

# CENTRAL REGION

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## SUMMARY AND TRENDS

The level of exploration activity in the Central region improved slightly from the robust level witnessed in 2004. There was a significant increase in the number of large reconnaissance-style exploration programs. These programs assessed large segments of several different geological terranes and included airborne magnetic and radiometric surveys, grid-based Induced Polarization (IP) surveys and broad geochemical sampling programs. This regional activity was spurred on by the province's conversion to on-line electronic mineral claim staking which enabled explorationists to readily acquire tenure over vast areas. Targets of these programs included sediment-hosted gold vein systems in Proterozoic rocks of ancestral North America and alkalic and calc-alkalic porphyry copper-gold deposits in Late Triassic to Early Jurassic arc rocks of the Quesnel Terrane. Strengthening metal markets also rekindled interest in some mineral belts, such as the Gataga zinc-lead-silver district, that have been dormant for several years.

Exploration expenditures are forecast to total approximately \$34.5 million, up marginally from the 2004 estimate of \$33.0 million (Figure 3.1). Exploration drilling decreased approximately 15 000 metres (or 9%) to an estimated 145 000 metres (Figure 3.2). The number of major exploration projects equalled last years total of 38.

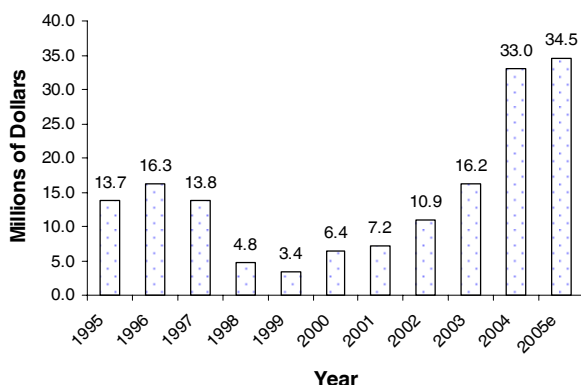


Figure 3.1. Annual Exploration Expenditures, Central Region.

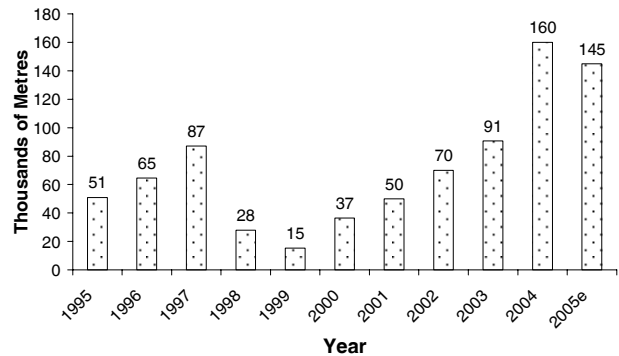


Figure 3.2. Annual Exploration Drilling, Central Region.

Bulk tonnage copper-gold deposits, as in previous years, were the most popular exploration target in the region. Seventeen projects targeted either alkalic porphyry systems, calc-alkalic porphyry systems or iron oxide-copper gold (IOCG) systems. Epithermal and mesothermal gold veins, stockwork zones and related high-grade gold replacements accounted for thirteen of the major projects. Zinc-lead-silver deposits (Sedimentary-Exhalative and Carbonate Replacement) accounted for three large programs. There were two major programs assessing skarns, two major programs exploring for polymetallic volcanogenic massive sulphide deposits and one major program that test a platinum group element (PGE) prospect.

Mining in the region was highlighted by the reopening of the Mount Polley copper-gold mine in the spring. The other two major open pit operations in the region, namely the Kemess gold-copper mine and the Gibraltar copper-molybdenum mine, continued to operate efficiently and enjoyed the benefit of year-long buoyant metal prices. A feasibility study was conducted on the dormant QR mine.

## OPERATING METAL MINES

### Mount Polley

Imperial Metals Corporation reopened its Mount Polley copper-gold mine in March, 2005, after a 3.5 year hiatus. The mine, located 8 kilometres southwest of Likely between Polley and Bootjack lakes, was originally commissioned in 1997. Mount Polley operated until 2001

