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2007

- Mining, Development & Exploration
- Placer Mining
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- Mineral Incentives
- Yukon Geological Survey
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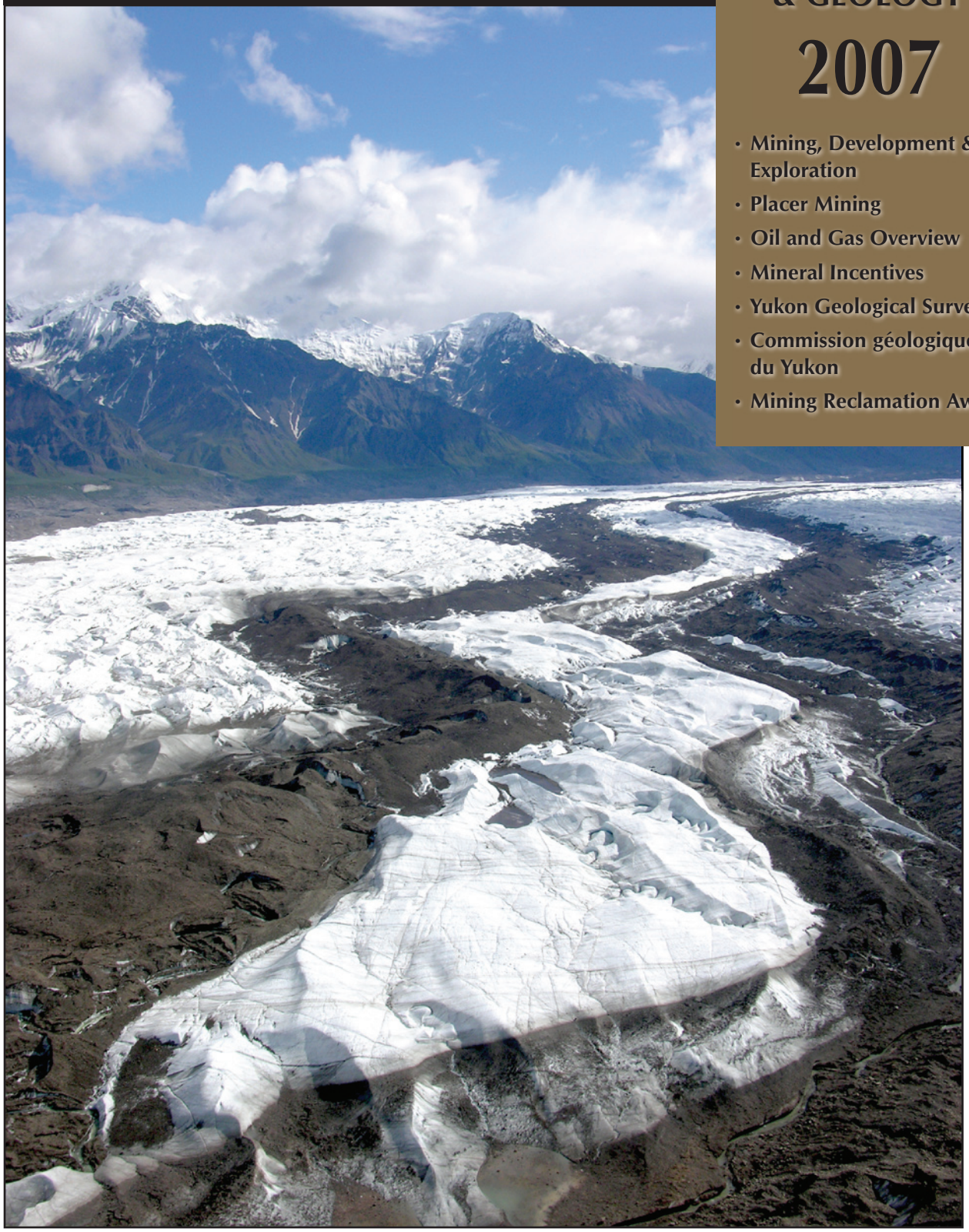
- Mining Reclamation Awards



YUKON GEOLOGICAL SURVEY

Yukon
Energy, Mines and Resources

YUKON
EXPLORATION & GEOLOGY
2007

Edited by
D.S. Emond, L.R. Blackburn, R.P. Hill
and L.H. Weston

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PHOTOGRAPHS

FRONT COVER: Southward view up-valley, near the terminus of the Klutlan Glacier, St. Elias Mountains. The characteristic compression observed in the medial moraine is typical of surging-type glaciers. According to Clarke and Holdsworth[1], the Klutlan glacier is one of 136 surging glaciers in the St. Elias Mountains. Photo provided by Jeff Bond.

BACK COVER: Lori Walton looking at the drillcore through a handlens on the Sonora property, Yukon. Lori was the Yukon Prospector Association's 2007 Prospector of the Year. Photo provided by Lori Walton.

[1]*Clarke, G.K.C. and Holdsworth, G., 2002. Glaciers of the St. Elias Mountains. In: Glaciers of North America, U.S. Geological Survey Professional Paper 1386-J-1, p. J301-J328.*

Bruce Patnode

IN MEMORIUM

On September 13, 2007, the Yukon lost a significant member of its prospecting and arts fraternities. Bruce Patnode lived in Whitehorse for nearly 40 years and, more recently, in Parksville, BC. He was only 60 years old when he passed away on Vancouver Island from a brain aneurysm.

Bruce prospected as a young man with his father, Larry, another prominent Yukon prospector. Upon his father's death, Bruce inherited several Yukon mineral properties and further explored many of them. He also worked in exploration and mining at Macmillan Pass, Keno Hill, Faro, Wellgreen and Cassiar, in addition to working abroad. He operated radios and heavy equipment, surveyed mineral claims, drove ore trucks, worked on diamond-drill rigs, and supervised geochemical and geophysical field programs. Eventually, he started his own mineral exploration company. Bruce also played a role in exploring the geothermal potential of the Wheaton River area.

In the mid-1980s, Bruce returned to college and finished his business administration degree; he then took a job with the Yukon government's Department of Economic Development. Bruce was an active and long-term executive member of both the Yukon Prospectors' Association and the Yukon Chamber of Mines.

Bruce was also a talented artist. He designed and promoted the large bronze prospector statue in the courtyard of the Elijah Smith Building on Main Street in Whitehorse. He created the wooden scroll housed in the main Government of Yukon Administration Building, with brass plaques for names of those who were inducted into the Hall of Fame and Honour Roll. He helped produce the commemorative mural for the RCMP Whitehorse detachment, and he designed the large mural on the exterior wall of the Transportation Museum. The backgrounds of the dioramas in the Kluane Museum of Natural History at Burwash Landing is another example of Bruce's fine work.

Bruce Patnode's name was inscribed on the Yukon Prospectors' Association's Honour Roll on November 26 at the 2007 Yukon Geoscience Forum. Former Yukoner Dutch Van Tassel, an Alberta-based geological consultant and former exploration superintendent for United Keno Hill Mines, spoke recently of Bruce:

"For every area that has its past history steeped in mining, there are individuals who stand out in so many ways for their energies and contributions. Such is the story of Bruce Patnode whose roots were planted and nurtured by his prospector dad. I remember Bruce for his friendly, positive attitude. Bruce will be remembered for his contribution to the Yukon Prospectors' Association and the Yukon Chamber of Mines and, as importantly, for his creative artistry."

Contributions from Jane Gaffin, Jim McFaul and Larry Carlyle

YUKON GEOLOGICAL SURVEY

TABLE OF CONTENTS

MINERAL AND PETROLEUM INDUSTRIES

GOVERNMENT

MINERAL AND PETROLEUM INDUSTRIES

Yukon Mining, Development and Exploration Overview 2007

Mike Burke, Ken Galambos, Lara Lewis and Steve Traynor
Yukon Geological Survey

Yukon Placer Mining and Exploration Overview 2007

William LeBarge
Yukon Geological Survey

Yukon Oil and Gas Overview 2007

Bernie Adilman
Oil and Gas Resources, Energy, Mines and Resouces, Government of Yukon

Yukon Mining Incentives Program 2007

Steve Traynor
Yukon Geological Survey

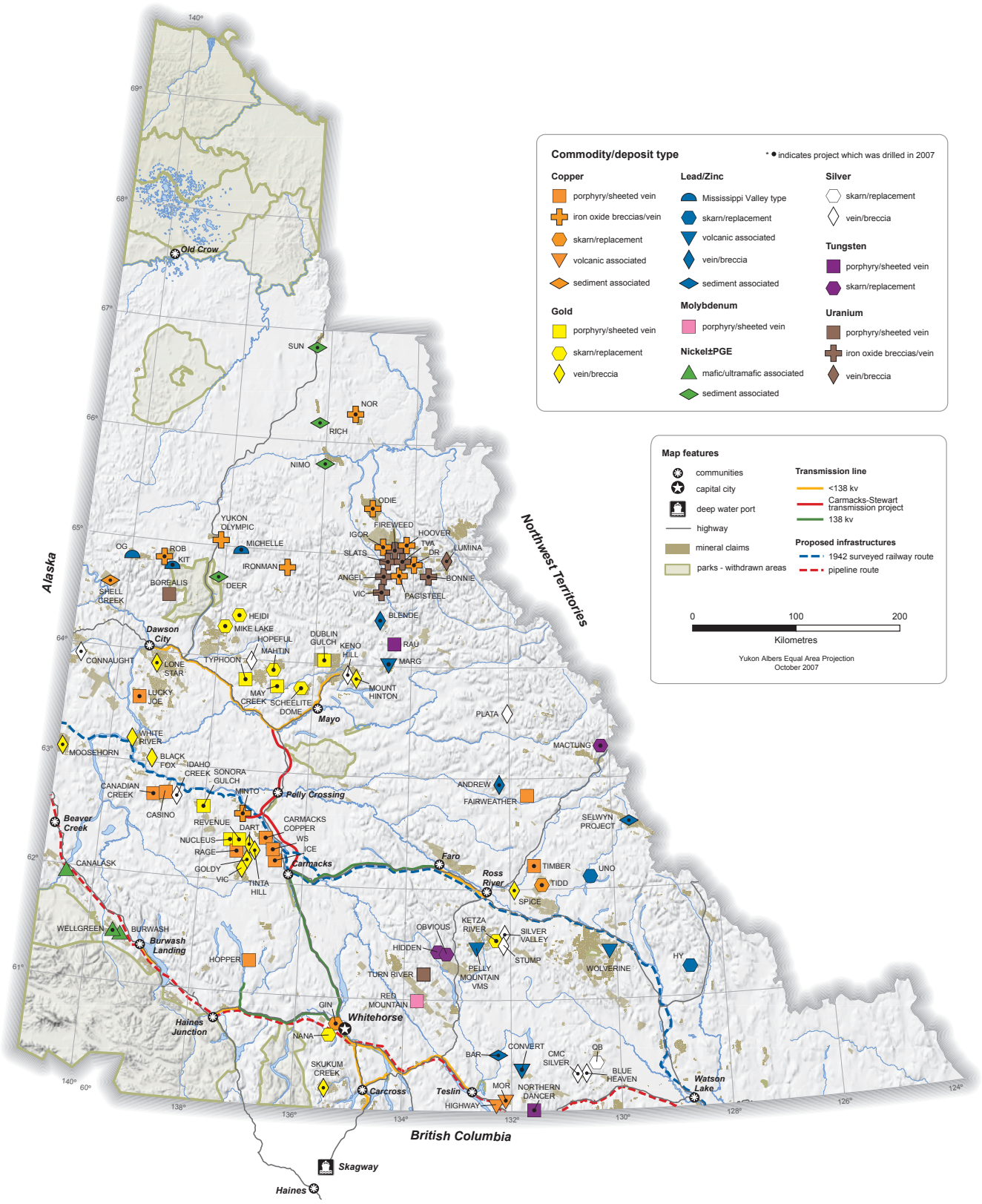


Figure 1. *Yukon advanced exploration projects, 2007. The exploration activity data represented on this map was compiled by the Mineral Services Unit of the Yukon Geological Survey. Advanced projects totaled over $100 000 in expenditures.*

Yukon Mining, Development and Exploration Overview 2007

Mike Burke[1], Ken Galambos, Lara L. Lewis and Steve Traynor
Yukon Geological Survey

Burke, M., Galambos, K., Lewis, L.L. and Traynor, S., 2008. Yukon Mining, Development and Exploration Overview 2007. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p. 2-42.

ABSTRACT

Mineral exploration in Yukon in 2007 continued its dramatic rise from the past few years, with an estimated $130 million spent on the search for base and precious metals, and uranium. Exploration for gold held the largest share of exploration expenditures (29%), followed by zinc and copper (23% each), silver (10%), uranium (8%), and tungsten, molybdenum, nickel and others (together 7%).

Mine development expenditures have also increased to an estimated total of $72 million. The bulk of development dollars were spent on the Minto copper-gold mine, which achieved commercial production on October 1, 2007 and at the Wolverine deposit, where road and site preparation for the construction camp were completed. Final development of the Wolverine polymetallic deposit will begin upon completion of additional project financing. The total Phase 1 development costs at Minto were $100.2 million over two years — this was only 2% above the feasibility study estimate of $98.1 million.

Exploration activities have experienced an increase at all levels in Yukon, from grassroots stages to advanced exploration, prefeasibility and feasibility stage projects. There were approximately 170 exploration projects in Yukon this year; 97 had expenditures of greater than $100 000, with 29 spending more the $1 million. The remaining projects were regional or grassroots generative projects. The largest program, with expenditures of approximately $25 million, was upgrading and expanding the huge zinc resources at the Selwyn (Howards Pass) project.

RÉSUMÉ

La prospection minérale au Yukon en 2007 a continué d'augmenter considérablement par rapport aux années antérieures et l'on estime à 130 millions de dollars les sommes consacrées à la recherche sur les métaux de base, les métaux précieux et l'uranium. La prospection minérale de l'or détient la plus grande part des dépenses d'exploration (29 %), suivie par le zinc et le cuivre (23 % chacun), l'argent (10 %), l'uranium (8 %) et enfin par le tungstène, le molybdène, le nickel et autres (totalisant ensemble 7 %).

Les sommes consacrées à la mise en valeur des mines ont également augmenté pour atteindre 62 millions de dollars au total (valeur estimée). La majeure partie d'entre elles ont été consacrées à la mine Minto, qui a entrepris la production commerciale le 1er octobre 2007 et au gisement Wolverine, où la route et la préparation du site pour le site de construction ont été complétés. Les activités finales de mise en valeur du gisement Wolverine débuteront dès l'obtention du financement additionnel lié au projet. Les coûts totaux de mise en valeur de la Phase 1 de la mine Minto se sont élevés à 100,2 millions de dollars, soit seulement 2 % de plus que l'estimation faite par l'étude de faisabilité, qui était de 98,1 millions de dollars.

Pour ce qui est des activités liées à l'exploration à tous les niveaux au Yukon, allant du développement au niveau local à l'exploration avancée, les projets de préfaisabilité et de faisabilité ont connu une augmentation. On dénombre environ 170 projets d'exploration au Yukon cette année; de ce nombre, 97 ont eu des dépenses supérieures à 100 000 $, et 29 ont dépensés plus d'un million de dollars. Les autres projets sont des projets génératifs locaux ou régionaux. Le programme le plus important est le projet Selwyn, dont les dépenses se sont élevées à environ 25 millions de dollars pour la valorisation et l'agrandissement du vaste gisement de zinc du projet Selwyn (Howards Pass).

[1]*mike.burke@gov.yk.ca*

INTRODUCTION

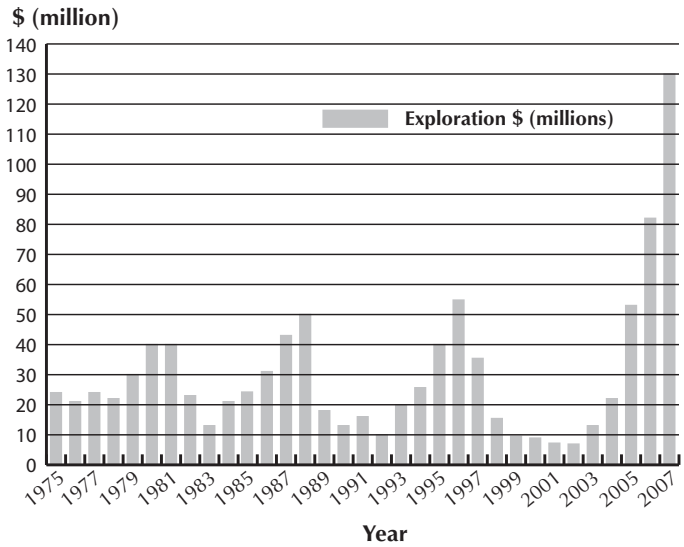
Mineral exploration expenditures in Yukon experienced a significant increase for the sixth consecutive year, rising to an estimated $130 million (Figs. 1 and 2). Mine development expenditures also increased with the completion of the Phase 1 development of the Minto copper-gold mine of Sherwood Copper Corporation, which allowed the mine project to achieve commercial production on schedule and only 2% above the feasibility study budget. The successful discovery of additional resources at the Minto mine allowed the company to begin construction of the Phase 2 mill expansion. Mine development also began at the Wolverine deposit of Yukon Zinc Corporation. The company received a number of permits allowing construction to proceed at the site in 2007, including a Quartz Mining Licence and a Type A Water Licence. A 24-km access road was constructed to the site and preliminary earthworks for the main camp facility were completed. Final construction will begin when project financing is completed and a production decision is made.

Claim staking remained at high levels, with a total of 12 123 claims staked and the number of claims in good standing rising to a total of 69 038 by year end (Figs. 3 and 4).

Although the bulk of expenditures can be attributed to large projects that involve drilling, Yukon has also benefited from an increase in the amount of grassroots generative exploration programs that continue to provide a steady stream of projects. This can be directly attributed to the high quality of prospectors and junior mining companies who have a long history of exploration in Yukon. They have enjoyed the support of the Yukon Mining Incentive Program (YMIP) which has allowed them to continue to generate new projects, especially in times of reduced activity.

The reader is reminded that the exploration overview is in no means a comprehensive overview of the activity in Yukon. Many results are still pending at the publication deadline of this volume and thus are preliminary in nature. This publication is available on the Yukon Geological Survey (YGS) website *(www.geology.gov.yk.ca)*. Links to company websites are available in this report; these contain much more comprehensive information including, in many cases, up-to-date results, plans and sections. The other valuable reference used throughout this report is the online version of Yukon MINFILE – A database of mineral occurrences *(www.geology.gov.yk.ca/databases_gis.html)*.

