological mapping as part of its reappraisal of historic work. The property is underlain by diverse volcanic and sedimentary rocks belonging to the Telkwa Formation that are intruded by steep, northeasterly granite dikes and younger monzonite sills (R. Therriault and A. Ross, pers. comm., 2007). Skarn formation, including development of actinolite, magnetite, garnet, epidote, pyrite and chalcopyrite, is associated with the granite dikes (Figure 1.33).

GOLD – SILVER PROJECTS

The gold-silver projects shown in Figure 1.34 comprise epithermal to mesothermal veins, orogenic and intrusion-related veins. Gold-silver projects occur in various geologic terranes but are concentrated in the ‘Golden Triangle’ (or Stewart district) of Stikine terrane. There is a secondary cluster in the Atlin area where they occur in Cache Creek terrane and in the terrane-bounding Llewellyn fault. Projects described below proceed roughly from north to south.

Yellow Jacket (MINFILE 104N 043) contains coarse gold mineralization related to the tectonic emplacement of ultramafic rocks of the oceanic Cache Creek terrane. Rich placer gold overlies the property, in the heart of the Atlin

Figure 1.33. Geologists examine skarn horizons on the New Moon property.

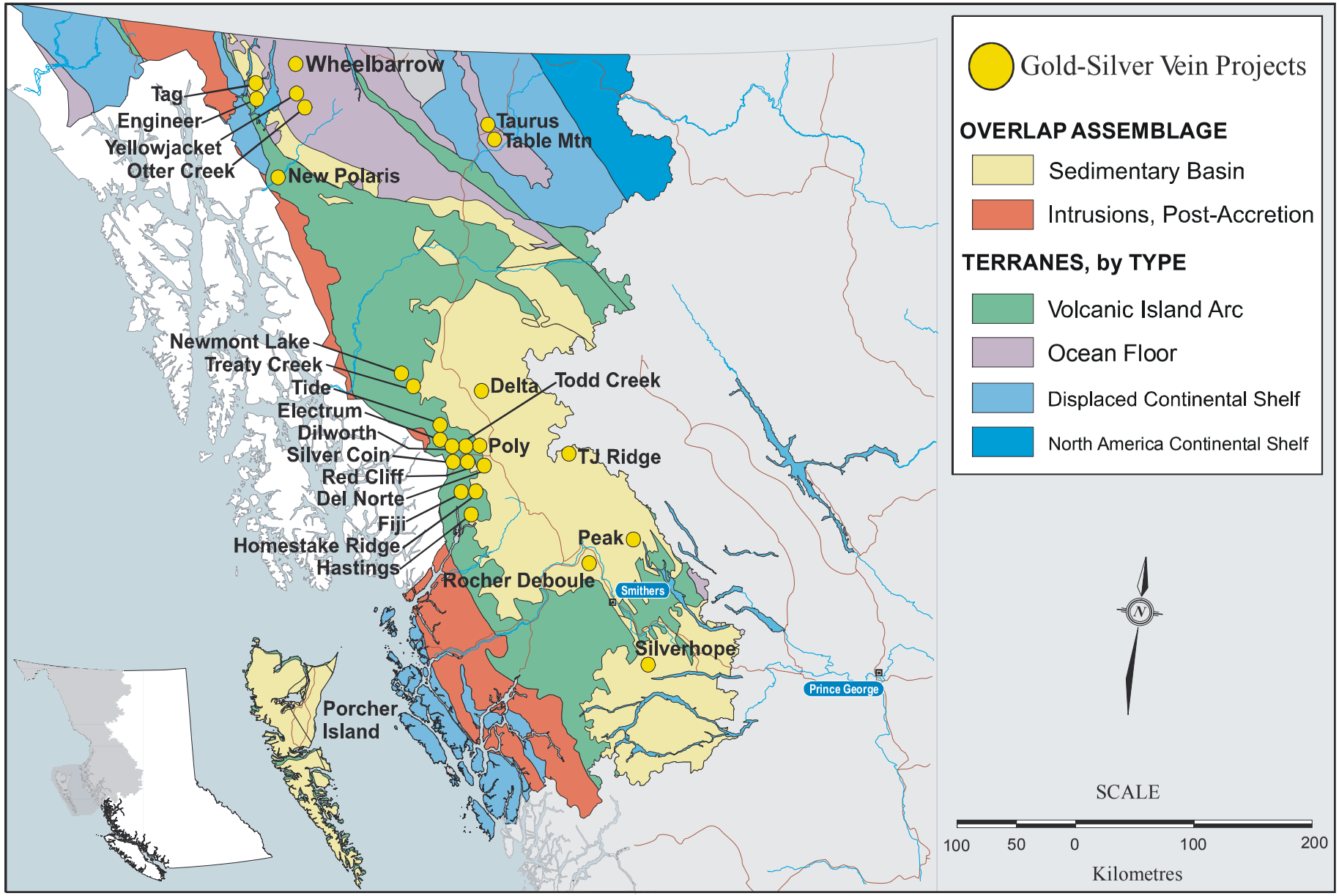

Figure 1.34. Map of gold-silver projects in Northwest Region.

placer district. Prize Mining Corporation excavated a 10 000 tonne bulk sample and built a state-of-the-art Knelson-designed gravity processing plant (Figure 1.35). Mining was done on three benches in blocks measuring 6 m square by 2.5 m deep (L. Dandy, pers. comm., 2007). Each block was channel sampled to enable close correlation with gold recovery from the plant. Abundant talc and serpentine resulted in poor crushing characteristics so that most of the material remains to be treated in 2008. Stockpiled gravel from above the test pit was sluiced and 206 oz of gold was recovered from the first shipment of heavy mineral concentrate.