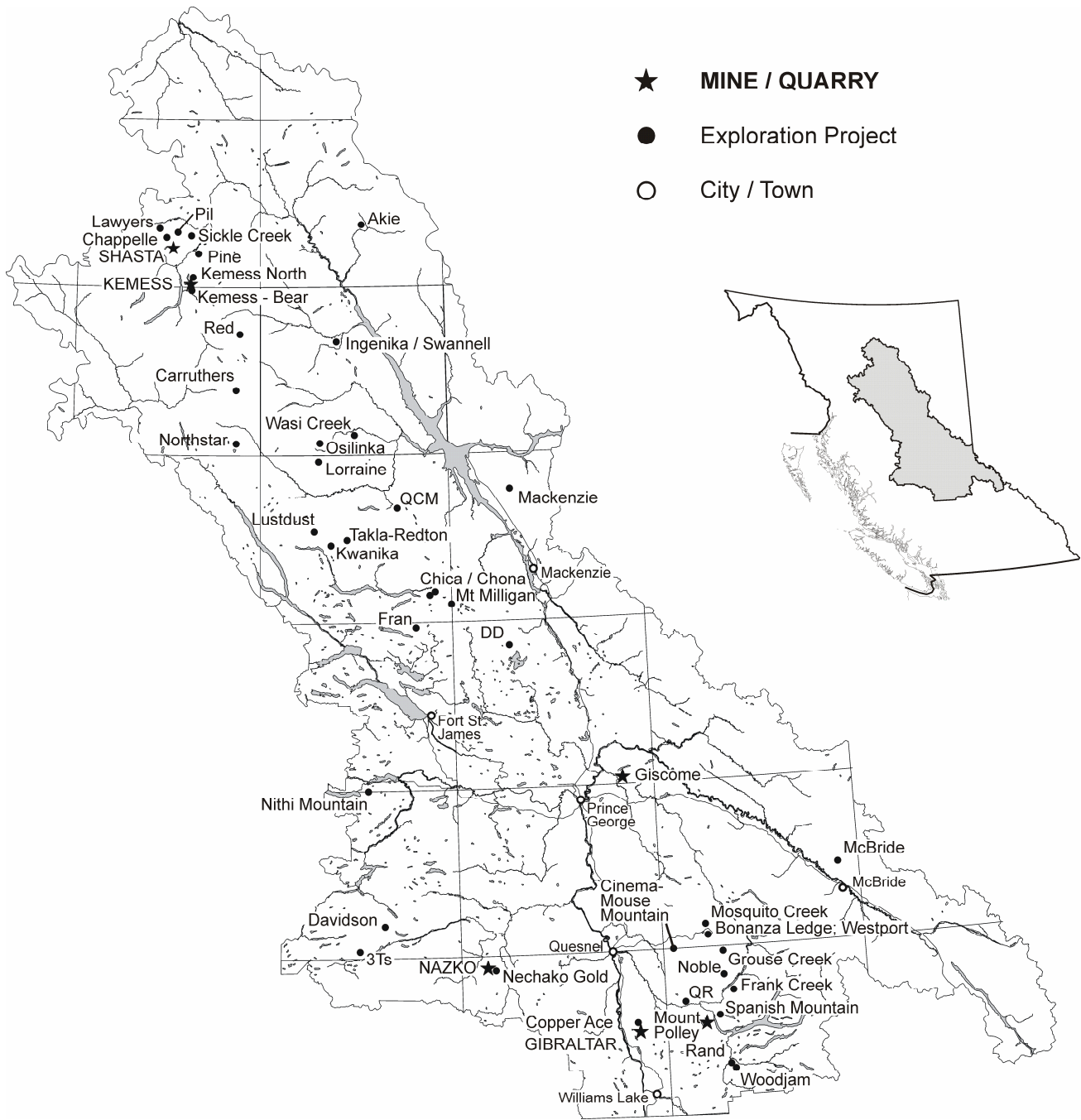


Figure 3.3. Operating mines, major exploration projects and selected smaller exploration projects, Central Region, 2005

producing 59 000 tonnes (131 million pounds) of copper and 11 500 kilograms (370 000 ounces) of gold.

The Mount Polley property (MINFILE 093A 008 and 164) covers Upper Triassic to Lower Jurassic volcanic-plutonic arc rocks of the Quesnel Terrane. The deposit is hosted by a high-level, composite alkalic intrusive complex that has a late Triassic age of 202 Ma. Mineralization typically occurs within a number of intensely potassium-altered hydrothermal breccias associated with monzonite and plagioclase porphyry.

Discovery of high-grade mineralization at the Northeast zone in 2003, and the subsequent identification of an economic deposit through systematic drilling, led to the decision to reopen the mine. Fortunately, and unlike 1998 when the mine was first commissioned, copper and gold prices increased steadily throughout the year further strengthening the economics of the mine. Additional definition drilling of the Northeast zone (or Wight pit) increased the proven and probable reserves of the deposit to 9.144 million tonnes averaging 0.88% Cu, 0.29 g/t Au and 6.4 g/t Ag. Proven and probable reserves for the mine (Wight, Bell and Springer deposits) as of February, 2005, totalled 44 million tonnes grading 0.45% copper and 0.30 g/t gold. In addition, total measured and indicated resources for the property are 68.5 million tonnes grading 0.37% Cu and 0.26 g/t Au.

Imperial Metals also outlined a significant resource in the Southeast zone, located south of the main waste rock dump. When converted to a proven reserve the Southeast zone is expected to increase the mine life of Mount Polley to about seven years.

Development of the Wight pit (Figure 3.4) began to contribute ore to the mill in July. The tenor of ore from the Wight pit is about three times that of the ore historically mined at Mount Polley. Ore from the Wight pit is blended with material from the low grade stockpile and ore from the expanded Bell pit. Estimated metal production for the year is 1060 kilograms (34 000 ounces) of gold, 14 000 tonnes (30 million pounds) of copper and 6660 kilograms (214 000 ounces) of silver.



Figure 3.4. Development of the new Wight Pit, Mount Polley mine.

## Gibraltar

Taseko Mines Ltd and operating partner Leduc Mining Ltd reopened the Gibraltar (MINFILE 093B 006, 007, 011-013 and 051) open pit copper-molybdenum mine near McLeese Lake in October, 2004. The Gibraltar deposits occur within tonalite of the Late Triassic Granite Mountain batholith. The batholith intrudes Cache Creek Group rocks between the Pinchi and Fraser River fault systems. Mining is currently taking place in the Pollyanna stage IV pit (Figure 3.5). When reserves at Pollyanna are exhausted, mining will proceed to the Granite Lake pit (stages III and IV), the Pollyanna-Gibraltar East Connector zone (PGEC) and the 98 Oxide zone.

A detailed review of the PGEC and Granite Lake deposits enabled the company to expand the overall proven and probable reserve base for the mine. As of September 30, 2005, these reserves were estimated at 176 million tonnes averaging 0.31% Cu and 0.01% Mo. Definition drilling of the Granite Lake and PGEC deposit areas, which will be resumed in 2007, is expected to further increase the reserve base of Gibraltar.

Estimated production for 2005 is 26 000 tonnes of copper and 225 000 kilograms of molybdenum. Fine tuning of the copper and molybdenum circuits took place throughout the first and second quarters of 2005 resulting in significant improvements in recoveries for both metals. An engineering study was initiated to evaluate the economics of increasing concentrate production by 25%.

The mine's existing SX-EW copper recovery plant is not yet operational, but Taseko plans to prepare heap leach pads part way through 2006 in anticipation of starting up this efficient facility in 2007. Taseko is still investigating the prospect of constructing a hydrometallurgical refinery on the mine site which would produce cathode copper and dramatically lower present concentrate transportation, smelting and refinery costs.



Figure 3.5. Mining in the Pollyanna stage IV pit, Gibraltar mine.

## *Kemess*

Northgate Minerals Corporation owns and operates the Kemess open pit gold-copper mine (Figure 3.6) located approximately 430 kilometres northwest of Prince George in the Toodoggone region. Mining of the Kemess South deposit takes place from a single open pit developed on a zone of calc-alkalic porphyry mineralization hosted by Late Triassic monzonites of the Black Lake intrusive suite. In 2005, mill throughput averaged approximately 50 000 tonnes per day. Forecast metal production for the year was 8700 kilograms (280 000 ounces) of gold, 33 100 tonnes (73 million pounds) of copper and 10600 kilograms (340 000 ounces) of silver making Kemess South British Columbia's single largest gold producer.

Northgate Minerals submitted an Environmental Impact Assessment report on the Kemess North project to the joint British Columbia Environmental Assessment Office - Canadian Environmental Assessment Agency panel for review. The proven and probable reserve estimate for Kemess North is 414 million tonnes grading 0.16% copper and 0.307 g/t gold. Approval would extend the mine life of the Kemess operation to approximately 2020. The proposal includes utilizing Duncan Lake for permanent storage of 397 million tonnes of tailings and up to 325 million tonnes of waste rock.



Figure 3.6. Mining in the Kemess South pit, Kemess mine.