Figure 2. *Exploration expenditures in Yukon, 1971 to 2007.*



MINE DEVELOPMENT

The **Minto** mine (Yukon MINFILE 115I 012) is a high-grade copper-gold deposit operated by Sherwood Copper Corporation (Fig. 5). Sherwood acquired the Minto project in June, 2005, and, in just two years from its acquisition, completed a definitive feasibility study, arranged project financing and spent $100 million to bring the open-pit mine into production. Commercial production commenced on Oct. 1, 2007. A Phase 2 mill

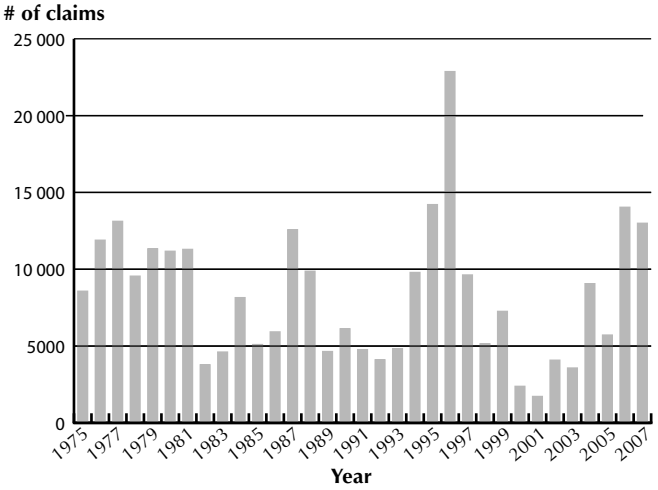


Figure 3. *Mineral claims staked, 1975–2007.*

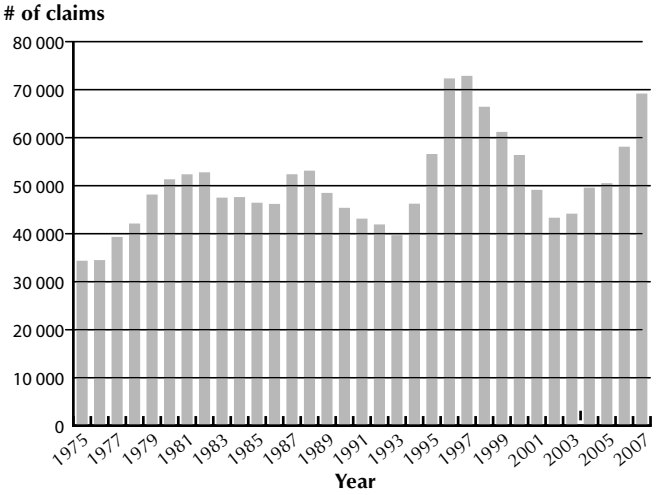


Figure 4. *Mineral claims in good standing, 1975–2007.*

expansion from 1563 tonnes per day to 2400 tonnes per day was completed ahead of schedule on December 15, 2007 (Fig. 6). A prefeasibility study has also been completed that lays out the basis for a Phase 3 mill expansion, to 3500 tonnes per day of throughput, and incorporates a significant portion of the Area 2 resources, resulting in a more than 40% increase in copper and gold production in comparison with its original feasibility study. Current total resources at the Minto mine, at a 0.5% copper cut-off grade, are Measured and Indicated 16 656 000 tonnes grading 1.54% Cu, 0.56 g/t Au, 5.95 g/t Ag plus an Inferred resource of 1 471 000 tonnes grading 1.00% Cu, 0.32 g/t Au, 2.05 g/t Ag (National Instrument 43-101 standard (NI)).

Figure 5. *Open pit at Minto mine. Truck (circled) for scale.*

Figure 6. *Mill at Minto mine site.*

Yukon Zinc Corporation *(www.yukonzinc.com)* further advanced the Wolverine project (Yukon MINFILE 105G 072). This included receiving both a Type A Water Licence and a Quartz Mining Licence which allows the company to construct and operate the mine until 2027. Access to the property was significantly upgraded with the completion of the all-weather tote road connecting to the Robert Campbell highway (Fig. 7). Civil engineering work consisting of site preparation for the construction camp was also completed. Construction of the project will occur when final project financing is secured and a production decision is made.

Figure 7. *Wolverine mine access road development. Photo by Yukon Zinc Corp.*

PRECIOUS METALS – GOLD

SKARN/REPLACEMENT

Yukon Nevada Gold Corp. *(www.yukon-nevadagold.com),* formerly YGC Resources Ltd., conducted a year-round exploration program that included geological mapping, geochemistry, trenching, airborne geophysical surveys and extensive diamond drilling at its **Ketza River gold-silver** property (Yukon MINFILE 105F 019) located 50 km south of Ross River (Fig. 8). Mineralization at Ketza consists of massive pyrrhotite-pyrite manto deposits hosted in Lower Cambrian limestone, as well as quartz-pyrrhotite-pyrite veins hosted in Lower Cambrian argillite, which stratigraphically underlie the limestone unit. Oxidized mantos mined at the Ketza River deposit between 1988 and 2000 produced approximately 3.1 million grams of gold. Just under 50 000 m of diamond drilling were completed in 363 holes making this the Yukon's largest drilling program in 2007. The company will be using drilling results from 2006 and 2007 to update the resource calculation on the property, complete the prefeasibility study, and make a production decision for an operation with an annual production of up to 100,000 ounces (300 million grams). Recent results from manto zones not included in the previous resource calculation include the following: Lab zone – DDH KR-06-892 at 4.94 g/t Au over 6.09 m; Penguin zone – DDH KR-07-1042 at 11.16 g/t Au over 10.26 m, including 18.27 g/t over 2.68 m; Hoodoo zone – DDH KR-07-1108 at 5.97 g/t Au over 16.3 m, including 1.7 m of 23.3 g/t Au; and Tarn zone – DDH KR07-1228 at 2.85 m of 2.26 g/t Au and 1.22 m of 4.28 g/t Au. Vein style mineralization in the Shamrock zone returned values up to 7.8 m grading 4.89 g/t Au from the Gully vein and 2.3 m of 15.89 g/t Au in hole KR01-1071 and 3.83 m grading 14.5 g/t in hole KR07-1166 at the QB vein.

Figure 8. *Ketza property, camp and existing mill.*

Dynamite Resources Ltd. *(www.dynamiteresources.com)* explored three areas on the **Mike Lake** property (Yukon MINFILE 116A 012) during 2007 with 1827 m of diamond drilling in nine holes. The property, located 90 km east-northeast of Dawson, covers a number of intrusive-related gold targets associated with Cretaceous Tombstone Suite intrusive stocks, dykes and sills. The upper skarn ridge area was drilled for the first time and resulted in a new discovery. Diamond drillhole SK-07-01 returned 89.31 m grading 0.61% Cu, 1.383 g/t Au and 13.6 g/t Ag. Within this interval a 2.66-m section returned values of 0.64% Cu, 12.30 g/t Au and 14.6 g/t Ag. Mineralization consists of calc-silicate skarn with pyrrhotite and chalcopyrite

Figure 9. *Chalcopyrite mineralized skarn in Mike Lake property core. Photo by Dynamite Resources.*

(Fig. 9). Drilling targeted a 1500 m by 700 m area with soils strongly anomalous in copper and gold which overlies a thick section of calcareous phyllite of the Cambro-Ordovician Rabbitkettle Formation that has been intruded by granodiorite sills. The other eight holes were drilled to test bulk tonnage copper-gold and high-grade, shear-controlled gold mineralization on the extreme northern and southern parts of the property. Results are pending for those holes.

Figure 10. *Drilling at the Heidi property. Photo by Logan Resources.*

Figure 11. *Arne Bakke of Kinross Gold Corporation working at faulted vein on the Dublin Gulch property.*

At the **Heidi** property (Yukon MINFILE 116A 037), located 95 km east-northeast of Dawson, Logan Resources *(www.loganresources.ca)* conducted airborne magnetic and radiometric geophysical surveys, additional claim staking and the diamond drilling of 19 holes for a total of 2686 m (Fig. 10). Drilling targeted stratabound gold-bearing pyrite-arsenopyrite replacement zones in carbonate-rich horizons within Upper Proterozoic to Lower Cambrian Hyland Group sedimentary rocks and sulphide-bearing breccia/veins. The mineralization is associated with what is believed to be a buried Cretaceous Tombstone suite intrusion. Best results from drilling were 3 m grading 1.51 g/t Au in hole HD07-07.

On the **May Creek** property (Yukon MINFILE 115P 008), Logan Resources drilled five reverse-circulation drillholes targeting skarn mineralization associated with a mid-Cretaceous Tombstone Suite intrusion. Results from the drilling have not been released.

PORPHYRY/SHEETED VEIN

StrataGold Corp. *(www.stratagold.com)* discovered a new gold zone at its **Dublin Gulch** property (Yukon MINFILE 106D 025) near Elsa. The Shamrock zone is located 3 km north-northeast of the Eagle zone gold deposit. The company drilled 868 m in five diamond drillholes at the Shamrock zone in order to follow up highly anomalous gold in soils and trenching results from the 2006 exploration program. Mineralization consists of sheeted quartz-sulphide veins in a structural zone cutting the Cretaceous Dublin Gulch granodiorite stock (Fig. 11). Highlights from the 2007 program include DDH 321, which averaged 1.12 g/t Au over 15.24 m, DDH 326 that returned 16.76 m averaging 1.42 g/t Au, and DDH 328 at 9.34 m of 2.058 g/t Au. The new zone has been intersected over a strike length of 325 m and remains open in both directions along strike and down dip. DDH 329 intersected 14.6 m averaging 1.16 g/t Au in what appears to be a parallel zone immediately north of the Shamrock zone. Extensive soil sampling was also completed on the Shamrock zone in 2007, tripling the

size of the grid completed the previous season. StrataGold's exploration efforts to date have focused primarily on the Eagle zone deposit which hosts the current NI 43-101-compliant resource estimate comprising an Indicated resource of 1.96 million ounces Au (60 963 000 g) at 0.916 g/t Au and an Inferred resource of 371,000 ounces Au (11 539 390 g) at 0.803 g/t using a 0.50 g/t Au cut-off grade. In 2007, 20 diamond drillholes were completed for a total of 5528 m at the Dublin Gulch property. The bulk of the drilling was outside the known resource area to test the potential to expand the deposit to the north, south and east (15 holes totaling 4660 m). Drilling was successful in intersecting additional mineralization outside of the resource area. Drillhole 334C, south of the Eagle zone, intersected 361 m of 0.98 g/t Au. The company also began relogging and resampling of historical drill core from the Ray Gulch tungsten deposit located 2.5 km east of the Eagle zone gold deposit.

In mid-July, International Gold Resources, Inc. *(www.intlgold.com)* mobilized a camp and commenced a seven-hole, 998-m diamond-drilling program on the **Mahtin** property (Yukon MINFILE 115P 007) located 135 km southeast of Dawson City. The property had never been drilled prior to this year's program. The property is underlain by the Cretaceous Sprague Creek stock, which intrudes Upper Cambrian to Ordovician Rabbitkettle Formation limestone. Mineralization at surface consists of calc-silicate skarn and sheeted quartz-sulphide veins within the intrusion. The initial program consisted of two set-ups where holes were fanned out to test the contact of the intrusive and limestone. Drilling intersected quartz-veined and altered intrusive and calc-silicate skarn with pyrrhotite and arsenopyrite (Fig. 12). Results from the program are pending.

Northern Freegold Resources *(www.northernfreegold.com)* completed an extensive $5 million exploration program on its **Freegold Mountain** property including diamond drilling of 57 holes totaling 11 428 m on six different targets, rotary air blast (RAB) drilling of 4635 m in 116 holes on two targets. Other work included

Figure 12. *Mineralized quartz vein at Mahtin property.*

Figure 13. *Jean Pautler and Danièle Héon examine core at the Freegold Mountain property.*

geophysical and geochemical surveys, trenching, prospecting and geological mapping. The main focus was on the Nucleus zone (Yukon MINFILE 115I 042), located 58 km west of Carmacks, with 6313 m of diamond drilling in 27 holes. The Nucleus zone consists of Cretaceous granodiorite sills of the Dawson Range Suite intruding metasedimentary rocks of the Yukon-Tanana terrane, intruded by later quartz-feldspar porphyry dykes. Mineralization occurs as quartz-sulphide veins and stringers, disseminated sulphide minerals, breccias and fault zones with associated phyllic and argillic alteration (Fig. 13). The first hole of the season, GRD07-41, returned 72.35 m of 2.5 g/t Au and 0.14% Cu including 2.00 m of 45.0 g/t Au. Other highlights from Nucleus include hole GRD07-50, the widest mineralized intercept drilled to date: 207.4 m of 0.59 g/t Au including 11.40 m of 1.36 g/t Au; and 11.90 m of 1.25 g/t Au and 0.17% Cu. The highest grade intercept released to date was hole GRN07-58, which intersected 74.97 m of 4.26 g/t Au including 10.6 m of 20.26 g/t Au. This hole was drilled 50 m east of hole GRD07-41 and appears to define an easterly trending high-grade zone, which remains open to the east. Approximately 1100 m of diamond drilling in eight holes were done in the Revenue zone located approximately 3.5 km east of Nucleus. The Revenue zone (Yukon MINFILE 115I 042) hosts similar gold-rich copper-porphyry mineralization, and the two zones are connected by anomalous copper-gold soil geochemistry. Results for the drilling at Revenue were pending at year end.

Firestone Ventures Inc. *(www.firestoneventures.com)* continued drilling at **Sonora Gulch** (Yukon MINFILE 115J 008), situated 110 km northwest of Carmacks. The program consisted of 2025 m of diamond drilling in 12 holes testing 3 target areas. The Amadeus zone, a gold-silver-copper-molybenum target within a mid-Cretaceous monzonite stock was tested with seven holes totaling 1730 m, six of which targeted potential extensions of the high-grade intercept of 6.21 g/t Au over

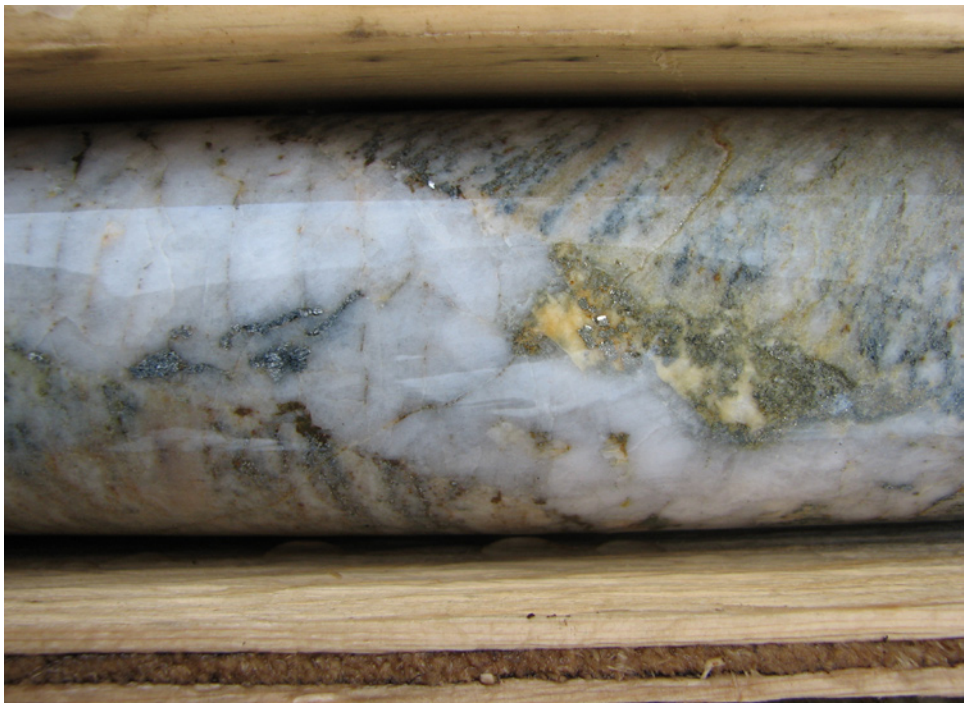


Figure 14. *Mineralized vein at Sonora Gulch property.*

the bottom 15.3 m of DDH SG-06-06. Drillhole SG-07-12 returned 4.0 m of 5.22 g/t Au within a larger intersection measuring 64 m of 1.0 g/t Au. High-grade mineralization appears to be controlled in a near-vertical structural zone while the stock is consistently mineralized with lower grade gold and silver values. Mineralization consists of polymetallic quartz-sulphide veins, breccias and disseminated sulphide minerals (Fig. 14). DDH SG-06-16 returned 2 m of 1.12 g/t Au and 817 g/t Ag with anomalous base metal values, while DDH SG-07-17, collared 200 m west of the discovery hole, returned a 2.0 m sample of 91.7 g/t (2.95 ounces per ton) Ag with 0.464 g/t Au and 0.93% Pb. Hole SG-07-22 targeted an ultramafic horizon located immediately to the north of the Amadeus zone. Anomalous gold and silver values were returned from surface to the upper contact of the horizon, including a value of 0.66 g/t Au with 6.5 g/t Ag across 2.0 m and another of 0.939 g/t Au with 2.7 g/t Ag across 1.5 m. Firestone conducted geochemical surveys, mapping and prospecting on its surrounding claims and developed additional target areas for follow-up.

At the **Typhoon** property (Yukon MINFILE 115P 060), located 100 km east-southeast of Dawson, Curlew Lake Resources *(www.curlew-lake.com)* completed line-cutting, an IP survey, additional magnetometer and geochemical surveys, and geological mapping. The property is within the Tombstone strain zone, and geophysical results suggest an underlying intrusive body. A six-hole, 1001-m diamond-drilling program commenced in July and results are pending.

Cariboo Rose Resources Ltd. *(www.caribooorose.com)* diamond drilled five holes totalling 879 m at the **Canadian Creek** copper-gold-molybdenum property (Yukon MINFILE 115J 036), located approximately 300 km northwest of Whitehorse. Veraz Petroleum Ltd. is financing the $400 000 program under an option that gives Veraz

(formerly North American Vanadium Inc.) the right to earn a 60% interest in the property. Highlights of this year's program include hole 07-04, which returned 0.31 g/t Au over 139.9 m. A narrower interval in this hole returned 2.96 g/t Au over 6.0 m. Drilling was completed on targets located 1000 to 1500 m to the west of the Casino deposit (Yukon MINFILE 115J 028).

VEIN/BRECCIA

Tagish Lake Gold *(www.tagishgold.com)* continued its year-round underground exploration at the **Skukum Creek** property (Yukon MINFILE 105D 022), located 80 km southwest of Whitehorse (Fig. 15). The company is conducting prefeasibility work examining the economics of a 270 000 tonne-per-year operation producing 1368 kg (44,000 ounces) of gold and 31 100 000 kg (1 million ounces) of silver per year. Early in the year, a Memorandum of Understanding was signed with the Carcross-Tagish First Nation on the shared values, principles and interests in developing the project. Continued deposit definition, engineering studies and development of the main access at the 1100-m level will form the basis for a feasibility study. The portal site for the 1100-m level access was prepared in 2007. Permitting of the project is planned for 2008. Tagish Lake Gold released an updated NI 43-101-compliant resource calculation in mid-November. With the addition of resources from the Rainbow Two and the Berg zones, Measured and Indicated resources at Skukum Creek are now calculated to be 1 066 000 tonnes at 6.4 g/t Au and 187 g/t Ag, and the Inferred resources to be 206 000 tonnes at 6.8 g/t Au and 155 g/t Ag, both at a cut-off grade of 4 g/t. The resource calculation incorporated drilling from last year's program.