Saturn Minerals Inc explored the **Wheelbarrow** property (MINFILE 104N 122) near the closed Atlin Ruffner mine northeast of Atlin. Silver mineralization occurs in a series of shear-veins within coarse-grained granite; the Big Canyon North, Big Canyon South (Figure 1.36), Vulcan, Brenda, Wheelbarrow, Wallis, Al and Wolf zones. In some zones, quartz veins have diffuse boundaries and are believed to be late magmatic (K. Mastarlaz, pers. comm., 2007). Geologic mapping and excavator trenching were followed up by drilling nine short core holes. Trenching in the Big Canyon zone returned up to 356 g/t Ag, 0.66% Pb and 0.27% Zn across 2.7 m. Saturn Minerals conducted preliminary work on several other properties in the Atlin area including **McKee Creek**, where it reported discovery of gold-bearing quartz veins below placer gold workings.

On **Otter Creek**, also in the Atlin placer district, Blind Creek Resources followed the Yellow Jacket exploration model and drilled four holes to test bedrock below gold-bearing gravel. One occurrence of visible gold was recorded, in a quartz vein cutting strata of the oceanic Cache Creek terrane; argillite, chert and serpentine (G. Payie, pers. comm., 2007).

CZM Capital Corp drilled 26 core holes (4650 m) to test epithermal gold-silver mineralization on the **Tag** property (MINFILE 104M 079, 080) located on the Taku Arm of Tagish Lake 35 km west of Atlin. The 025 fault is a northeast splay off the regional-scale Llewellyn fault. Banded and vuggy quartz with sparse pyrite fill open space in a fault breccia of Laberge Group greywacke (Figure 1.37). Soil geochemical and airborne magnetic surveys were conducted to detect new mineralized areas. The highlight of the first phase of drilling is an interval from TAG07-29 that graded 1.3 g/t Au and 5.9 g/t Ag over 35.0 m.

The historic **Engineer** mine (MINFILE 104M 014) is another epithermal gold system on the shore of Taku Arm that is located on a splay of the Llewellyn fault. BC Gold worked to rehabilitate underground workings to enable more advanced exploration, including drilling in 2008.

The **New Polaris** gold project (MINFILE 104K 003) is centred on the past producing Polaris mine. Gold is controlled by structures related to the Llewellyn fault, at elevations 700-1000 m lower than at Engineer and Tag. Mineralization is more mesothermal in character. Gold is

Figure 1.35. Pilot plant to recover gold on the Yellow Jacket (YJ) property.