## *Shasta*

Sable Resources Ltd mined approximately 5000 tonnes of ore from an open cut at its **Shasta** gold-silver mine near Black Lake, north of the Kemess mine. The ore was trucked to the company's nearby Baker mill where it was processed into dore bars. Reported metal production was 15.2 kilograms (488 ounces) of gold and 320.8 kilograms (10 314 ounces) of silver.

## **INDUSTRIAL MINERAL QUARRIES**

The **Nazko** lava rock quarry, centred on the Nazko volcanic cone west of Quesnel, is operated by Canada Pumice Corporation, a subsidiary of Crystal Graphite Corporation. Successful marketing of the porous tephra, which is suitable for construction, landscaping, light-weight aggregate and horticultural applications, led to an increase in production to an estimated 25 000 to 30 000 cubic metres and sales of approximately half of that volume.

A four-month mining campaign at CN Rail's **Giscome** basalt quarry, near Eaglet Lake northeast of Prince George, produced 386 000 tonnes of crushed and screened basalt for use as railroad ballast on the company's regional main lines (Table 3.1).

## **EXPLORATION PROJECTS**

### *Toodoggone Camp*

Drilling by Northgate Minerals Corporation immediately east of the proposed **Kemess North** pit development (and east of the East Creek fault) identified a possible extension to the deposit. The zone, termed **Kemess North Offset**, was first intersected by drill hole KN-05-24 which cut 308 metres averaging 0.31 g/t Au and 0.24 % Cu. Additional holes confirmed the presence of a major new bulk tonnage target and established the zone as a priority drilling target for 2006. The company also tested several other targets on claims that enclose the Kemess North area, including the **Kemess East** and **Nugget** porphyry gold-copper prospects, the **Hilda** structurally-controlled gold zone, and the **Duncan Ridge** and **Nor 1** skarn prospects (Table 3.2).

South of the Kemess mine Northgate continued to evaluate its **Bear** claims. A total of 17 core holes were drilled to test anomalies suggestive of buried porphyry systems that had been defined by an earlier airborne magnetic and radiometric survey and IP survey.

Finlay Minerals Ltd continued to explore its **Pil** property (MINFILE 094E 029, 083, 213 and 216) for both bulk tonnage porphyry copper deposits and high-grade gold-silver epithermal deposits. The property is centered

**TABLE 3.1. FORECAST MINE PRODUCTION, CENTRAL REGION, 2005**

Mine	Operator	Deposit Type / Commodity	Forecast Production in 2005 (tonnes or kilograms)	Number of Employees	Proven and Probable Reserves (on Jan. 1, 2005, unless stated otherwise)
<b>Metals</b>					
Gibraltar	Taseko Mines Ltd / Ledcor Mining Ltd	Calcalkalic porphyry Cu-Mo	26 000 t Cu, 225 t Mo	252	179 000 000 t at 0.31% Cu and 0.01% Mo (as of September, 2005)
Kemess	Kemess Mines Ltd (Northgate Minerals Corporation)	Calcalkalic porphyry Au-Cu	8700 kg Au, 33 100 t Cu	~475	Kemess South (Proven): 86 600 000 t at 0.67 g/t Au and 0.22% Cu; Kemess North (Proven & Probable) 414 000 000 t at 0.307 g/t Au and 0.16% Cu
Mount Polley	Imperial Metals Corporation	Alkalic porphyry Cu-Au-Ag	14 000 t Cu, 1060 kg Au, 6660 kg Ag	~280	44 000 000 t at 0.45 % Cu & 0.30 g/t Au (as of February, 2005)
Shasta	Sable Resources Ltd	Epithermal Vein Au-Ag	15.2 kg Au, 321 kg Ag	~10 (seasonal)	n/a
<b>Industrial Minerals</b>					
Giscome	Canadian National Railway Company	Basalt	386 000 t railroad ballast	~10 (seasonal)	n/a
Nazko	Canada Pumice Corp (Crystal Graphite Corp)	Lava rock	30 000 cubic metres	~10 (seasonal)	n/a

approximately 35 km north of the Kemess mine and is underlain predominantly by the Black Lake Intrusive Suite and volcanic rocks of the Toodoggone formation. The northwest-trending Pillar fault dissects the property. Drilling of the Northwest and Silver Ridge/Silver Ridge North porphyry targets identified strongly altered monzonite and quartz diorite, but modest copper-molybdenum grades. Prospecting and rock geochemical sampling led to the discovery of the **Atlas East** epithermal gold-silver prospect (Figure 3.7). Silicified pyritic andesite was traced over an area measuring 500 metres by 200 metres. Surface grab samples with visible electrum and argentite assayed up to 72.4 g/t Au and 2187 g/t Ag. Two holes were drilled to test the east end of the showing. They intersected narrow intervals of lower grade mineralization but the prospect warrants further investigation.



Figure 3.7. Exploration geologists Warner Gruenwald and Rob Montgomery on the Atlas East epithermal vein prospect, Pil property.

Prior to arranging an option agreement with Placer Dome Ltd, Stealth Minerals Ltd conducted a modest prospecting and geochemical sampling program on parts of its **Sickle Creek** property, located north of the Finlay River. In 2006 Placer will explore at least four of the eleven claim blocks that Stealth controls. Prominent among the targets is the **Sickle-Griz** epithermal gold-silver system (MINFILE 094E 237). This target is a set of banded quartz-calcite-sulphide veins that occurs in silicified andesite lavas that correlate with the Metsantan member of the Toodoggone formation. Two other promising showings yet to be drilled include **Sofia** (MINFILE 094E 238), a porphyry gold-copper showing on the Toodoggone River, and the **Alexandra** porphyry prospect, centred west-southwest of the confluence of Jock Creek and Toodoggone River. The **Paula** bulk tonnage copper prospect, discovered in 2005, is defined by a 1500 metre by 2000 metre area of anomalous rock geochemistry where assays averaged 0.46% Cu. The occurrence is in propylitically altered, bladed feldspar mafic lavas of the Triassic Takla Group.

Cascadero Copper Corporation, a newly formed sister company to Stealth Minerals, examined the **Pine** porphyry copper-molybdenum-gold property (MINFILE 094E 016, 045, 047-048, 082 and 237) near the Finlay River, north of the Kemess mine. The property is underlain by monzonitic intrusions of the Late Triassic to Early Jurassic Black Lake suite and coeval volcanic rocks. Cascadero drilled eight holes on the **Fin** target and intersected interesting, but sub-economic concentrations of copper, molybdenum and gold. Four holes were drilled on the **Mex** target (094E 057), one on the main **Pine** deposit and four north of the Finlay River on the **Ryan Creek** prospect. Results for the latter three targets were not available at press time.

