NORTHWEST REGION

By Paul Wojdak, MSc, PGeo
Regional Geologist, Smithers
and
Gayle Febbo, BSc
Mineral Resource Officer, Smithers

SUMMARY AND TRENDS

The year began with robust mine performance and surging exploration brought on by both high demand and prices for metals. However, tightening financial markets began to signal a slowdown by mid-year. By late in the year, a 50-70% reduction in the price of molybdenum, copper, silver and zinc, caused a sharp retrenchment among producers and contraction of exploration. The Endako molybdenum mine postponed a major expansion and modernization program. Operations continued normally at the Huckleberry copper-molybdenum mine but reserves are limited and a decision to develop a low-grade resource must be made in 2009 if the mine is to continue beyond 2010. The Eskay Creek gold-silver mine closed in early 2008 and most of the site has been reclaimed. Production and reserves at northwest mines are listed in Table 1.1.

The pattern of mine development was uneven across the region. Development continued at the Tulsequah Chief copper-zinc-silver-gold mine, focused on construction of site infrastructure. However, work was suspended soon after it started on the Ruby Creek molybdenum deposit. Redesign of the large Galore Creek copper-gold mine continued; the project is still on hold. Significant progress was made on building the Galore Creek access road. Plans to install a bulk ship-loader at the Swamp Point aggregate quarry were shelved due to a slump in the U.S. building industry. Despite these setbacks, the total development expenditure in 2008 on Endako, Galore Creek, Swamp Point, Ruby Creek and Tulsequah is estimated at $245 million. Mines in operation, under construction and proposed for development in the Northwest Region are shown in Figure 1.1.

The KSM (Kerr-Sulphurets-Mitchell) project entered the environmental assessment process. Owners of the property claim it to be one of the five largest undeveloped gold resources in the world. The project report for the Davidson molybdenum project was submitted to government agencies and is under review. Collection of data to assess environmental impact and project design work continued at full pace on the Schaft Creek copper-molybdenum-gold project and, by new owners, on the Kutcho Creek copper-zinc project. Progress on the Morrison copper-gold and Mount Klappan coal projects was slow as their proponents seek development partners.

Mineral exploration expenditures were less than the record high set in 2007, but still strong at $140 million (Figure 1.2). Fifty-five projects exceeded $500,000 in expenditures. These are classed as major projects and listed in Table 1.2. There were 70 drilling projects and exploration drilling in the region totaled about 270 000 metres (Figure 1.3). The distribution of exploration expenditures is grassroots 1%, mine property 6%, early stage 29%, advanced stage 37% and mine evaluation 27%.

Porphyry copper-gold and copper-molybdenum deposits were the most popular exploration targets (50% of expenditures) and occur mainly in the Iskut-Stikine and Skeena districts. Porphyry molybdenum exploration accounted for 18% of spending. Gold and silver exploration (20% of expenditures) targeted a variety of epithermal and orogenic vein deposits mainly in the 'Golden Triangle' near Stewart, the Atlin and Skeena districts. Polymetallic volcanogenic massive sulphide deposits were sought in several areas and accounted for 9%. Program highlights at the time of writing include:

- **KSM**, the continued growth of the Mitchell zone as a gold-copper resource.
- **Snowfield North**, recognition of an eastern continuation of the Mitchell gold-copper zone.
- **Kitsault**, reactivation of a past-producing molybdenum project under new ownership.
- **Lone Pine**, growth of a significant new molybdenum resource.
- **Storie**, step-out holes find western extension of a major molybdenum deposit.
- **Homestake Ridge**, wide gold and silver intercepts promise a resource increase.
- **Dilworth**, drilling of three gold-silver showings found in 2007-08.
- **Yellow Jacket**, success of bulk sample and pilot mill may lead to a new gold producer.
- **Zymo**, wide copper-gold intercepts from a porphyry copper zone discovered in 2007.
- **Trek**, newly recognized copper-gold breccia on a Galore-district porphyry project.

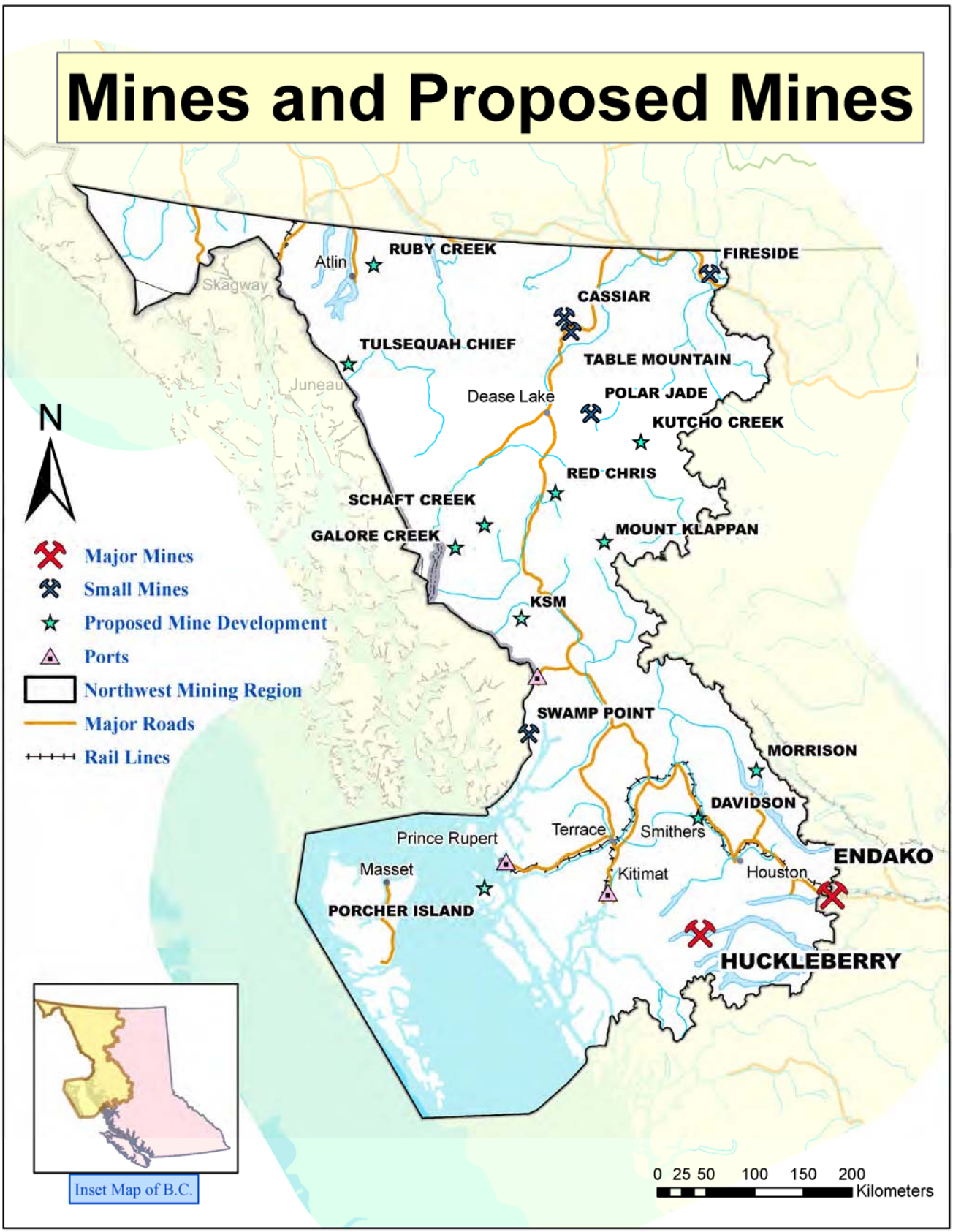

Figure 1.1. Mines and proposed mines, Northwest Region.

TABLE 1.1. MINE PRODUCTION AND RESERVES, NORTHWEST REGION

Mine	Operator	Production (2007)	Reserves (Dec 31, 2007)	Tonnes milled/ processed - 2007	Grade
Endako	Thompson Creek Metals Company & Sojitz Corporation	4292 tonnes molybdenum	292 800 000 tonnes at 0.050% Mo	9 808 000	0.06% Mo
Eskay Creek	Barrick Gold Corp	2115 kg (68 000 oz) gold, 108 978 kg silver	31 750 T at 15.7 g/t Au, 878 g/t Ag on Dec 31, 2007	139 000	20.9 g/t Au
Huckleberry	Huckleberry Mines Ltd (50% Imperial Metals Corp)	25 014 tonnes copper, 138 tonnes molybdenum	16 560 000 T at 0.352% Cu, 0.005% Mo on Dec 31, 2007	6 477 600	0.442% Cu, 0.013% Mo
Fireside	Fireside Minerals Inc	4000 tonnes	Not available	from stockpile	

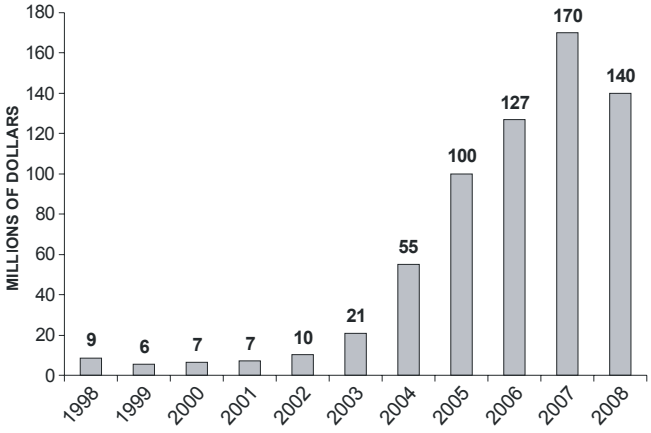

Figure 1.2. Annual exploration spending, Northwest Region.

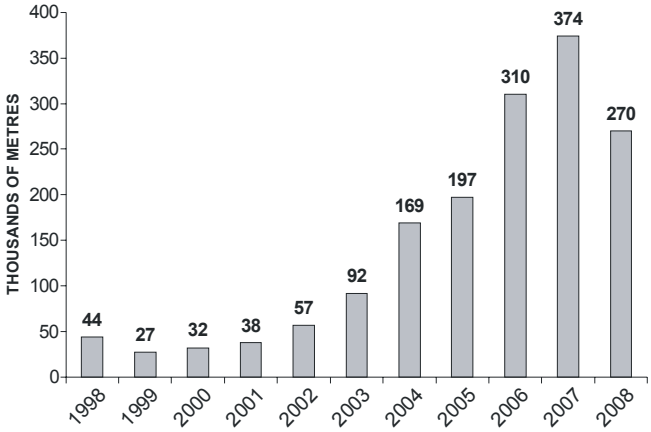

Figure 1.3. Annual exploration drilling, Northwest Region.

MINES AND QUARRIES

METAL MINES

The **Eskay Creek** mine closed in April. This trackless underground mine (Figure 1.4) produced more than 100 tonnes of gold (about 3.3 million oz) and over 5000 tonnes of silver from less than 2.3 million tonnes of ore during its 14 year life (Table 1.3). Ownership of the extremely rich mine was highly prized because it generated a great deal of wealth. Because Eskay Creek was so exceptional, its development history is summarized here. Its story has been related in greater detail in past editions of this volume. Likewise, a much more complete geological description can be found in MINFILE (104B 008) and in published journals. Eskay Creek is the almost singular example of a new type of ore deposit; an epithermal volcanogenic massive sulphide deposit formed in a shallow submarine setting and distinguished by an unusual suite of gold, silver, mercury, arsenic and antimony minerals associated with bedded base metal sulphides. Since its discovery in 1988, dozens of companies joined in the search for a second, equally rich deposit, spending more than $100 million dollars on exploration.

Mining at Eskay Creek was mainly by drift-and-fill, an expensive and therefore uncommon method. The host rock is mudstone and strongly altered rhyolite which are very weak and under high strain near the hinge of a tight anticline (Figure 1.5). Most of the principal 21B ore zone was on the west limb of the fold. The ore dipped gently and required very small stopes, typically 2.4 m wide by 2.7 m high that were backfilled with cemented river gravel. Ground failure could occur within days of stope development if not backfilled. Direct smelter treatment

TABLE 1.2. MAJOR EXPLORATION PROJECTS, NORTHWEST REGION

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
Aspira	Amarc Resources Ltd	093K 052	Cu, Zn	VMS	DD (2343 m, 11 holes); IP; A
Babs	Kenrich-Eskay Mining Corp	093L 325	Cu	Porphyry	DD (1048 m, 7 holes); G; GC
Barbara Anne	Mountain Boy Minerals Ltd	104A 178	Pb, Zn, Ag	VMS	DD (22 holes); A
Ball Creek	Paget Resources Corp	104G 018	Cu, Au	Porphyry	DD (672 m, 2 holes)
Beavis	Saturn Minerals Inc	104N 007	Au	Orogenic vein	DD (855 m, 2 holes); G
Berg	Terrane Metals Corp	093E 046	Cu, Mo	Porphyry	DD (11 661 m, 31 holes)
Big Bulk	Durango Capital Corp	103P 014, 16	Cu, Au	Porphyry	DD (2482 m, 10 holes), GC, IP
Big Onion	Eagle Peak Resources Inc	093L 124	Cu, Mo	Porphyry	DD (2350 m, 11 holes); IP
Cassiar Gold (Table Mountain)	Hawthorne Gold Corp	104P 010, 11, 15	Au	Orogenic vein	DD (2537 m); AB-EM; AB-MG
Coles Creek	Callinan Mines Ltd	093E 042	Ag	Epithermal Vein	DD (3267 m, 11holes); IP; MG; GC
Corey	Kenrich-Eskay Mining Corp	104B 240, 387	Au, Ag	Epithermal VMS	DD (1750 m, 7 holes)
Davidson	Thompson Creek Metals Company	093L 110	Mo	Porphyry	EN
Dilworth	Ascot Resources Ltd	104B 039, 142	Au, Ag	Epithermal	DD (10 886 m, 63 holes); G; GC;TR; AB-EM; AB-MG
Eaglehead	Carmax Explorations Ltd	104I 008	Cu, Mo	Porphyry	DD (5495 m, 14 holes)
Endako	Thompson Creek Mining Ltd	093K 006	Mo	Porphyry	DD (3133 m, 18 holes)
Engineer	BC Gold Corp	104M 014	Au	Epithermal Vein	DD (1825 m, 7 holes); G
FH	Durango Capital Corp	103P 155	Cu, Au	Porphyry	DD (1204 m, 4 holes)
Foremore	Roca Mines Inc	104G 148	Cu, Zn Ag, Au	VMS	DD (1520 m, 15 holes)
Galore Creek	Galore Creek Mining Corp	104G 090	Cu, Au	Alkalic Porphyry	DD (2049 m, 9 holes); GD (315 m); MS
Golden Eagle	Troymet Exploration Corp	104M 044, 74	Au	Epithermal Vein	DD (2406 m, 12 holes)
Grizzly	Inmet Mining Corp	104G 079	Cu, Au	Alkalic Porphyry	DD (2127 m, 11 holes); G; GC; IP
Groundhog	Westhawk Development Corp	104A 078	Coal	Anthracite	DD (1000 m, 11 PQ holes)
Haskins Mountain	Velocity Resources Inc	104P 059	Mo	Porphyry	DD (3427 m, 13 holes)
Homestake Ridge	Bravo Venture Group Inc	103P 216, 82, 93	Au, Ag, Zn	Vein, stratabound	DD (8602 m, 42 holes)
Joss'alun	Lomiko Resources Inc	104N136	Cu	VMS	DD (760 m, 3 holes); AB-MG
Kalum	Mountain Capital Inc.	103I 211	Au, Ag	Intrusion-related	DD (1390 m, 11 holes); IP