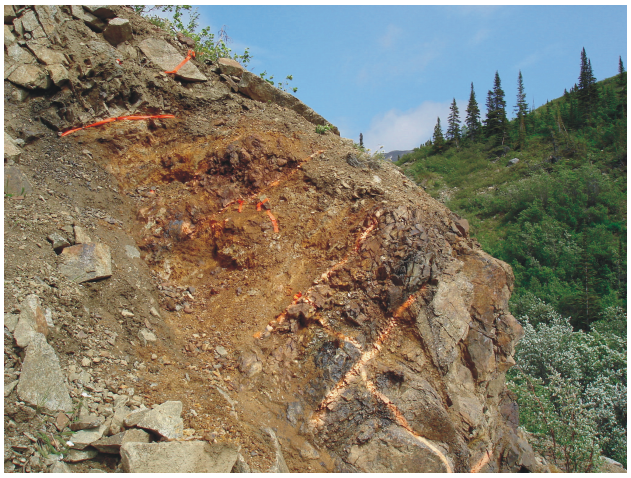

Figure 1.36. Silver-bearing fault zone in the Big Canyon zone on the Wheelbarrow property.

Figure 1.37. Epithermal quartz heals a fault breccia on the Tag property.

locked in arsenopyrite. Canarc Resource Corp reported a measured plus indicated undiluted resource of 1.67 million tonnes grading 10.62 g/t Au and an inferred resource 2.06 million tonnes grading 10.5 g/t Au. Both are at a 2 g/t cut-off grade. A preliminary assessment was made to build a mine to produce 80 000 oz of gold per year. Development cost is projected to be C$90.5 million and cash cost at US$327 per oz. The company is considering an underground development program to recover a bulk sample to test recovery of the refractory gold.

Cusac Gold Mines Ltd continued the **Taurus** project (MINFILE 104P 010, 011), expansion of a bulk-tonnage gold zone on its mineral property near Cassiar. Drilling (2600 m in 15 holes) returned up to 1.25 g/t Au over 79.9 m and 27.9 g/t Au over 5.5 m. Gold occurs in quartz veins and adjacent carbonate-altered mafic volcanic rocks where it is associated with coarse pyrite and arsenopyrite (Figure 1.38). Geologic work advanced the understanding of faulting in the district (L. Hunt, pers. comm., 2007). Bottle-roll cyanide leach tests indicate high gold recovery in the 88-Hill zone but low recovery from the Highway and Taurus West zones. As noted in a preceding section, Cusac Gold merged with Hawthorne Gold Corporation at the end of 2007.

At **Newmont Lake**, 30 km southeast of Galore Creek, Romios Gold Resources Inc reported discovery of alkalic porphyry-style copper-gold mineralization. The RNT zone was found by geologic mapping and occurs in syenite dikes of the Forrest-Kerr pluton. Early in the year, calculation of an inferred resource was announced in the Northwest zone (MINFILE 104B 281) of 1 406 000 tonnes grading 4.43 g/t Au, 0.22% Cu and 6.4 g/t Ag, at a cut-off grade of 2 g/t Au equivalent. Many gold and copper veins and skarn zones occur on the Newmont Lake property, related to the northeasterly McClymont and Newmont fault zones that cut Paleozoic Stikine assemblage, including limestone, and intrusive rocks of various ages.

Romios Gold Resources Inc was active on the **Jack Wilson**, **Trek** and **Royce**/**Porc** properties near Galore Creek. Drillhole JW07-06 on the Jack Wilson project (MINFILE 104G 021) intersected a 2.4 m interval that returned 31.87 g/t Au in a quartz-carbonate vein zone. The hole tested below the Boundary zone vein, a high-grade gold showing found in 1988. Two other holes in the program explored a soil geochemical anomaly.

American Creek Resources Ltd reactivated exploration on the **Treaty Creek** gold property 25 km southwest of Bell II on Highway 37. Recession of the Treaty glacier enabled discovery of two new showings on opposite sides of the one km-wide glacier (Figure 1.39). The ND discovery is near the Eureka zone (MINFILE 104B 078) on the south side of the glacier, Copper Belle is near the Goat Trail zone (MINFILE 104B 172) on the north side. Six holes were drilled in the Eureka zone, five holes at ND zone, ten at Copper Belle and nine holes were drilled in the GR2 zone, one km northwest of

Figure 1.38. Pyritohedrons of pyrite in carbonate-altered basalt, Taurus project.