**TABLE 3.2. MAJOR EXPLORATION PROJECTS, CENTRAL REGION, 2005**

Property	Operator	Minfile (NTS)	Commodity	Deposit Type	Work Program
3Ts	Southern Rio Resources Ltd	093F 055, 068	Au-Ag	Epithermal Vein	A; P; G; GC; DD
Akie	Mantle Resources Ltd	094F 031	Zn-Pb-Ag	Sed-Ex	DD (~2000m, 4 holes)
Blackwater-Davidson	Southern Rio Resources Ltd	093F 037	Au-Ag	Epithermal Vein	A; DD (939m, 5 holes)
Cariboo Gold Quartz	International Wayside Gold Mines Ltd	093H 019	Au	Vein; Replacement	A; G; GC; DD (4518m, 26 holes)
Carruthers	Maxtech Ventures Ltd	094D 172	Cu-Zn-Pg-Ag-Au	Volcanogenic Massive Sulphide	DD (405m, 4 holes)
Chappelle (Baker)	Sable Resources Ltd	094E 026	Cu-Au	Calcalkalic Porphyry	DD (609m, 2 holes)
Chica / Chona	Amarc Resources Ltd	(093N/01 & 08)	Au-Cu	Calcalkalic Porphyry	A; IP; DD (960m, 9 holes)
Cinema - Mouse Mountain	Richfield Ventures Corp	(093G/01 & 08)	Cu-Au	Alkalic Porphyry	AB-MG; AB-RD; G; GC; TR
Croy-Bloom (incl Davie Creek)	Serengeti Resources Inc	094D 015, 039, 113	Au-Cu-Mo	Calcalkalic Porphyry	G; GC; IP; MG
DD	Almo Capital Corp	(093J/11)	Au-Cu-PGE		GC; GP; DD (7 holes planned)
Fran	Yankee Hat Industries Corp	093N 207	Au-Cu	Alkalic Porphyry	A; P; G; GC; DD (3028m, 16 holes)
Frank Creek	Barker Minerals Ltd	093A 152	Cu-Zn-Pg-Ag-Au	Volcanogenic Massive Sulphide	DD (4 holes)
Gibraltar	Taseko Mines Ltd	093B 005-008, 011-012, 051, 061-063	Cu-Mo	Calcalkalic Porphyry	CD & DD (6990m, 40 holes)
Grouse Creek	Golden Cariboo Resources Ltd	093H 003, 008	Au	Mesothermal Vein; Replacement	A; G; GC; DD (6252m, 44 holes)
Ingenika Swannell	Bard Ventures Ltd / Selkirk Metals Corp	094C 002-005, 086	Zn-Pb-Ag	Replacement	DD (993m, 7 holes)
Kemess - Bear	Northgate Minerals Corporation	(094E/02)	Au-Cu	Calcalkalic Porphyry	A; G; DD (5786m, 17 holes)
Kemess North area	Northgate Minerals Corporation	094E 021	Au-Cu	Calcalkalic Porphyry	A; G; DD (10 372m, 23 holes); FS
Lawyers	Bishop Gold Inc	094E 066	Au-Ag	Epithermal Vein	DD (845m, 5 holes)
Lorraine - Jajay	Teck Cominco Limited	093N 002, 066, 224	Cu-Au	Alkalic Porphyry	G; GC; IP; DD (3704m, 17 holes)
Lustdust	Alpha Gold Corp	093N 008-009	Au-Ag-Cu-Zn-Pb	Skarn, Manto, Vein	A; TR; DD (5153m, 16 holes)
Mosquito Creek Gold	Island Mountain Gold Mines	093H 010	Au	Mesothermal Vein	DD (1170m, 10 holes)
Mount Polley	Imperial Metals Corporation	093A 008, 164	Cu-Au-Ag	Alkalic Porphyry	G; PD; DD (39 495m, 98 holes); FS
Nechako Gold (Bob)	Endurance Gold Corp	093B 054	Au-Ag	Epithermal Vein	A; G; P; GC; DD (422m, 3 holes)
Nithi Mountain	Leeward Capital Corp	093F 006-016	Mo	Calcalkalic Porphyry	A; G; DD (~6000m)
Noble	Noble Metal Group Incorporated	(093A/14)	Au	Mesothermal Vein	GC; GP; DD (881m, 3 holes)
Northstar	Northern Hemisphere Development Corp	094D 032	Cu-Ag	Volcanic Redbed Copper	DD (~1200m, ~10 holes)
Osilinka	Lysander Minerals Corporation	094C 069	Au-Cu	Alkalic Porphyry	A; GC; IP; DD (1447m, 8 holes)
Pil	Finlay Minerals Ltd	094E 029, 083, 213, 216	Au-Cu	Calcalkalic Porphyry; Epithermal Vein	A; P; G; DD (3088m, 12 holes)
Pine	Cascadero Copper Corp	094E 016, 045, 047-048, 082, 237	Au-Cu (+/- Mo)	Calcalkalic Porphyry	A; G; DD (3980m, 17 holes)
QCM	Canadian Gold Hunter Corp	093N 200	Au	Mesothermal Vein	A; DD (1802m, 9 holes)
QR	Cross Lake Minerals Ltd	093A 121	Au	Skarn	DD (1972m, 9 holes); PF
Rand	Wind River Resources	(093A/06)	Cu-Au	Calcalkalic Porphyry	DD (1182m, 5 holes)
Red	Buffalo Gold Ltd	094D 034	Cu-Au	Calcalkalic Porphyry	DD (626m, 4 holes)
Shasta	Sable Resources Ltd	094E 050	Ag-Au	Epithermal Vein	IP; DD (1042m, 11 holes)
Spanish Mountain	Skygold Ventures Ltd / Wildrose Resources Ltd	093A 043	Au	Mesothermal Vein	A; GC; G; RC (3377m, 30 holes); DD (7746m, 35 holes)
Wasi Creek	Bard Ventures Ltd / Selkirk Metals Corp	094C 024	Zn-Pb-Ag	Replacement	P; G; GC; AB-EM; AB-MG; DD (1054m, 7 holes)
Westport	Williams Creek Explorations Limited	093H 027, 034	Au	Mesothermal Vein	DD (1460m, 6 holes)
Woodjam	Fjordland Exploration Inc	093A 078, 124	Au-Cu	Alkalic Porphyry	A; G; RC (907m, 10 holes); DD (2018m, 6 holes)

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; P = prospecting; PD = percussion drilling; PF = pre-feasibility studies; R = reclamation; RC = reverse circulation drilling; TR = trenching, UG (X m) = X metres of underground development; UG-BU = underground bulk sample; OP-BU = open-pit bulk sample; UT = UTEM; VLF; WT = washability test (coal)

Bishop Gold Inc completed a five-hole diamond drilling program on the plateau west of the Cliff Creek portal on the **Lawyers** (MINFILE 094E 066) property. The property hosts a low-sulphidation gold-silver vein and breccia system, part of which was mined (AGB zone) by Cheni Gold Mines Ltd from 1988 to 1992. The mine was reclaimed in 1998. Bishop is evaluating the potential for a bulk tonnage gold deposit. Drillhole 05-CC-03 intersected 3 metres grading 12.34 g/t Au within a 27-metre wide zone of silica-healed breccia grading 0.94 g/t Au.