Significant results released in 2007 included hole SC06-95 which intersected 6.91 g/t Au and 72.4 g/t Ag over 9.72 m (6.32 m true width) from the Rainbow Two zone. Chip samples of newly exposed mineralization from recent drifting ranged from 1.50 m grading 1.18 g/t Au and 104.0 g/t Ag, up to 4.51 m of 33.21 g/t Au and 51.8 g/t Ag from the Rainbow Two zone, with a further notable intersection of 1.50 m grading 94.08 g/t Au and 654.0 g/t Ag. The newly discovered Rainbow Three zone returned widths of up to 2.60 m of 5.67 g/t Au and 86.1 g/t Ag, while the Berg zone intersections ranged from 1.50 m grading 1.60 g/t Au and 67.7 g/t Ag, up to 1.5 m of 15.2 g/t Au and 211 g/t Ag. The company is currently conducting a 5000-m diamond drilling program, undertaken from the exploration crosscuts driven on the 1300-m level this year. The

Figure 15. *Skukum Creek property adit.*

Figure 16. *Bill Mann examines trench samples at the Lone Star property.*

program will focus on exploring the upward and downward extensions of the Rainbow Two and Berg zones, and will also test the Rainbow Three zone and provide information on the extensions of these zones to facilitate mine planning.

Klondike Star Mineral Corp. *(www.klondikestar.com)* was active on its large mineral property south of Dawson City in the heart of the Klondike again this season. One of its main targets on the property is the historic **Lone Star** (Yukon MINFILE 115O 072) gold mine. The company followed up results from the 2006 season including diamond-drilling results released early in the year. In general, fairly narrow higher grade sections occur within broad envelopes of anomalous gold mineralization. Mineralization consists of quartz veining and/or disseminated sulphide minerals with visible gold in schists within a structural trend (see also Mackenzie, this volume, a and b). Hole 06-LS-23, drilled beneath a 1987 trench along the west side of the Lone Star zone, returned 0.46 g/t Au over 40.0 m including 8.40 g/t Au over 0.8 m. This trench was also the target of a bulk-sampling program where ten samples, ranging in weight from 2.9 to 8.1 tonnes, collected across widths varying from 6 to 10 m, were taken along a 67-m length of the trench (Fig. 16). Results varied between 1.41 g/t Au over 6.0 m in sample 06LS-B5 to 0.054 g/t Au over 10.0 m in sample 06LS-B8, and averaged 0.67 g/t Au over the entire 67-m interval, including 1.33 g/t Au over 24 m from the southern end of the bulk sampling. Elsewhere, excavator trenching discovered a new gold zone, dubbed the JF, near the centre of the Lone Star property. A 95-m-long trench 06TR-06 returned values up to 2.32 g/t Au over a 5-m interval.

The **Buckland** zone (Yukon MINFILE 115O 077) located approximately 1 km southwest of the Lone Star was drilled with five holes totalling 856 m. The drilling targeted a similar structural trend to that at the Lone Star, where a zone of chargeability was identified in an induced-polarization survey. Highlights of the

Figure 17. *Vein at the Mount Hinton property.*

drilling include 2.06 g/t Au over 21.0 m, including 22.6 g/t Au over 1.0 m in hole 07BU-3, and 1.29 g/t Au over 16.0 m, including 24.9 g/t over 0.5 m in hole 07BU-4.

The Dominion project of Klondike Star includes the **Mitchell-Sheba** veins (Yukon MINFILE 115O 068) and other surrounding claims. Work this season included detailed geological mapping, surveying, grid cutting, trenching, chip sampling and bulk sampling.

The **Spice** property (Yukon MINFILE 105G 150), located 25 km east of Ross River, optioned by Klondike Star was drilled with three holes totaling 440 m. The drilling was the first drilling to be conducted on the property. The exploration target on the property is a low-sulphidation epithermal system. Rhyolitic rocks on the property are interpreted to be Eocene volcanic rocks similar to those hosting the Grew Creek deposit (Yukon MINFILE 105K 009) located 60 km to the west. Results from the drilling have not been released.

International Gold Resources *(www.intlgold.com)* conducted geochemical surveys on the **Crown Jewel** and **Bonanza** properties (Yukon MINFILE 115O 139, 080) in 2007. The properties are located in the heart of the Klondike goldfields south of Dawson City.

Yukon Gold Corp. Inc. *(www.yukongoldcorp.com)* completed an airborne versatile time-domain electromagnetic (VTEM) geophysical survey, trenching and drilling of three holes totalling 366 m at its **Mount Hinton** property (Yukon MINFILE 105M 052), located 8 km north of Keno Hill. Four trenches were located in McNeil Gulch along strike from known quartz-sulphide veins exposed on the north face of Mount Hinton and a newly discovered vein on the ridge opposite Mount Hinton (Fig. 17). The trenches are approximately 1 km from any previously known vein. Trench 3 exposed two sheared/crushed quartz veins, one of which grades a weighted average of 1.36 g/t Au, 183 g/t Ag and 2.1% Pb over 6 m. The second vein grades 0.41 g/t Au, 110 g/t Ag and 0.9% Pb over 1 m. Trench 4 exposed a mineralized vein that returned a grade of 1.27 g/t Au, 116 g/t Ag and 1.7% Pb over 3.1 m. The small drilling program provided inconclusive results due to poor core recovery and holes that had to be abandoned short of their targets.

Atac Resources performed soil geochemical sampling and prospecting, flew a property-wide helicopter-borne, versatile time-domain electromagnetic (VTEM) survey, and performed a reconnaissance-scale induced-polarization (IP) survey on the **Hartless Joe** property (Yukon MINFILE 105D 203) north of Whitehorse. Mineralization on the property consists of low-sulphidation gold- and silver-rich quartz veins, breccias and replacement zones

Northern Freegold Resources *(www.northernfreegold.com)* explored the central and eastern parts of its **Freegold Mountain** property with prospecting, soil sampling, trenching and drilling. New mineralization was found from trenching on historical

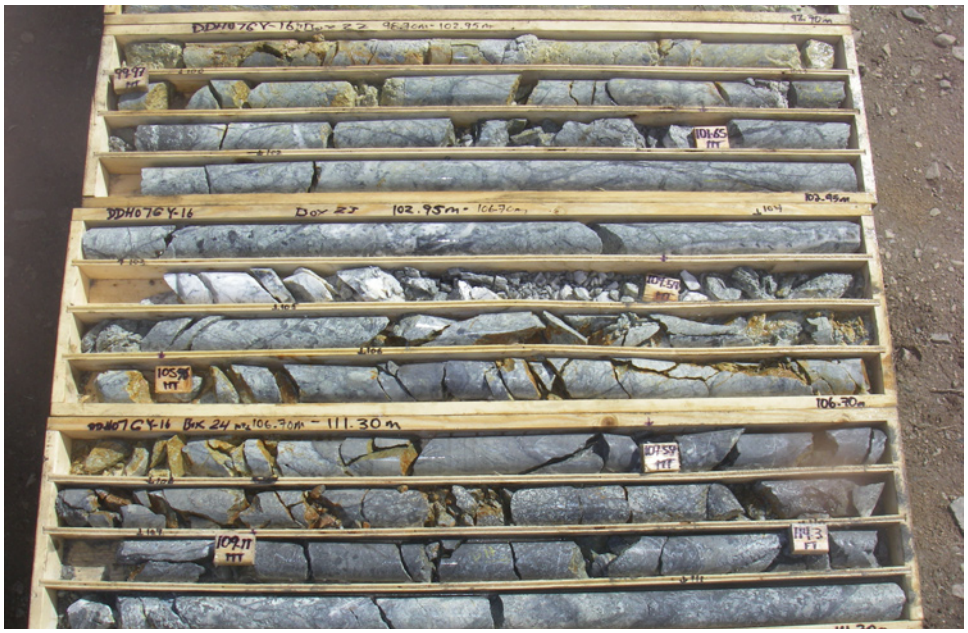


Figure 18. *High-grade section of core (15.45 g/t Au) in the Goldy zone, from 103 to 112.3 m. Photo by Northern Freegold Resources.*

geochemical anomalies, an example being the newly discovered **Ridge** Zone, situated 46 km northeast of Carmacks. The company excavated a highly gossanous zone of 4.7 m grading 3.72 g/t Au, 60.3 g/t Ag, 0.59% Cu, 0.51% Pb and 0.23% Zn. Two other trenches in the immediate area returned 37.86 g/t Au and 18.02 g/t Au with significant silver and several percent copper over true widths of 0.68 m and 1.70 m, respectively. At the **Goldy** zone (Yukon MINFILE 115I 112), the company conducted trenching and geophysical surveys followed by diamond drilling. The target is epithermal-style quartz veining and silicified zones associated with an altered quartz-feldspar porphyry body. Drilling intersected 53.75 m averaging 3.5 g/t Au, including a section of alternating altered porphyry and syenite/hornblendite containing abundant quartz-sulphide veinlets and fine-grained pyrite and arsenopyrite needles replacing mafic minerals that graded 8.03 g/t Au over 19.05 m, including an interval grading 15.45 g/t Au over 9.3 m (Fig. 18). At the **Tinta Hill** zone (Yukon MINFILE 115I 058), diamond drilling was successful in expanding the zone, which is an intrusion-hosted polymetallic vein deposit. Drilling intersected the vein to a depth of 300 m over 100 m of strike length. Mineralization consists of sulphide mineralization including tetrahedrite, chalcopyrite, galena and sphalerite in vuggy quartz-carbonate veins. Results from hole TH07-08 graded 1.7 m of 14.90 g/t Au, 446 g/t Ag , 3.3% Cu, 5.2% Pb and 0.66% Zn. Four drillholes totaling 711 m were drilled in the **Dart** property (Yukon MINFILE 115I 055), which is an epithermal vein target. Assays from this drill program are pending.

Underworld Resources *(www.underworldresources.com)* conducted soil geochemical surveys, geological mapping, trenching and IP surveys on the **White Gold** and **Blackfox** properties (Yukon MINFILE 1150 011, 014) 100 km southwest of Dawson. The two properties host multiple styles of gold mineralization including wide quartz veins, hydrothermal breccias and disseminated targets, hosted within widespread soil geochemical anomalies. Poorly exposed quartz veins, ranging from 0.5 to 3.0 m wide hosting visible gold, have been discovered on both properties. Significant placer gold has been historically mined in the area.

Aurchem Exploration, a private company, conducted a trenching and sampling program on the **VG (Vic)** property (Yukon MINFILE 115I 068), 47 km west of Carmacks. Quartz veins on the property carry high-grade gold values, and the company is currently evaluating the potential of the veins to support small-scale mining.

PRECIOUS METALS – SILVER

VEIN/BRECCIA

Alexco Resources Corporation *(www.alexcoresource.com)* continued a comprehensive exploration program that included HQ diamond drilling, regional geological mapping, compilation work and geophysical and geochemical programs on its **Keno Hill** properties (Yukon MINFILE 105M 001). Over the past century, the silver mines at Keno Hill have produced approximately 214 million ounces (6 656 000 kg) Ag at an average grade of 40.4 ounces/ton (1389 g/t) Ag, 5.62% Pb and 3.14% Zn. The district contains three distinctive styles of mineralization including high-sulphidation epithermal silver-gold as seen in the Husky Southwest, native silver ± sulphosalts and base metals at the Lucky Queen, and massive base-metal sulphide veins like those present at Bellekeno.

In March 2007, the corporation entered into a Memorandum of Understanding with the First Nation of Na-Cho Nyak Dun (NND) that provided NND with opportunities in terms of employment, preferential contract positioning, training and other benefits, while NND provided support for the Corporation's ongoing activities at Keno Hill. In September 2007, the Corporation and NND entered into a negotiation agreement relating to the Corporation's current and future activities on and around the former UKHM property.

Figure 19. *Keno Hill core room.*

In November, 2007, the company released a new NI 43-101 resource calculation for the historic Bellekeno mine. The total Inferred resource is stated as 356 000 tonnes grading 1630 g/t Ag, 20.3% Pb and 5.9% Zn. The new estimate represents a tonnage increase of 35% over the historic UKHM resource. Both silver and lead grades have increased: 37% and 75%, respectively. The current consolidated Bellekeno resource estimate incorporates 2006/2007 Alexco drill results for the Southwest zone only, but does not include recent work from the 99 and East zones.

Prior to this resource estimate, the company had released a

number of notable intersections on each of its targets drilled in late 2006 and into 2007. Released in January, results from hole K06-027, drilled approximately 50 m below the lowest working of the **Bellekeno** deposit, show an intersection of 7.5 m interval grading 670.2 g/t Ag, 1.99 g/t Au, 8.83% Pb and 8.81% Zn, including a 3-m section that returned 1522 g/t Ag, 1.26 g/t Au, 20.02% Pb and 7.22% Zn, as well as a separate 1.5 m section that ran 206.9 g/t Ag, 6.02 g/t Au, 1.39% Pb and 20.31% Zn (Fig. 19). This hole confirms the down-plunge continuation of the southwest ore zone. Grade potential of this zone is demonstrated by hole K07-0101 which cut an interval grading 3279 g/t Ag, 0.718 g/t Au, 59.7% Pb and 5.7% Zn over 9.64 m, occurring within a broader 13.84 m zone grading 2350 g/t Ag, 0.878 g/t Au, 42.3% Pb and 8.2% Zn. At **Bellekeno East**, hole K07-066 returned a 4.44 m interval grading 1642 g/t Ag, 0.406 g/t Au, 8.46% Pb and 11.18% Zn, including a 1.51 m intersection grading 3058 g/t Ag, 0.574 g/t Au, 19.63% Pb and 15.89% Zn. Drilling at Bellekeno has extended the East zone mineralization approximately 250 m down plunge from the initial 1995 drilling. The zone remains open along strike and down plunge. The East zone mineralization occurs below a major greenstone sill that has historically been interpreted to truncate Bellekeno mineralization at depth. This recent drilling confirms the presence of high-grade mineralization below this unit adding significant potential for discovery of down-plunge extensions of mineralization related to the high-grade 99 and Southwest zones. Adjacent to the Bellekeno mine area, drilling at the **Onek** mine intersected significant intervals of high-grade zinc/precious metals mineralization 70 m down plunge of mine workings. Hole K07-069 cut an intersection grading 29.45% Zn, 0.842 g/t Au, 85.4 g/t Ag and 0.14% Pb over 6 m. Mineralization remains open at depth and along strike.

At **Silver King**, hole K07-0112 cut an interval grading 10 534 g/t Ag, 2.15 g/t Au, 6.61% Pb and 0.72% Zn over 0.8 m. Highlights from **Husky Southwest** include DDH K06-036 which cut a 1.4 m interval grading 2010 g/t Ag and 1.94 g/t Au within a 12.75-m section which assayed 284.2 g/t Ag. Shallower reconnaissance drilling in 2006 and early 2007 by Alexco in the Husky Southwest zone intersected thin, high-grade silver zones within broader intervals of intense pyrite and clay-altered quartzite. This is interpreted to be associated with a higher level (vapour phase) of mineralization which may transition to increased silver and base-metal mineralization (fluid stage) deeper within the hydrothermal system. Subsequent deeper exploration drilling in 2007 intersected progressively greater widths of stockwork. This mineralization remains open along strike and to depth. Drilling on the **Townsite** vein cut an interval grading 1804 g/t Ag, 0.31 g/t Au, 3.95% Pb and 2.5% Zn in hole K07-0088.

At **Lucky Queen**, hole K07-0114 intersected a 1.12-m native silver, galena and silver sulphosalt mineralized zone grading 17 380 g/t Ag, 0.201 g/t Au, 6.37% Pb and 1.36% Zn including a 0.52 m zone of native silver-dominated mineralization which assayed 35 618 g/t Ag, 6.95% Pb and 0.58% Zn. Hole K07-0114 was drilled 170 m southwest of the 2006 drillhole K06-018 which carried similar values. At both Lucky Queen and Shamrock, bonanza-grade intercepts are present within thicker zones of mineralization. **Shamrock** drilling results released in February of this year, returned 0.6 m grading 2405 g/t Ag, 0.31 g/t Au and 43.14% Pb with a larger 7.6-m intersection grading 343 g/t Ag, 1.45 g/t Au and 4.92% Pb from K06-025. Announced at the same time, **Ruby** drillhole K06-029 cut a 1-m intersection grading 10 480 g/t Ag, 1.50 g/t Au, 29.87% Pb and 17.42% Zn.

Figure 20. *Drilling at CMC silver property.*

In the Rancheria district, CMC Metals *(www.cmcmetals.ca)* released results from a bulk sampling program on its **CMC** silver property (formerly Silverhart; Yukon MINFILE 105B 021), located 111 km east of Teslin. The property is host to high-grade silver veins and replacement mineralization. Based on the SGS Lakefield Laboratories Ltd.'s metallurgical test results, metal recoveries from the raw ore are 96.7% Ag, 97.0% Pb and 80.0% Zn by flotation methods. The 2007 condemnation drilling under the proposed 80-tonne-per-day mill site area confirmed no potential mineralization at that site. Twinning of several holes at the TM zone was designed to test the confidence of the historical data and to allow the calculation of a NI 43-101-compliant resource estimate (Fig. 20). Partial results from drilling of the TM zone returned values grading up to 3181 g/t Ag, 8.46% Pb and 27.95% Zn over 0.65 m. Diamond drilling has been completed to test the strike and depth of mineralization at several of the other known surface vein structures explored previously with only trenching. At the M zone, drilling intersected mineralization grading up to 2055 g/t Ag, 40.98% Pb and 8.57% Zn over 0.60 m. In late October, the company submitted a development and operating plan to the Yukon government, Yukon Environmental and Socio-economic Assessment Board (YESAB) and the Yukon Water Board for review and approval of the Silver Hart mine. The development and operating plans are for a 20 000-tonne-per-year mine and an 80-tonne-per-day mill facility to concentrate the run-of-mine ore. Mining of the TM and S zones will be on a seasonal (June to October) basis with milling continuing year-round. CMC has also acquired a camp facility for the Silver Hart mine site. The facilities include sleeping quarters for 24 people, a mess hall, a recreation area, wash facilities and a first aid room.

Yukon Nevada Gold *(www.yukon-nevadagold.com)* completed 57 holes for approximately 8500 m of drilling at its Silver Valley (**Ketzakey**) property (Yukon MINFILE 105F 057) located 8 km east of its Ketza River mine and 50 km south of Ross River. Drilling to date has focused on the moderate to deep portions of the vein. Drillhole SV-07-62 returned 913.0 g/t Ag, 23.3% Pb, 0.49 g/t Au and 0.9% Cu over a true thickness of 1.83 m. Best grades were intersected in hole SV-07-59 which contained three intercepts, including 1170 g/t Ag, 12.9% Pb, 0.72 g/t Au and 1.0% Cu over a true thickness of 0.67 m. As well, the company completed line cutting in preparation for a ground geophysical survey to identify extensions of this vein system to complement the airborne geophysical survey which was completed in the spring. Induced-polarization surveys produced some intriguing anomalies that will be followed up on in the 2008 drilling campaign, in addition to exploring the shallow portions of the vein system.

Valencia Ventures Inc. *(www.valenciaventures.com)* continued exploration on its Rancheria project which includes the **Blue Heaven** and **Qb** properties (Yukon

MINFILE 105B 20, 98; Fig. 21). The properties are host to high-grade veins and carbonate replacement mineralization. The project is located approximately 300 km east of Whitehorse in a 130-km by 50-km belt that straddles the Yukon and British Columbia border. In 2007, excavator trenching totaling 1535 m in 21 trenches and diamond drilling of 605 m in six holes were focused on the Hall and Don zones on the Blue Heaven property. At the Hall zone, trench TR-06-05 exposed 11.20 m of 555.2 g/t Ag, including 7.90 m of 769.5 g/t Ag, and including 1.70 m of 3050 g/t Ag; drilling intersected 1.48 m grading 600 g/t Ag, 9.1% Pb, 0.54% Zn in hole BH-07-03, while the Don zone trenching revealed 3.70 m of 778 g/t Ag, including 0.65 m of 4350 g/t Ag from trench TR-07-31. A 180 line-km VTEM airborne geophysical survey was flown over the **QB** property to locate the source of very anomalous mineralized float boulders located on the property. Initial results from the VTEM survey show a series of sharp anomalies in the southeastern part of the grid, roughly 1-1.5 km southeast of the main geochemical anomaly and historical 1998 drill area.