Figure 1.39. Drilling the new Copper Belle zone at Treaty Creek; the Eureka and ND zones are visible across the 1 kilometre wide glacier.

Copper Belle, for a total of 5470 m. Significant results were obtained in three zones with many holes yet to be reported at year-end. Intercepts in the Eureka zone include 0.69 g/t Au and 2.89 g/t Ag over 75.45 m and an impressive 0.33 g/t Au, 2094 g/t Ag and 0.38% Cu over 8.5 m with the hole ending in mineralization as the hole was lost in a fault. Highlights from the Copper Belle zone

include 0.93 g/t Au and 8.78 g/t Ag over 76.1 m and 1.32 g/t Au, 5.93 g/t Ag and 0.09% Cu over 30.2 m (Figure 1.40). Interestingly, the Mitchell zone on the Kerr-Sulphurets property lies 10 km to the southwest with the intervening area covered by glaciers. The Mitchell and Sulphurets faults project beneath Treaty glacier.

The **Electrum** property of American Creek Resources Ltd covers the former East Gold mine (MINFILE 104B 033), a small producer of gold from a very rich vein of electrum. The deposit occurs within an extensive quartz-sericite-pyrite alteration zone on the margin of the Summit Lake stock (Figure 1.41). American Creek continued a major, systematic drilling program, 12 500 m in 45 holes.

Exploration on the **Tide** property (MINFILE 104B 129) by American Creek Resources Ltd comprised geological mapping, channel sampling (318 m) and eight core holes (1835 m). Two north-south mineral trends are present that are 2 km long and 500-1000 m apart. The western belt comprises the North Pit, 36 and South Pit zones, each overlain by gold and arsenic soil anomalies. The eastern belt comprises silver, copper, zinc and molybdenum soil anomalies that are localized along the north-striking Arrow fault. Gold content correlates with fracture density and detailed study (R. Black, A. Shannon, pers. comm., 2007) determined that gold occurs with arsenopyrite on steep east-west fractures that are cut by steep north-south fractures. Drilling results were not available.

Ascot Resources Ltd conducted rock trenching (452 lineal m) and drilling (4855 m in 36 holes) on the **Dilworth** property. Perhaps because of fragmented ownership, the area has not been explored in decades despite many historic gold-silver showings including Oxedental (MINFILE 104B 142), Forty-Nine (MINFILE 104B 038), Chicago and Helen. The mineral zone strikes north-northwest and dips steeply west (S. Deanne, pers. comm., 2007). Late in the year Ascot purchased the Old Timer, Butte and Yellowstone (MINFILE 104B 039) Crown grant claims, internal to the Dilworth property. Surface sampling (Figure 1.42) returned up to 9.4 g/t Au and 246 g/t Ag over 6 m in the Central Chicago zone, 5.8 g/t Au and 386 g/t Ag over 4 m in the Hammer zone and 9.8 g/t Au and 1068 g/t Ag over 5 m in the Forty-Nine zone. Drill results were not available.

Pinnacle Mines Ltd continued to drill on the **Silver Coin** property (also known as Silver Butte, MINFILE 104B 150) located 24 km northwest of Stewart. Fifteen holes (2764 m) were completed before the onset of winter conditions forced a halt to work. The property includes the Kansas claim that was acquired from Tenajon Resources Corp. Prior to the 2007 program, MineFill Services calculated an inferred resource of 25.66 million tonnes grading 1.66 g/t Au, 7.49 g/t Ag and 0.28% Zn at a cut-off grade of 0.75 g/t Au.

Figure 1.40. Desmond O'Brien, co-discoverer of the Copper Belle and ND showings at Treaty Creek, takes a sample.

Figure 1.41. Susan Deanne and Darrel Garner study an old trench on the Electrum property.