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
KSM	Seabridge Gold Inc	104B 103, 176, 182	Au, Cu	Porphyry	DD (17 000 m, 30 holes); EN
Kitsault	Avanti Mining Corp	103P 120	Mo	Porphyry	DD (10 127 m, 33 holes)
Kutcho Creek	Capstone Mining Corp	104I 060	Cu, Zn	VMS	DD (9905 m, 81 holes); MS
Laura	Paget Moly Corp	093M 079	Mo	Porphyry	DD (1858 m, 8 holes)
Lennac Lake	Dentonia Resources Ltd	093L 190, 191	Cu, Mo	Porphyry	DD (1420 m, 5 holes)
Lone Pine	Bard Ventures Ltd	093L 027, 28	Mo	Porphyry	DD (18 793 m, 32 holes)
Louise Lake	North American Gem Inc	093L 079	Cu, Mo, Au	Porphyry	DD (5043 m, 16 holes); G
McKee	Saturn Minerals Inc	104N 035	Ag	Vein	DD (694 m, 4 holes); G
MO	Paget Moly Corp	104I 023, 33	Mo	Porphyry	DD (2148 m, 8 holes); G
Morrison	Pacific Booker Minerals Inc	093M 007	Cu	Porphyry	DD (3 holes); GD (3 holes)
Nak & Dorothy	Copper Ridge Explorations Inc	093M 010	Cu, Au	Porphyry	DD (1265 m, 5 holes); IP
Naskeena	Jet Gold Corp	103I 096	Coal	Anthracite	DD (1400 m, 9 holes); A
Nechako	GMV Minerals Inc		Au, Ag	Epithermal Vein	DD (2164 m, 6 holes); IP; MG
Newmont Lake	Romios Gold Resources Inc	104B 281, 282	Au, Ag	Skarn	DD (3603 m, 11 holes); G; GC; IP; AB-EM
Pass	Grand Portage Resources Ltd	093L 196	Au, Ag	Vein	DD (1570 m, 24 holes)
Peak	Grizzly Diamonds Ltd	093M 015	Au, Ag	Vein	DD (1093 m, 5 holes); IP
Red Bird	Torch River Resources Ltd	093E 026	Mo	Porphyry	DD (5000 m, 16 holes)
Red Chris	Imperial Metals Corp	104H 005	Cu, Au	Porphyry	DD (1300 m, 1 hole); A
RHG	GMV Minerals Inc	104G 178	Cu, Au	Skarn	DD (829 m, 2 holes)
Ruby Creek	Adanac Molybdenum Corp	104N 052	Mo	Porphyry	DD (15 800 m, 41 holes)
Schaft Creek	Copper Fox Metals Inc	104G 015	Cu, Mo, Au	Porphyry	DD (6958 m, 48 holes); IP; A
Seel	Gold Reach Resources Ltd	093E 105	Cu, Au	Porphyry	DD (4407 m, 21 holes)
SIB	Kenrich-Eskay Mining Corp	104B 375	Au, Ag	Epithermal VMS	DD (2333 m, 4 holes)
Silver Coin	Pinnacle Mines Ltd	104B 095	Au, Ag, Pb, Zn	Vein	DD (12 216 m, 88 holes)
Snowfield	Silver Standard Resources Inc	104B 179	Cu, Au	Porphyry	DD (16 945 m, 31 holes)
Storie	Columbia Yukon Explorations Inc	104P 069	Mo	Porphyry	DD (20 700 m, 49 holes)
Swan	Hastings Resource Corp	104O 010	Mo, W	Porphyry	DD (1000 m, 13 holes)
Tag	CZM Capital Corp	104M 079, 80	Au, Ag	Epithermal Vein	DD (3429 m, 20 holes)
Terrace	Argonaut Resources Inc	103I 079	Au, Ag	Vein	DD (1156 m, 13 holes); IP

TABLE 1.2. CONTINUED

Property	Operator	MINFILE	Commodity	Deposit Type	Work Program
TJ Ridge	Roxgold Inc	093D 031	Au, Ag	Epithermal vein	DD (4880 m, 27 holes); 3D-IP; A; TR
Todd Creek	Intuitive Exploration Inc	104A 001	Cu, Au	Vein, Porphyry	DD (2582 m, 8 holes); IP; MG
Topley Richfield	NXA Inc.	093L 018	Au, Ag	Vein, VMS	DD (2706 m, 14 holes); IP; MG; GC
Trek	Romios Gold Resources Inc	104G 029	Au, Cu	Shear vein	DD (1410 m, 6 holes); AB-MG; AB-EM
Turnagain	Hard Creek Nickel Corp	104I 119, 120	Ni	Magmatic	DD (4105 m, 16 holes)
Virginia Silver	Megasilver Inc	093M 021	Ag	Vein	DD (1037 m, 6 holes); IP
Whiting Creek	Huckleberry Mine Ltd	093E 112	Cu, Mo	Porphyry	DD (2400 m, 7 holes)
Yellow Jacket	Prize Mining Corp	104N 043	Au	Orogenic Vein	PP (5000 tonnes)
Zymo	Canadian Gold Hunter Corp	093L 324	Cu, Au	Porphyry	DD (1554 m, 6 holes); IP; GC

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)

was required for a large proportion of the ore due to high levels of mercury and arsenic. Ore was blended to suit the requirements of the Dowa and Noranda smelters, and to maximize payments to the mine. Throughout its life, careful determination of ore characteristics was required to separate smelter ore from milling ore. Four beat geologists and a senior mine geologist were on-site at all times. Cut-off grades were 12-15 g/t gold equivalent for mill ore and 30 g/t gold equivalent for smelter ore. Underground blast rounds containing more than one million dollars in gold and silver were common. Waste rock was trucked to Albino Lake where it was placed below water level to mitigate oxidation and prevent generation of acid run-off.

The Eskay Creek mine was approved by regulatory agencies in 1994 on behalf of Prime Resources Group Inc. A new 60 kilometre road was built from Highway 37 to access the mine site. Homestake Canada Inc acquired Prime Resources and developed the mine, at a nominal rate of 270 tonnes per day, with the first shipment of direct-to-smelter ore from the 21B zone being made in January 1995. Planning for an on-site mill started almost immediately and was permitted in 1996. It began commercial production on January 1, 1998 at 150 tonnes per day; the mill treated metallurgically simpler ore. This ore came primarily from the 109 footwall zone below 21B, and subsequently the NEX stratiform zone which was discovered in 1995. Mill tailings were handled in a similar fashion as waste rock, trucked 8 km to Albino Lake. The mine and milling rate increased incrementally over the next six years.

Figure 1.4. Eskay Creek Mine, geologist and miners at No. 1 Portal in 2003.

TABLE 1.3. ESKAY CREEK MINE PRODUCTION

Year	Gold Produced (oz)	Gold Produced (kg)	Silver Produced (kg)	Ore Tonnes Milled	Ore Tonnes shipped direct
1995	196 550	6113	309 480	0	100 470
1996	211 276	6570	375 000	0	102 395
1997	244 722	7612	367 000	0	110 191
1998	282 088	8774	364 638	55 690	91 660
1999	308 985	9934	422 627	71 867	102 853
2000	333 167	10 363	458 408	87 527	105 150
2001	320 784	9977	480 685	98 080	109 949
2002	358 718	11 157	552 487	116 013	116 581
2003	352 069	10 951	527 775	115 052	134 850
2004	283 738	8825	504 602	110 000	135 000
2005	190 221	5917	323 350	103 492	78 377
2006	106 880	3324	216 235	123 649	18 128
2007	68 000	2115	108 978	138 772	0
2008	15 430	480	27 800	31 750	0
TOTAL	**3 272 628**	**102 112**	**5 039 065**	**1 051 892**	**1 205 604**

Figure 1.5. Eskay Creek ore, sulphide – sulphosalt mineral layers in mudstone. Note small-scale offset on cleavage fractures.

A major improvement to mine infrastructure occurred in 2000 - 2001 when a 5 km tailings pipeline was built to Tom Mackay Lake. Homestake Mining Company merged with Barrick Gold Corporation in December 2001 and the mining rate increased yet again, this time to 670 tonnes per day. Several small ore bodies (21C, 21E, Hangingwall, Water Tower and 44 zones) extended the life of Eskay Creek. Currently, the site is undergoing reclamation on a seasonal basis. Portions of the camp buildings were sold to Sherwood Copper for its Minto mine in the Yukon. Some of the major equipment was sold but many smaller items were generously donated to Northwest communities. The mill and crusher buildings have been reduced to scrap and shipped off-site. By year-end the on-site work force was reduced to a rotating staff of 8 people supplemented by contractors when required.

The **Endako** open-pit molybdenum mine (MINFILE 093K 006) is operated by Thompson Creek Metals Company which owns 75% interest. Sojitz Corporation, a major Japanese-based molybdenum trading company, holds 25% interest. Molybdenum production for 2007 was 4292 tonnes from 9 808 000 tonnes of ore with an average grade of 0.060% molybdenum. The mill normally processes 28 000 tonnes per day. In 2007, recovery of molybdenum sulphide averaged 72.7% all of which was converted to molybdic oxide in the on-site roaster. In-situ and stockpile ore reserves are 292.8 million tonnes grading 0.050% molybdenum, with 128 million tonnes of waste rock. Employment near year-end 2008 totaled 299, plus 89 contractor employees who are installing a 3 km ore conveyor. Coupled with relocation of the in-pit crusher from the Endako pit to West Denak, the conveyor will transport ore to the mill more efficiently than trucks.

A mill expansion at Endako began on March 13 that will increase capacity from 28 000 to 50 000 tonnes of ore per day. The mill has been in operation since 1965 and the project will modernize the efficiency of processing. Included in the project is installation of a new grinding circuit with semi-autogenous grinding (SAG) and ball mills, a modern flotation circuit and an upgrade of the roaster circuit. However, the expansion project was put on hold on December 5 until the molybdenum price recovers.

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 orebody 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 hangingwall 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, Denak West. In the long-term mine plan these will merge into a large 'superpit'. Mining was relocated to Denak West (Figure 1.6) near the end of 2007, following a large slide in the Endako pit. Ore from Denak West contains more molybdenum than expected, ore milled in early 2008 graded 0.08-0.09% molybdenum.

Exploration at the Endako Mine occurred in two zones and consisted of 18 drillholes totaling 3133 m. A westerly extension to the shallow dipping vein system in the Denak West pit was tested with 11 vertical drillholes. Southeast of the '#1 tailings pond' an expansion of the Casey Zone was explored with 7 drillholes.

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 kilometres by road south of Houston at the foot of Huckleberry Mountain and employs 275 people including camp and trucking contractors. In 2007, the mill processed 6 477 600 tonnes of ore grading 0.442% Cu and 0.013% Mo. Copper recovery in 2007 averaged 87.4% but molybdenum recovery was just 16.3%. Copper concentrate is trucked to the port of Stewart for shipment to Japan and molybdenum concentrate is trucked to Vancouver. In 2008, ore was produced from the new Main zone extension (MZX) pit and copper production is forecast at 18 000 tonnes, 28% less than was produced in 2007. Mining in MZX is limited by proximity of the tailings impoundment and by waste rock back filled into the Main zone pit. A causeway of waste rock was constructed across the East pit to bulkhead the north wall failure that occurred in late 2007. In addition, a dam was built at its east end to accommodate tailings. Mine design work continued on a possible 13 million tonne expansion of the MZX pit into the Saddle zone between the Main and MZX pits. When the price of copper fell late in the year, Huckleberry continued to benefit from a forward sales agreement.

Huckleberry is a porphyry copper deposit related to the late Cretaceous Bulkley intrusions. In the Main zone, copper mineralization occurs in hornfelsed and fractured Hazelton Group volcanic rocks adjacent to a 500 metre diameter granodiorite stock. The arcuate ore zone is 150-200 m wide by 600 m long and rims the contact of the stock. The East zone is larger, measuring 150 m wide by one kilometre long, and is centred on a fault-controlled 40 m wide granodiorite dike that trends at 105°. Ore in both zones is a stockwork of quartz, pyrite and chalcopyrite, crosscut by gypsum-filled fractures. The Main and East zones are disrupted by the reactivated 105 Fault which resulted in 100 m of right lateral offset of ore. The Main Zone Extension is the faulted portion of the Main zone north of the 105 Fault. The East zone is also disrupted by a younger structure, the 150 Fault which resulted in 200 m of right lateral displacement. The Saddle zone lies 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 by prevailing costs and copper price.

Figure 1.6. Endako Mine, Gordon Clark, Vice President and General Manager, oversees initial mining in Denak West pit.

Table Mountain gold mine (MINFILE 104P 070) remained closed in 2008. Hawthorne Gold Corporation acquired the mine and nearby Taurus gold deposit, now collectively named the Cassiar property. Gold at Cassiar occurs as free gold in a series of quartz-sulphide veins within a thrust-imbricated gently dipping sequence of serpentinite, basalt and argillite, an assemblage of oceanic crustal rocks. At Table Mountain, the sub-vertical quartz veins generally strike 070° and are developed in basalt on the west side of the Erickson normal fault. The veins dissipate in the overlying listwanite-altered serpentinite. The highest gold grade is found within 50 m of the base of a serpentinite body; the ore grades 15-30 g/t Au in situ. Veins have short strike extent, typically less than 100 m and generally do not penetrate into argillite above the serpentinite. Only one vein has been mined in the argillite from a nearly flat, bedding-parallel structure. The down-dropped east side of the Erickson fault is prospective for auriferous quartz veins but the area is difficult to explore due to barren argillite above the thrust fault. Production from the Main and Cusac underground workings and small open cuts on Table Mountain (1979-1988, 1993-95, 1998, 2007) totals 315 500 ounces (9815 kg) of gold. Placer mining in the Cassiar district recovered an estimated 74 500 ounces (2317 kg) of gold in the late 1800s, and streams are still worked on a small scale.

The geological setting at **Taurus** (MINFILE 104P 010, 11) is similar to Table Mountain but the erosional level of the quartz veins is deeper, approximately several hundred metres below the important serpentinite-listwanite cap. Gold grade of the quartz veins is generally less than 5 g/t. However, there are broad carbonate alteration zones around the veins, both conformable and

crosscutting, that contain about 1 g/t Au, associated with coarse pyrite and arsenopyrite. Past production from underground mining at Taurus is just 35 000 ounces (1089 kg) Au but there is a NI 43-101 compliant geological resource of 32.4 million tonnes grading 1.0 g/t Au that is under consideration for open pit mining.

Hawthorne Gold consolidated its ownership of the Cassiar gold camp by acquiring additional ground and by purchasing the interests of American Bonanza Gold Corp in the Taurus area for $2 million. Hawthorne undertook a comprehensive review of geological and survey data, and completed a 6355 line-kilometre airborne VLF-EM and magnetic survey to detect structures and alteration zones. Geological mapping was conducted over a nine kilometre interval of the prospective corridor between the Erickson and Beaton Creek faults. A diamond drilling program began to test targets in the Pete, Gap/Sky and Vollaug zones, to raise the resource category of the Taurus resource, and to validate reserves in the Bain vein. The previous mine owner calculated a probable reserve of 25 000 tonnes grading 17 g/t Au in the Bain vein. Drilling was curtailed and no results are available.

INDUSTRIAL MINERAL QUARRIES

Fireside barite quarry (MINFILE 094M 003) processed and sold 8000 tonnes of product in 2008. Plant feed was derived mainly from material mined in 2006 and stockpiled at the site, 125 km east of Watson Lake. A small amount of barite was mined by excavator from near the crusher. The quarry is owned by a private company, Fireside Minerals Ltd. of Red Deer Alberta. Fault-controlled barite veins are associated with gabbro dikes, of inferred Paleozoic age, emplaced into strata of the early Paleozoic North American continental shelf (*BCGS Geological Fieldwork – 2007, pages 219-225)*.

Three jade properties were active in the Dease Lake and Cassiar areas; **Cassiar** (MINFILE 104P 005), **Polar Jade** (MINFILE 104I 083), and **Provencher Lake** (MINFILE 104I 073, 92). Nephrite jade formed at the contact between tectonically emplaced serpentinite and argillite within both Cache Creek and Slide Mountain oceanic terranes. The Polar site was mined by Jedway Enterprises under contract with the owner, Polar Gemstones Ltd. In-situ jade is normally produced at Polar Jade (Figure 1.7) but most of the 35 tonnes shipped in 2008 were culled from previously mined material. Excavation in the small Polar pit, and trenching and drilling nearby were all unsuccessful in locating jade of commercial quality. A large block of jade mined 8 years ago was carved into a piece named the Emperor's Sunrise, and was featured in the Canada Pavilion at the Beijing Olympic Games (Figure 1.8).