Figure 21. *Gord Smarch (left) and Don Pilsworth at the newly discovered Don vein on the Blue Heaven property. Photo by Archer Cathro and Associates (1981) Ltd.*

The **Connaught** (CN) property (Yukon MINFILE 115N 040) hosts an extensive system of silver-lead-gold veins located within the Sixty Mile placer gold camp 65 km west of Dawson. The property, which was optioned and explored by Klondike Silver Corp. in 2007, covers roughly 4100 hectares. A VTEM survey flown across the property identified four conductors along strike of the known showings, in an area that also returned the highest lead values obtained from stream sediment samples. The company drilled seven holes totaling 557 m; results are pending.

Klondike Silver Corp. *(www.klondikesilver.com)* explored for lead and silver mineralization at its **Stump** property (Yukon MINFILE 105F 056) located in southern Yukon, about 55 km southeast of the community of Ross River and 6 km east of the former Ketza gold mine. The showing discovered in the late 1960s was trenched this season exposing the vein for a 350 m strike length. The results show that most of the metal is concentrated in discrete lenses, making it potentially amenable to small-scale mining without on-site processing. The company excavated a 72.6-tonne bulk sample of galena from four lenses along different parts of the vein and shipped the material to Klondike Silver's mill at Sandon, B.C., where it will be crushed and assayed. Depending upon the grade, the bulk sample may be milled to produce a concentrate or directly shipped to the Teck Cominco Ltd. smelter at Trail, BC.

Klondike Silver Corp. released results from a five-hole percussion drill program it completed in 2006 on the **Idaho Creek** (Yukon MINFILE 115J 099) property located approximately 100 km northwest of Carmacks. Anomalous gold and silver values were encountered in most holes, however, the program was initiated prior to receiving IP survey interpretations. In 2007, 1188 m of diamond drilling in four holes were completed. The best intersection averaged 60.35 g/t Ag, 0.9% Pb and 0.8% Zn across 11.4 m.

BASE METALS – ZINC

SEDIMENTARY

Selwyn Resources Ltd. *(www.selwynresources.com)* completed an aggressive drilling program at its **Selwyn** property (Howards Pass) (Yukon MINFILE 105I 12, 37, 38) which straddles the Yukon/NWT border, 160 km northwest of Ross River. The program focused on expanding high-grade zones and upgrading mineral resources (Fig. 22). The company also continued comprehensive baseline environmental studies and a technical program focused on metallurgy, mining techniques and project infrastructure. These data will form the basis for prefeasibility studies. A scoping study completed in January indicates a very robust project with net present value (NPV), discounted at 8%, of $836 million and very attractive cash cost of zinc production after deducting lead credits of US$0.48 per pound (calculated prior to the new mineral resource estimate). In April, Selwyn released an updated NI 43-101-compliant resource estimate on the nine deposits that occur over a strike length of 26.2 km. The new mineral resource contains 86 600 000 t in the Indicated category at a grade of 4.93% Zn, 1.73% Pb and 215 460 000 t in the Inferred category grading 4.71% Zn and 1.48% Pb, including a higher grade underground resource of 7 394 860 t grading 9.88% Zn and 4.32% Pb. This season, numerous areas received drilling, mostly focused on the Don and Don East zones discovered in 2005. Drilling highlights for the season include deeper intersections at the Don zone where a number of holes returned greater than 10% Zn and 5% Pb over intervals in the 1.8 m to 6.25 m range, including Hole Don-074 which intersected 31.63 m true thickness of mineralization at a depth of 241.7 m with a grade 10.2% Zn and 3.91% Pb, including 4.3 m grading 35.97% Zn and 16.01% Pb.

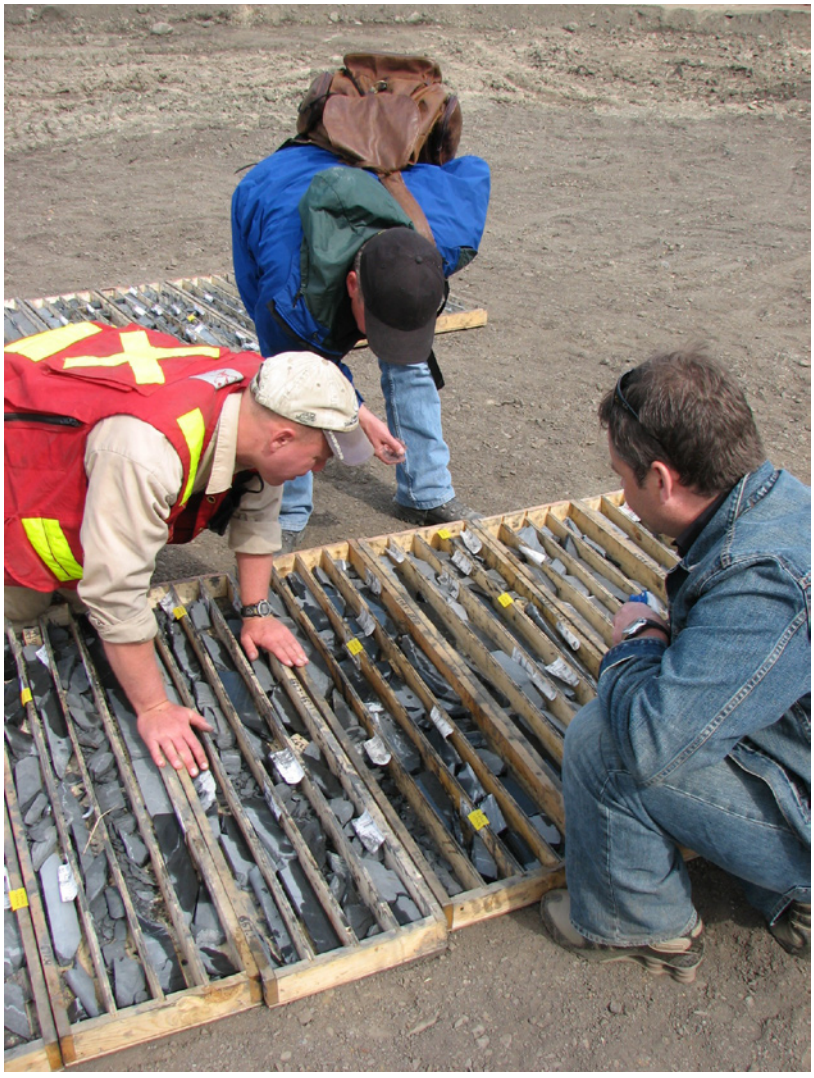


Figure 22. *(left) Geoff Newton and J.J. O'Donnell, examining core from Selwyn (Howards Pass) property.*

Zinccorp Resources Inc., a private company, conducted drilling on the **Bar** (Yukon MINFILE 105C 003) property, located 45 km northeast of Teslin. The claims occur in Carboniferous shale, chert sandstone and chert-pebble conglomerate overlain by Mississippian tuff and limestone. Bedded barite and laminated sulphide minerals occur on the property. The company drilled three holes, totalling 622 m.

VOLCANIC

Yukon Gold Corp. Inc. *(www.yukongoldcorp.com)* completed a seven-hole, 2395-m drill program on the **Marg** deposit (Yukon MINFILE 106D 009) located approximately 80 km northeast of Mayo in central Yukon. The deposit is hosted in Devonian to Mississippian

Earn Group volcaniclastic and sedimentary rocks of the Selwyn basin. Drilling was directed at expanding the deposit along strike and down-dip. The most significant intersection was in hole M07-97, which intersected 7.3 m grading 2.7% Cu, 4.4% Zn, 2.1% Pb, 60.3 g/t Ag and 0.88 g/t Au. Results from drilling are being incorporated into a 3D model. Additional drilling of 603 m was completed for the first time on targets outside the main deposit area. Initial results were very encouraging with intersections of a carbonate-rich exhalative and strata containing laminated pyrite and pyrrhotite.

Figure 23. *Geologists at the MM property.*

Eagle Plains Resources Ltd. *(www.eagleplains.com)* completed an exploration program on its Pelly Mountain VMS Project which includes the **Fire, Ice, Melt** and **MM** properties (Yukon MINFILE 105F 71, 73 and 128, 012), located 40 km south of Ross River. The numerous showings in the district (Fig. 23) are hosted in Devono-Mississippian rocks of the Cassiar platform, coeval with those in the Finlayson Lake district. The company has developed a database of historical information linked to an advanced Geographic Information System to aid in directing the exploration program that included geochemistry, geological mapping and prospecting. The most significant exploration result was the discovery of a silver-lead-zinc±copper mineralized barite horizon in the eastern half of the MM property. Grab samples returned up to 39 ppm Ag, 1.3% Pb and 3.5% Zn. The 2- to 8-m-wide mineralized zone was traced on surface along strike for at least 100 m.

Zinccorp conducted drilling on the **Convert** (Yukon MINFILE 105B 143) property, 79 km northeast of Teslin. The claims are underlain by rock units that have recently been mapped as Yukon-Tanana terrane. The company drilled three holes, totalling 479 m.

VEIN/BRECCIA

In January, Eagle Plains Resources Ltd. *(www.eagleplains.com)* and Blind Creek Resources Ltd. *(www.blindcreekresources.com)* released results from the 2006, 23-hole 4233-m diamond drilling program at the **Blende** property (Yukon MINFILE 106D 064), located in central Yukon approximately 65 km northeast of Keno Hill.

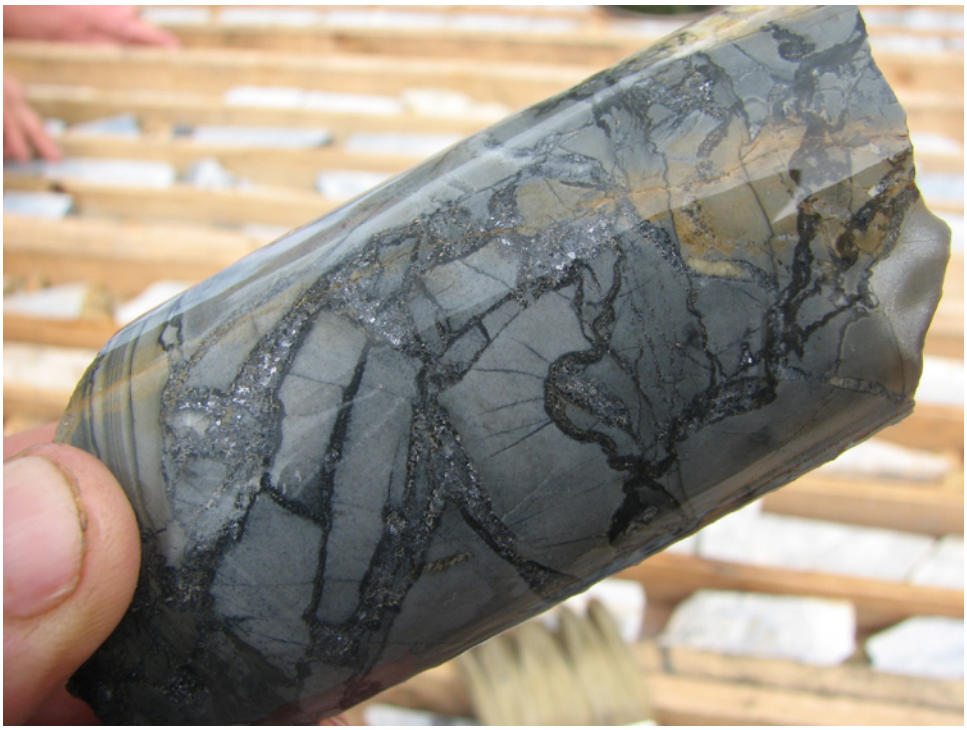


Figure 24. *Drill Core from Blende property.*

The deposit is a structurally controlled carbonate-hosted zinc-lead-silver deposit. Highlights consist of 65.5 m of 3.9% Zn, 1.9% Pb and 31.9 g/t Ag, including 3.1 m of 8.1% Zn, 6.4% Pb and 52.8 g/t Ag from hole BE06088. New Zn-Pb-Ag-Cu mineralization along the trend from existing showings was discovered in 2006. Results of the 2007 drill program, which consisted of 3210 m in 13 holes, were pending at year end (Fig. 24).

The **Andrew** deposit (Yukon MINFILE 105K 089), located 105 km north of Ross River, was acquired by Overland Resources *(www.overlandresources.com)*, an Australian-based exploration company. The deposit consists of coarse sphalerite and galena in quartz-carbonate veins and breccias. The company compiled historical data on the property, explored by Noranda in 2001-2003. Overland calculated a Joint Ore Reserves Committee (JORC)-compliant Indicated and Inferred mineral resource on the property of 5.92 million tonnes at 5.84% Zn, 2.03% Pb, 9.49 g/t Ag and 14.86 g/t Ge. In 2007, the company completed 2800 m of drilling in 10 holes. In addition to exploration work, the company has initiated a prefeasibility study. Initial metallurgical testwork has achieved metal recoveries of up to 96.3% Zn and 98.4% Pb. Exploration drilling was directed at expanding the known deposit and upgrading existing resources. Several drillholes returned significant results and the deposit remains open in all directions (Fig. 25). Hole AN07-30, the deepest hole on the deposit, returned 10.9% Zn and 20.2 g/t Ge over 13.0 m. Hole AN07-33 intersected 35.5 m grading 17.6% Zn, 1.0% Pb, 8.76 g/t Ag and 26.9 g/t Ge at a vertical depth of 40 m, highlighting the open-pit potential of the deposit.

Full Metal Minerals Corp. *(www.fullmetalminerals.com)* conducted an exploration program of geological mapping, soil geochemistry and ground-based gravity

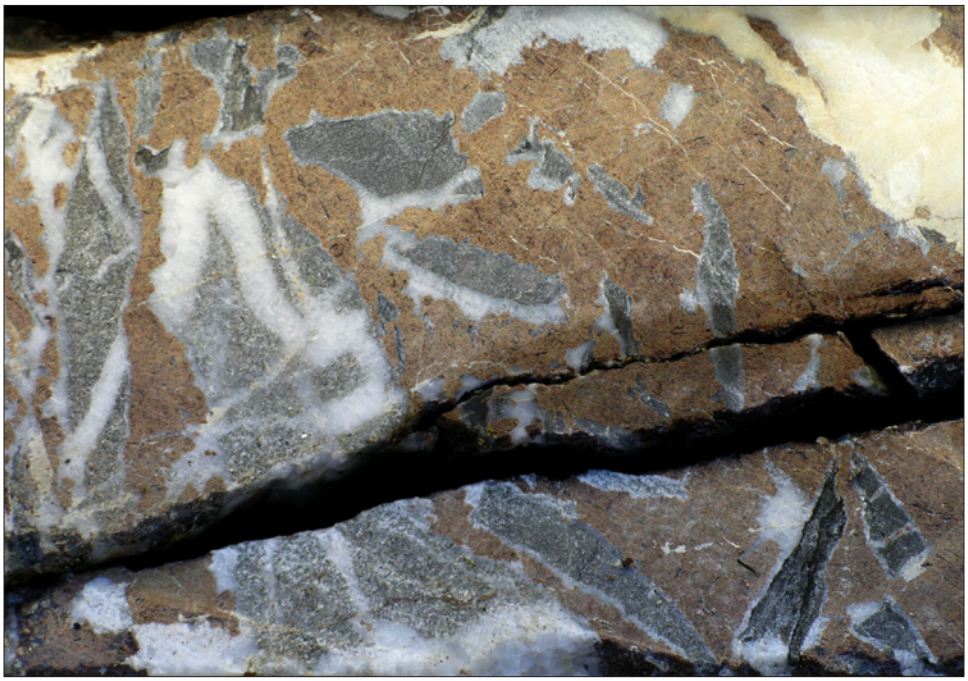


Figure 25. *Drill Core from the Andrew property.*

surveys on the **OG** property (Yukon MINFILE 116B 083), located 90 km north of Dawson. The property covers carbonate-hosted lead-zinc occurrences in Lower Proterozoic Quartet Group dolomite, minor shale and quartzite. The property was last explored in the mid-70s by Hudson Bay Mining and Smelting; drilling intersected values up to 16.3 m of 7.61% Zn, 2.06% Pb and 63 g/t Ag.

Zinccorp conducted exploration programs that included drilling seven holes, totalling 850 m, on the **Michelle**, and two holes, totalling 477 m, on the **Kit** properties (Yukon MINFILE 116A 016, 116B 086). The properties are Mississippi Valley-type occurrences located north of Dawson City.

BASE METALS – COPPER

PORPHYRY/SHEETED VEIN

Sherwood Copper Corporation *(www.sherwoodcopper.com)* explored the Minto copper-gold mine area (Yukon MINFILE 115I 021) with 23 618 m of drilling in 102 holes. The objective of the 2007 exploration program was to define more fully the limits of the Area 2 deposit and provide technical information for the prefeasibility study, but mostly to test a wide swath of the Minto property to the south, west, and between the Minto and Area 2 deposits (Fig. 26). The program was very successful in producing many ore-grade intersections throughout the property that indicate the

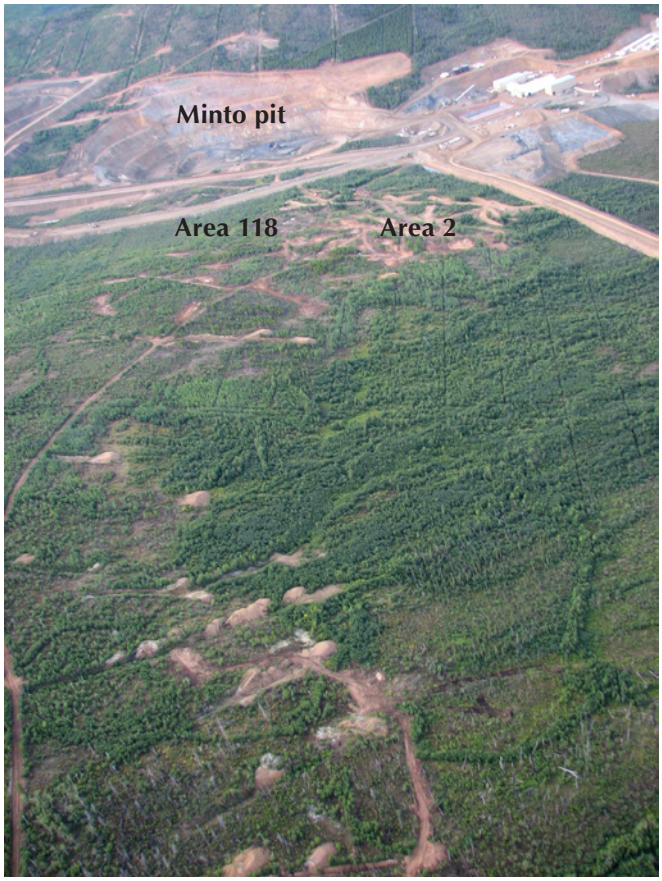


Figure 26. *Minto mine site, showing exploration drilling sites in the foreground.*

Figure 27. *Greg Komaromi (left) and Scott Casselman at the Carmacks Copper property.*

potential to add significantly to the mineral resources on the property and extend the mine life. The exploration established the presence of multiple stacked zones of mineralization and has demonstrated continuity between the main Minto deposit and the Area 2 deposit, and possibly the newly explored Ridgetop zone. The work will allow the Area 2 resource model to be upgraded and new resource models to be calculated on the Area 118 and Ridgetop zones. New discoveries were made in the Copper Keel and Airstrip zones. Examples of drill intersections include 8.4 m grading 3.68% Cu, 1.34 g/t Au and 10.5 g/t Ag from Area 118 and 88.8 m grading 0.75% Cu, 0.15 g/t Au and 2.0 g/t Ag from the Ridgetop. The full scope of the success of this drilling can be obtained by visiting Sherwood's website for complete results.