The **Red Cliff** past-producer (MINFILE 104A 037) was explored by Mountain Boy Minerals Ltd which completed 41 drillholes totaling 8570 m. Red Cliff produced 1175 tonnes of copper-gold ore, mainly in 1912, from 2300 m of underground development on five levels. No details of drillhole distribution are available but the company reported an intersection of 15.0 g/t Au and 1.29% Cu over a 3.8 m core length.

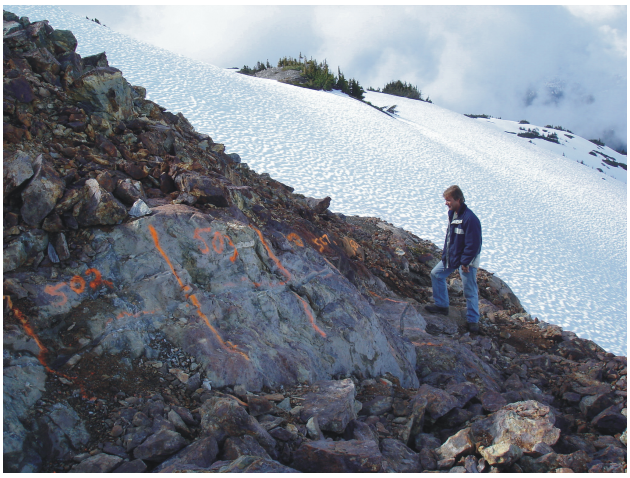

Figure 1.42. Rick Kasum surveys sample lay-out on the Dilworth property.

Bravo Venture Group Inc returned to the **Homestake Ridge** gold-silver prospect (MINFILE 103P 216) 35 km southeast of Stewart to complete 9300 m of drilling in 28 holes. The program employed up to four rigs. The focus was on follow-up to drilling in 2006 which identified an inferred resource of 2.3 million tonnes grading 7.53 g/t Au, 31 g/t Ag and 0.27% Cu at a 3 g/t Au cut-off. In addition to the Main Homestake zone, holes were drilled in the Vanguard Gold zone and the Homestake Silver zone. No assay results had been reported at year-end.

Geofine Exploration Consultants Ltd directed three drilling projects in the Stewart district for various clients. These include **Todd Creek** (MINFILE 104A 001 and 005, for Goldeye Explorations Limited and Polar Star Mining Corp), **Poly** (in Bear Pass northeast of Stewart) and **Delta** (MINFILE 104A 165, for Weekes Investment Group).

Teuton Resources carried out exploration drilling on the **Fiji**, **Orion** (MINFILE 104B 201), **Midas** (MINFILE 104A 176) and **Konkin Silver** (MINFILE 103P 250) properties in the Stewart district to test gold and silver targets.

The **TJ Ridge** property (MINFILE 094D 031) of Roxgold Inc comprises a series of veins mineralized with base and precious metals related to a hidden igneous intrusion. A temporary access trail was built to bring an excavator to the property, located 95 km north of Hazelton. Work comprised some 2000 m of trenching, 564 km of airborne EM and magnetic survey, and eighteen core holes totaling 2900 m. Prior exploration intersected narrow dikes but up to 223 m of quartz monzodiorite was intersected in 2007. Veins contain pyrite, pyrrhotite, arsenopyrite, sphalerite, galena and chalcopyrite. No core assays are available but surface samples contain up to 10 g/t Au.

Cross Lake Minerals Ltd completed a major drill program early in 2007 at the past-producing gold mine on **Porcher Island** (MINFILE 103J 017), located 35 km southwest of Prince Rupert. Almost 12 000 m was completed in 39 holes and featured discovery of a new high-grade gold vein. Intersections of the Cedar vein were reported from 10 holes ranging from 7.1 to 27.0 g/t Au over widths of 1.0 to 3.4 m. The Cedar vein is defined along a strike length of 230 m and to a vertical depth of 150 m. Drillhole CL-07-29 confirms the presence of high gold grade in the previously-known AT zone. It intersected 54.3 g/t Au over 3.4 m, true width is estimated to be 70-75% of the intercept.