Sable Resources Ltd drilled 11 holes on its **Shasta** epithermal vein deposit (MINFILE 094E 050), prior to its limited mining campaign, in order to confirm additional ore grade material for future mining. Sable Resources also drilled two holes into the Black Gossan zone, a bulk tonnage copper-gold target on its **Chappelle** property (MINFILE 094E 026) that encompasses the Baker mine. The zone is characterized by a large area of oxidized pyritic Takla Group andesite that coincides with a copper-gold geochemical anomaly. It may be indicative of a buried porphyry system.

### *Omineca Mountains*

Buffalo Gold Ltd optioned the **Red** porphyry copper-gold property (MINFILE 094D 034), located 40 kilometres south of the Kemess mine, from Gitennes Exploration Inc. The company drilled four holes to test a northwest-trending structural corridor where previous exploration identified chalcopyrite-bearing porphyritic diorite dikes that intrude andesitic volcanics of the Takla Group.

The **Carruthers** volcanogenic massive sulphide prospect (MINFILE 094D 172), located in the upper reaches of Quenada Creek about 75 kilometres south of the Kemess Mine was examined by Maxtech Ventures Ltd. The junior company drilled several prominent geophysical/geochemical targets, but did not intersect significant mineralization.

The **Croy-Bloom** property (MINFILE 094D 139) of Serengeti Resources Inc covers some 49 square kilometres of prime porphyry copper-gold real estate in the northern Quesnel Terrane about 75 kilometres south of the Kemess mine. The company's 2005 field program identified a strong IP chargeability zone that is coincident with a broad copper-gold-cobalt soil geochemical anomaly. This prospective area, called Bloom Cirque, is a priority drill target for 2006.

A soil geochemical sampling program and IP geophysical survey conducted by Serengeti on its nearby **Davie Creek** porphyry molybdenum prospect (MINFILE 094D 113) has expanded the size of the target to a 3000 by 600 metre area. Mineralization occurs in potassically-altered porphyritic granodiorite of the northwest-trending Early Cretaceous(?) Davie Creek stock.

Further to the southeast in the Valleau Creek area, Serengeti completed a 420 line-kilometre airborne magnetic and radiometric geophysical survey on its **Kwanika** porphyry copper-gold-molybdenum property (MINFILE 093N 006). The intent of the program was to identify geophysical anomalies indicative of porphyry mineralization in heavily overburden covered areas of the Quesnel Terrane. Six such anomalies were identified and will be prioritized for drilling in 2006. Still further south the company also investigated the **Tchentlo** property for its porphyry copper-gold potential.

Joint venture partners Selkirk Metals Corp and Bard Ventures Ltd explored the **Ingenika-Swannell** (MINFILE 094C 002-005, 086) and **Wasi Creek** (MINFILE 094C 024) carbonate-hosted zinc-lead-silver properties in the Swannell Ranges. Seven diamond drill holes tested the South Grid area of the Ingenika-Swannell property, but did not encounter significant mineralization. A modest electromagnetic and magnetic survey was flown over part of the Wasi Creek property. It was followed up by a seven-hole diamond drilling program that targeted the Carrie and Par horizons. Three of the holes intersected zinc-lead mineralization on the Par horizon including a 14.2-metre interval that averaged 2.1% Zn and 0.14% Pb. Additional drilling is planned for Wasi Creek in 2006.

Geoinformatics Exploration Inc optioned the 118 000 hectare **Takla-Redton** property from Redton Resources Inc. The property is centered about 150 kilometres northwest of Fort St. James and covers Late Triassic to Early Cretaceous intrusions and volcanic rocks that are prospective for alkalic porphyry copper-gold deposits. Following compilation of all historical information to form a comprehensive GIS database for the property, the company completed a 4300 line-kilometre helicopter-borne magnetic and radiometric survey.

The profile of the **Lorraine-Jajay** alkalic porphyry copper-gold property (MINFILE 093N 002, 066, 224) received a boost in 2005 when Teck Cominco Ltd optioned the large tenure package from Eastfield Resources Ltd and Lysander Minerals Corporation. The property covers the headwaters of Ha Ha and Duckling creeks northwest of Germansen Landing. It is underlain by igneous rocks that are assigned primarily to the Late Cretaceous to Jurassic Hogen Intrusive Suite. The 2005 exploration program included bedrock mapping, sampling of talus fines, several IP surveys and diamond drilling near the Upper Main zone at Lorraine and on the Mackenzie, Rhonda and 2Good targets (Figure 3.8). The new 2Good target, located two kilometres west of the Lorraine zone, is defined by a magnetic low – IP chargeability high anomaly, but lacks a surface showing.



Figure 3.8. Diamond drill testing the Rhonda prospect, Lorraine-Jajay porphyry copper-gold property.

Highlight assays from the Upper Main zone drilling include a 30.08-metre intersection grading 1.19% Cu and 0.74 g/t Au in hole 05-105. This intersection effectively extends the Upper Main zone an estimated 250 metres westward. Drill assays from the Mackenzie zone, located 12 kilometres to the southeast of the main Lorraine area, encountered weakly altered and weakly mineralized rock. However at the Rhonda zone, 8.5 kilometres east of the main Lorraine area, drill hole 05-95 intersected 94.9 metres averaging 0.24% Cu. The Rhonda zone is characterized by areas of pervasive potassic alteration, disseminations and veins of chalcopyrite+/-magnetite and local calc-silicate and propylitic alteration of both intermediate volcanics and diorite.