Western Copper Corp. *(www.westerncoppercorp.com)* reported the key findings of the independent feasibility study by M3 Engineering and Technology Inc. of Tucson and announced that the study supports the development of the **Carmacks Copper** property (Yukon MINFILE 115I 008; Fig. 27). Based on the new reserve (proven and probable) estimate of 10.6 million tonnes, the deposit has a six-year mine life. The feasibility study indicates initial capital development costs of $144 million, which includes a contingency of $14.1 million. An additional sum of $7.3 million is attributable to owner's costs, which include the Company's project team salaries, spare parts, and bond costs. The life-of-mine operating costs are estimated to be CDN$0.98/lb. of copper (US$0.83/lb. of copper using an exchange rate of US$0.85 = CDN$1). Using a rolling average of three years' historical and two years' future copper prices of US$2.32 per lb., based on 100% equity, the project has an internal rate of return of 15.7% and an undiscounted NPV of $122.9 million. The feasibility study indicates a payback period of 3.9 years.

The NI 43-101 resource estimate for the Carmacks Copper property was updated in November 2007. The new estimate includes geological and assay results from an additional 64 diamond drillholes totaling 9900 m drilled in 2007 in the No. 1, 4 and 7 zones. At a 0.25% total Cu cut-off grade, the deposit now boasts an oxide resource of 11.98 Mt in the Measured and Indicated category grading 1.06% total Cu, 0.84% oxide Cu, 0.46 g/t Au and 4.6 g/t Ag, and an Inferred oxide resource of 90 000 t grading 0.73% total Cu, 0.53% oxide Cu, 0.13 g/t Au and 1.8 g/t Ag. The deposit contains a significant Measured and Indicated sulphide resource of 4.34 Mt grading 0.75% Cu, 0.21 g/t Au, 2.3 g/t Ag plus an Inferred resource of 4.03 Mt grading 0.71% Cu, 0.18 g/t Au and 1.9 g/t Ag, both beneath oxide reserves in the main zones and in newly discovered targets peripheral to the planned open pits.

Exploration highlights for the year include the discovery of significant copper sulphide and native copper mineralization at the No. 13 zone which is not included

in the resource calculation. Best results include 89.0 m grading 0.62% Cu and 0.14 g/t Au from hole WC-022. Approximately 600 m east of No. 13 zone, the company discovered sulphide mineralization which has been named the No. 14 zone. Drillholes here returned values of 8.8 m grading 1.39% Cu, 0.02% Mo, 0.108 g/t Au and 9 g/t Ag from WC-130 and 16.37 m grading 1.04% Cu, 0.01% Mo, 0.093 g/t Au and 7.5 g/t Ag from hole WC-140. The zone appears to have a strike length of at least 480 m.

BCGold *(www.bcgoldcorp.com)* is the largest mineral claim holder in the Carmacks copper-gold belt, holding title to 17 mineral properties (16 274 hectares) situated proximal and adjacent to Sherwood Copper Corp.'s Minto deposit and Western Copper Corp.'s Carmacks (Williams Creek) deposit. The company began an aggressive exploration program on its **Carmacks** copper-gold properties (Yukon MINFILE 115I 006, 024) this year, completing 3295 line-km of combined magnetic-radiometric airborne geophysics, a 4040-sample Mobile Metal Ion (MMI) geochemical survey, geological mapping, prospecting, trenching, regional structural analysis and the diamond drilling of seven holes totaling 1360 m. Geochemical survey results immediately south of Western Copper Corp.'s Carmacks property define a number of copper-in-soils anomalies that appear to be the surface expression and extension of the Carmacks copper-gold trend. This corridor measures up to 1 km wide and can be traced southeastward for 4 km before being possibly offset approximately 1.5 km northward. The anomalous trend can then be traced another 3 km to the southeast and remains open along strike. Rock samples from the newly discovered **Ice zone** located 7 km south of the Carmacks Copper deposit returned values up to 1.83% Cu and 0.25 g/t Au, and 1.28% Cu and 0.41 g/t Au. The samples were collected from a series of granitic outcrops over a partially exposed strike length of 80 m. Drilling underneath the surface showings intersected mineralization grading up to 0.46% Cu over 4.69 m.

Copper Ridge Explorations Inc. *(www.copper-ridge.com)* completed a 13-hole diamond drill program totaling 2400 m on its **Lucky Joe** (Yukon MINFILE 115O 051)

Figure 28. *Drilling at the Lucky Joe property.*

property located 50 km south of Dawson City (Fig. 28). The drilling targeted the Ryan's Creek trend, a linear copper-gold geochemical anomaly with an associated geophysical (IP) anomaly. The horizon is defined by pyrite mineralization that occurs as both disseminated and massive to semi-massive blebs throughout the host quartz-biotite-chlorite schist, with malachite and disseminated chalcopyrite at depth. Highlights include 7.3 m of 0.905% Cu and 0.5 g/t Au from LJ07-19, 26.6 m grading 0.152% Cu in hole LJ07-18, and 15.3 m of 0.176% Cu in LJ07-22. These three holes define a copper-gold mineralized horizon that extends for at least 1500 m. A further 2000 m south along the trend, hole LJ06-09, drilled in 2006, intersected 12.05 m of 0.370% Cu and 0.8 g/t Au, including 3.05 m of 0.76% Cu and 0.38 g/t Au, and 2.4 m of 0.17% Cu and 3.24 g/t Au.

The **Rage** property (Yukon MINFILE 115I 050), located in the centre of the Freegold Mountain property, was drilled by Northern Freegold Resources *(www.northernfreegold.com)* for the first time, with two holes totaling approximately 500 m. The target was a 1.5 by 0.5 km copper-gold-in-soil geochemical anomaly. Both drillholes intersected significant stockwork and disseminated chalcopyrite and molybdenite mineralization in granodiorite. Results from the drilling are pending.

Results from last year's drilling program at the **Tidd** property (Yukon MINFILE 105J 029) were released this past February by Sedex Mining Corp. *(www.sedexmining.com).* The property is located in central Yukon, approximately 60 km east of Ross River. Two styles of mineralization have been discovered on the property to date. The first and most abundant type is copper-silver-indium-lead-zinc mineralization that occurs at the Indium zone in the eastern part of the 18 000-hectare property. Mineralization occurs as quartz-chalcopyrite-pyrrhotite associated with shallow-dipping granitic sills. Best results from a 16-hole diamond-drill program targeting the 3000 by 1000 m area of moderate to strong copper-in-soil geochemical response, included short intervals with peak values of 182 g/t Ag, 4.64% Cu, 113.5 g/t In, 0.96% Pb and 4.04% Zn from various holes. The Road River target consists of massive, crudely bedded pyrite located 5 km west of the Indium zone. Cobbles of massive sulphide mineralization, consisting of crudely banded, coarse pyrite material returned up to 17.5 g/t Ag, 0.11% Pb and 0.69% Zn. Wide-spaced deep soil auger samples collected across an electromagnetic conductor in the vicinity of the sulphide mineralization returned elevated silver, copper, lead and zinc. In 2007, the company completed approximately 2000 m of excavator trenching, and collected over 2000 soil samples from six grids across the property. At the Indium zone, 23 trenches explored untested IP anomalies and areas of anomalous copper-silver response. Most of these trenches exposed either mineralized float in till and/or mineralized bedrock of variable thickness (Fig. 29). The company drilled two holes, totalling 394 m. Assays for this work are pending.

Figure 29. *Geologist at the Tidd property.*

Figure 30. *Geologist Jeff Bond (YGS) demonstrating how to conduct an MMI survey at King Lake copper property.*

On the **Timber** property (Yukon MINFILE 105J 035) Strategic Metals Ltd. *(www.strategicmetalsltd.com)*, conducted a three-hole, 1000-m drill program on a strong soil geochemical anomaly that is characterized by a molybdenum core surrounded by a copper-silver-zinc halo. A quartz stockwork with copper and molybdenum mineralization outcrops in the area of the geochemical anomaly. Results were pending at year end.

On the **King Lake Copper** property (Yukon MINFILE 105D 104) 39231 Yukon Inc. carried out MMI geochemical sampling and prospecting during 2007. Preliminary interpretation of the MMI data shows multiple high-contrast copper and gold anomalies coincident with a large area underlain by pervasively altered and highly magnetic diorite (Fig. 30). Fifteen samples of fracture-controlled and vein mineralization collected from within this area averaged 1.82% Cu, 15.3 ppm Ag, 325 ppb Au and 129 ppm Mo, with values grading up to 11.5% Cu, 86.1 g/t Ag, 2.02 g/t Au and 878.8 ppm Mo.

VOLCANIC

Tarsis Capital Corp. (www.tarsis.ca) completed an exploration program consisting of an airborne geophysical survey (VTEM) and diamond drilling of four holes totaling 685 m on the Mor property (Yukon Minfile 105C 061). Massive sulphide minerals were intersected in each of the four diamond drill holes completed on the property. Highlights included 5.46 m of 1.2% Cu, 2.85% Zn, 1.36 g/t Au and 55.8 g/t Ag from drill hole MOR 07-03 and 7.8 m of 1.18% Cu, 1.52% Zn, 1.26 g/t Au and 52.2 g/t Ag from drill hole MOR 07-02. Based on the results of the program the company staked additional claims covering a series of preliminary VTEM anomalies outlined during the airborne survey. Some of the anomalies occur along the inferred trend of the sulphide horizons encountered in the drill holes.

WERNECKE BRECCIA

Cash Minerals Ltd. *(www.cashminerals.com)* and joint-venture partner Mega Uranium Ltd. *(www.megauranium.com)* conducted an extensive drill program at the **Igor** IOCG-U (iron-oxide copper-gold-uranium) property (Yukon MINFILE 106E 009) in the Wernecke Mountains. The first phase of drilling intersected 0.055% U_3O_8, 2.82% Cu, 5.2 g/t Ag and 0.03 g/t Au over 22.25 m. A high-grade section of 0.993% U_3O_8, 2.70% Cu, 0.07 g/t Au and 5.7 g/t Ag over 4.5 m was also intercepted. Approximately 9043 m of drilling in 31 holes has been completed at Igor this year. The last phase of the drill program at Igor is designed to test buried gravimetric anomalies identified in 2006 and to attempt to extend the known mineralization to the north.

Cash and Mega drilled 3050 m in six holes at the **Odie** property in the Wernecke Mountains to test coincident magnetic and gravimetric anomalies in 2007. They drilled through overburden and intersected native copper in two holes. One zone included a 16.6 m section of 0.14% Cu (518.90 to 535.45 m) within a higher grade interval of 0.27% Cu over 3.7 m between 522 and 525.7 m. Gold up to 0.33 ppm occurs in anomalous concentrations within zones of elevated copper.

Cash's and Mega Uranium's **Vic** property, an IOCG-U target, is located near the western limit of the Wernecke Supergroup rock package in the Wernecke Mountains. Samples have assayed up to 6.86% U_3O_8, 6.13% Cu, 0.398% Mo and 4.46 g/t Au. The property appears to be structurally controlled and exhibits characteristic IOCG-U mineralization similar to that of the Igor property. Ten holes were drilled for a total of 3012 m.

Fronteer Development Group Inc. *(www.fronteergroup.com)* and joint venture partner Rimfire Minerals Corp. *(www.rimfire.bc.ca)* completed eight widely spaced drillholes for 2400 m at the **Hoover** property (Yukon MINFILE 106E 002) in the Wernecke Mountains. Drill-intersection highlights include hole HV07-22 with 0.56% Cu and 0.11 g/t Au over 89 m (including 0.82% Cu and 0.17 g/t Au over 39 m) and hole HV07-27 with 0.56% Cu and 0.16 g/t Au over 45.5 m, including 1.84% Cu and 0.53 g/t Au over 17.3 m. Mineralization at Hoover has been intersected in a total of 11 widely space holes over a strike length of 500 m, and remains open along strike and at depth.

Figure 31. *Drilling at Shell Creek.*

Fjordland Exploration Inc. *(www.fjordlandex.com)* optioned the 3675-hectare **Olympic-Rob** IOCG-U property (Yukon MINFILE 116B 113) from Commander Resources Ltd. in 2006. The Olympic-Rob property occurs within Wernecke Supergroup rocks in the Ogilvie Mountains region. The 2007 drill program included two holes on the undrilled Rob zone for a total of 404 m to test coincident surface mineralization and a magnetometer anomaly. Both holes intersected copper and uranium mineralization associated with altered and brecciated quartz-dolomite within a package of hematite-altered siltstone and shale. One intersection ran 0.21% Cu and 27 ppm U_3O_8 over 11 m. A number of anomalous gold values at Rob

exceeded 0.10 g/t, with the best 1-m intersection running 0.33 g/t Au. On the Olympic zone, grab samples assaying from 100 ppm to 21.4% Cu lie within a 2-km-diameter copper-in-soil anomaly. A strong magnetic anomaly also underlies the area. Drilling on the Olympic zone in 2007 encountered poor ground conditions and the target depths were not reached.

CVRD Inco Ltd., now renamed Vale Inco *(www.inco.com)*, optioned the **Ironman** property (Yukon MINFILE 116A 017) from Copper Ridge Explorations in June 2007. The property is situated approximately 160 km northeast of Dawson City. CVRD completed a 7 km IP geophysical program over this IOCG target to confirm and extend the IP chargeability anomaly originally defined by Copper Ridge.

SEDIMENTARY

Logan Resources *(www.loganresources.ca)* continued mapping, prospecting, conducting geophysical and geochemical survey, and diamond drilling at its **Shell Creek** copper project (Yukon MINFILE 116C 029) this season (Fig. 31). The property is situated 75 km northwest of Dawson City. This year's program followed up a 2006 geochemical sampling program that expanded the area of anomalous copper in soils to an area of over 13.4 by 1.8 km. This past season, company personnel believe they have found characteristics similar to redbed-type copper deposits. The sedimentary copper mineralization has been discovered proximal and stratigraphically above the banded magnetite iron formation, which forms a plunging syncline to the northwest. Chalcocite, minor bornite and chalcopyrite occur as disseminations and fracture-fillings hosted primarily by a chloritic phyllite. Surface grab sampling returned grades up to 1.8% Cu and 9.08 g/t Au. Logan drilled 1535 m in 10 holes at Shell Creek in 2007; results of this program are pending.

BASE METALS – NICKEL + PLATINUM GROUP ELEMENTS (PGE)

MAFIC/ULTRAMAFIC

Coronation Minerals Inc. *(www.coronationminerals.com)* continued exploration on the **Wellgreen** property, situated in the Kluane area, with surface trenching, mapping and sampling on the relatively unexplored eastern portion of the property (Fig. 32). This year's program also included infill and confirmation drilling, bringing the resource estimate at Wellgreen to NI 43-101 standards. The company deepened drillhole WS-06-153, which had been extended last season to 480 m. The hole was targeted to test the thickness of the body and was still in ultramafic rock when the drill program was shut down because of inclement weather. The

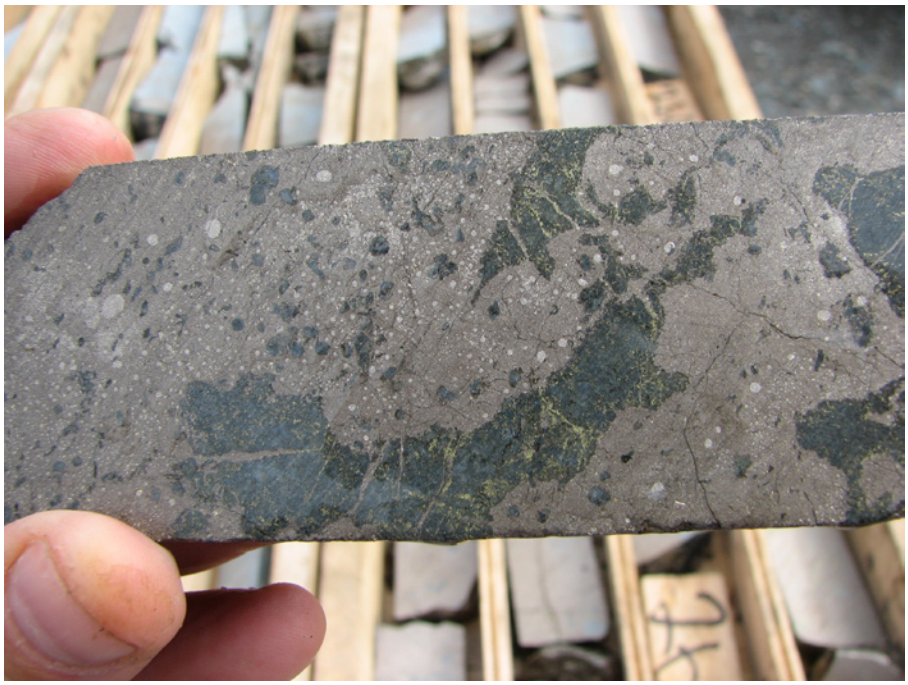


Figure 32. *Massive sulphide core at Wellgreen.*

hole ended at 561.14 m. Further underground drilling was completed to explore the deposit at depth. Assay results are pending.

White River Resources, a subsidiary of Umbono Capital Partners LLC, conducted geological mapping, prospecting and airborne VTEM geophysical surveying this past summer on the **Canalask** property (Yukon MINFILE 115F 045) situated in southwest Yukon.

SEDIMENTARY

Southampton Ventures *(www.southamptonventures.com)* optioned the **Nick** (Yukon MINFILE 106D 092), **Mon, Pe, El, Rich, Fox** and **Deer** (Yukon MINFILE 116B 170) properties from Strategic Metals Ltd., and the **Sun** from prospector Shawn Ryan, and conducted a regional-scale diamond-drilling program on several properties. The properties, termed the NiMo Project, are targeting a unique style of mineralization, which consists of stratiform vaesite (nickel disulphide) that occurs in Lower to Middle Devonian shale in an outlier of Selwyn basin rocks preserved in an east-west graben. The narrow massive sulphide horizon lies at the contact between Middle Devonian black chert of the Earn Group and a distinctive concretionary unit of Lower Devonian age, which forms the top of the Road River Formation in this area. The horizon can be enriched in a wide range of commodities including nickel, molybdenum, zinc, gold, platinum, palladium, selenium and rhenium. A total of 6796.21 m of diamond drilling was done in 59 holes on the El, Pe, Rich, Sun and Fox claims (see table at left). On the El claims, the thickest intersection graded 5.2% Ni, 0.16% Mo, 1.86% Zn, 120 ppb Au, 317 ppb Pt, 183 ppb Pd and 28.5 ppm Re, over 14 cm. Exploratory drilling tested the horizon in two areas located about 6 km apart. At the Rich property, the thickest intersection averaged 1.31% Ni, 0.041% Mo, 0.104% Zn, 46 ppb Au, 92 ppb Pt, 41 ppb Pd and 9.68 ppm Re over 1.96 m.