The **BQ** property located 50 km northwest of Smithers contains recently recognized epithermal gold mineralization that was explored by Endurance Gold Corp. The property is underlain by gently north dipping felsic volcanic tuff and breccia intercalated with fossiliferous sandstone and mudstone, which are cut by dikes of quartz-feldspar porphyry. Mineralization occurs as stringer veins and disseminations of pyrite, arsenopyrite, pyrrhotite, sphalerite and chalcopyrite. Gold is most closely associated with arsenopyrite. Endurance Gold contracted an 814 line km airborne survey that collected high resolution EM and magnetic data. This was followed up by a 600 sample soil geochemical grid and a 10 km IP survey.

Near French Peak located 65 km northeast of Smithers, Grizzly Diamonds Ltd explored the Ute and Rio silver-gold-copper-lead-zinc veins on the **Peak** claims (MINFILE 093M 015) with a 2293 m diamond drilling program. Eleven holes expanded the strike length of the Ute vein and breccia zone. Nine holes tested a conformable pyrite-chalcopyrite vein in the Rio zone. The volcanic hostrocks are correlated with the Cretaceous Rocky Ridge Formation. No results were available.

Finlay Minerals explored for a continuation of silver-copper mineralization south of the closed Equity Silver mine on the **Silverhope** property (MINFILE 093L 256). Four holes (1720 m) were completed. Highlights include a 9.35 m intercept that graded 333 g/t Ag and 0.69% Cu in SH07-02 and 3.8 m that graded 159 g/t Ag and 1.09% Cu in SH07-04.

Christopher James Gold Corporation prospected and conducted soil geochemical surveys at its **Deer Horn** (MINFILE 093E 019), **Dome Mountain** (MINFILE 093L 277) and **Happy Sullivan** gold properties. A new copper-silver-barite occurrence, the Peggy showing, was found on Dome Mountain. Channel samples from hand-dug trenches returned 0.7% Cu and 60 g/t Ag over 5 m (M. Renning, pers. comm., 2007; Figure 1.43).

The **Rocher Deboule** project of Rocher Deboule Minerals Corporation targets an iron oxide copper-gold deposit in the vicinity of the historic Rocher Deboule (MINFILE 093M 071) and Highland Boy (MINFILE 093M 070) past-producing mines. High-temperature hydrothermal veins in a granodiorite pluton contain copper, silver, gold, tungsten, zinc, lead, molybdenum, uranium and cobalt. The veins also contain magnetite, specularite and tourmaline. Six holes (1100 m) were drilled.

Figure 1.43. Lisa Pettenuzzo and Mike Renning describe a new showing on Dome Mountain.

SPECIALTY METALS

Figure 1.44 shows the location of specialty metal projects and coal projects. Fireside barite quarry, selected jade producers and aggregate-for-export projects are also shown.

Hard Creek Nickel Corporation conducted the largest drilling program in Northwest region as it continued to define a bulk-tonnage nickel deposit on the **Turnagain** property, 70 kilometres east of Dease Lake. The Turnagain serpentinized ultramafic body contains zones of disseminated, net-textured pyrrhotite with minor pentlandite and rare chalcopyrite. The Horsetrail zone (MINFILE 104I 119) contains a measured and indicated resource of 489 152 000 tonnes grading 0.163% nickel contained in sulphide minerals and 0.012% cobalt. The resource estimate includes the first 19 holes of the 74 drilled in the 2007 program (totaling 24 500 m). Sulphide nickel grades are based on selective leach analyses that constitute 60-90% of the total nickel which averages 0.222%. An additional 560 million tonnes is inferred at 0.152% nickel. A preliminary assessment of the project indicates a 12.2% internal rate of return based on a production rate of 50 000 tonnes per day, a capital cost of C$1380 million and 73.6% nickel recovery. A four tonne sample for metallurgical testing was extracted using PQ core. The objective is to produce a concentrate grading at least 8% nickel and less than 8% magnesium oxide, a component that is detrimental to nickel smelters (N. Froc, pers. comm., 2007).