At Cassiar, jade is recovered from the waste dump of the Cassiar mine where it was discarded by previous operators. At Provencher Lake, jade boulders are entrained in glacial deposits. Cassiar Jade Contracting Ltd owns and operates the Cassiar site and also mined at Provencher Lake under contract with Glenpark Enterprises Ltd of Portland, Oregon. A 16.5 tonne boulder of exceptional quality was extracted from overburden at Provencher Lake and may rise to equal prominence as the Emperor's Sunrise.

The **Swamp Point** quarry (MINFILE 103O 017) was developed in 2007 by Ascot Resources Ltd to supply high-quality aggregate to California and other Pacific coastal markets. In 2008, Ascot carried out most of the site work necessary to install a ship-loader conveyor system designed to accommodate 'Panamax' size (70 000 dwt) vessels. Foundations, fuel storage and dispensing system, barge ramp and upgrade of the small craft dock and breakwater were largely completed (H. Smit, pers. comm., 2008). However, a sharp downturn in the U.S. housing industry caused Ascot to suspend erection of steel for the ship-loader. The site is now under care and maintenance.

Figure 1.7. Polar Jade, lens of high-quality jade (light colour) bounded by serpentine (left) and sedimentary rocks (right).

Figure 1.8. 'Emperor's Sunrise' carved from Polar Jade, on exhibit at Beijing Olympic Games, 2008.

MINE DEVELOPMENT AND CONSTRUCTION

Tulsequah Chief and Ruby Creek deposits were under development in 2008, although activities at Ruby Creek were suspended on March 19th. A suspension of development continued at the Galore Creek copper-gold project but construction of the access road was reactivated. Development at Swamp Point was slowed and the site is now under care and maintenance. Similarly at Table Mountain, activities were curtailed. The start and subsequent postponement of the Endako expansion was noted in the preceding section. Despite this uneven pattern across the region, total development expenditure on these six projects, separate from exploration spending, is estimated at $245 million, down from $385 million spent on mine development and construction in 2007.

Redfern Resources Ltd continued development of the **Tulsequah Chief** copper-lead-zinc-gold-silver deposit (MINFILE 104K 002) as a 2000 tonne per day underground mine. It has a BC Environmental approval certificate and is acquiring permits required under the *Mines Act* and other legislation. Cost to build the mine is estimated at $201.5 million. Work in 2008 was financed in part by a future gold sales agreement with Gold Wheaton Corp in exchange for a $90 million advance payment.

A 1200 m airstrip was built on the flood plain of the Tulsequah River, near the mouth of Shazah Creek, to provide access for personnel and light supplies. A new 8 km road links the airstrip with the mine site, including a 42 m bridge across Shazah Creek. A new 12 km road was built to link the barge landing site near the Taku – Tulsequah confluence with the mine site (Figure 1.9). A spur road was pioneered to the Shazah tailings impoundment site, enabling detailed design work. Movement of heavy equipment and supplies via conventional barge from Juneau, Alaska was compromised by unusually low water levels in the Taku River. Redfern contracted construction of an air cushion barge (ACB) in Portland, Oregon that was forecast to be launched and tested in December 2008. Development of an amphibious tug boat to tow the ACB was cancelled and two shallow draft tugs are in use. Mill equipment and the 140-person permanent camp are being marshalled in Juneau. The first mining equipment is on site and removal of underground rail and old water and air pipe was completed on 5400 level in preparation for new trackless development.

The Tulsequah deposits are stratiform massive sulphide layers in a Devonian volcanic succession. The Tulsequah Chief deposit contains Probable Reserves of 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. The Big Bull deposit (MINFILE 104K 008) has an indicated resource of 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, and an inferred resource of 669 000 tonnes at 0.35% Cu, 2.59% Pb, 5.97% Zn, 4.14 g/t Au and 194.8 g/t Ag. Big Bull is located about 2 km north of the barge landing site but does not figure into the current mine plan. Tulsequah operated as a tracked mine in the early 1950s but the new mine will be trackless. Most of the ore is located below valley elevation and will be accessed by a spiral ramp.

Figure 1.9. Tulsequah Chief Mine, new road will link the mine with a barge-landing site on the Taku River.

Adanac Molybdenum Corp began development of the **Ruby Creek** molybdenum deposit by upgrading the access trail from Surprise Lake to accommodate transportation of construction machinery and materials (Figure 1.10). The project is located 18 km east of Atlin. Construction was suspended on January 28 while the company worked to secure project financing and to complete necessary mine-layout details for a *Mines Act* permit. The permit was issued in June but Adanac was unable to arrange funding and in November Adanac announced that operations on the property are halted until further notice. The deposit 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. An updated feasibility study reports a capital cost of $640 million to build the mine and 23 000 tonne per day mill.

The Ruby Creek deposit (MINFILE 104N 052) is a wide-spaced, coarse-grained molybdenite-quartz stockwork in a satellite intrusion of the Surprise Lake granite batholith. Molybdenite veins occur mainly in coarse-grained granite that is located above and peripheral to a flat-lying fine-grained sparse porphyry phase. (Previously described as quartz monzonite, the rocks are granite in composition, R. Pinsent, pers. comm., 2007). 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).

Figure 1.10. Ruby Creek, construction equipment parked on the new mine access road; tailings site in the distance.

Adanac completed 41 drillholes in 2008, part of a 60 hole program that began in 2007, in order to expand the resource in a down-dropped block north of the Adera fault. A grid pattern was drilled in the proposed pit with average spacing between drill collars of 15 m and an average depth of 370 m. Highlights from recent results include 219 m grading 0.09% molybdenum in hole AD-407 and 277 m grading 0.094% molybdenum in hole AD-422.

MINERAL EXPLORATION

Total exploration spending in the Northwest Region for 2008 is estimated at $140 million. Figure 1.11 shows the distribution of expenditure; grassroots 1%, early stage 29%, advanced stage 37%, mine evaluation 27% and mine property 6%.

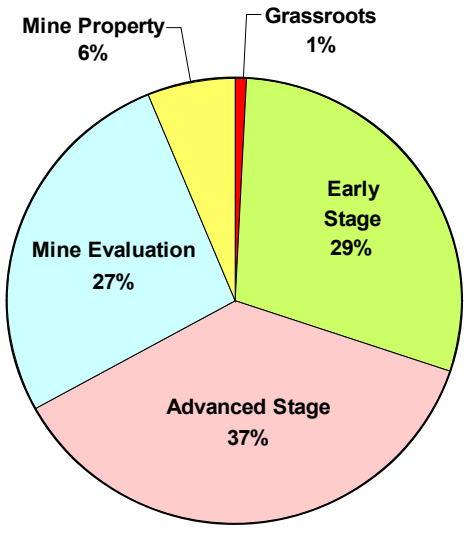

Figure 1.11. Distribution of total exploration spending in the Northwest Region.

Grassroots is the search for an exploration target. It spans pre-tenure activities such as literature research and airborne surveys to on-ground work (perhaps on mineral tenure) such as prospecting, silt and rock sampling and, in some instances, drilling for geological information. Grassroots work is commonly confidential and secretive; it is certainly not all captured by our survey.

'Early stage' exploration is the initial work conducted on a target, usually based on a deposit model. It comprises focused geological mapping, soil geochemical and geophysical surveys, generally on a grid, trenching and drilling. A property may remain in 'early stage' for more than one campaign of drilling if new areas are tested.

'Advanced stage' exploration concerns the delineation of a mineral resource. The main activity is regularly spaced drilling. Other activities may be undertaken but are subordinate to resource definition drilling; baseline environmental and access surveys, bench-scale metallurgical study and exploration of satellite or secondary targets. An economic scoping or pre-feasibility study is commonly undertaken.

'Mine evaluation' is concerned with the environmental, social, engineering and financial evaluation of a mining project. The first two components are synonymous with fulfilling requirements of the BC and Canada Environmental Assessment Acts; engineering and financial evaluations are addressed by the project proponent's full-scale feasibility study which cannot be completed accurately until the environmental and social terms are set. Social evaluation includes consideration of First Nations; negotiation of an impact and benefits agreement. Resource drilling may continue but the focus of site activity is on hydrology, geotechnical assessment of pit walls and tailings impoundment, selection of plant site and bulk sample metallurgical testing. Environmental studies include wildlife and stream-water quality and quantity.

'Mine property' exploration refers to work done at an operating or developing mine on new mineral zones outside existing ore reserves. Drilling programs at the operating Endako mine and at the (briefly) under construction Ruby Creek mine are in this category.

Figure 1.12 shows spending distribution by mineral deposit type; porphyry copper (copper-gold and copper-molybdenum projects) 50%, gold and silver in vein-type deposits 20%, porphyry molybdenum 18%, polymetallic massive sulphide deposits 9%, magmatic nickel 2% and coal 1%.

MINE EVALUATION PROJECTS

Mine evaluation projects are shown in Figure 1.1 together with major and small operating mines and mining projects in development. Important infrastructure is also presented.

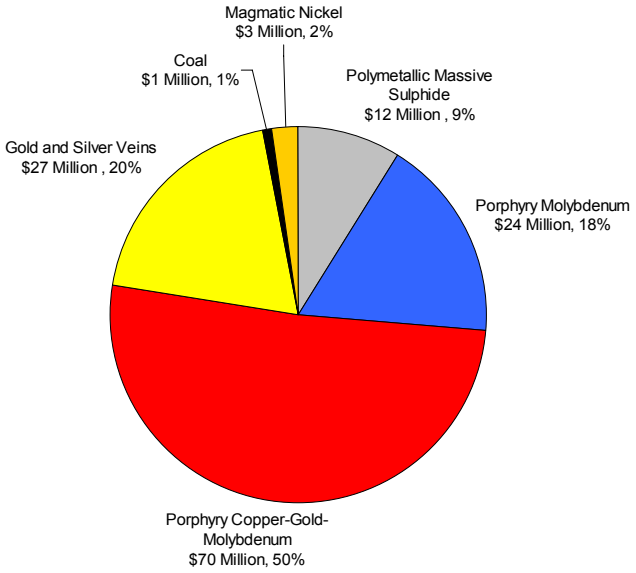

Figure 1.12. Spending distribution by mineral deposit type.

Galore Creek Mining Corp, a 50-50 partnership between Teck and NovaGold Resources, carried out studies related to re-engineering of the Galore Creek project (MINFILE 104G 090). Construction began in 2007, but was suspended late in the year due to unanticipated cost over-runs. Key elements of the 2008 program were; core drilling to provide better acid-base assessment of waste rock in the pit high-wall, geotechnical drilling of an alternative tailings site in West More Creek valley and investigation of a new alignment for the access tunnel. Pit waste rock that can be characterized as non-acid generating will not require subaqueous disposal, thereby reducing the height of a tailings impoundment. The West More site, near Round Lake (Figure 1.13), receives much less precipitation than Galore Creek valley and will not require large and costly diversion structures to accommodate high run-off volumes. The portal for the tunnel on the access road is now planned to be at Kilometre 91. Tunnel length is increased to 12 km but eliminates a 10 km section of road in Sphaler canyon that would be very costly to build and of high risk during operations. The overall length of the access route is reduced to 106 km from 130 km.

Galore Creek measured and indicated resources total 785.7 million tonnes grading 0.52% Cu, 0.29 g/t Au and 4.87 g/t Ag. Inferred resources, which include the nearby **Copper Canyon** deposit, stand at 522.5 million tonnes at 0.35% Cu, 0.29 g/t Au and 4.79 g/t Ag.

At **Schaft Creek,** Copper Fox Metals Inc. employed up to 90 people to acquire information for environmental assessment of a proposed 100 000 tonne per day open pit copper mine. The property is located 30 km north of the Galore Creek access road at the 65 km mark. One large pit would encompass three closely adjacent zones; the principal Liard (Main) zone, the small relatively high grade West Breccia zone and the northerly Paramount zone. Work focused on geotechnical drilling of the pit margins (the northeast high wall in particular) and at the Skeeter valley tailings impoundment east of the deposit. New mineralization was encountered by drilling east of the Paramount zone (Figure 1.14). An IP survey was completed over the plant site to detect mineralization that might be alienated by development. Test samples of all waste rock lithologies were established to monitor generation of acid run-off.

Schaft Creek (MINFILE 104G 015) is a large porphyry copper deposit that also contains molybdenum, gold and silver. Measured and indicated resources, at a 0.20% Cu equivalent cut-off, are 1.393 billion tonnes grading 0.25% Cu, 0.019% Mo and 0.18 g/t Au and 1.55 g/t Ag. The measured and indicated open pit resource is estimated to be 812 million tonnes at a grade of 0.30% Cu, 0.020% Mo, 0.21 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 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.

The **KSM** (**Kerr-Sulphurets-Mitchell)** gold-copper project entered the BC Environmental Assessment process. Seabridge Gold Inc. contemplate a 120 000 tonne per day open pit mine at the large porphyry copper

Figure 1.13. Galore Creek, Paul Cocklin (Construction Manager) and Jay Fredericks (EMPR) overlook Round Lake from the Galore Creek access road. Proposed tailings site in the distance.

Figure 1.14. Schaft Creek, geologists examine drill core.

Figure 1.15. KSM, Mitchell zone, marked by the gossan, is truncated by the paired Mitchell and Sulphurets thrust faults.

deposit. The site is 40 km north of Stewart and 18 km southeast of Eskay Creek mine (Figure 1.15). Key to the development is the Mitchell zone (MINFILE 104B 176, 275) that continues to be delineated; 30 core holes (17 000 m) were completed in 2008 to upgrade and expand the resource. The company began environmental and engineering studies for a 23 km tunnel and conveyor that would transport ore easterly to a proposed plant and tailings site near the head of Teigen Creek, 10 km south of Highway 37 near Bell II. The development vision includes mining the Kerr and Sulphurets deposits (MINFILE 104B 191, 182). Mineral resources in the three deposits, based on work up to the end of 2007 are tabled below.

Indicated Resources

Zone	Tonnes (000)	Gold (g/t)	Copper (%)
Mitchell	734 163	0.69	0.18
Kerr	206 272	0.25	0.45
Sulphurets	74 655	0.75	0.24
Total	1 015 090	0.61	0.24

Inferred Resources

Zone	Tonnes (000)	Gold (g/t)	Copper (%)
Mitchell	667 421	0.62	0.15
Kerr	51 387	0.21	0.45
Sulphurets	33 636	0.62	0.20
Total	752 444	0.59	0.18

Work by Seabridge shows the Mitchell porphyry system is inclined 45° north with its southerly surface expression truncated by the southeast-directed Mitchell thrust fault. Movement on the Mitchell and closely overlying Sulphurets thrust faults occurred in late Cretaceous time. Gold occurs with chalcopyrite and pyrite in a quartz stockwork. Uniformity of copper and gold grade throughout the deposit is an important characteristic. The Mitchell zone quartz stockwork is strongly deformed (Figure 1.16) and hostrocks are a monotonous sequence of chlorite-sericite schist. Deformation is less intense at depth (M. Savell, pers. comm. 2008), but a distinction is obscure between possible progenitor lithologies; Mitchell intrusions or volcanic rocks of either the Stuhini or Hazelton groups. Likewise, ore-related hydrothermal alteration is obscured by post-mineral deformation, although M. Savell states that highest copper grade is associated with potassium feldspar and magnetite toward the west end and at depth in the deposit (pers. comm., 2008). Furthermore, sericite and molybdenite are more prevalent to the east and topographically higher in the mineral zone. This pattern extends to the molybdenite-bearing gold zone at Snowfield (refer to *Exploration and Mining in British Columbia 2007 (EMBC 2007)*, page 14).

In 2008, Sherwood Copper Corporation completed its acquisition of Western Keltic Mines Inc whose principal asset was the **Kutcho Creek** copper-zinc project located 100 km east of Dease Lake. Kutcho Creek is a volcanogenic massive sulphide deposit (MINFILE 104I 060). Three elongate sulphide lenses (Main, Sumac and Esso West) 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.