NiMo Project, drill summary

	Total (m)	holes
El property	2839.55	19
Pe property	749.82	8
Rich property	2485.98	25
Sun property	295.66	3
Fox property	425.2	4
Total	**6796.21**	**59**

BASE METALS – TUNGSTEN + MOLYBDENUM

SKARN

North American Tungsten Corporation Ltd. *(www.natungsten.com)* carried out a definitive feasibility study on the **Mactung** deposit (Yukon MINFILE 105O 002), located off the North Canol road on the Yukon/NWT border, following a geotechnical drilling and test-pitting program this past summer. The drilling was conducted to aid planning of potential placement for developmental infrastructure such as mill, tailings ponds and an employee camp. A total of 23 locations was explored with 42 boreholes and 42 test pits. The Mactung deposit has NI 43-101-compliant Indicated resources of 33.0 million tonnes grading 0.88% WO_3 (tungsten oxide) and an Inferred mineral resource estimate of 11.9 million tonnes grading at 0.78% WO_3.

Playfair Mining Ltd. *(www.playfairmining.com)* released a NI 43-101-compliant resource calculation on its **Risby** property (Yukon MINFILE 105F 034). The study reports an Inferred resource of 6 385 000 tonnes at an average grade of 0.462% WO_3 at a 0.20% WO_3 cut-off, an increase of 38% over the relevant historic estimate of 2 651 975 tonnes at an average grade of 0.808% WO_3 at a 0.4% WO_3 cut-off prepared by the Hudson Bay Exploration and Development Company Ltd. (HBED) in 1982. Risby is located roughly 50 km west-southwest of Ross River.

PORPHYRY/SHEETED VEIN

Largo Resources Ltd. *(www.largoresources.com)* has completed a new block model and updated mineral resource estimate incorporating all recent and historical drilling results for the **Northern Dancer** (Logtung) deposit (Yukon MINFILE 105C 009), located in the south-central region of the Yukon Territory (Fig. 33). The Inferred mineral resource for the overall deposit at a cut-off grade of 0.05% WO_3 is estimated at 242.0 million tonnes grading 0.10% WO_3 and 0.047% MoS_2. Preliminary pit modeling was done in order to help maximize the effectiveness of the recently completed diamond-drill program of 26 holes and a total of 8494 m, which will further upgrade the mineral resource. Initial results from this season's drilling include 53.6 m grading 0.32% WO_3 and 0.02% Mo within a much broader zone of 339.9 m grading 0.15% WO_3 and 0.03% Mo from drillhole LT07-73.

Figure 33. *Northern Dancer (Logtung) camp.*

Prospector Consolidated Resources Inc. *(www.prospectorresources.com)* optioned the **Kalzas** property from Copper Ridge Explorations in mid-August, 2007 and planned a program of surface bulk sampling during the current field season in preparation for a major drill test of Kalzas in 2008. The Kalzas property is located 70 km southeast of Mayo and is a porphyry-style tungsten deposit that contains tabular, high-grade zones in the central part of a larger, low-grade deposit.

On the **Molygarchy** (Hig) property (Yukon MINFILE 105E 024), located 40 km northeast of Whitehorse, 37999 Yukon Inc. conducted geological mapping, prospecting and blast trenching in 2007 as a follow-up to soil sampling and magnetic field surveying completed the previous year. Disseminated fine to coarse crystalline molybdenite, grading up to 0.44% Mo, is hosted in an extensive limonite ± K feldspar ± calcite alteration zone within granodiorite and associated quartz veins (Fig. 34). The main zone, which is coincident with a magnetic field low, remains open at either end.

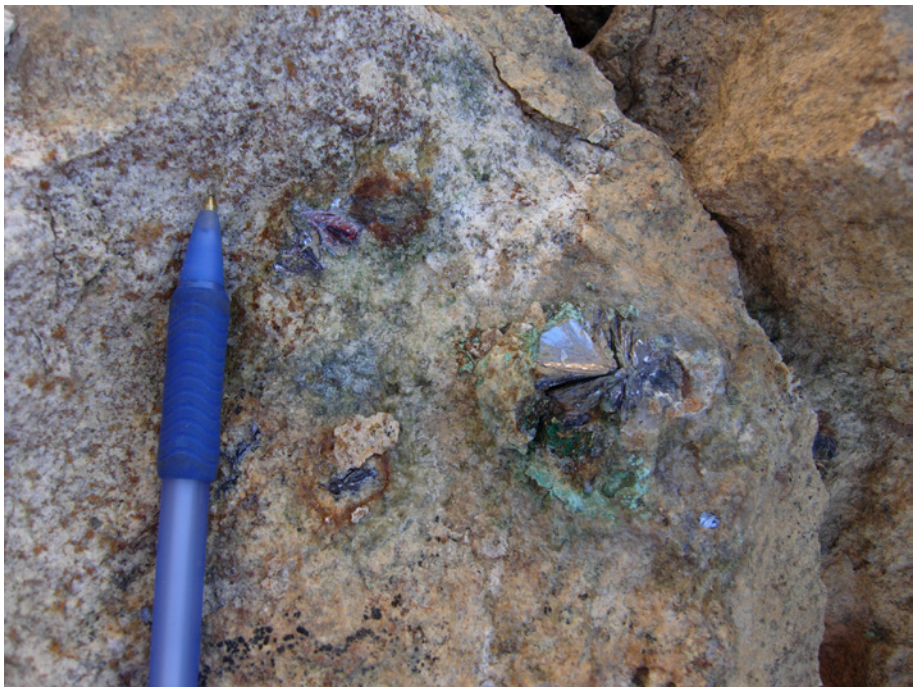


Figure 34. *Molybdenite mineralization at the Molgarchy property.*

URANIUM

The bulk of expenditures on uranium exploration in 2007 occurred in the Wernecke Mountains, focusing on iron oxide-copper-gold-uranium (IOCG-U) and structurally controlled uranium models. Overall, nearly $25 million were spent on uranium exploration in 2007, and several new and under-explored properties were drilled for the first time.

IRON-OXIDE COPPER-GOLD+URANIUM AND STRUCTURALLY CONTROLLED URANIUM

The **Lumina** property (Yukon MINFILE 106C 069), located at the easternmost extent of Wernecke Supergroup rocks in the Wernecke Mountains, has been recently characterized as a uranium-molybdenum-gold polymetallic target. Drilling by Cash minerals and Mega Uranium extended the sub-surface distribution of mineralization to the south of the Jack Flash showing in 2007 (Fig. 35). Over 4000 m were drilled this year on the property. One good intersection graded 0.14% U_3O_8, 0.035% Mo and 0.08 g/t Au over 1.5 m. Fieldwork demonstrated that uranium mineralization outcrops along the same 6-km-long north-trending structure to the north of the Jack Flash showing at the Flash Gordon and Eagle Eye localities.

Figure 35. *Russell Smits examines drill core at the Lumina property.*

Cash and Mega Uranium conducted exploration on their **Angel, Bonnie, Nad, Doh** and **Win** properties in the Wernecke Mountains in 2007. Two holes were completed on the Bonnie property, and five holes, for a total of 1478 m, were completed on the Angel property. The company also performed sampling and mapping on the Nad, the Doh and the Win, and completed sampling on the **Asap** and **Per** properties.

A 10 000-m drill program was undertaken by Fronteer Development Group Inc. *(www.fronteergroup.com)* and joint venture partner Rimfire Minerals Corp. (*www.rimfire.bc.ca*) on their Wernecke Mountain properties in 2007. This exploration program was designed to drill test high-priority targets, including the Fireweed, Hail, Pagisteel fault and TVA properties. A total of 6520 m of drilling in 28

holes was completed on seven different target areas, with assay results pending.

Fronteer identified a new high-grade uranium drill target at the Rio zone on its **TVA** property (Yukon MINFILE 106D 062), located 170 km northeast of Mayo (Fig. 36). Assays returned an average grade of 0.31% U_3O_8 from 41 surface samples, and mineralized rocks at Rio have been identified over an area measuring at least 15 by 150 m. Assays range from 0.08% to 0.60% U_3O_8. The Rio zone is thought to parallel another nearby mineralized radioactive zone that is exposed in outcrop over a 500-m distance.

International KRL *(www.krl.net)* Resources Corp.'s **Nor** IOCG-U property (Yukon MINFILE 106L 061) covers 9363 hectares on the east side of the Richardson Mountains in Yukon, approximately 310 km northeast of Dawson City. Seven diamond drillholes were completed in 2007 on the Nor property. The company also conducted an airborne-radiometric survey and a high-resolution magnetic survey to delineate alteration and known mineralization. Extensive prospecting and mapping were also performed. The company discovered additional uranium showings on the northern part of the property. Grab samples from new showings (Fig. 37) returned values from 0.11% to 5.54% U_3O_8 over 1.1 km. The uranium mineral is brannerite, and it is hosted in a potassic feldspar-altered siliceous structure. Trench mapping suggests that the structure is north to north-northwest-striking and steeply dipping.

Figure 36. *Geologists from Equity Engineering and Fronteer use a scintillometer to check radioactivity on the Rio zone of the TVA property.*

INTRUSION-RELATED

International KRL Resources *(www.krl.net)* optioned the **U** claims, which cover 1881 hectares approximately 170 km south of Dawson City. Several uranium geochemical anomalies on the property are thought to be associated with the Coffee Creek Intrusive Group. International KRL conducted a high-resolution airborne magnetic and radiometric survey in the 2007 field season. Results from the survey are pending.

International KRL *(www.krl.net)* and Logan Resources Ltd. *(www.loganresources.ca)* undertook a large staking operation to secure land with uranium potential northeast of Whitehorse. The **Turn River** project covers 743 km^2 and is located approximately

Figure 37. *Uranium showing at the Nor property.*

95 km from Whitehorse. The highest known uranium-silt geochemical values in the Yukon (up to 291 ppm) are found in the Cassiar Plateau physiographic region. High-resolution airborne radiometric and magnetic surveys over the property were completed during the 2007 field season.

Cash Minerals Ltd. *(www.cashminerals.com)* acquired the 627-hectare **Murphy** property (Yukon MINFILE 105F 079) from Signet Minerals in 2007. The property is located 85 km northeast of Whitehorse and covers intrusion-hosted uranium occurrences. The highest radioactivity was found in two zones (showings A and B) 600 m apart within a Cretaceous granitic batholith. The mineralization is associated with secondary yellow and green uranium oxides coating leached cavities within biotite-rich phases of the intrusion. Samples at showing A assayed up to 0.018% U_3O_8. The larger, talus-covered showing B assayed up to 0.137% U_3O_8 for material exposed in bedrock. Float samples taken from talus nearby assayed up to 0.226% U_3O_8. Silt and soil samples from the Murphy property are also strongly anomalous in lead, silver and molybdenum. The property is centred on a strong aeromagnetic high.

Copper Ridge Explorations Inc. *(www.copper-ridge.com)* explored its **Borealis** uranium project northeast of Dawson city. A 1108-km airborne radiometric and magnetic survey successfully defined a large uranium anomaly within and at the margins of the mid-Cretaceous Deadman stock. Uranium mineralization is associated with late-stage syenite dykes within the stock, and occurs as structurally controlled lenses of pitchblende and as disseminated uraninite within the syenite. Prospecting and silt, soil and rock sampling has identified targets for follow-up.

ACKNOWLEDGEMENTS

This report is based on public information gathered from a variety of sources. It also includes information provided by companies through press releases, personal communications, and property visits conducted during the 2007 field season. The cooperation of companies and individuals in providing information, as well as their hospitality, time and access to properties during field tours, is gratefully acknowledged.

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APPENDIX 1: 2007 EXPLORATION PROJECTS

Project name	Optioner/Owner	MINFILE number	NTS	Work type	Primary commodity	Deposit
PRECIOUS METALS - GOLD						
Black Fox	Underworld Resources Inc./ RyanWood Exploration Inc.	115O 014	115O/3	G, GP, GC, T	Au	vein/breccia
Dart	Northern Freegold Resources Ltd.	115I 055	115I/6	DD	Au	vein/breccia
Dublin Gulch	StrataGold Corp.	106D 025	106D/4	GC, DD	Au	porphyry/ sheeted vein
Goldy	Northern Freegold Resources Ltd.	115I 112	115I/6	GP, T, DD	Au	vein/breccia
Heidi	Logan Resources Ltd.	116A 037	116A/5	AGP, DD	Au	skarn/ replacement
Ketza River	Yukon-Nevada Gold Corp.	105F 019	105F/9	DD, PF	Au	skarn/ replacement
Lone Star	Klondike Star Mineral Corp.	115O 072	115O/14	G, T, BS, DD	Au	vein/breccia
Mahtin	International Gold Resources Inc./ RyanWood Exploration Inc.	115P 007	115P/15	DD	Au	skarn/ replacement
May Creek	Logan Resources Ltd./ RyanWood Exploration Inc.	115P 008	115P/15	GC, RC/P	Au	porphyry/ sheeted vein
Mike Lake	Dynamite Resources Ltd.	116A 012A	116A/5	DD	Au	skarn/ replacement
Moosehorn	Mountain Rio Resources	115N 024	115N/2	DD	Au	vein/breccia
Mount Hinton	Yukon Gold Corporation Inc.	105M 052	105M/14	AGP, T, DD	Au	vein/breccia
Nana	H. Coyne and Sons/McKeown, Sid	105D 076	105D/11	G, DD	Au	skarn/ replacement
Nucleus	Northern Freegold Resources Ltd.	115I 107	115I/6	DD	Au	porphyry/ sheeted vein
Revenue	Northern Freegold Resources Ltd.	115I 042	115I/6	GC, DD	Au	porphyry/ sheeted vein
Rosy	ATAC Resources Ltd.	105C 024	105C/13	AGP	Au	vein/breccia
Scheelite Dome	Riverside Resources Inc./ Copper Ridge Explorations Inc.	115P 004	115P/9, 16	DD	Au	skarn/ replacement
Skukum Creek	Tagish Lake Gold Corp.	105D 022A	105D/3	DD, U/GD, PF	Au	vein/breccia
Sonora Gulch	Firestone Ventures Inc./ Martensson, Jan	115J 008	115J/9	P, G, GC, DD	Au	porphyry/ sheeted vein
Spice	Klondike Star Mineral Corp./ Tanana Exploration Inc.	105G 150	105G/13	DD	Au	vein/breccia
Tinta Hill	Northern Freegold Resources Ltd.	115I 058	115I/7	DD	Au	vein/breccia
Typhoon	Curlew Lake Resources Inc.	115P 060	115P/14	G, GP, GC	Au	porphyry/ sheeted vein
VG (Vic)	Aurchem Exploration Ltd.	115I 068	115I/3	T, BS	Au	vein/breccia
White River	Underworld Resources Inc./ RyanWood Exploration Inc.	115O 011	115O/4	G, GP, BS	Au	vein/breccia

Abbreviations

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PGE - platinum group elements
RC/P - reverse circulation/percussion drilling
RD - road construction
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Appendix 1 (continued): 2007 EXPLORATION PROJECTS

Project name	Optioner/Owner	MINFILE number	NTS	Work type	Primary commodity	Deposit
PRECIOUS METALS - SILVER						
Blue Heaven	Valencia Ventures Inc./ Strategic Metals Ltd.	105B 020	105B/7	AGP, T, DD	Ag	vein/breccia
CMC Silver (Hart)	CMC Metals Ltd.	105B 021	105B/7	DD, RD, MD	Ag	vein/breccia
Connaught	Klondike Silver Corp./ ATAC Resources Ltd.	115N 040	115N/15	P, GC, T, DD	Ag	vein/breccia
Gram	Yukon Gold Corporation Inc.	105M 057	105M/15	P, AGP, GC	Ag	vein/breccia
Hopeful	ATAC Resources Ltd./Berdahl, Ron	115P 047	115P/14	P, AGP, GC	Ag	vein/breccia
Idaho Creek	Klondike Silver Corp./ ATAC Resources Ltd.	115J 099	115J/10	DD	Ag	vein/breccia
Keno Hill	Alexco Resource Corp.	105M 001	105M/14	DD	Ag	vein/breccia
Kuda	International KRL Resources Corp./ Tarsis Capital Corp.	105B 140	105B/1	GC, T, DD	Ag	skarn/ replacement
Plata	Strategic Metals Ltd.	105N 003	105N/9	P, AGP, GC	Ag	vein/breccia
Qb	Valencia Ventures Inc./ Strategic Metals Ltd.	105B 098	105B/8	AGP, GC	Ag	skarn/ replacement
Rancheria Silver	Tanana Exploration Inc.	various	105B	P, GP, GC, T	Ag	skarn/ replacement
Silver Valley	Yukon-Nevada Gold Corp.	105F 057	105F/9	DD	Ag	vein/breccia
Stump	Klondike Silver Corp.	105F 056	105F/9	G, GC, T, BS	Ag	vein/breccia
BASE METALS - ZINC-LEAD						
Andrew	Overland Resources Ltd./ Berdahl, Ron	105K 089	105K/16	P, G, GC, DD, PF	Zn-Pb	vein/breccia
Bar	Zinccorp Resources Inc./ Strategic Metals Ltd.	105C 003	105C/9	DD	Zn-Pb	sediment associated
Blende	Blind Creek Resources Ltd./ Eagle Plains Resources Ltd.	106D 064	106D/7	GC, DD	Zn-Pb	vein/breccia
Convert	Zinccorp Resources Inc./ Strategic Metals Ltd.	105B 143	105B/5	DD	Zn-Pb	volcanic associated
Gentian	Overland Resources Ltd./ Berdahl, Ron	new	105K/16	G, GC	Zn-Pb	sediment associated
Goz Creek	Tarsis Capital Corp.	106C 020	106C/7	P, GC	Zn-Pb	vein/breccia
Hy(land)	Strategic Metals Ltd.	105H 010	105H/7	P, G, AGP, GC	Zn-Pb	skarn/ replacement
Jake	Strategic Metals Ltd.	105G 060	105G/16	AGP	Zn-Pb	skarn/ replacement
Kit (MVT)	Zinccorp Resources Inc./ Strategic Metals Ltd.	116B 086	116B/14	DD	Zn-Pb	Mississippi-Valley type
Liberty Fork	Ross, John Peter	116C 172	116C/10	P, GC	Zn-Pb	volcanic associated

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Appendix 1 (continued): 2007 EXPLORATION PROJECTS