The **Rossing** project in the Jennings River – Swan Lake – Cassiar area targets highly fractionated granite batholiths primarily for a uranium deposit. Rossing is a large bulk-tonnage uranium mine in Southwest Africa and represents the deposit-type sought by Garnet Point Resources Corp. Thirteen properties were acquired in areas underlain by the Glundebery, Cassiar and Simpson Peak batholiths and more than 1100 stream silt and 1700 soil samples were collected. While uranium is the principal target, tantalum, molybdenum and tungsten are also of interest. Follow-up exploration will occur on the **Swan** (MINFILE 104O 010) and **Nazcha** properties for molybdenum mineralization and on the **Cas** property for uranium.

COAL AND AGGREGATE PROJECTS

Coal in Northwest region occurs in the Jurassic-Cretaceous Bowser sedimentary basin, notably as extensive deposits of anthracite in the Klappan-Groundhog coalfield. The reader is referred to the section on mine development projects for an update on the Klappan project. The Bowser basin measures 300 by 150 km, though it is structurally compressed from its original extent. Smaller Cretaceous and Tertiary basins also contain coal, such as the Terrace-Kitimat graben which has not been explored for many years.

Jet Gold Corporation carried out a drilling program in the Terrace-Kitimat graben on the **Naskeena** thermal coal deposit (MINFILE 103I 002) located 50 km north of Terrace. Sixteen holes (1215 m) were completed but further work was curtailed by unavailability of drilling equipment. Age of the coal measures is uncertain as the separation of Bowser Lake Group (Jurassic) and Skeena Group (Cretaceous) is not distinct. Work by Jet Gold re-located coal showings found by G.F. Monckton in 1914 but were incorrectly plotted on maps when the Big Cedar and Little Cedar drainages were renamed (Figure 1.45). Coal explorers in the 1970s were unable to find the historic showings. The best hole in 2007 cut 4.8 m of coal in a 30 m interval beginning 15 m below surface. Overburden up to 20 m thick comprises glacial till and clean gravel in a 1.5 km-wide paleochannel of the Nass River (D. McRae, pers. comm., 2007).

Nass Valley Gateway Ltd evaluated a granite rock quarry site at **Nass Bay** near Kincolith where the Nass River enters the Portland Canal. Twenty-three holes totaling 3000 m were drilled. The granite could be loaded onto ships or barges as rock or crushed aggregate for construction purposes for the local (Prince Rupert) or offshore market.

OUTLOOK FOR 2008

The year 2008 may prove to be a pivotal year in mineral exploration and development in Northwest region. If mine construction resumes at Galore Creek and becomes full-scale at Ruby Creek and Tulsequah Chief then the mining boom will be sustained. Development projects with broad First Nation support and a contractual impact and benefits agreement have a clear advantage in proceeding forward. It is encouraging that Galore Creek,