To the north on Cat Mountain, Lysander Minerals Corporation explored its **Osilinka** (Minfile 094C 069) porphyry gold-copper property (Figure 3.9). The property straddles the contact between monzonitic intrusions of the Hagem Intrusive Suite and andesitic volcanics of the Takla Group. The primary targets of the eight-hole drill program were the Bet and Hoffman prospects. The Bet prospect is an 800-metre northerly trending structural corridor that displays impressive zones of magnetite, pyrite and chalcopyrite stockworking accompanied by K-feldspar flooding of the host volcanic rocks. To the east, the Hoffman prospect is defined by a coincident copper and gold soil geochemical anomaly. Results of the drilling were not available at the time of writing, however Lysander added on to the property by staking an additional 5000 hectares. The company also staked some 18 000 hectares of prospective ground adjacent to the regional Pinchi fault system.

The **QCM** bulk tonnage gold prospect (MINFILE 093N 024, 136 & 200), centred seven kilometres northwest of Manson Creek, was drilled by Canadian Gold Hunter Corp. A total of 9 holes evaluated carbonate-altered, quartz veined pyritic greywacke of the Triassic Slate Creek Succession (Takla Group) and returned a best intersection of 0.58 g/t Au over 137.2 metres.



Figure 3.9. Project geologist Dr. Peter Fox in a 1940s trench on Cat Mountain, Osilinka property.

Alpha Gold Corp released a revised resource figure for its **Lustdust** polymetallic property (MINFILE 093N 008 & 009) located 215 kilometres northwest of Fort St. James. Mineralization occurs in sedimentary and volcanic rocks of the Cache Creek Group and is genetically related to monzonite of the narrow, northwest-trending Eocene Glover stock. Five linear mineralized zones, including sulphide-rich proximal skarns (Canyon Creek and Canyon Creek extension), mantos (Zones 3 and 4B) and distal veins (Zone 1), have been extensively drilled. The zones comprise an inferred mineral resource of 2.45 million tonnes grading 2.45 g/t Au, 59 g/t Ag, 0.56% Cu and 1.01% Zn at a cut-off grade of 3 g/t Au equivalent. In 2005 Alpha completed a 16-hole, 5153-metre diamond drilling program. Drilling of a coincident gold-arsenic soil geochemical anomaly, 300 metres east of the Canyon Creek skarn zone, intersected narrow bands of manto-style mineralization (East zone).

Placer Dome Inc continued with its full pre-feasibility study on the **Mt. Milligan** porphyry gold-copper deposit (MINFILE 093N 191, 194) located west of Mackenzie. The Southern Star and MBX zones comprise the Mount Milligan deposit. The total measured and indicated mineral resource for the property is 408.45 million tonnes grading 0.4 g/t Au and 0.184% Cu. The results of the company's evaluation may be available in the spring of 2006.

The **Fran** porphyry gold-copper property (MINFILE 093N 207), located 70 kilometres north of Fort St. James, was explored by Yankee Hat Industries Corp. The property is underlain by an Early Jurassic granodiorite to quartz diorite stock and hornfelsed volcanoclastics and cherty argillites of the Inzana Lake succession (Takla Group). Numerous narrow pyrite-pyrrhotite-chalcopyrite veins and wider structural zones hosting disseminated sulphide mineralization are concentrated along the contact between the intrusion and hornfelsed country rock (Figure 3.10). Diamond drilling and trenching of the North Contact and South Contact zones, part of a 1.5 kilometre long prospective belt, produced a number of multi-gram gold assays. Highlights include a 1.55-metre intersection



in hole FR-047 that graded 19.52 g/t Au, 31.5 g/t Ag and 0.98% Cu and an 11-metre channel sample from Trench B that averaged 8.42 g/t Au, 20.5 g/t Ag and 3664 ppm Cu.



Figure 3.10. Project geologist Ron Wells explaining the geology of Fran property.

Amarc Resources Ltd completed a number of large induced Polarization surveys over prospective areas of its massive **Chica** and **Chona** properties in the Nation River area east of Chuchi Lake. The company's tenure covers vast areas of the Quesnel Terrane that are prospective for bulk tonnage copper-gold deposits. The company drilled several priority targets, including the MW (Milligan West) geochemical-geophysical anomaly, late in the year, but has not released any results.

Several modest exploration programs also took place in the Chuchi Lake area including those on the **Cabin Lake** and **Skook** properties of Nation River Resources Ltd and on the **Chuchi Lake** property of High Ridge Resources Ltd.

West Hawk Development Corp acquired 12 000 hectares of tenure covering part of the **Groundhog** coal field (MINFILE 093N 212) in the northwest corner of the Fort St. James Forest District. The company assessed existing data and reported a NI43-101 compliant inferred resource of 48.2 million tonnes of anthracite for the Discovery Creek and Evans Creek blocks.

### **Northern Rocky Mountains**

Wealth Minerals Ltd acquired the **Mackenzie** property, located north of Mackenzie in the Misinchinka Ranges east of Williston Lake, and completed a large reconnaissance geochemical sampling program in search of sediment-hosted vein deposits. The property covers a 65-kilometre northwest trending belt of primarily Late Proterozoic clastic and carbonate rocks of the Misinchinka Group. The work identified numerous gold anomalies in stream sediments up to 1250 ppb Au, abundant quartz float and local areas of carbonate alteration.

Midway through the year Mantle Resources Inc optioned the **Akie** property (MINFILE 094F 031) from

Ecstall Mining Corp. Akie is located in the Gataga area north of Williston Lake. The property hosts a sheet-like body of sedimentary-exhalative zinc-lead-silver mineralization within shale of the middle to late Devonian Gunsteel Formation. The mineralized zone strikes northwest for 1600 metres, extends down dip for 800 metres and is up to 30 metres thick. Mineralization consists of finely laminated sphalerite, galena and pyrite within a thicker zone of laminated pyrite and barite with shale interbeds. Previous work by Inmet Mining Corporation outlined an inferred resource of 12 million tonnes grading 8.6% Zn, 1.5% Pb and 17.1 g/t Ag based on four drill holes. Mantle's first (A-05-30) of four bore holes drilled in the core of the resource area, intersected 17.9 metres grading 17.2% Zn, 4.2% Pb & 30.1 g/t Ag within a 37-metre interval that averaged 11.0% Zn, 2.6% Pb and 21.1 g/t Ag. Mantle is planning an expanded drill program for the 2006 field season.

### **Prince George - McBride**

North of McBride, Canadian Empire Exploration Corp acquired the **McBride** property. It is a 75 kilometre northwest-trending belt of tenure covering fine to coarse-grained sedimentary rocks of upper Proterozoic age that is prospective for sedimentary-exhalative nickel-copper-zinc mineralization. Previous prospecting and geochemical sampling identified a 50 kilometre trend of elevated nickel, copper and zinc values and more than 25 gossans.

Tiger Ridge Resources acquired the **Apollo** (MINFILE 093H 136) bedded barite prospect located near the Bowron River east of Prince George, from Ron MacArthur and drilled six bore holes into the barite-rich horizon.