Sherwood Copper undertook an in-fill drilling program in the Main zone with holes spaced 25 m apart on 60 m section lines, aimed at proving continuity of high grade areas close to surface. Drilling amounted to 9900 m in 81 core holes. The company anticipates both an increase in metal grade and an upgrade in classification of the resource; in addition, the drill core will provide

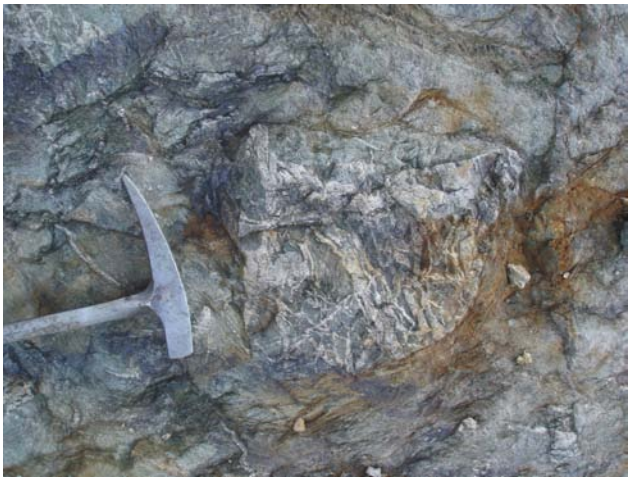

Figure 1.16. KSM – Mitchell zone, a clast of deformed quartz stockwork in a fault breccia.

Figure 1.17. Kutcho Creek, Jay Fredericks (EMPR) and Dani Alldrick (Sherwood Copper geologist) view surface trace of the ore zone and the proposed tailings site.

material for detailed metallurgical testing. Sherwood Copper advised the Envirnomental Assessment Office (EAO) of several changes to proposed mine development, including a decrease in milling rate to 4000 tonnes per day and a switch to dry-stacked disposition of tailings (Figure 1.17). In September, Sherwood Copper and Capstone Copper Corporation announced plans to merge the two companies. The new entity aims to submit a Project Report to the EAO in the first half of 2009.

Fortune Minerals Limited updated its feasibility study of the **Mount Klappan** anthracite coal project and retained CIBC World Markets to solicit a partner to develop the property. The feasibility analysis determined a strong rate of return; a higher coal price ($150 per tonne) used in the study offsets an escalation in capital cost to $617 million for a 3 million tonne per year mine. The study focused on truck transportation via a proposed new 100 km road linking the property to Highway 37 and on to Stewart, as a lower cost alternative to a buried slurry pipeline or a railway extension.

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, coupled with the 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 020-22) occur in four deposits that 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.

The **Davidson** molybdenum project (MINFILE 093L 110) is located 10 km west of Smithers and is owned by Blue Pearl Mining, a wholly-owned subsidiary of Thompson Creek Metals Company. The company proposes to develop an underground mine at Davidson and ship high grade molybdenum ore to Endako Mine for processing. This development is linked with the proposed new mill at Endako which would have a separate circuit to treat Davidson ore. A feasibility study estimated that a 2000 tonne per day mill would require capital expenditures of $109 million to develop the project; $65.7 million for underground development and $43.3 million for surface infrastructure. Underground development would be a new 3 km adit at the base of Hudson Bay Mountain to be used as a haulage ramp. Surface infrastructure would consist of a water treatment plant, access roads, onsite buildings and ore-handling facilities. The Project Report was accepted by EAO on September 3. The quality and quantity of water emanating from the mine is a primary concern to nearby residents. Blue Pearl announced in November that the project is on hold due to the decline in molybdenum price; the company will continue the Environmental Assessment permitting process.

The Davidson molybdenum deposit is related to a blind late Cretaceous intrusive complex beneath Hudson Bay Mountain. The intrusive complex produced a hornfels zone in Hazelton Group volcanic rocks. The principal molybdenum ore zone determined to be 75.3 million tonnes grading 0.177% Mo is situated 300 m above a quartz porphyry plug and is connected to a smaller ore zone within the quartz porphyry in a stacked arrangement. The preferred hostrock for the upper (principal) zone is a granodiorite sill of inferred Jurassic age. The top of the quartz porphyry is characterized by crenulated quartz layers popularly referred to as ‘brain rock’ but more properly known as unidirectional solidification texture. Below the lower molybdenum zone, the quartz porphyry plug is cut by a granite to quartz

monzonite stock, possibly a Nanika intrusion. The deposit represents a complex history of cross-cutting relationships with at least three molybdenum mineralizing events including fine-grained molybdenite veins, banded quartz-molybdenite veins and molybdenite blades and rosettes in pegmatite.

Pacific Booker Minerals Inc. continued to advance the **Morrison** copper-gold project. A program of geotechnical and hydrogeology drilling and test-pitting was completed. Metal leaching and acid generation test work continued and environmental field work was completed. The company continued to try to engage the Lake Babine First Nation. 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. The inferred resource stands at 56 524 000 tonnes grading 0.40% Cu, 0.21 g/t Au and 0.005% Mo. The company proposes to develop a 30 000 tonnes per day open pit mine.

GRASSROOTS, EARLY AND ADVANCED EXPLORATION

PORPHYRY COPPER PROJECTS

Porphyry copper projects comprise copper-gold and copper-molybdenum projects. Few projects contain all three metals in economically significant amounts. Projects that exceeded $500,000 expenditure are displayed in Figure 1.18. The map also shows, with a separate symbol, several deposits with significant resources that had a lower level of expenditure or were inactive. These may represent opportunities for new partners.

Prospects in the Iskut-Stikine district are all, except for one, developed in late Triassic to early Jurassic igneous rocks within Stikine terrane prior to its accretion to North America. Pre-accretion porphyry prospects are primarily copper-gold projects; molybdenum is significant only at Schaft Creek. Only the Eaglehead copper-molybdenum prospect occurs in a post-accretion intrusion. Galore Creek, Red Chris and Schaft Creek projects are described in the preceding section on Mine Evaluation Projects. The intrusions 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. Some of the copper-gold deposits 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 and relative prices, gold may be more important than copper so that some can be referred to as porphyry gold-copper projects.

Porphyry copper-molybdenum prospects predominate in the Skeena district. Some copper-gold prospects occur but gold content is appreciably less than in the Iskut-Stikine district. Skeena district porphyry prospects are all contained in post-accretion intrusions comprising the extensive late Cretaceous Bulkley, and more localized Eocene Nanika and Babine calc-alkaline intrusions. The three suites have separate distribution patterns but all occur within a transverse geologic feature known as the Skeena Arch. Bulkley and Babine intrusions are generally intermediate in composition; medium to coarse granodiorite is typical of the Bulkley suite and biotite-feldspar porphyry is characteristic of the Babine suite. Nanika intrusions contain more quartz and potassium feldspar, and comprise pink granite and quartz porphyry rhyolite dikes. The Huckleberry deposit is related to a Bulkley intrusion. The Morrison deposit is in a Babine stock. Both projects are described in preceding sections.

ISKUT-STIKINE DISTRICT

The **Eaglehead** porphyry copper prospect (MINFILE 104I 008) 50 km east of Dease Lake was drilled by Carmax Explorations Ltd. Copper-molybdenum mineralization is developed in a pink, biotite-hornblende granodiorite for a 10 km distance along the Thibert fault, a regional terrane-bounding structure. Fourteen holes were completed, testing IP anomalies in the Bornite, East and Far East zones. Results were not available.

Turnagain is a bulk-tonnage nickel prospect in a zoned ultramafic complex, located 70 kilometres east of Dease Lake and owned by Hard Creek Nickel Corporation. It is the only nickel project in the region and is grouped with porphyry copper projects only for the convenience of this report. Nickel occurs as disseminated pyrrhotite with minor pentlandite and rare chalcopyrite in the Horsetrail zone (MINFILE 104I 119). Forty of the 75 holes drilled in 2007 were reported in early 2008. The new data led to a revised measured plus indicated resource estimate totaling 576 million tonnes at a grade of 0.162% nickel sulphide and an inferred resource of 545 million tonnes at 0.154% nickel sulphide. Determination of sulphide nickel is based on selective leach analyses; total nickel content is about 0.22%. Fourteen core holes were completed in 2008, in-fill holes in the Horsetrail zone and to investigate platinum-palladium content of the Cliff zone. Ore grinding and nickel flotation test work was undertaken on the 4-tonne bulk sample extracted in 2007. A flat hole was drilled as a pilot hole for an adit that may be excavated to obtain a larger bulk sample. Hard Creek began to collect site environmental and hydrologic data, and signed a cooperation agreement with the Dease River Band and the Kaska Dena Council that contemplates negotiation of a socio-economic participation agreement that will be completed as part of a feasibility study.

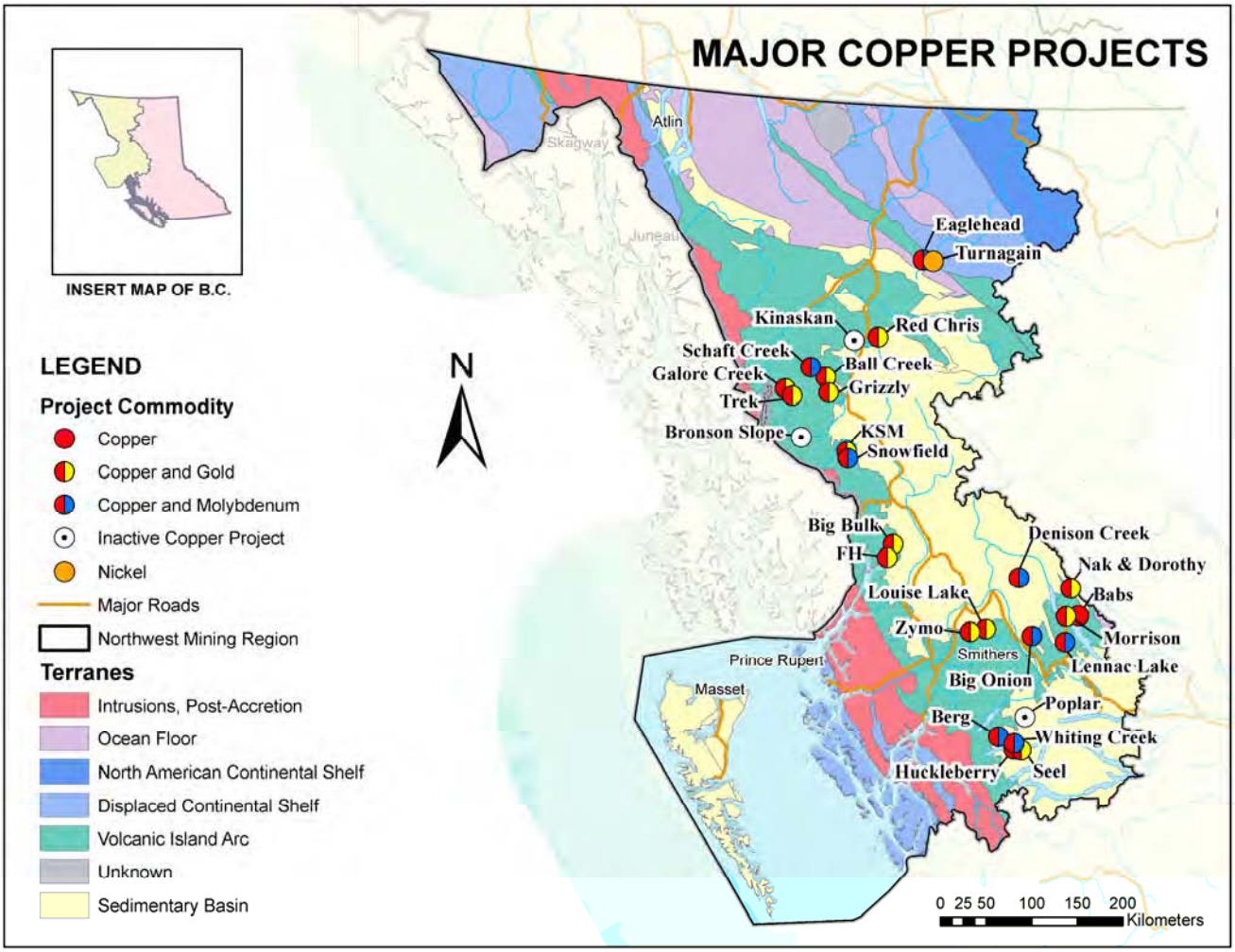

Figure 1.18. Major porphyry copper projects, Northwest Region.

At the **Red Chris** copper-gold property, 80 km south of Dease Lake, Imperial Metals Corporation constructed a 17 km access road to enable transportation of equipment for deep drilling and year-round operation. In 2007, a hole in the core of the East zone intersected 1024.1 metres grading 1.01% Cu, 1.26 g/t Au and 3.92 g/t Ag and bottomed in strong mineralization. In 2008 the first follow-up hole was completed to a depth of 1300 m and a series of wedge offsets will be drilled in 2009 (Figure 1.19).

Red Chris (MINFILE 104H 005) is a porphyry copper-gold deposit developed in an early Jurassic monzonite stock emplaced very near the fault-controlled north margin of the Bowser Basin. 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. The Red Chris project was awarded a BC Environmental Assessment Certificate in 2005. Federal approval under the Canadian Environmental Assessment Act was revoked in 2006 but, in 2008, the Federal Court of Appeal overruled the earlier trial court decision, thereby upholding the federal process and reinstating the federal environmental certificate.

Silver Standard Resources Inc. devoted its drill program on the **Snowfield** property to exploring east of the boundary of the KSM property owned by Seabridge Gold, in particular east of the Mitchell zone. Thirty-one holes were completed, totaling 16 945 m which outlined a gold-copper zone 700 by 800 m in surface extent that was named Snowfield North (Figure 1.20). Width and grade are comparable to the Mitchell zone, but mineralization is developed best 500 m east of the mutual boundary. Mitchell and Snowfield North are likely continuous geologically but separated by a lower grade interval. Drill-hole MZ-20 near the centre of Snowfield North intersected 662 m with an average grade of 0.86 g/t Au and 0.18% Cu. Silver Standard determined that Snowfield North is continuous with the Snowfields gold zone (MINFILE 104B 179) located 500 m to the south and at higher elevation (Figure 1.21). It was delineated during the past two seasons and contains a measured plus indicated resource of 78.57 million tonnes grading 1.21

Figure 1.19. Red Chris, Boyles 56-model drill, capable of drilling to 1500 m.

Figure 1.20. Snowfield, Silver Standard and EMPR geologists review drill core; Iron Cap gold-copper zone in the distance.

Figure 1.21. Snowfield, view of the Snowfield gold-molybdenum zone and the upper camp; Snowfield North is at lower elevation, beneath the fog.

g/t Au above a cut-off of 0.5 g/t gold. This occurs in a flat, near-surface zone. The inferred resource is 14.3 million tonnes at a slightly lower grade.

Canadian Gold Hunter Corporation disclosed a revised resource estimate for its **Kinaskan** (GJ) property 25 km southwest of Iskut. The measured and indicated resource in the Donnelly and North Donnelly copper-gold zones (MINFILE 104G 086) is 153.3 million tonnes grading 0.321% Cu and 0.369 g/t Au, at a cut-off of 0.2% Cu. At the same cut-off the inferred resource is 23.0 million tonnes grading 0.260% Cu and 0.310 g/t Au. No field work was conducted in 2008; geology of the prospect is described in *EMBC 2007*, pages 14-15.

A private company, Pembrook Mining Corporation drilled two holes on the **Ball Creek** porphyry copper prospect 10 km west of Highway 37, north of Bob Quinn. Geology and mineralization of the Mary (MINFILE 104G 018) and DM zones are described in *EMBC 2007*, page 15. John Bradford (pers. comm., 2008) reported BC08-01 intersected 0.16% Cu and 0.41 g/t Au over 265 m, beginning 33 m below surface.