Project name	Optioner/Owner	MINFILE number	NTS	Work type	Primary commodity	Deposit
Marg	Yukon Gold Corporation Inc.	106D 009	106D/1	DD	Zn-Pb	volcanic associated
Michelle	Zinccorp Resources Inc./ Strategic Metals Ltd.	116A 016	116A/13	DD	Zn-Pb	Mississippi-Valley type
OG	Full Metal Minerals Corp./ Ryan, Shawn	116B 083	116B/13	G, GP, GC	Zn-Pb	Mississippi-Valley type
Pelly Mountain VMS	Eagle Plains Resources Ltd.	105F 012	105F/7	G, GC	Zn-Pb	volcanic associated
Selwyn Project	Selwyn Resources Ltd.	105I 012	105I/6	DD, PF	Zn-Pb	sediment associated
Top	Strategic Metals Ltd.	116B 041	116B/4	AGP	Zn-Pb	volcanic associated
Uno	Strategic Metals Ltd.	105J 030	105J/1	AGP	Zn-Pb	skarn/ replacement
Wolverine	Yukon Zinc Corp.	105G 072	105G/8	PF, MD	Zn-Pb	volcanic associated
BASE METALS - COPPER						
(Merr) Ice	BCGold Corp/ RyanWood Exploration Inc.	new	115I/7	G, AGP, GC, T, DD	Cu	porphyry/ sheeted vein
Canadian Creek	North American Vanadium Inc./ Cariboo Rose Resources Ltd.	115J 101	115J/10	DD	Cu	porphyry/ sheeted vein
Carmacks Copper	Western Copper Corp.	115I 008	115I/7	DD, PF	Cu	porphyry/ sheeted vein
Casino	Western Copper Corp.	115J 028	115J/10	G	Cu	porphyry/ sheeted vein
DR	Fronteer Development Group Inc./ Rimfire Minerals Corp.	new	106D/16	DD	Cu	Wernecke breccia
Fairweather	Strategic Metals Ltd./ RyanWood Exploration Inc.	105J 010	105J/13	AGP, GC	Cu	porphyry/ sheeted vein
Gin	H. Coyne and Sons	105D 055	105D/11	DD	Cu	skarn/ replacement
Highway	Strategic Metals Ltd.	new	105C/1	AGP	Cu	volcanic associated
Hoover	Fronteer Development Group Inc./ Rimfire Minerals Corp.	106E 002	106E/1	DD	Cu	Wernecke breccia
Hopper	Strategic Metals Ltd.	115H 019	115H/7	P, G, AGP, T	Cu	porphyry/ sheeted vein
Igor	Cash Minerals Ltd./ Mega Uranium Ltd.	106E 009	106E/2	DD	Cu	Wernecke breccia
Ironman	Vale Inco/ Copper Ridge Explorations Inc.	116A 017	116A/15	GP	Cu	Wernecke breccia

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Appendix 1 (continued): 2007 EXPLORATION PROJECTS

Project name	Optioner/Owner	MINFILE number	NTS	Work type	Primary commodity	Deposit
King Lake Copper	39231 Yukon Inc.	105D 104	105D/14	P, GP, GC	Cu	porphyry/ sheeted vein
Lucky Joe	Copper Ridge Explorations Inc.	115O 051	115O/11, 12	GC, DD	Cu	porphyry/ sheeted vein
Minto	Sherwood Copper Corp.	115I 021	115I/11	GP, DD, PF, MD	Cu	IOCG
Mor	Tarsis Capital Corp.	105C 061	105C/1	P, G, AGP, GC, DD	Cu	volcanic associated
Nor	International KRL Resources Corp./ RyanWood Exploration Inc.	106L 061	106L/6	P, G, AGP, GP, GC, DD	Cu	Wernecke breccia
Odie	Cash Minerals Ltd./ Mega Uranium Ltd.	new	106E/7	DD	Cu	Wernecke breccia
Pagisteel Fault	Fronteer Development Group Inc./ Rimfire Minerals Corp.	new	106D/16	DD	Cu	Wernecke breccia
Rage	Northern Freegold Resources Ltd.	115I 050	115I/6	GC, T, DD	Cu	porphyry/ sheeted vein
Rob	Fjordland Exploration Inc./ Commander Resources Ltd.	116B 113	116B/14	DD	Cu	Wernecke breccia
Shell Creek	Logan Resources Ltd.	116C 029	116C/9	P, G, GP, GC, DD	Cu	sediment associated
Tidd	Sedex Mining Corp./ Strategic Metals Ltd.	105J 029	105J/3	P, G, AGP, GC, T, DD	Cu	skarn/ replacement
Timber	Strategic Metals Ltd.	105J 035	105J/4	AGP, DD	Cu	porphyry/ sheeted vein
WS Total	BCGold Corp./ RyanWood Exploration Inc.	115I 006	115I/7	G, AGP, GC, DD	Cu	porphyry/ sheeted vein
Yukon Olympic	Richmond Capital Corp./ Copper Ridge Explorations Inc.	116G 082	116G/1	G	Cu	Wernecke breccia
BASE METALS - NICKEL ± PLATINUM GROUP ELEMENTS (PGE)						
Burwash	Golden Chalice Resources Inc./ Strategic Metals Ltd.	115G 100	115G/6	AGP	Ni/PGE	mafic/ultramafic associated
Canalask	White River Resources/ StrataGold Corp.	115F 045	115F/15	P, G, AGP	Ni/PGE	mafic/ultramafic associated
Deer	Southampton Venture Inc./ Strategic Metals Ltd.	116B 170	116B/9	DD	Ni/PGE	sediment associated
NiMo	Southampton Venture Inc./ Strategic Metals Ltd.	new	106E/13	P, G, DD	Ni/PGE	sediment associated
Rich	Southampton Venture Inc. /Strategic Metals Ltd.	new	116I/8	AGP, DD	Ni/PGE	sediment associated
Sun	Southampton Venture Inc./ Strategic Metals Ltd.	new	116I/16	DD	Ni/PGE	sediment associated
Wellgreen	Coronation Minerals Inc./ Northern Platinum Ltd.	115G 024	115G/5	DD	Ni/PGE	mafic/ultramafic associated

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Appendix 1 (continued): 2007 EXPLORATION PROJECTS

Project name	Optioner/Owner	MINFILE number	NTS	Work type	Primary commodity	Deposit
BASE METALS - TUNGSTEN						
Hidden	Strategic Metals Ltd.	105F 129	105F/6	AGP	W	skarn/ replacement
Kalzas	Prospector Consolidated Resources Inc./Copper Ridge Explorations Inc.	105M 066	105M/7	GC, T, BS	W	porphyry/ sheeted vein
Logtung (Northern Dancer)	Largo Resources Ltd./ Strategic Metals Ltd.	105B 039	105B/4	DD, PF	W	porphyry/ sheeted vein
MacTung	North American Tungsten Corp. Ltd.	105O 002	105O/8	T, RC/P, PF	W	skarn/ replacement
Obvious	Strategic Metals Ltd.	105F 094	105F/6	AGP	W	skarn/ replacement
Rau	ATAC Resources Ltd.	106D 005	106D/1	P, G, AGP, GC	W	porphyry/ sheeted vein
Track	Strategic Metals Ltd.	116C 137	116C/8	AGP	W	skarn/ replacement
BASE METALS - MOLYBDENUM						
Red Mountain	Tintina Mines Ltd.	105C 009	105C/13	RD, PF	Mo	porphyry/ sheeted vein
BASE METALS - URANIUM						
Angel	Cash Minerals Ltd./ Mega Uranium Ltd.	new	106D/15	DD	U	Wernecke breccia
Bonnie	Cash Minerals Ltd./ Mega Uranium Ltd.	new	106C/13	DD	U	Wernecke breccia
Borealis	Copper Ridge Explorations Inc./ RyanWood Exploration Inc.	116B 098	116B/11	G, AGP, GC	U	porphyry/ sheeted vein
Fireweed	Fronteer Development Group Inc./ Rimfire Minerals Corp.	106E 001	106E/1	DD	U	Wernecke breccia
Lumina	Cash Minerals Ltd./ Mega Uranium Ltd.	106C 069	106C/14	P,G, GC, DD	U	vein/breccia
Slats	Fronteer Development Group Inc./ Rimfire Minerals Corp.	106D 075	106D/16	DD	U	Wernecke breccia
Turn River	Longview Capital Partners/ Logan Resources Ltd.	various	105E/4	AGP	U	porphyry/ sheeted vein
TVA	Fronteer Development Group Inc./ Rimfire Minerals Corp.	106D 062	106D/16	DD	U	Wernecke breccia
Vic	Cash Minerals Ltd./ Mega Uranium Ltd.	106D 072	106D/10	DD	U	Wernecke breccia
REGIONAL PROGRAMS						
Regional - NTS 115I	BCGold Corp./RyanWood Exploration Inc.	various	115I	AGP, GC		

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PF - prefeasibility
PGE - platinum group elements
RC/P - reverse circulation/percussion drilling
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APPENDIX 2: 2007 DRILLING STATISTICS

Property	Optioner/Owner	# drillholes	# of metres
	Diamond drilling		
Andrew	Overland Resources Ltd./Berdahl, Ron	10	2837
Angel	Cash Minerals Ltd./Mega Uranium Ltd.	5	1478
Bar	Zinccorp Resources Inc./Strategic Metals Ltd.	3	622
Blende	Blind Creek Resources Ltd./Eagle Plains Resources Ltd.	13	3209
Blue Heaven	Valencia Ventures Inc./Strategic Metals Ltd.	6	605
Bonnie	Cash Minerals Ltd./Mega Uranium Ltd.	2	1000
Canadian Creek	North American Vanadium Inc./Cariboo Rose Resources Ltd.	5	879
Carmacks Copper	Western Copper Corp.	122	17 830
CMC Silver (Hart)	CMC Metals Ltd.	11	787
Connaught	Klondike Silver Corp./ATAC Resources Ltd.	7	557
Convert	Zinccorp Resources Inc./Strategic Metals Ltd.	3	479
Dart	Northern Freegold Resources Ltd.	4	259
DR	Fronteer Development Group Inc./Rimfire Minerals Corp.	2	350
Dublin Gulch	StrataGold Corp.	20	5528
EL	Southampton Venture Inc./Strategic Metals Ltd.	19	2840
Fireweed	Fronteer Development Group Inc./Rimfire Minerals Corp.	5	1028
Gin	H. Coyne and Sons		975
Goldy	Northern Freegold Resources Ltd.	5	696
Heidi	Logan Resources Ltd.	19	2686
Hoover	Fronteer Development Group Inc./Rimfire Minerals Corp.	10	3150
Idaho Creek	ATAC Resources Ltd.	4	1188
Igor	Cash Minerals Ltd./Mega Uranium Ltd.	31	9043
Ketza River	Yukon-Nevada Gold Corp.	360	51 104
Kit (MVT)	Zinccorp Resources Inc./Strategic Metals Ltd.	2	477
Lone Star	Klondike Star Mineral Corp.		846
Lucky Joe	Copper Ridge Explorations Inc.	13	2400
Lumina	Cash Minerals Ltd./Mega Uranium Ltd.	25	4367
Mahtin	International Gold Resources Inc./RyanWood Exploration Inc.	7	998
Marg	Yukon Gold Corp. Inc.	10	2998
(Merr) Ice	BCGold Corp./RyanWood Exploration Inc.	4	860
Michelle	Zinccorp Resources Inc./Strategic Metals Ltd.	7	850
Mike Lake	Dynamite Resources Ltd.	9	1827
Minto	Sherwood Copper Corp.	102	23 618
Moosehorn	Mountain Rio Resources	12	2805
Mor	Tarsis Capital Corp.	4	685
Mount Hinton	Yukon Gold Corp. Inc.		1000
Nana	H. Coyne and Sons/McKeown, Sid	2	305
Nor	International KRL Resources Corp./RyanWood Exploration Inc.	7	1040
(Northern Dancer) Logtung	Largo Resources Ltd./Strategic Metals Ltd.	26	8494

Appendix 2 (continued): 2007 DRILLING STATISTICS

Property	Optioner/Owner	# drillholes	# of metres
Nucleus	Northern Freegold Resources Ltd.	27	6313
Odie	Cash Minerals Ltd./Mega Uranium Ltd.	6	3050
Pagisteel Fault	Fronteer Development Group Inc./Rimfire Minerals Corp.	1	300
PE	Southampton Venture Inc./Strategic Metals Ltd.	8	750
Rage	Northern Freegold Resources Ltd.	2	509
Revenue	Northern Freegold Resources Ltd.	7	1451
Rich	Southampton Venture Inc./Strategic Metals Ltd.	25	2486
Rob	Fjordland Exploration Inc./Commander Resources Ltd.	6	2000
Scheelite Dome	Riverside Resources Inc./Copper Ridge Explorations Inc.	5	601
Selwyn project	Selwyn Resources Ltd.	101	34 385
Shell Creek	Logan Resources Ltd.	10	1535
Silver Valley	Yukon-Nevada Gold Corp.	57	8494
Skukum Creek	Tagish Lake Gold Corp.	18	1700
Slats	Fronteer Development Group Inc./Rimfire Minerals Corp.	6	886
Sonora Gulch	Firestone Ventures Inc./Martensson, Jan	12	2113
Spice	Klondike Star Mineral Corp./Tanana Exploration Inc.	3	440
Sun	Southampton Venture Inc./Strategic Metals Ltd.	3	296
Tidd	Sedex Mining Corp./Strategic Metals Ltd.	2	314
Timber	Strategic Metals Ltd.	3	830
Tinta Hill	Northern Freegold Resources Ltd.	12	2200
TVA	Fronteer Development Group Inc./Rimfire Minerals Corp.	5	855
Typhoon	Curlew Lake Resources Inc.	6	1001
Vic	Cash Minerals Ltd./Mega Uranium Ltd.	10	3012
Wellgreen	Coronation Minerals Inc./Northern Platinum Ltd.	3	657
WS Total	BCGold Corp./RyanWood Exploration Inc.	7	1360
	Total	**1241**	**240 238**
	Percussion/Reverse Circulation		
MacTung	North American Tungsten Corp. Ltd.	42	225
May Creek	Logan Resources Ltd./RyanWood Exploration Inc.	5	
	Total	**47**	**225**

Yukon Placer Mining Overview, 2007

***William LeBarge*[1]**
Yukon Geological Survey

LeBarge, W., 2008. Yukon Placer Mining Overview, 2007. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p. 43-47.

PLACER MINING

Today, more than 100 years after the discovery of gold in the Yukon, placer mining is still an important sector in the Yukon's economy. Royalty records, which represent the minimum amount of gold production, show that over 16.6 million crude ounces (518 tonnes) of placer gold have been produced to date in the Yukon — at today's prices that would be worth more than $9.8 billion.

In 2007, there were 107 active placer mining operations employing approximately 350 people directly. Although the total number of operations was only one more than in 2006, the industry saw a fair amount of transition: ten operations moved to new drainages, four operations closed, nine operations were sold and five new mines began operating. Although most placer operations are still small and family-run (with an average of three or four employees), there has been a recent trend for small, relatively inactive properties being sold to new owners and re-activated. In addition, several mine owners now own more than one active property, so there appears to be a shift towards larger operators.

As in past years, weather played a factor in the mining process, heavy snowfall over the winter in central and southern Yukon delayed the start of the season for many operators, but warm weather in September and October allowed many miners to sluice well into the fall.

There are ten placer mining areas (Fig. 1) distributed throughout the four Yukon Mining Districts. The majority of active placer mining operations were in the Dawson Mining District, followed by the Whitehorse Mining District and the Mayo Mining District. No mines are currently active in the Watson Lake Mining District, although there are a few exploratory properties along the Pelly and Liard rivers.

The total Yukon placer gold production in 2007 was 63,929 crude ounces (1 988 400 g), compared to 58,294 crude ounces (1 813 100 g) in 2006. The value of this 2007 gold production was CDN$38.13 million or US$35.63 million (Fig. 2).

Approximately 88% of the Yukon's placer gold was produced in the Dawson Mining District, which includes the unglaciated drainages of Klondike River, Indian River, west Yukon (Fortymile and Sixtymile rivers) and lower Stewart River. The remaining gold came from the unglaciated Moosehorn Range in the Whitehorse Mining District, and other placer mining areas in the glaciated Mayo and Whitehorse mining districts which include Clear Creek, Mayo, Dawson Range, Kluane, Livingstone and Whitehorse South.

Reported placer gold production from Indian River drainages in 2007 increased dramatically over 2006, from 18,008 crude ounces (560 110 g) to 24,436 crude ounces (760 050 g). With the exception of Quartz Creek, all other drainage production increased, with the most dramatic rise seen on Dominion Creek.

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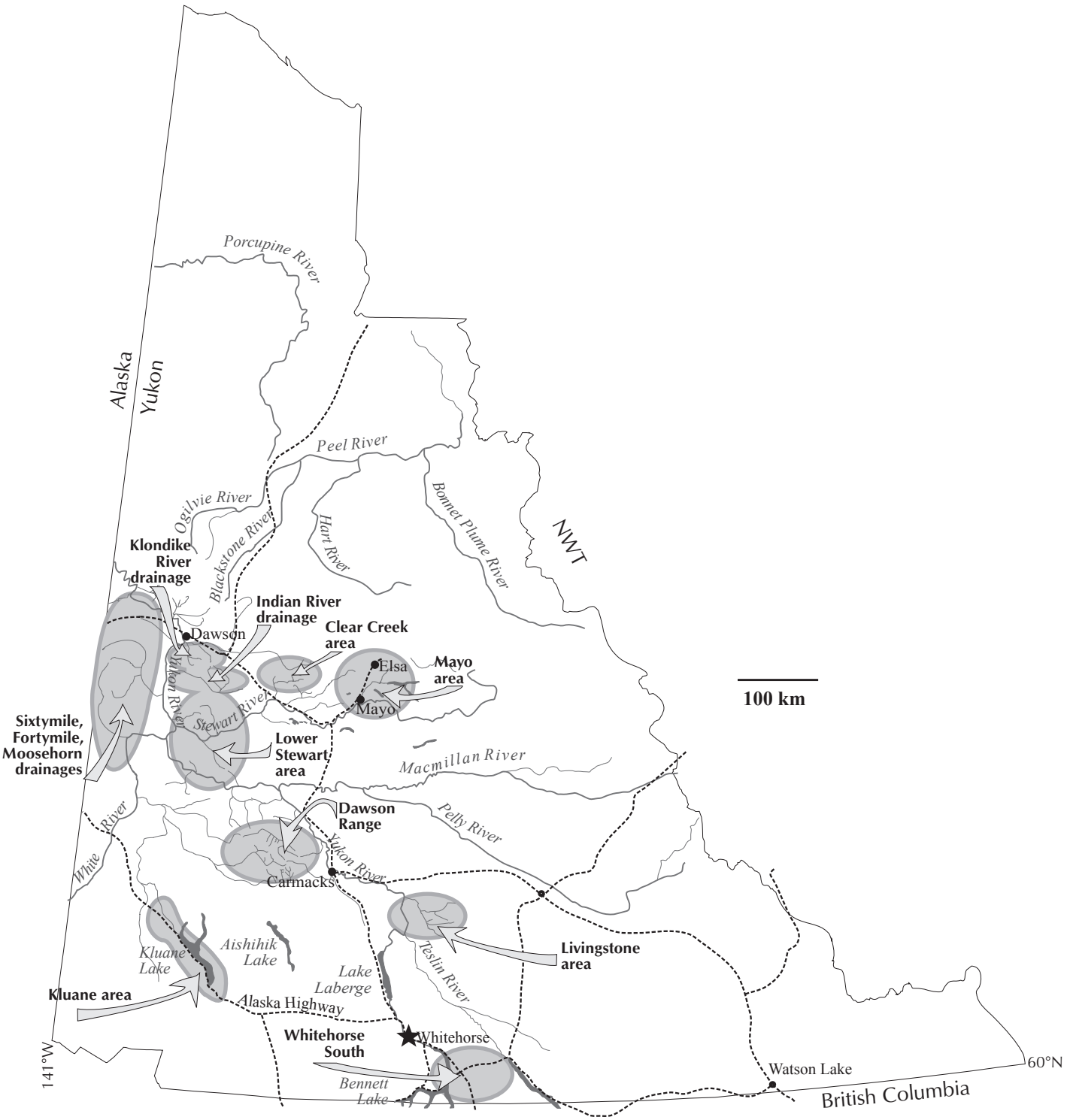

Figure 1. *Yukon placer mining areas.*

In Klondike area drainages, production decreased from 15,442 crude ounces (480 300 g) in 2006 to 11,621 crude ounces (361 450 g) in 2007. Notable decreases were seen on Hunker and Eldorado creeks, while Bear, Lindow and Bonanza creeks all saw increases.