In the Robson Valley east of Prince George, Yellowhead Mining Corporation investigated several properties, including **East Twin**, **Forget** and **Ramcorp**, for sources of dimension stone and landscaping material.

Dave Pilkington mined and marketed a small tonnage of green slate from his **Dyno** property near Herrick Creek east of Prince George.

### **Nechako Plateau**

Leeward Capital Corp completed two phases of diamond drilling on the **Nithi Mountain** porphyry molybdenum prospect (MINFILE 093F 006-016) located 10 kilometres south of the town of Fraser Lake and just 18 kilometres east of the operating Endako molybdenum mine. Molybdenite occurs as fracture fillings and narrow, ribboned quartz-molybdenite veins in argillically and potassically altered coarse-grained quartz monzonite of the Nithi Mountain phase of the Late Jurassic to Early Cretaceous Francois Lake Plutonic Suite (Figure 3.11). Drilling evaluated three zones (Beta, Delta and Gamma) within a 4 kilometre by 1 kilometre east-northeast trending corridor of mineral showings and geochemical

and geophysical anomalies called the Alpha Trend. The Gamma zone produced the best assays from the first phase of drilling and included a 256 metre intersection in hole N-05-01 that averaged 0.057% MoS<sub>2</sub>. The second phase of drilling focussed on the Gamma zone, but assays were not available at the time of writing. The company's goal is to outline a 100 million tonne deposit with an average grade of 0.1 % MoS<sub>2</sub>.



Figure 3.11. Fracture-controlled molybdenite in coarse-grained quartz monzonite, Nithi Mountain property.

Almo Capital Corp evaluated its **DD** property in the McDougall River area on the northern edge of the Nechako Plateau. Diamond drilling intersected sulphide-bearing pyroxenite and hornblende pyroxenite that intrude and hornfels sedimentary rocks of the Triassic Takla Group. Elevated, but sub-economic grades of copper, nickel, gold and platinum group elements were reported.

Diamond drilling by Southern Rio Resources Ltd (now Silver Quest Resources Ltd) on its **Davidson** epithermal gold-silver prospect (MINFILE 093F 037) in the Nechako Plateau area south of Vanderhoof resulted in a discovery of a new gold zone in a previously untested area. Strongly altered felsic to intermediate volcanics of the Early Jurassic Hazelton Group underlie the area of interest and are coincident with geophysical and geochemical anomalies. Drill-hole DAV-05-02 intersected 14.0 metres grading 4.94 g/t Au and 17.1 g/t Ag within a 64.0-metre interval averaging 1.80 g/t Au and 6.5 g/t Ag.

Exploration further south on Southern Rio's **3Ts** epithermal gold-silver property (MINFILE 093F 055, 068) included detailed lake sediment sampling and diamond drilling. In November, 2004, the company initiated a 4000-metre diamond drilling program which continued well into 2005. Deep holes intersected the depth extension of the Ted vein and Tommy vein. The highlight of the program was hole TS-05-108, drilled to test the central portion of the Tommy quartz-carbonate vein system below a 100 metre thick microdiorite sill. Drill-hole TS-05-108 intersected 8.9 metres grading 10.9 g/t Au and 60.2 g/t Ag including a 2.6 metre interval grading 23.1 g/t Au and 153.2 g/t Ag. The intersection demonstrated that the vein system remains open at depth particularly along strike to the north.

Endurance Gold Corporation evaluated its **Nechako Gold** epithermal gold-silver prospect (MINFILE 093B 054) in the southern Nechako Plateau area 75 kilometres west of Quesnel. Three bore holes of a planned six-hole program were drilled to test strong IP chargeability anomalies in the southwest corner of the property. They intersected a sedimentary succession that included graphitic argillites, a likely explanation for the chargeability anomalies. Drilling of the primary target, a zone of low grade gold mineralization (64 metres averaging 611 ppb Au) previously defined by Lac Minerals Ltd, was deferred until 2006.

### **Cariboo**

The largest exploration program in the Cariboo was conducted by Imperial Metals Corporation on and adjacent to its **Mount Polley** mining lease west of Likely. By mid-year close to 40 000 metres of diamond drilling had been completed. It further appraised the Northeast and Southeast zones and tested the Pond showing.

The 2003 discovery of the **Northeast** zone, a high-grade 'end member' of the alkalic porphyry copper-gold system at Mount Polley, is now in production as the Wight pit. Northeast zone mineralization consists of fracture-controlled and coarsely disseminated bornite and chalcopyrite in potassically-altered homolithic to polyolithic hydrothermal breccias associated with monzonite and plagioclase porphyry intrusive phases. Drilling at the Northeast zone evaluated a possible northwest extension, called the **92** zone, and tested for the continuity of deep, high-grade copper-gold-silver mineralization, called the **Green** zone. The Green zone occupies a position below the present mine plan for the Wight pit. Earlier drilling intersected the Green zone over a strike length of 270 metres and yielded some impressive mineralization including a 25.1 metre interval that averaged 4.43% Cu, 1.28 g/t Au and 26.9 g/t Ag.

Systematic drilling of the **Southeast** zone outlined a small near surface deposit with a low strip ratio that will ultimately find its way to the mill. Atypically, the zone occurs outbound from the intrusion and is hosted by propylitically altered intermediate volcanic breccias. A measured and indicated resource for the Southeast zone, calculated in February prior to completion of drilling, totalled 3.53 million tonnes grading 0.377 g/t Au and 0.215% Cu. The nearby **Pond** showing had not previously been drilled. It was tested with four diamond drill holes that intersected a well-mineralized calc-silicate (skarn) assemblage including a 51.3 metre interval in hole PZ05-01 that averaged 0.88% Cu, 0.66 g/t Au and 11.6 ppm Ag.

Following the completion of diamond drilling, Imperial Metals embarked on a large till geochemical sampling, bedrock mapping and data compilation program. This work identified numerous targets worthy of follow-up. In the fall the company Imperial Metals assessed a number of targets using a percussion drill rig.

Approximately 150 shallow holes were drilled along or near existing roads and identified several new areas of mineralization, including the promising Tall Fir, Ace, Skid and Wagon Wheel zones. Concentrated drilling of the **Wagon Wheel** zone, a magnetite-bearing breccia within 300 metres of the mill, outlined an Indicated Resource of 0.4 million tonnes grading 0.46% Cu and 0.60 g/t Au. The company plans to resume its exploration drilling program early in the new year.