On the **Grizzly** property near the Galore Creek access road, Rimfire Minerals Corporation explored an alkalic copper-gold system (MINFILE 104G 079) with a comprehensive program of geology, soil geochemistry, induced polarization and drilling (Figure 1.22). The principal target is a chalcopyrite-bearing zone exposed in a steep drainage, bounded by a fault on one side and by an orthoclase porphyritic dike on the other (Figure 1.23). Hostrocks are volcanic and volcaniclastic sedimentary rocks correlated with the Stuhini Group; the former contain 20-30% potassium-feldspar and small sparse hexagonal crystals, possibly pseudoleucite. Pseudoleucite occurs in volcanic rock at Galore Creek and indicates an alkaline composition. Results of the 11-hole, 2127 m program were not available at time of writing.

Romios Gold Resources Inc reported discovery of a copper-gold breccia zone on the **Trek** property, located at Kilometre 92 of the Galore Creek access route. A late Triassic intrusion at Trek (MINFILE 104G 029) is controlled by a northeast fault that corresponds to a prominent deflection in the course of Sphaler Creek. Romios carried out an airborne geophysical survey and drilled 6 holes (1410 m). The first hole, angled steeply southwest, returned 0.61% Cu and 0.39 g/t Au over 131.4 m. The second hole, drilled vertically from the same site, cut 0.10% Cu and 0.51 g/t Au over 315 m. The property was not visited.

Durango Capital Corporation acquired mineral claims over much of a 20 by 30 km area in the Kitsault district, 50 km southeast of Stewart. In 2008, Durango explored the **Big Bulk** prospect (MINFILE 103B 016) near Kinskuch Lake, including the nearby Seabee (MINFILE 103B 014) and Midnight Blue areas. In 2003, Canadian Empire Exploration Corp intersected significant copper-gold mineralization on the property but did no follow-up (see *EMBC 2007*, page 11). Durango performed a deep-

Figure 1.22. Grizzly property, soil samplers Joe McCreery and Mike Drennan-Young.

penetration induced polarization survey prior to drilling eight holes at Big Bulk, two at Seabee and two at Midnight Blue. Results at Big Bulk demonstrate widespread sub-economic copper and gold grades, such as 152.4 m interval in hole BB-11 grading 0.17% Cu and 0.06 g/t Au. On the **FH** property, 15 km south of Big Bulk and 5 km north of Kitsault, Durango Capital explored the San Diego zone (MINFILE 103P 155) copper-gold target with a 4-hole, 1200 m program (Figure 1.24). The zone had not previously been tested by drilling.

SKEENA DISTRICT

Terrane Metals Corporation continued in-fill drilling on the **Berg** porphyry copper-molybdenum prospect (MINFILE 093E 046) located 84 km southwest of Houston and 22 km northwest of Huckleberry mine. Mineralization occurs in a Nanika quartz monzonite stock as an annular zone around a barren core (Figure 1.25). Work in 2007 resulted in an updated resource estimate; 372.5 million tonnes indicated at a grade of 0.31% Cu, 0.036% Mo and 2.1 g/t Ag, and 140.9 million tonnes inferred at a grade of 0.25% Cu, 0.039% Mo and 2.2 g/t Ag. The estimates include a near-surface zone of supergene mineralization. Important findings of the 2007 program were recognition of a molybdenum-rich core to the annular ore zone, and local areas of significant silver content. These were investigated further by drilling in 2008 of 11 661 m in 31 holes. Berg is a classic porphyry copper system; alteration comprises potassium feldspar and secondary biotite in the stock, biotite hornfels in the country rocks, and a peripheral sericite zone.

Huckleberry Mines Ltd, a subsidiary of Imperial Metals Corp, drilled seven holes (1400 m) on the **Whiting Creek** prospect (MINFILE 093E 112). The property was not visited; no results are available.

Gold Reach Resources Ltd. completed a winter drill program at the **Seel** prospect (MINFILE 093E 105) that totaled 4407 m in 21 holes and focused on the Seel breccia zone. The property is 110 km south of Houston, and just 7 km from Huckleberry copper mine. The Seel breccia is about 200 m in diameter with higher grade copper-gold-silver mineralization occurring on its flank. The breccia plunges steeply toward the nearby copper-gold zone developed in a Bulkley intrusion. Seel property resources contained in three zones were determined to be 13.9 million tonnes indicated, grading 0.30% Cu, 0.30 g/t Au and 0.007% Mo, and 12.9 million tonnes inferred, grading 0.20% Cu, 0.11 g/t Au and 0.019% Mo. A 0.3% Cu equivalent cut-off grade was used. The adjoining Ox Lake deposit, drilled by Gold Reach in 2007, was determined to contain an inferred resource of 16.1 million tonnes at a grade of 0.30% Cu and 0.04% Mo.

The **Big Onion** porphyry copper prospect (MINFILE 093L 124) is 16 km east of Smithers and contains a historic resource of 94 million tonnes grading 0.42% Cu. Eagle Peak Resources, a private company, drilled early in the year (11 holes, 2350 m), the culmination of a major program that began in 2007. Mineralization is developed in a composite quartz diorite and quartz-feldspar porphyry intrusion, tentatively assigned to the early Tertiary Nanika suite. The mineralized zone was expanded and additional drilling is proposed but a new resource estimate is not available.

Figure 1.23. Grizzly property, Rimfire geologist Mike Roberts examines the Grizzly copper-gold showing.

Figure 1.24. FH property, a difficult drill set-up on the San Diego zone.

Figure 1.25. Berg drill camp, situated on the barren core of the copper-molybdenum deposit; the ore zone underlies the recessive area and the hornfels zone is on the skyline.

On the **Zymo** property (MINFILE 093L 324) located 45 km west of Smithers, Canadian Gold Hunter received encouraging results from drilling the Hobbes zone discovered in 2007 (Figure 1.26). The Hobbes zone is 3 km west of the area drilled by Freeport McMoRan in 1999 (refer to *EMBC 1999*, page 59-64). Drill targets were derived from a 60 km soil geochemical survey and a 45 km induced polarization survey. All six holes (1554 m total) intersected wide intervals of quartz-chalcopyrite stockwork veins. Drill-hole ZY-08-09 assayed 0.32% Cu and 0.23 g/t Au over its full core length of 253 m. Mineralization is developed in diorite, associated with potassium feldspar, biotite and magnetite, and in adjacent sericite-altered sedimentary rocks. The diorite is one of several similar bodies that lie within a 2 by 4 km magnetic anomaly, and are interpreted to be apophyses of a single intrusion.

North American Gem Inc. conducted another winter drilling campaign at the **Louise Lake** porphyry prospect (MINFILE 093L 079) west of Smithers. Sixteen holes (5043 m) were completed. Geological mapping of the property and a soil geochemical survey were carried out in the summer. Resources are estimated at 6 million tonnes (indicated) at 0.214% Cu, 0.006% Mo and 0.20 g/t Au and 141 million tonnes (inferred) at 0.234% Cu, 0.009% 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.

At the **Lennac Lake** porphyry copper property (MINFILE 093L 190, 191) 45 km east of Smithers, Dentonia Resources Ltd completed five drillholes in January, the conclusion of a program that began in late 2007 (see *EMBC 2007,* pages 16-17). The holes tested the Southeast zone, one to two kilometres from areas explored in the 1970s. The best hole, LL08-16, intersected 62 m grading 0.037% Mo and 0.067% Cu.

The **Nak** (MINFILE 093M 010) and nearby **Dorothy** (MINFILE 093M 009) porphyry copper prospects in the Babine district, 85 km northeast of Smithers, were explored by Copper Ridge Explorations Inc. Both prospects are underlain by biotite-feldspar porphyry stocks of the Babine suite. Similar intrusions are associated with porphyry copper deposits at past-producing Bell and Granisle mines. Copper Ridge completed an 85 km IP survey that was started late in 2007, and followed up by drilling five holes totaling 1265 m. Results were not available.

Figure 1.26. Zymo, Geologist Bob Johnston on the discovery outcrop, a chalcopyrite-bearing quartz stockwork.

Also in the Babine district, Kenrich Eskay Mining Corp reactivated exploration of the **Babs** property (MINFILE 093L 325) located 70 km east of Smithers. Several previous operators searched without success for the source of copper-bearing biotite feldspar porphyry (Babine suite) boulders in glacial till. Past drilling encountered copper mineralization in Babine suite eruptive rocks (see *EMBC 2007*, pages 117-121). Kenrich Eskay conducted trenching (Figure 1.27), collected soil samples over a 57.5 km grid for mobile metal ion (MMI) analyses and drilled 1048 m in 7 core holes. The holes intersected felsic lapilli tuff with disseminated and veinlet chalcopyrite. Hole 08-2 returned 0.16% Cu over 59.6 m and hole 08-6 contained 0.21% Cu over 76.4 m. Derivation of the mineralized intrusive boulders remains elusive.

Figure 1.27. Babs, three geologists prospect newly exposed copper mineralization 30 metres away from the excavator.

PORPHYRY MOLYBDENUM PROJECTS

Porphyry molybdenum projects are displayed on Figure 1.28. 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 are two distinct areas of concentration, the Skeena Arch and in the Atlin-Cassiar area. Skeena Arch molybdenum deposits are found in a number of intrusive suites: the early Tertiary Alice Arm and Nanika intrusions, late Cretaceous Bulkley intrusions and the Jurassic Francois Lake batholith. In the Atlin-Cassiar area, molybdenum occurs mainly in late Cretaceous batholiths, the Surprise Lake and Cassiar batholiths in particular but also in Tertiary intrusions. In both regions, molybdenum mineralization found in granite batholiths is preferentially associated with a fine-grained border or high-level phase and usually forms a laterally extensive, tabular deposit. Examples are Endako mine, Ruby Creek, Storie and the new Shan prospect. Molybdenum mineralization associated with small, highly silicic intrusions 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 Kitsault. Three deposits; Endako, Ruby Creek and Davidson are described in previous sections of this report.

ATLIN-CASSIAR DISTRICT

Exploration at the **Titan** molybdenum deposit (MINFILE 104M 089), located 40 km west-southwest of Atlin, was carried out by XO Gold Corp. The property is underlain by the Coast Plutonic Complex. Mineralization is located near the contact between a Tertiary granite and older metamorphic rocks as well as disseminations in the intrusion. Field work included an airborne geophysical survey over 650 line kilometres, geological mapping, prospecting and soil geochemistry.

The Swan molybdenum-tungsten porphyry (MINFILE 104O 010) is held by Hastings Resources Corp and is located approximately 90 km west of Cassiar. Mineralization is hosted by phases of the Glundebery batholith. Molybdenum is controlled by northwest trending fracture sets and occurs as coarse molybdenite grains in quartz and arsenopyrite-magnetite-pyrite-quartz veins. The 2008 work program included 1000 m of drilling in 13 holes (Figures 1.29, 1.30).

Velocity Minerals Ltd. conducted a drill program on its **Haskins** property, located near Cassiar (MINFILE 104P 059). The molybdenum zone is situated on the northwest slope of Haskins Mountain in lower Paleozoic Atan Group chert and limestone near the contact with an Eocene granite stock. The sequence of hornfels and skarn zones progressing toward the stock is biotite hornfels, actinolite-chlorite hornfels, garnet-diopside skarn and marble, and, next to the stock, magnetite-pyrrhotite skarn (V. Strimbu, pers. comm., 2008). A quartz-molybdenite stockwork is developed best in chert-skarn with abundant actinolite-chlorite veins. Quartz veins are both planar and highly crenulated. Velocity Minerals drilled 13 holes with total length 3427 m (Figure 1.31) to bring a historic resource of 12.3 million tonnes grading 0.094% Mo into compliance with current standards.

Columbia Yukon Resources Inc. continued to drill the **Storie** deposit (MINFILE 104P 069) near Cassiar to upgrade the molybdenum resource. A large program was conducted with 20 700 m of drilling in 49 holes. An important outcome of the program was wide molybdenum intersections up to 450 m west of the resource area. A new resource estimate based on 2007 drilling upgrades the deposit size to an indicated 98.3 million tonnes grading 0.064% Mo and an inferred 30.9 million tonnes grading 0.059% Mo. This is anticipated to be significantly increased due to the westerly extension of molybdenum zone. Molybdenite mineralization is located in the Cassiar batholith near the eastern border and forms a flat

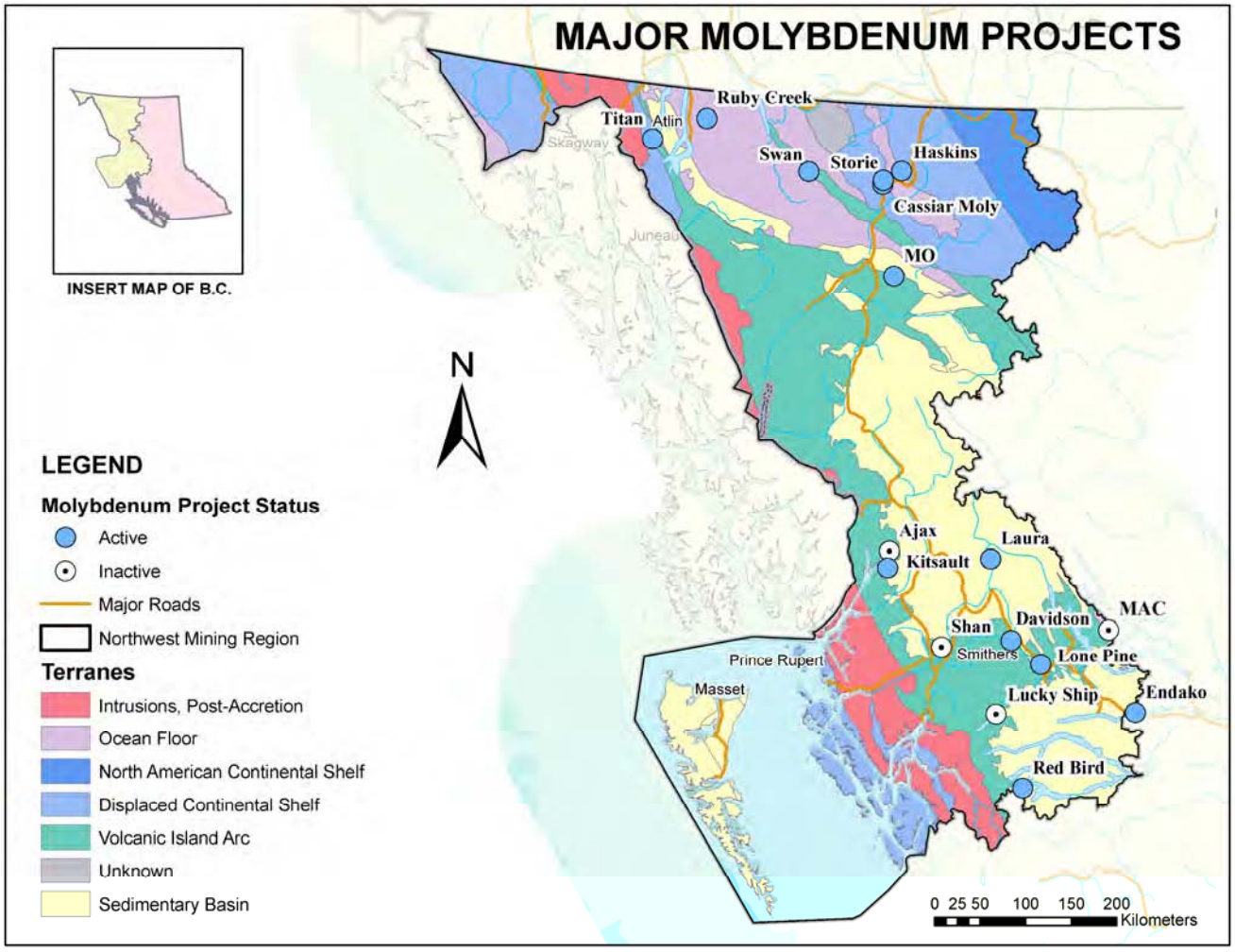

Figure 1.28. Major porphyry molybdenum projects, Northwest Region.

lying, 150-200 metre thick zone. Four sub-horizontal phases are recognized (M. Jerema, pers. comm., 2008), all are quartz monzonite to granite in composition; an uppermost megacrystic unit, a fine-grained (quenched) unit, medium to coarse grained phase and a lower quartz-feldspar porphyry. Quartz-feldspar porphyry, possibly the youngest phase, contains the highest molybdenite content. Metallurgical testing determined a concentrate grade of 53% Mo and "locked cycle testing" showed molybdenum recoveries of 70% to 87%.