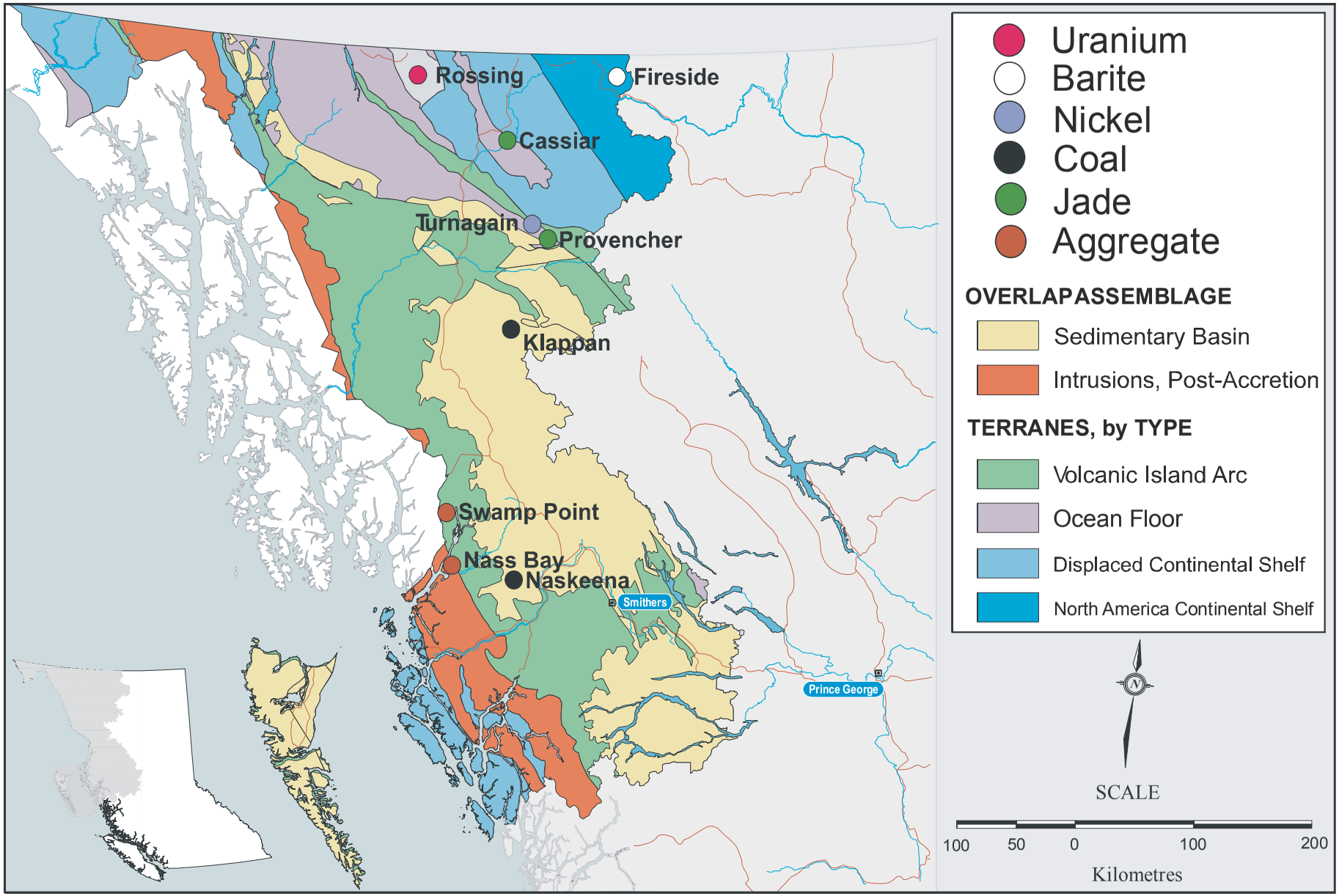

Figure 1.44. Map of uranium, barite, nickel, coal, jade and aggregate projects.

Figure 1.45. Naskeena coal property; immediate footwall to #1 seam exposed on Big Cedar River.

Ruby Creek and Tulsequah Chief Projects have achieved this. The proposed acquisition of the Kutcho Creek project by an operating company is a positive development, especially because that company has a recently proven track record of bringing a new mine into production on-time and on-budget. If Kutcho Creek is approved for development, a production decision is anticipated in the second-half of 2008. If continuation of deep drilling at Red Chris outlines sufficient copper-gold mineralization, an alternative mine plan to an open-pit may be considered.

The workforce at the Eskay Creek mine, already reduced during 2007, will shrink further when the mine closes in early 2008. Many employees have been transferred to other Barrick Gold operations, and contractors have readily found work at other mines.

The sustained high price for molybdenum and forecast continuation suggests the mine and mill expansion at Endako mine will proceed. It may be necessary to reduce pit slopes and thereby increase the stripping ratio in the Endako pit.

Owners of the Kerr-Sulphurets gold-copper project and the Turnagain nickel project have both declared their intent to enter the Environmental Assessment (EA) process in early 2008. Both are huge bulk tonnage deposits with a high capital cost and high power requirement, underscoring the need for grid power along the Highway 37 corridor. The scale of these two projects will ultimately require a major operating company to develop. If this involvement transpires in 2008 then it will be a considerable boost to exploration that is already robust in the region. Two more projects, Lucky Ship molybdenum and Berg copper-molybdenum may also enter the EA process. If go-ahead decisions are made by the respective proponents, this would further augment exploration in the region.

Promising discoveries in Northwest region, such as the new gold-silver zones at Treaty Creek, and significant resource improvement, such as the Ajax and Lone Pine molybdenum prospects, could also propel an increase in exploration in 2008.

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