Just north of the Quesnel River, Cross Lake Minerals Ltd completed a feasibility study on its dormant **QR** gold mine. Mineralization occurs in propylitically altered basalt and lesser hornfelsed siltstone peripheral to a Late Triassic-Early Jurassic diorite stock. Two of three zones (the West and Midwest zones) containing resources at QR were partly mined by Kinross Gold Corp between 1995 and 1998. Updated “Combined Measured and Indicated Resources” for the three zones area:

Midwest zone: 180 712 tonnes grading 5.54 g/t Au.

West zone: 355 907 tonnes grading 5.07 g/t Au

Northwest zone: 122 417 tonnes grading 3.58 g/t Au

In 2005, the company rehabilitated the underground Midwest zone as part of its re-evaluation of the property. It also conducted a limited infill drilling program on the West zone, drilled two holes to further test the promising North zone and drilled another two holes to evaluate an IP chargeability anomaly. Cross Lake Minerals is poised to reopen the mine should its studies determine that it is economically feasible.

Richfield Resources Ltd conducted a helicopter-borne magnetic and radiometric survey on its **Cinema-Mouse Mountain** property east of Highway 97 and north of Quesnel. Only a modest amount of follow-up work was performed including a small trenching program on the Chubby Bear prospect.

Reverse circulation and core drilling by partners Wildrose Resources Ltd and Skygold Ventures Ltd continued to evaluate the bulk tonnage gold potential of their **Spanish Mountain** mesothermal gold property (MINFILE 093A 043) east of Likely. Phyllitic black shales and dark grey siltstones of the basal Nicola Group (Takla equivalent) are host to pyrite and quartz-pyrite veins, stringers and stockworks that locally report bonanza-grade gold values. The main zone is highlighted by a northwest trending three kilometre by one kilometre gold geochemical anomaly. Drilling within this area has outlined a gently dipping horizon over a strike length in excess of 1500 metres. Step out drilling continued to test the zone along strike and expand the 250 metre width of the zone which remains open (Figure 3.12). Late in the year, deeper drilling intersected a second horizon of preferentially gold-enriched shale and siltstone beneath the ‘upper’ horizon. Drill hole 05-DDH-270 intersected both mineralized blankets--the ‘upper’ horizon averaged 1.05 g/t Au over 78.2 metres and the ‘lower’ horizon’ averaged 1.01 g/t Au over 88.44 metres. The increased density of drilling may support the calculation of the resource estimate. The companies’ aggressive

exploration drilling campaign is expected to continue in 2006.



Figure 3.12. Examining fresh drill core at the Spanish Mountain gold prospect.

Dajin Resources Corp optioned the **Addie 1** and **Addie 2** properties from Lloyd Addie and completed modest prospecting and geochemical sampling programs. Addie 1 adjoins the Spanish Mountain property and Addie 2 is adjacent to Eureka Resources’ **Frasergold** prospect (MINFILE 093A 150). Both properties are prospective for bulk tonnage and bonanza-grade gold mineralization.

Noble Metal Group Inc drilled 3 holes in search of mesothermal gold mineralization on its **Noble** property in the headwaters of Keithley Creek. The company also completed a small test mining program (< 1000 cubic metres) on its nearby placer lease that produced 966 grams of gold.

Late in the year Barker Minerals Ltd initiated a 1000 to 1500 metre diamond drilling program on its **Frank Creek** volcanogenic massive sulphide property (MINFILE 093A 152) south of Cariboo Lake.

Fjordland Exploration Inc drilled the Megabuck and Takom zones on the **Woodjam** property (MINFILE 093A 078) south of Horsefly. Gold-copper mineralization at Woodjam is associated with a subvolcanic quartz monzonite intrusion, part of the Late Triassic to Early Jurassic Takomkane batholith, in proximity to intermediate flows of the Nicola Group. Four of five holes drilled on the east side of the Megabuck zone intersected the projected eastern extension of the zone. Encouraging intervals of gold-copper mineralization include 91.7 metres averaging 1.00 g/t Au and 0.22% Cu within a 178.9-metre intersection averaging 0.64 g/t Au and 0.13% Cu in drill hole 05-43. A summer reverse circulation drilling program on the Takom zone, defined by a coincident copper geochemical and IP anomaly, encountered anomalous copper grades. A single diamond drill hole completed on the zone in the fall intersected 82.6 metres grading 0.06 g/t Au and 0.11% Cu. Fjordland is expected to conduct an expanded drill program on the property in 2006.

To the north, Wind River Resources Ltd completed five diamond drill holes on the **Rand** porphyry copper-gold prospect. Drilling did not intersect any intervals of economic significance. There were also a number of smaller exploration programs in the Likely to Horsefly area of the southern Quesnel Terrane. These included the **Miracle** project of Consolidated Big Valley Resources Inc, the **TJ** project of Tom Scuffi, the **Cedar Creek** project of Gordon Richmond, the **Giff** and **Naud** projects of Amarc Resources Ltd and the **Horsefly** project of Chapleau Resources Ltd.

Copper Ridge Resources completed an IP program on the **Copper Ace South** and **Copper King** properties immediately north of the Gibraltar mine.

Exploration continued on a number of properties in the Wells-Barkerville gold belt, an area underlain by argillites, psammites and limestones of the Paleozoic Snowshoe Group. International Wayside Gold Mines Ltd drilled along the Bonanza Ledge and Wells trends near the **Bonanza Ledge** gold deposit on its **Cariboo Gold Quartz** property. Drilling targeted both mesothermal vein and replacement-style mineralization that are known to host moderate to high gold grades. Late in the year the company announced its desire to mine the Bonanza Ledge deposit by open pit methods. The deposit was previously defined by a systematic diamond drilling program and mining of a 10 000 tonne underground bulk sample.

To the north on tenure enclosing the former **Mosquito Creek Gold** mine (093H 010), Island Mountain Gold Mines Ltd explored for similar style mineralization in impure limestones. No results from the program have been released. In December the company announced its plan to sell all of its tenure in the Wells-Barkerville area to sister company International Wayside Gold Mines.

Williams Creek Exploration Limited returned to its **Westport** mesothermal gold vein prospect in the Wells area after a one-year hiatus and drilled six holes. Several encouraging intersections resulted from program including a 38.6 metre interval in drill hole 05-01 that averaged 2.6 g/t Au. The intersection was heavily influenced by a 0.68-metre quartz vein that assayed 86.8 g/t Au.

South of Barkerville, Golden Cariboo Resources Ltd evaluated a number of mesothermal vein and replacement-style gold targets on its stable of properties in the Grouse Creek and Cunningham Creek areas. Drilling took place on the **G, Grouse, Warspite, Tin, Nugget, Cariboo Hudson, Craze, Wolf** and **Bar** prospects.

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