The **Cassiar Moly** deposit (MINFILE 104P 035) is located approximately 5 km south of Cassiar in an eastern phase of the Cassiar batholith. An adit, 970 m long, was excavated in 1968-1969 by Value Line Minerals Ltd to evaluate continuity of a surface showing discovered by John Hope in 1966. (John Hope, pers. comm., 2008). Historic sampling of the showing returned 0.28% Mo over 3.6 m and 3.6% Mo over 1.5 m. Velocity Resources Ltd. restored the portal, located at an elevation of 1890 m, for underground access and rehabilitated the access trail to the portal (Figure 1.32).

Paget Moly Corp drilled 8 holes (2148 m) on the **MO** property (MINFILE 104I 059) located 30 km southeast of Dease Lake, within the Snowdrift Creek pluton. Exploration for a porphyry system was conducted by Kennco and BHP Utah Mines in 1973-76, without success. Work by Paget Moly confirmed an RGS (regional geochemical survey) silt anomaly from Snowdrift Creek, at 280 ppm Mo, it is one of the highest RGS values in BC. Initial drillholes targeted areas of high magnetic response, as did the unsuccessful holes by Utah Mines, but subsequent holes tested a magnetic low and found a quartz-molybdenite stockwork (Figure 1.33).

SKEENA DISTRICT

The **Kitsault** property (MINFILE 103P 120) is located about 140 km north of Prince Rupert and was acquired by Avanti Mining Corp. in June 2008 for a purchase price of $20 million. The high grade molybdenum mine operated between 1967 and 1972 and from 1981 to 1982 with a total production of 13 600 tonnes of molybdenum.

Figure 1.29. Swan, Clive Aspinall supervised the drill program.

Figure 1.31. Haskins Mountain, site geologist Vlad Strimbu reviews drill core.

Figure 1.30. Swan, a porphyritic phase of the Glundebery batholith in drill core, with prominent potassium feldspar.

Figure 1.32. Cassiar Moly, access trail and exploration adit were re-opened.

A resource estimate from historical drill assays concluded that at a 0.04% cut-off grade there is an indicated resource of 158 million tonnes grading 0.100 % Mo and an additional inferred 133 million tonnes grading 0.080% Mo. Avanti released a preliminary economic assessment and is currently working toward completion of a formal prefeasibility study that will include a resource update and further examination of pit and site details.

A drill program comprising 33 holes and 10 127 m, collared within the open-pit (Figure 1.34), targeted an annular zone of molybdenum mineralization associated with the multiphase Lime Creek quartz monzonite to quartz diorite stock that cuts Bowser Lake Group sedimentary rocks. Molybdenite veins occur in the stock and in the contact metamorphic aureole. Preliminary drill results show no significant differences with the resource model and could improve it to the north. The program also provided for metallurgical testing, the geotechnical evaluation of pit wall slope angles and to measure acid generation potential.

Paget Moly Corp. carried out exploration on the **Laura** molybdenum prospect (MINFILE 093M 079) completing 1858 m in 8 drillholes (Figure 1.35). Mineralization occurs within a biotite granodiorite stock, one of the Bulkley intrusions, located 32 km north of Hazelton. Four episodes of veining are evident, molybdenite occurs in the two intermediate vein sets with pyrite, chalcopyrite, pyrrhotite and secondary biotite. Bowser Lake Group sedimentary rocks are fractured but a less receptive hostrock.

The **Shan** property (MINFILE 103I 114), located 20 km northeast of Terrace, experienced a reduced level of activity from the 2007 field season. Mineralization occurs in the Carpenter Creek granitic pluton, part of the Coast Plutonic Complex, which intrudes and underlies Hazelton Group volcanic rocks. BCM Resources Ltd conducted

Figure 1.33. MO property, quartz-molybdenite veins with pink K-feldspar envelopes.

Figure 1.34. Kitsault, Dan Munter (project manager) in the open pit of the past-producing molybdenum mine.

geological mapping to test an interpreted fault offset of the Las Margaritas molybdenum zone. A purple mineral previously considered to be fluorite was identified to be anhydrite. Geology and mineralization at Shan are described in greater detail by Venable and Wojdak (*Geological Fieldwork 2008*).

Bard Ventures Ltd further outlined the Alaskite molybdenum zone on the **Lone Pine** project (MINFILE 093L 027, 28) located 15 km north-northwest of Houston. A total of 25 holes were drilled into the zone. An additional 2 holes were completed in the nearby Granby Zone and 5 holes in the Quartz Breccia zone for a total of 18 793 m of core drilling. In the Alaskite zone, the mineralized intrusion dips steeply to the southwest toward a quartz-feldspar porphyry tentatively correlated with the Nanika intrusions. Adjacent Telkwa Formation andesite is extensively hornfelsed, fractured and veined but contains less molybdenite than the alaskite (Figure 1.36). Drilling has delineated the alaskite body over 510 m in length, 310 m in width and to a depth of 843 m. Significant drill intercepts from hole BD-08-25 include 731 m grading 0.10% Mo (200 m estimated true thickness) and 130 m grading 0.20% Mo. Release of a resource estimate is anticipated.

Located 65 km southwest of Houston, the **Lucky Ship** property (MINFILE 093L 053) had a decreased level of activity compared to the large drill program conducted in 2007. Nanika Resources Inc, previously named New Cantech Ventures, announced an indicated resource estimate of 65.66 million tonnes grading 0.064% Mo and an inferred resource of 10.24 million tonnes grading 0.054% Mo at a cut-off grade of 0.03%. The Lucky Ship molybdenum-bearing stock belongs to the Nanika suite of intrusions and cuts Telkwa Formation volcanic rocks, part of the Hazelton Group.

Torch River Resources Ltd. completed 16 core holes (5000 m) on the **Red Bird** molybdenum prospect, which is located 125 km south of Houston (MINFILE 093E 026). Based on work prior to the 2007 field 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 resource is distributed in three zones, Main, Southwest and Southeast, which occur around the margin of an Eocene quartz monzonite stock that intruded Telkwa Formation tuffs. Torch River investigated rhenium content; a sample with 0.137% Mo returned 0.128 ppm Re, in the high end of the range typical of porphyry molybdenum deposits.

Figure 1.35. Laura property, Doug Campbell at the drill.

Figure 1.36. Lone Pine, quartz-molybdenite vein in the Alaskite zone.

POLYMETALLIC MASSIVE SULPHIDE PROJECTS

Polymetallic massive sulphide projects are shown in Figure 1.37. 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 massive sulphide projects span a wide age range. Tulsequah Chief, Joss'alun, Highway, Foremore and Aspira are all in Paleozoic strata but of different terrane affiliation. The Kutcho Creek deposit is in rocks of Triassic age. Projects in the Stewart area, including Eskay Creek, are all in Jurassic volcanic rocks of Stikine terrane. Finally, BQ and Suskwa occur in a Cretaceous-age overlap assemblage. Eskay Creek mine, Tulsequah Chief and Kutcho Creek projects are described in previous sections of this report.

The **Highway** property is located in the Big Salmon metamorphic complex near the Alaska Highway and is operated by Strategic Metals Inc. The Paleozoic rocks north of the B.C. - Yukon border are known to contain volcanogenic mineralization. A single drillhole (213 m) determined that an electromagnetic anomaly is derived from buried river gravel. Exploration of the nearby Tes claims (MINFILE 104N 135) was deferred.

The **Joss'alun** project (MINFILE 104N 136) was explored by Lomiko Metals Inc under option from Copper Ridge Exploration Inc. The property is located approximately 75 km southeast of Atlin. Copper mineralization occurs as conformable lenses of chalcopyrite and pyrite within mafic volcanic and volcaniclastic rocks of the Nakina Formation, Cache Creek Group. One hole to test for an extension of the Joss'alun zone intersected 0.66% Cu over 3.1 m. Two holes targeted an IP and soil geochemical anomaly at the Box Lake showing but did not intersect significant copper.

On the **Foremore** project (MINFILE 104G 148), stratibound copper-zinc-silver-gold sulphide mineralization occurs within Stikine Assemblage mafic to felsic flows and sedimentary rocks. Roca Mines Inc optioned the property, located 30 km east of the Galore Creek project, from Lorne Warren in 2000 to search for the source of high-grade boulders in glacial moraine. Roca was successful in locating new showings which continue to be evaluated. Work completed in 2008 included a ground induced polarization survey and 15 drillholes totaling 1520 m. No drill results were available.

Kenrich-Eskay Mining Corp. completed 4 drillholes with an accumulative length of 2333 m on the **SIB** claims (104B 376). Eskay-type, gold-silver rich massive sulphide mineralization is situated in a succession of Eskay Rift rhyolite and mudstone that is directly correlative with the Eskay Creek deposit. Deep holes were designed to test a fault-offset of the Lulu Zone below the Coulter Creek thrust. Mineralization was intersected at depth in altered rhyolite, including 25.4 m grading 2.1 g/t Au, 0.2% Zn and 0.1% Pb in drillhole EK08-134.

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 also covers directly correlative stratigraphy. Drilling recommenced in the Red Lightning zone to outline stratibound and disseminated pyrite-pyrrhotite-chalcopyrite mineralization that occurs in an altered mafic volcanic unit of the Hazelton Group. The zone was tested with 7 drillholes (1750 m in total). Intercepts of base metal massive sulphides include 20.4 m (estimated true thickness of 10.8 m) grading 0.79% Cu, 0.42% Ni and 0.8 g/t Au in hole CR08-86.

The **Todd Creek** claims, located in the Stewart district, are underlain by a series of prominent gossans in the glacially-scoured valley of Todd Creek (Figure 1.38). Mineral showings include Mylonite, South (MINFILE 104A 001), Yellow Bowl (104A 111), Knob (104A 109), Fall Creek (104A 107), North (104A 105, 106) and Amarillo (104A 104). These showings comprise characteristics of epithermal vein and polymetallic massive sulphide deposits. A volcanogenic massive sulphide deposit is the target sought by Intuitive Exploration Inc. Coarse chalcopyrite occurs in fine grained quartz-jasper veins in the South zone (Figure 1.39). At a new showing, massive pyrite-chalcopyrite-sphalerite-galena is underlain by volcanic breccia, with clasts to 40 cm, and overlain by massive andesite (Figure 1.40). The zone extends about 700 m. (D. Molloy, pers. comm., 2008). Work in 2008 comprised 6.2 line kilometres of induced polarization surveying, 66 line kilometres of magnetic surveying and 8 diamond drillholes totaling 2582 m.

The **Barbara Anne** (or **BA**, MINFILE 104A 178) project of Mountain Boy Minerals Ltd. is located 30 km northeast of Stewart. A sequence of well-bedded massive pyrite, iron-rich mudstone, chert and jasper is associated

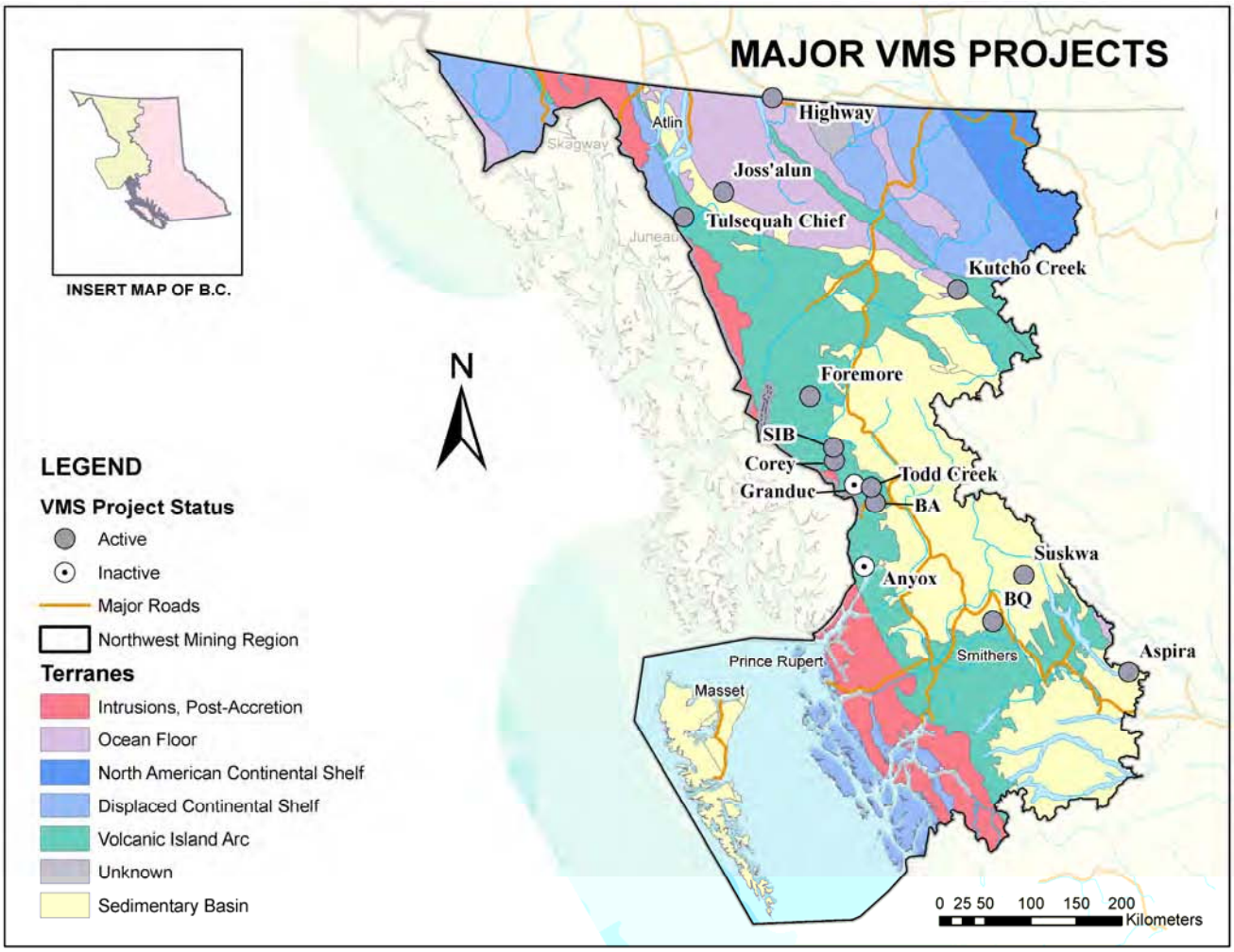

Figure 1.37. Polymetallic massive sulphide deposits, Northwest Region.

with spheroidal rhyolite in Hazelton Group strata. Silver, lead and zinc mineralization is associated with replacement-style barite and hematite alteration. Twenty-two drillholes were completed over an area measuring 800 m in strike extent by 400 m downdip. A highlight from holes drilled in 2007 was a 19.82 m intercept grading 146.81 g/t Ag, 1.16% Pb and 2.56% Zn. All holes drilled in 2008 remain to be reported.

Otterburn Ventures Inc. explored the **Suskwa** project that covers the Max (MINFILE 093M 027) and Knoll (MINFILE 093M 100) showings located 34 km east of Hazelton. Work focused on the Max prospect and involved 60 line kilometres of soil sampling, prospecting, cleaning trenches and completion of a 43-101 technical report. Geological mapping and prospecting linked silver and gold-bearing veins with a felsic volcanic horizon. A volcanogenic massive sulphide deposit setting is described on the nearby Knoll showing in *EMBC 1999*, page 79-84.

Endurance Gold Corp. followed up geophysical and geochemical surveys conducted in 2007 on the **BQ** property with four drillholes (625 m). The claims are located 50 km northwest of Smithers. Drilling encountered little mineralization, chargeability anomalies are considered to be derived from graphitic argillite horizons observed in drill core. Endurance Gold terminated its option to acquire a 100% interest in BQ.

Figure 1.38. Todd Creek, drilling on the Knob zone, one in a series of strong gossans.

Figure 1.39. Todd Creek, South zone core with banded quartz-jasper vein network.

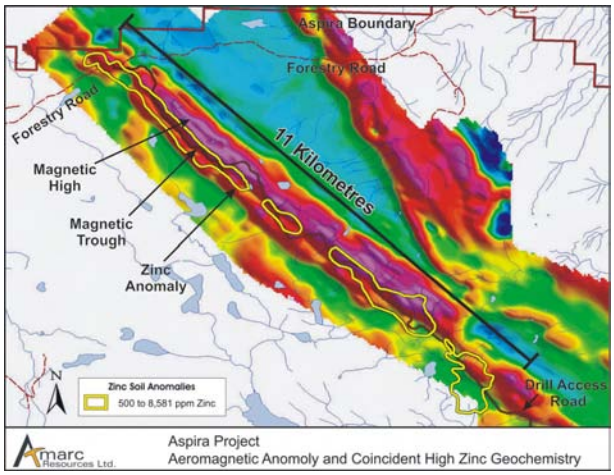

Figure 1.41. Aspira, map showing aeromagnetic anomaly and coincident high zinc soil geochemistry (from Amarc website).

Figure 1.40. Todd Creek, stratabound massive pyrite-chalcopyrite-sphalerite at the VMS showing.

Figure 1.42. Aspira, wispy disseminated pyrite (and sphalerite) in mafic meta-volcanic rock.

Amarc Resources Ltd. explored the **Aspira** property (MINFILE 093K 052) 40 km northeast of Burns Lake. The property is underlain by deformed volcanic and sedimentary rocks of the Sitlika Assemblage. In 2007, a soil survey generated a strong zinc anomaly, values up to 8500 ppm, in association with mafic to felsic volcanic rocks. Follow-up in 2008 comprised an aeromagnetic survey, a major soil survey (5184 samples), 37 line kilometres of induced polarization and 11 drillholes (2343 m). A 15 km road was built for drill access. The zinc anomaly extends for 11 km in a north-northwest direction and is associated with a high magnetic signature (Figure 1.41). The drillholes encountered pyrite and trace amounts of sphalerite, chalcopyrite and galena as fine laminations in volcanic and sedimentary rocks (Figure 1.42). No economic values were encountered.

GOLD – SILVER PROJECTS

The gold-silver projects shown in Figure 1.43 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 and in the Atlin area where they occur in Cache Creek terrane and near the terrane-bounding Llewellyn fault. In the Skeena district, silver accompanies gold or is the dominant metal at many projects. The following descriptions proceed roughly from north to south.

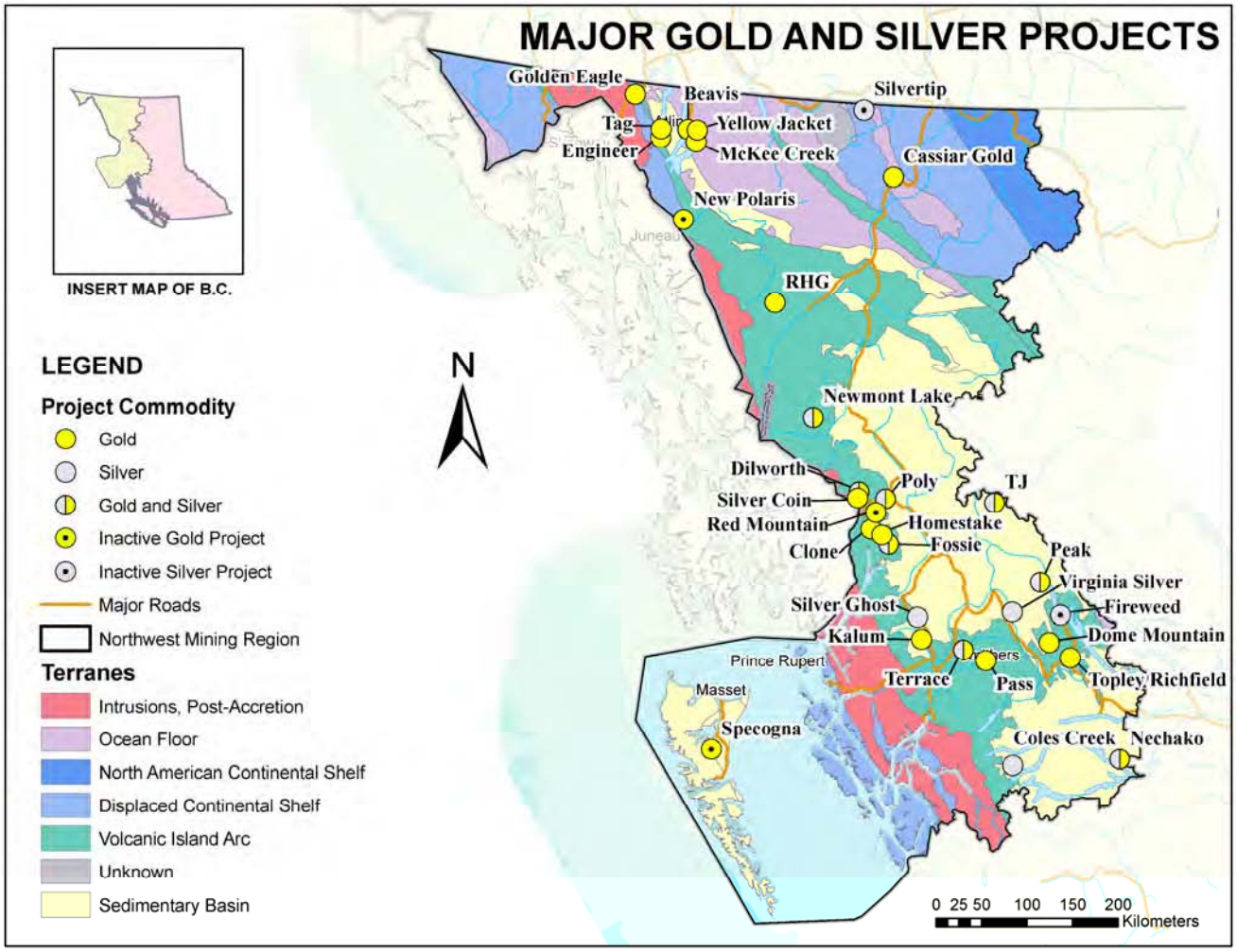

Figure. 1.43. Major gold and silver projects, Northwest Region.

ATLIN DISTRICT

Troymet Exploration Corp. contracted Equity Exploration Consultants Ltd. to complete an exploration program focused on the Tannis zone of the **Golden Eagle** project (MINFILE 104M 044, 74). The property is located approximately 50 km northwest of Atlin and is near a major structure, the Llewellyn fault. Drilling in 2006 (Figure 1.44) intersected gold-bearing quartz-arsenopyrite veins developed in a body of rhyolite, of assumed Tertiary age, and intersected up to 10.7 g/t Au and 104.2 g/t Ag over 5.5 m. In 2008, a total of 2406 m were drilled in 12 holes. The arsenopyrite-gold vein system was found to extend downward into porphyritic and miarolytic biotite granite, likely related to the overlying rhyolite.

Saturn Minerals Inc. explored orogenic gold veins on the historic **Beavis** mine (MINFILE 104N 007) located 2 km north of the town of Atlin. The mine was developed on three levels from one shaft with a depth of 60 m between 1902 and 1908. The gold target is situated in a compressional tectonic belt of oceanic crustal rocks overprinted by listwanite alteration. Gold mineralization is entrained in the Monarch Mountain thrust near the contact between serpentinite, volcanic rocks, chert and argillite, all part of the Cache Creek terrane. Gold, locally high grade, is associated with quartz veins in zones of listwanite alteration in ultramafic rocks. Results were not available for the 8 holes (855 m) that were drilled.

Yellow Jacket (MINFILE 104N 043) contains coarse gold mineralization related to the tectonic emplacement of ultramafic rocks of the oceanic Cache Creek terrane. A 10 000 tonne bulk sample was mined in 2007 and approximately 5000 tonnes were milled in 2008. Rich placer gold overlies the property, in the heart of the Atlin placer district. Prize Mining Corp used a ball mill to increase throughput of material into a Knelson-designed gravity processing plant (Figure 1.45). Three gold bars with a combined weight of 547 ounces were produced on site, and a quantity of concentrate was shipped off-site for final recovery of gold. Prize Mining may expand the operation to mill an additional 40 000 tonnes in 2009. A semi-autogenous grinding mill is at the site which, when installed, will enable more efficient processing of ore.

McKee Creek, also in the Atlin placer district, is located 15 km southwest of the town of Atlin (MINFILE 104N 035) in a similar geologic setting as Yellow Jacket and Beavis. Saturn Minerals Inc drilled four holes (694 m) and intersected chert and argillite cut by banded and vug-lined quartz veins (Figure 1.46). Drill results were not available.

CZM Capital Corp. drilled 20 core holes (3429 m) to test epithermal gold-silver mineralization on the **Tag** property (MINFILE 104M 079, 80) 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 developed in Laberge Group greywacke. A highlight of the first phase of drilling is an interval from TAG08-60 that graded 2.33 g/t Au and 6.93 g/t Ag over 22.1 m.

The historic **Engineer** mine (MINFILE 104M 014) is located on the southeast side of Tagish Lake, 32 km west-southwest of Atlin. Focus of the BC Gold Corp. exploration program was shear zone "A" which was tested by seven holes totaling 1825 m (Figure 1.47). Underground sampling was conducted and samples of drill core were analyzed with a hand-held unit that detects alteration minerals (PIMA). Structural mapping was completed underground and on surface to determine displacement along the A and B shears and locate the extension of the Engineer vein. Gold-bearing veins are related to tensional fractures associated with motion along the Llewellyn fault (F. Devine, pers. comm., 2008). Drill intercepts indicate the A shear is approximately 60 m wide, broader than previously thought. Map interpretation indicates that a likely location for the Engineer vein offset is in a previously unexplored area.

GMV Minerals Inc. conducted a drill program on the **RHG** property, 110 km southwest of Dease Lake. Two core holes were drilled in the RHG zone (Figure 1.48), one of four showings on the property (MINFILE 104G 178). Property geology comprises a sequence of Stuhini Group volcanic and sedimentary rocks intruded by diorite. Gold-copper-silver skarn-style mineralization up to 20 m thick is developed where diorite intrudes limestone.

'GOLDEN TRIANGLE' (THE STEWART DISTRICT)

At **Newmont Lake**, 30 km southeast of Galore Creek mine, Romios Gold Resources Inc. conducted an exploration program focused in the vicinity of the Northwest zone (MINFILE 104B 281). A length of 3603 m was drilled in 11 holes to upgrade an inferred resource of 1 406 000 tonnes grading 4.43 g/t Au, 0.22% Cu and 6.4 g/t Ag. A 40-kilometre induced polarization survey followed airborne electromagnetic and magnetic surveys. A total of 984 soil samples were taken. Gold-copper veins and skarn zones on the property are related to the northeasterly McClymont and Newmont fault zones that cut Paleozoic Stikine Assemblage, including limestone, and intrusive rocks. Two samples of the porphyritic intrusions submitted for geochronological analysis returned late Triassic uranium-lead ages of 203.1 and 214.1 Ma (Romios website). Assays of drill core returned up to 1.23 m grading 51.7 g/t Au, 33.7 g/t Ag and 0.97% Cu.

Figure 1.44. Golden Eagle, drilling in the Tannis zone in 2006; rhyolite in nearby outcrops.

Figure 1.45. Yellow Jacket, Rino Mihoc, milling consultant, and Linda Dandy, project manager, at the pilot mill.

Figure 1.46. McKee Creek, banded and vuggy quartz-calcite veins in deformed argillite of the Cache Creek Group.

The **Dilworth** property, located 25 km north of Stewart, is a consolidation of gold and silver showings including, from north to south; Chicago, Hammer, Yellowstone (MINFILE 104B 039), Forty-Nine (MINFILE 104B 038), Helen and Oxidental (MINFILE 104B 142). Three new showings named Below the Road, Below Helen and Snow (Figure 1.49) were discovered. Ascot Resources Ltd. conducted silt, soil and rock chip sampling of trenches and an airborne electromagnetic, magnetic and gamma-ray survey that covered 500 line kilometres. A large drill program, 10 886 m in 63 drillholes, was completed to determine the extent of mineralized zones. Sulphide mineralization occurs with calcite and quartz in veins and breccia zones which are hosted by volcanic rocks of the Hazelton Group. Assays from mineralized drill core at the Snow zone, containing native silver, returned 3.23 m of 2.18 g/t Au and 2516.1 g/t Ag (Figure 1.50).

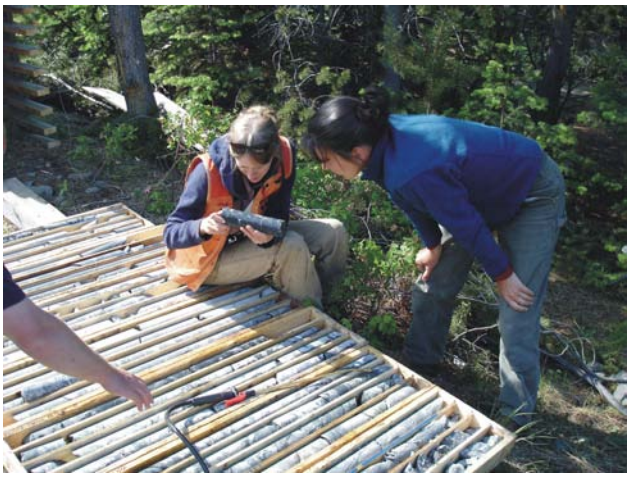

Figure 1.47. Engineer, Gayle Febbo (EMPR) and Fionnuala Devine (for BC Gold) examine drill core from 'A' shear zone.

Figure 1.49. Dilworth, geologists examine the newly discovered Snow gold-silver showing.

Figure 1.48. RHG, drill set up at top of cliff outcrop where chalcopyrite-bearing skarn is exposed.

Figure 1.50. Dilworth, native silver and pyrite in quartz vein breccia from the Snow zone.

Pinnacle Mines Ltd. continued to drill on the **Silver Coin** property (also known as Silver Butte, MINFILE 104B 150) located 24 km north of Stewart. A large program of 88 drillholes, 12 216 m in total length, comprised dominantly infill drilling based on 20 m sections. Ten drillholes tested an eastern extension of the zone. Gold, zinc and silver bearing epithermal veins and breccias occur in Hazelton Group andesitic volcanic rocks (Figure 1.51). Prior to the 2007 program, inferred resources stood at 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.

Geofine Consultants conducted exploration on the **Poly** project (MINFILE 104A 177) for Intuitive Exploration Inc. The property is located north of Highway 37A, 4 km west of Meziadin Lake. Geophysical surveys included 3 km of induced polarization and 4 km of magnetics. Four drillholes were completed, however only two reached bedrock. Mineralization is contained in quartz-sulphide veins that cut Hazelton Group volcanic rocks near a quartz monzonite stock of early Tertiary age.

The **Clone** property (MINFILE103P 251) is located 16 km west of Stewart and is jointly-owned by Teuton Resources Corp and Silver Grail Resources Ltd. Shear-controlled quartz veins cut Hazelton Group volcanic rocks and contain disseminated native gold and sulphide minerals. A length of 900 m was drilled in 10 holes, results include an intercept of 0.61 m grading 36.2 g/t Au.

Bravo Venture Group Inc. returned to the **Homestake Ridge** gold-silver prospect (MINFILE 103P 216) 35 km southeast of Stewart to complete 8602 m of drilling in 42 holes (Figure 1.52). The focus of the program was to test extensions of gold and silver mineralization, interpreted as stratibound, and explore for underlying mineralized structures. Mineralization occurs in Hazelton Group andesite and is thought to be related to major structures coeval with volcanism (pers. comm. Bruno Kasper, 2008). Epithermal textures are evident in drill core (Figure 1.53). Significant assay results include a 73 m intercept, approximately 52 m true width, grading 20.99 g/t Au. Infill and step-out drilling from 2007 and 2008 will significantly upgrade the inferred resource at Homestake Ridge. Based on drilling prior to 2007 the inferred resource was calculated at 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.

Bravo Venture Group Inc. also conducted an exploration program on the nearby **Fossie** property located 20 km northeast of Alice Arm (also known as Silver Basin, MINFILE 103P 181). Two drillholes (180 m) targeted quartz-sulphide veins and breccia in Stuhini Group strata.

SKEENA DISTRICT

The **TJ Ridge** property (MINFILE 094D 031) of Roxgold Inc comprises a series of veins mineralized with

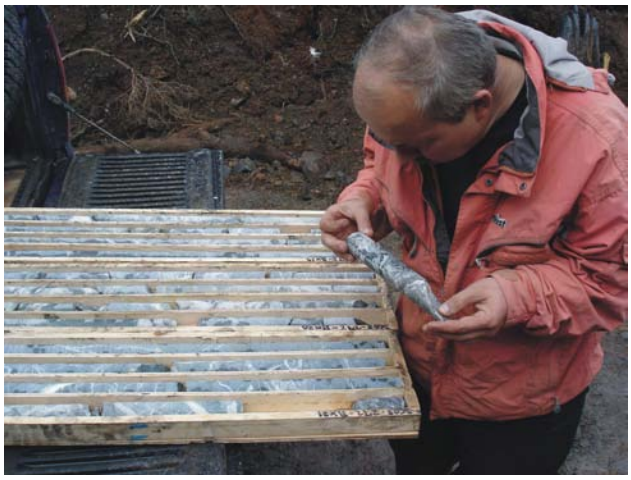

Figure 1.51. Silver Coin, Alex Walus, project manager, examines new core from a gold-bearing vein stockwork and breccia zone.

Figure 1.52. Homestake Ridge, helicopter-supported drilling near the toe of the Homestake glacier.

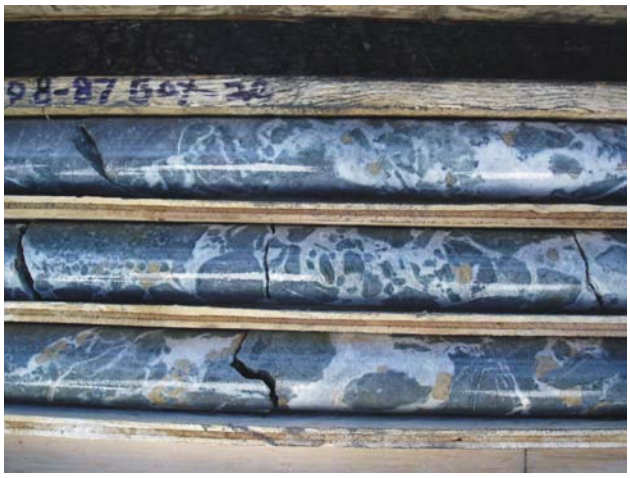

Figure 1.53. Homestake Ridge, quartz, calcite and light brown sphalerite heal a breccia in the gold zone.

base and precious metals, related to feldspar porphyry and monzonite dikes. These belong to the Bulkley suite and intrude Bowser Lake Group sandstone and shale. A 12 km access trail was built to bring equipment to the property, located 95 km north of Hazelton. Work comprised some three km of trenching, 20 km of 3D induced polarization, and 27 core holes totaling 4880 m. Veins with pyrite, pyrrhotite, arsenopyrite, sphalerite, galena and chalcopyrite also contain significant gold.

Strategic Metals Ltd drill tested the **Silver Ghost** silver-lead vein (MINFILE 103I 022), located about 60 km north of Terrace. A total of 140 m of core was drilled in two holes from one site.

Mountain Capital Inc explored the Burn gold showing (MINFILE 103I 211) on the **Kalum** property, located approximately 40 km north of Terrace. Eleven holes (1390 m) were completed. Gold occurs near the contact of the Allard granitic pluton. Hole KKM 08-01 intersected a quartz-shear vein that contained 28.7 g/t Au over 0.3 m. A 4.1 km induced polarization survey was completed to guide the drilling.

The **Terrace** property covers a large area approximately 30 km northeast of Terrace. Apex Geoscience Ltd conducted work for Argonaut Resources Inc completing two drillholes at M&K (MINFILE 103I 062), two at the Pass showing (2.5 km southeast of M&K) and six at Golconda (MINFILE 103I 076). The target is gold-silver-lead-zinc quartz veins at the contact between Hazelton Group volcanic rocks and granodiorite of the Coast Plutonic Complex. Drilling was guided by a 12.2 line kilometre induced polarization survey.

Grande Portage Resources Ltd completed the first drill test on the **Pass** property, located 42 km southwest of Smithers (MINFILE 093L 196). A quartz vein occurs in a quartz monzonite that intrudes Telkwa Formation tuffs and volcanic flows of the Hazelton Group. The vein averages 1-2 m in width but is up to 9.9 m wide in drill core and locally contains pyrite, chalcopyrite, sphalerite and galena. Total strike length of the mineralized structure is about 2 km with a strike of 030-040 degrees and a dip of 20-30 degrees to the southwest. A series of 24 holes were drilled over the length of the vein (Figure 1.54). Significant mineralized intervals include drillhole PAS-08-23 which intersected 2.46 m grading 12.84 g/t Au and 29.21 g/t Ag.

Located near French Peak some 65 km northeast of Smithers, Grizzly Diamonds Ltd. explored the Ute and Rio silver-gold-copper-lead-zinc veins on the **Peak** claims with a 1092.7 m diamond drilling program (MINFILE 093M 015). Five holes tested chargeability anomalies; the high signature has been attributed to widespread pyrite disseminations in Kasalka Group volcanic rocks. No drill results were available. A 5.8 line kilometre induced polarization survey was completed.

Five kilometres east of Moricetown, Megasilver Inc explored a small past-producing mine, **Virginia Silver** (MINFILE 093M 021). Sandstone of the Skeena Group

Figure 1.54. Pass property, K.C. Smith, Wes Raven (project manager) and Nichole Prichard visit the drill during a brief drilling shut-down.

contains silver-bearing veins and shear zones. A historic reserve of 20 000 tonnes grading 2948 g/t Ag, 1.19 g/t Au, 4.4% Pb and 2.2 % Zn was delineated by work in two adits. Work in 2008 comprised an induced polarization survey of 8.8 line kilometres followed by 6 diamond-drill holes with total length 1037 m.

The **Dome Mountain** project (also known as Free Gold, MINFILE 093L 023) is located 35 km east of Smithers and includes the Dome Mountain gold mine that operated in 1992-93. Dome Mountain is an orogenic quartz vein deposit within andesite of the Nilkitkwa Formation, part of the Hazelton Group. The company reopened two portals, three air vents and the mine access road, and completed a 22 km induced polarization survey. Eagle Peak Resources intends to validate an historic resource and then to re-open the mine for production.

The target on the **Topley Richfield** property (MINFILE 093L 018) is gold and silver veins. NXA Inc explored the property, located approximately 60 km east-southeast of Smithers, to confirm and expand a historic resource of 181 420 tonnes grading 4.25 g/t Au and 191.96 g/t Ag. The area is underlain by pyroclastic rocks of the Telkwa Formation, Hazelton Group. Induced polarization, magnetic and soil geochemical surveys were used to guide drilling in the extensively drift-covered property (Figure 1.55). Drilling totaled 2706 m in 14 holes.

GMV Minerals Inc explored for epithermal gold and silver mineralization on its 50 km long **Nechako** property 70 km south of Burns Lake. Faults are associated with crustal extension and related felsic and mafic volcanism in the Nechako Basin. Geophysical surveys comprised 40.7 km of induced polarization surveys on two grids and 76.2 km of magnetic surveying on three grids. Six holes were drilled totaling 2164 m (Figure 1.56).

Figure 1.55. Topley Richfield, Erin O'Brien (project manager) and Janice Girling (EMPR) beside two drillhole markers in overburden covered terrain.

Figure 1.56. Nechako, inspecting drill core.

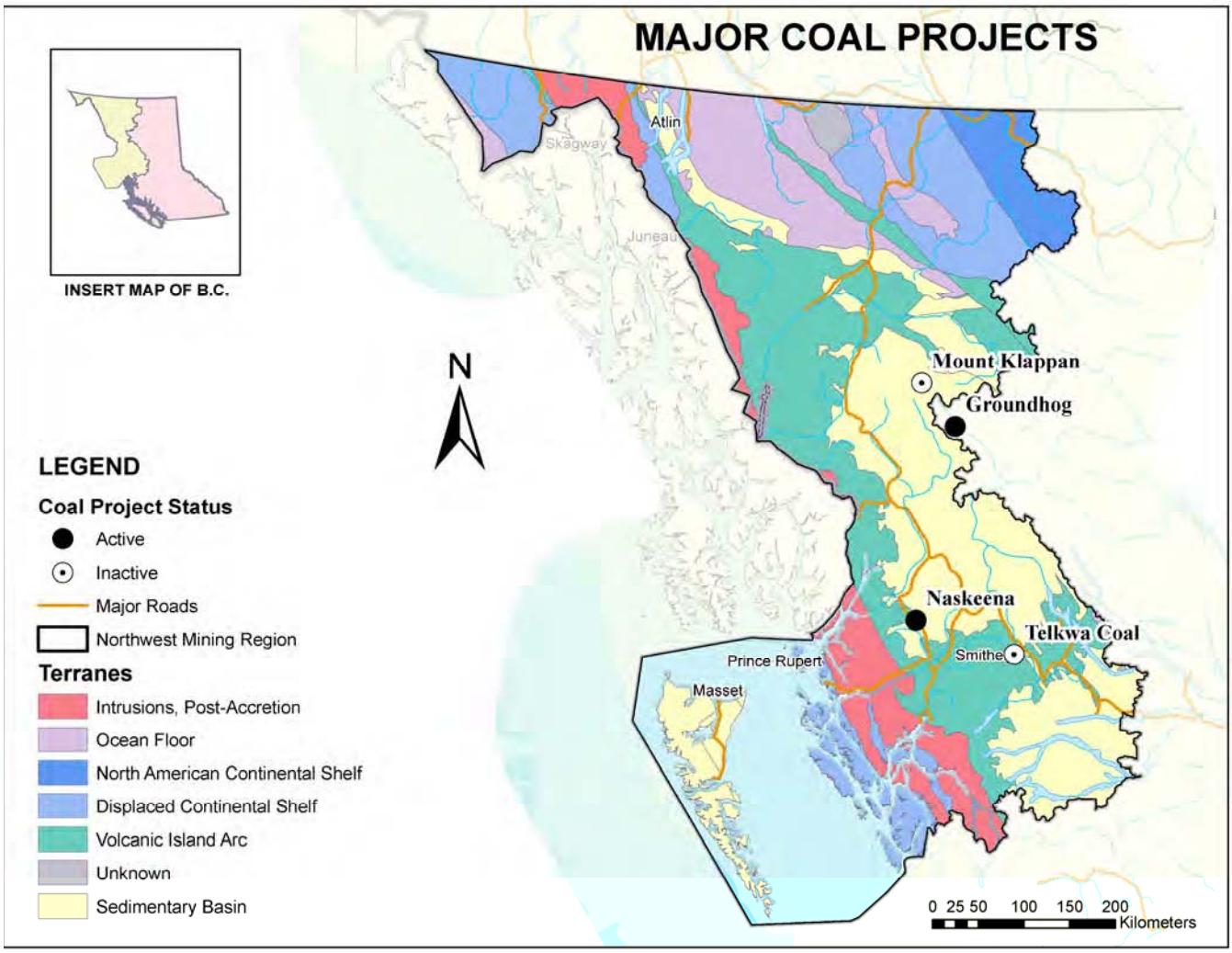

Figure 1.57. Major Coal Projects, Northwest Region.

The **Coles Creek** project of Callinan Mines Ltd evolved from a porphyry copper target (MINFILE 093E 042) to a new silver-base metal prospect. Located 90 km south-southwest of Houston, the property is underlain by Kasalka Group volcanic and sedimentary rocks. Silver, lead and zinc mineralization is associated with intense stockwork and breccia zones. Eleven holes (3267 m) were drilled as step-outs from weak silver mineralization discovered in 2007; three drillholes targeted nearby structures. A 100 km grid was cut for induced polarization and magnetic surveys, soil sampling and prospecting were also conducted on the grid. Hole 18 intersected 141 m grading 20.5 g/t Ag, 0.32% Zn and 0.17% Pb.

COAL AND AGGREGATE PROJECTS

Coal in Northwest region occurs in the Jurassic-Cretaceous marine basin filled by sedimentary rocks of the Bowser Lake Group (Figure 1.57). Extensive deposits of anthracite are found in the Klappan-Groundhog coalfield; the Mount Klappan project is described in a preceding section of this report. The Bowser basin measures 300 by 150 km, though it is structurally compressed from its original extent. Further north in the Atlin-Taku district, the northwest axial Whitehorse Trough is a sedimentary basin of similar Jura-Cretaceous age but it is not known to contain significant coal in British Columbia. Coal-bearing deltaic sequences of the Lower Cretaceous Skeena Group are preserved in fault grabens on the southern margin of the Bowser basin. Notable examples are in the Bulkley valley and Terrace-Kitimat graben; these are close to rail and other infrastructure. Smaller basins of Early Tertiary age also contain coal in Northwest region; at Tuya River west of Dease Lake and at Coal River east of Watson Lake.

West Hawk Development Corp drilled 11 large-diameter holes in the **Groundhog** coalfield (MINFILE 104A 078) located 180 km north of Hazelton. Large diameter core (PQ size) was extracted for analysis of coal quality characteristics. Westhawk opened a field office in Hazelton and negotiated access to the property over a two year period; the 2008 program was the first step to evaluate its development potential.

Jet Gold Corporation drilled nine holes (1400 m) on its **Naskeena** coal property (MINFILE 103I 002) located 50 km north of Terrace. Coal underlies the 5 km wide Kitsumkalum River valley near the north end of the Terrace-Kitimat graben. Age of the coal measures is uncertain as the separation of Bowser Lake Group (Jurassic) and Skeena Group (Cretaceous) is not distinct. Preliminary coal quality data indicate high fixed carbon content of up to 62%, low volatile material in the order of 5% and low sulphur, about 0.4% (D. McRae, pers. comm., 2008). These are characteristics of high ranking anthracite coal.

OUTLOOK FOR 2009

The 2008 downturn in the mining industry will lead to opportunities in 2009 for those with access to capital to acquire projects of exceptional merit. Risk capital will be in short supply and companies that cannot access exploration funding may not survive. Base metal projects will be more difficult to advance and may be 'on hold' until metal prices recover. The continuing strong price for gold means that gold projects, particularly those with low-risk resources and favourable location, will continue in 2009. The commitment was made by the province to spend $10 million on the environmental assessment process and First Nations consultation for the **Northwest Transmission Line** along Highway 37 in northwestern British Columbia. The new 287-kilovolt line would extend 335 km from Terrace to Meziadin Junction and north to Bob Quinn Lake. The Province plans to partner with the private sector to fund the total project, which is estimated to cost approximately $400 million. A continued and growing spirit of working together between industry and all levels of government – First Nation, Municipal, Provincial, Federal and United States – will lead to growth in the northwest British Columbia mining industry.

ACKNOWLEDGMENTS

The authors are very thankful for the contributions made by the mine staff, exploration geologists and prospectors who work in northwest B.C. This report would not be possible without their input. Their hospitality while visiting projects is greatly appreciated. Valuable assistance was also provided by other staff in the Smithers office of the Ministry of Energy, Mines and Petroleum Resources. Patience and skillful work by Garry Payie to prepare this paper is greatly appreciated. Errors or omissions remain the responsibility of the authors.