West Yukon (Sixtymile, Fortymile and Moosehorn Range) placer gold production increased from 9333 crude ounces (290 300 g) in 2006 to 14,914 crude ounces (463 880 g) in 2007. The largest increase was from Sixtymile River, while Matson Creek and Ten Mile Creek also saw significant increases.

Reported production from operations in the Lower Stewart drainages was down in 2007, to a total of 5424 crude ounces (168 700 g) from 7884 crude ounces (245 200 g) the previous year. Black Hills, Maisy May and Kirkman creeks increased substantially while Thistle and Scroggie saw a drop in reported production.

Clear Creek drainages saw an increase in gold reported over the year, from 232 crude ounces (7220 g) in 2006 to 363 crude ounces (11 290 g) in 2007.

In the Dawson Range, reported placer gold production increased from 735 crude ounces (22 900 g) in 2006 to 912 crude ounces (28 370 g) in 2007.

In the Mayo area, gold production increased substantially from 1471 crude ounces (45 750 g) to 2755 crude ounces (85 690 g). A dramatic increase was seen in reported royalties from Owl Creek.

In the Kluane area, reported placer gold production dropped from 2260 crude ounces (70 290 g) to 887 crude ounces (27 590 g). Burwash Creek saw an increase while Gladstone Creek had a significant drop in reported gold.

The Livingstone area saw some active mining on Little Violet Creek, with 52 crude ounces (1600 g) of gold reported, down from 64 crude ounces (2000 g) the year before.

In the Whitehorse South area, no gold was reported in 2007, in contrast with last year's 24.8 crude ounces (771 g) reported from Iron Creek.

PLACER EXPLORATION

There were at least 24 exploratory operations in 2007, up from 9 the year before. Placer miners throughout the Yukon continue to explore for new deposits, using traditional methods such as excavator trenching and bulk sampling, as well as auger, reverse circulation and churn drilling. Newer methods such as ground-penetrating radar, magnetometer surveys and resistivity surveys are also becoming popular.

One exploration highlight of the 2007 season was the continuing testing by Klondike Star Ltd. of the Indian River drainage between McKinnon Creek and Montana Creek. Several test pits were mined and an access road was

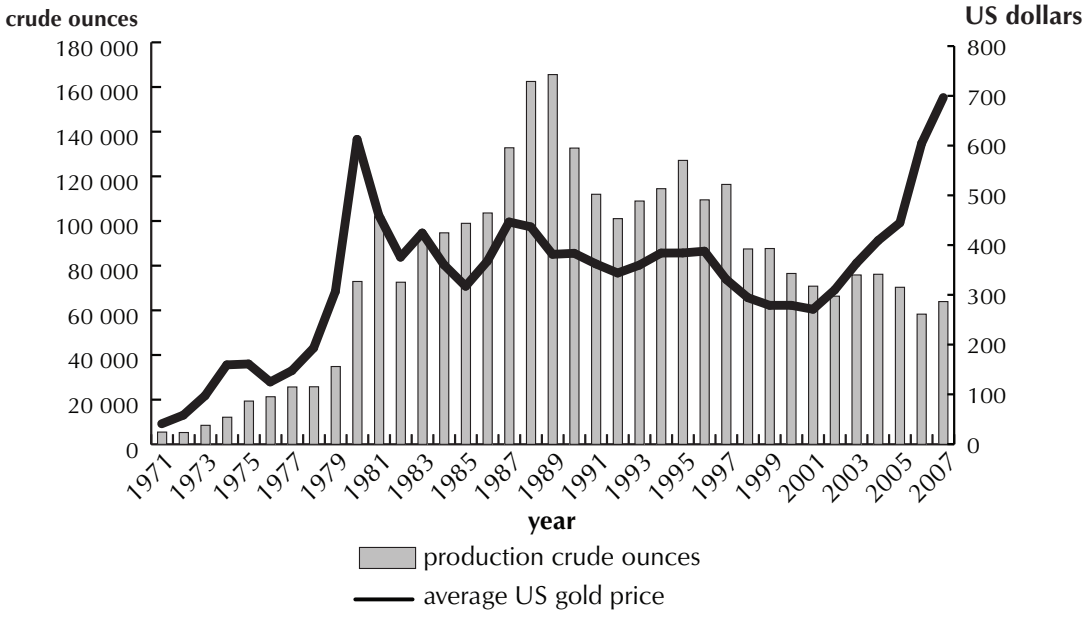

Figure 2. *Yukon placer gold production figures and average US gold price, 1971-2007.*

constructed, which may eventually link the middle reaches of the Indian River to its upstream reaches and Dominion Creek (Fig. 3).

The extensive development of the lower Sixtymile River drainage between the mouth of Ten Mile Creek and the confluence of Sixtymile River and Yukon River continued in 2007. In addition to the construction of several kilometres of road and an airstrip, a bridge was installed over the Sixtymile River. This improved access is favourable for increased development and testing of nearby drainages such as Twenty Mile Creek and Thirteen Mile Creek, as well as the upstream reaches of the Sixtymile River.

The staff at the Yukon Geological Survey and the Client Services and Inspection Division (Department of Energy, Mines and Resources, Yukon government) can provide information and advice regarding placer mining in the Yukon. Publications on placer mining in the Yukon are available through the Yukon Geological Survey office at Room 102, Elijah Smith Building, 300 Main St. Whitehorse, Yukon. Many recent publications and maps can be downloaded for free from our website at www.geology.gov.yk.ca.

APERÇU

Aujourd'hui, plus de cent ans après la découverte des premiers gisements d'or dans le Yukon, l'exploitation des placers reste un important secteur de l'économie du Yukon. Plus de 16,6 millions d'onces brutes (518 tonnes) d'or placérien ont été produites à ce jour au Yukon, ce qui représente plus de 9,8 milliards de dollars au prix actuel de l'or.

En 2007, on a dénombré 107 sites d'exploitation directement sur des placers. Près de 350 personnes étaient employées directement sur ces placers. Bien que l'on ait compté qu'un seul site exploité de plus qu'en 2006, les transitions se sont avérées nombreuses dans cette industrie : dix sites ont été déplacés vers de nouveaux bassins versants, quatre sites ont été fermés,

Figure 3. *Aerial view of Klondike Star Ltd. test pits on Indian River, July 2007.*

neuf sites ont été vendus et cinq nouvelles mines sont entrées en exploitation. Bien que la majorité des sites d'exploitation sur placers soient de petites entreprises familiales qui emploient en moyenne de trois à quatre employés, on a observé récemment une tendance à vendre les petites propriétés relativement inactives à de nouveaux propriétaires et à les remettre en activité. En outre, plusieurs propriétaires de mines possèdent aujourd'hui plus d'une propriété active, alors il semble y avoir une tendance vers de plus grands exploitants.

Comme ce fut le cas au cours des dernières années, les conditions météorologiques ont joué un rôle important dans les activités minières et les chutes de neige importantes au cours de l'hiver dans le centre et dans la partie sud du Yukon ont retardé le début de la saison pour de nombreux exploitants. Cependant, les températures chaudes du mois de septembre et du mois d'octobre ont permis à de nombreux mineurs de poursuivre efficacement leurs activités à l'automne.

On compte dix zones d'exploitation de placers réparties dans l'ensemble des quatre districts miniers du Yukon (Fig. 1). La majorité des placers encore actifs sont situés dans le district minier de Dawson, le reste se trouvant dans les districts miniers de Whitehorse et de Mayo. Il n'y a présentement aucune mine active dans le district minier de Watson Lake, malgré la présence de quelques propriétés de prospection le long des rivières Pelly et Liard.

La production d'or dans les placers du Yukon a totalisé 63 929 d'onces brutes (1 988 400 g) en 2007 alors qu'elle s'élevait à 58 294 d'onces brutes (1 813 100 g) en 2006. La production d'or en 2007 est évaluée à 38,13 millions de dollars canadiens ou 35,63 millions de dollars americains (Fig. 2).

Approximativement 88 % de l'or placérien du Yukon a été produit dans le district minier de Dawson qui inclut les drainages non englacés de la rivière Klondike, de la rivière Indian, de l'Ouest du Yukon (rivières Fortymile et Sixtymile) et le cours inférieur de la rivière Stewart. Le reste de l'or a été extrait de la chaîne non englacée Moosehorn dans le district minier de Whitehorse et d'autres districts placériens dans les districts miniers englacés de Mayo et de Whitehorse qui comprennent Clear Creek, Mayo, la chaîne Dawson, Kluane, Livingstone et le Whitehorse Sud.

On dénombre au moins 24 activités d'exploration en 2007, soit neuf de plus que l'année précédente. Les exploitants de placers continuent à explorer de nouveaux gisements en utilisant des méthodes classiques, comme l'emploi d'excavatrice pour le creusement des tranchées, l'échantillonnage massif, ainsi que l'utilisation de tarières (ou mèches), le recours à la méthode de la circulation inverse et le forage au battage. De nouvelles méthodes, comme celles utilisant des géoradars, des levés magnétométriques et des levés de résistivité deviennent également de plus en plus populaires.

YUKON OIL AND GAS OVERVIEW 2007

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Adilman, B., 2008. Yukon Oil and Gas Overview 2007. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p. 49-58.

ABSTRACT

This summer, Oil and Gas Resources' (OGR) had its most successful oil and gas rights disposition process to date. The Government of Yukon awarded Northern Cross (Yukon) Ltd. with exploration rights for 13 locations in the Eagle Plain basin. Northern Cross bid a record $20 million for these rights. In the second disposition process of 2007, in mid-December AustroCan Petroleum Corporation was awarded exploration rights for one location in the Peel Plateau-Plain area in north Yukon.

Production of natural gas yielded more than 80 000 10^3m^3 of natural gas from two wells in southeast Yukon.

Other OGR activities in 2007 included the following: participation in the development of a Yukon Energy Strategy; continued participation in preparations for the Mackenzie Gas Project and the Alaska Highway Pipeline Project; participation in several offshore oil and gas initiatives; continued consultation and cooperation with affected First Nations on a variety of oil and gas issues; development of Oil and Gas Royalty Regulations; ensuring oil and gas interests are taken into account during the Land Use Planning process; and ongoing cooperation with the Yukon Geological Survey in field work and associated analytical work to discover potential source rocks and petroleum reservoir rocks.

RÉSUMÉ

Cet été, la division des Ressources pétrolières et gazières (RPG) du gouvernement du Yukon a connu sa meilleure disposition des droits sur le pétrole et le gaz. Elle a accordé à la Northern Cross (Yukon) Ltd. les droits d'exploration pour 13 emplacements dans le bassin d'Eagle Plain au Yukon septentrional. La soumission de la Northern Cross pour l'obtention de ces droits atteint la somme inégalée de 20 millions de dollars. Lors du deuxième processus de vente de droits à la mi-décembre de 2007, la société pétrolière d'AustoCan s'est vue accorder des droits d'exploration pour un emplacement dans la région du plateau et de la plaine de Peel dans le nord du Yukon.

La production de gaz naturel de deux puits au sud-est du Yukon s'est élevée à plus de 80 000 10^3m^3.

Parmi les autres activités de RPG en 2007 mentionnons : la participation à l'élaboration de la stratégie du Yukon en matière d'énergie ; la poursuite de la participation aux préparatifs du Projet gazier Mackenzie et du Projet du gazoduc de la route de l'Alaska ; la participation à plusieurs initiatives pétrolières et gazières sur le talus continental ; la poursuite de consultations et de la collaboration avec plusieurs Premières nations concernées par toute une gamme de problèmes reliés au pétrole et au gaz ; l'élaboration du Règlement sur les redevances sur le pétrole et le gaz ; s'assurer que les intérêts pétroliers et gaziers soient pris en compte dans le processus de planification de l'utilisation des terres ; la collaboration permanente avec la Commission géologique du Yukon pour les travaux sur le terrain et les travaux d'analyse associés menés à la recherche de potentielles roches mères et roches réservoirs de pétrole

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INTRODUCTION

This was a busy year for the newly reorganized Oil and Gas Resources (OGR) branch of the Department of Energy, Mines and Resources. While industry activity was limited in 2007, much work was done by OGR staff in preparation for future exploration and development in Yukon's oil and gas sector. This work has already translated into significant interest by industry.

Yukon has eight onshore sedimentary basins containing an estimated 17 trillion cubic feet (Tcf) (480 billion m^3) of natural gas and 770 million barrels (120 million m^3) of oil (Government of Yukon, 2007, p. 25; Fig. 1). Offshore estimates in the Beaufort Sea north of Yukon consist of an additional 53 Tcf (1.5 trillion m^3) of natural gas and 4.5 billion barrels (720 billion m^3) of oil (Government of Yukon, 2007, p. 9), contributing to Yukon's vast and virtually untapped petroleum resources.

New dispositions of oil and gas rights in the Eagle Plain basin, opportunities in southeast Yukon, and the construction of the Mackenzie and/or Alaska Highway pipelines would significantly expand Yukon's oil and gas sector. The two producing natural gas wells in southeast Yukon continue to provide revenue for Yukon.

OGR continues to develop partnerships with other jurisdictions and governments, including First Nations. A unique and competitive oil and gas common regime, jointly crafted by Yukon and First Nation governments, is in place in preparation for potential expansion of exploration and production. Although Yukon resources are remote and pipeline infrastructure is presently lacking, OGR has created an attractive economic environment and legislative framework that bodes well for future activity.

YUKON'S OIL AND GAS RIGHTS DISPOSITION PROCESS

In response to First Nations and the petroleum industry recommendations, Oil and Gas Resources has developed a more streamlined and efficient process to grant oil and gas rights. This new disposition process runs twice annually, and OGR's first process, initiated in February of this year, resulted in 25 expressions of interest that ultimately led to successful bids of $20 million by Northern Cross for exploration and test production on 13 locations in the Eagle Plain basin in north Yukon (Fig. 2). It was the largest single disposition of oil and gas rights in Yukon's history. The second disposition process of 2007 was completed on December 12. AustroCan Petroleum Corporation was the successful bidder on one location in the Peel Plateau and Plain oil and gas basin, with a bid of $2.28 million (Fig. 3).

Pursuant to the Government of Yukon's *Oil and Gas Act* and *Oil and Gas Disposition Regulations*, rights to oil and gas are granted by the Minister through a competitive disposition process. The disposition process, which is designed to be completed in approximately five months, consists of the following:

- submission for consideration of Requests for Postings (RFP) for locations of interest to explore for oil and gas;
- review of the RFP, wherein the public, First Nations and government agencies may submit presentations on environmental, socio-economic and surface access concerns related to the requested locations;
- a Call for Bids, where persons or companies are invited to submit bids on posted locations; and
- issuance of oil and gas permits to successful bidders.

A successful bidder is required to submit a work deposit equal to 25% of their bid. The work deposit is returned proportionally as work is completed.

The initial term of the Permit is six years. Permits may be renewed for a further four-year term if a well is drilled during the initial term. Before any activity takes place, companies are required to obtain all regulatory approvals and undergo environmental screening through the *Yukon Environmental and Socio-Economic Assessment Act*. Companies are also encouraged to follow best management practices as outlined by OGR.

In summary, the Government of Yukon's oil and gas rights disposition process provides:

- an attractive investment climate for future development since it is efficient, streamlined and offers certainty;
- a two-year rolling schedule, providing companies with an opportunity to plan ahead; and
- a minimum work commitment which has been lowered from $1 million to $400 000.

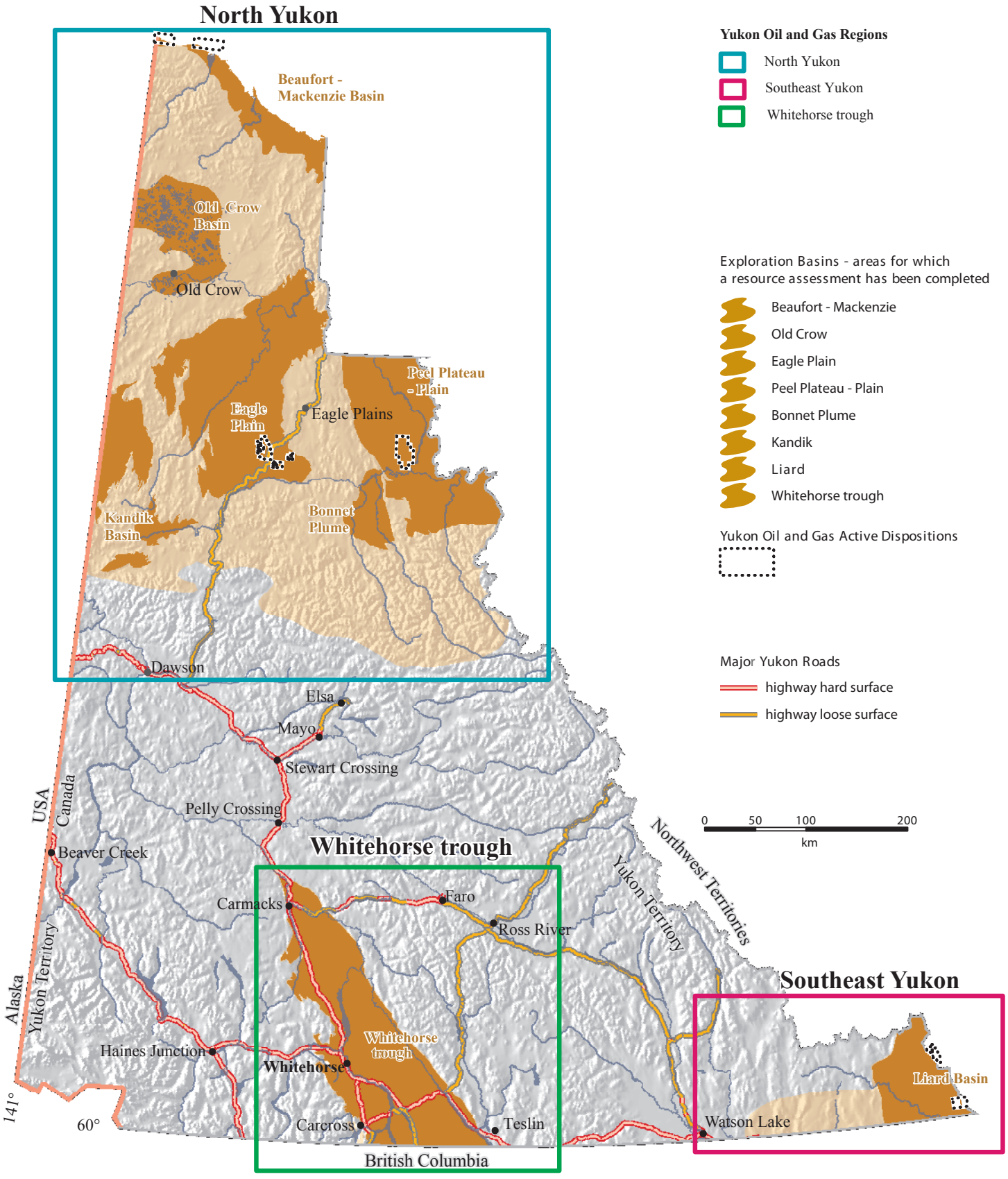
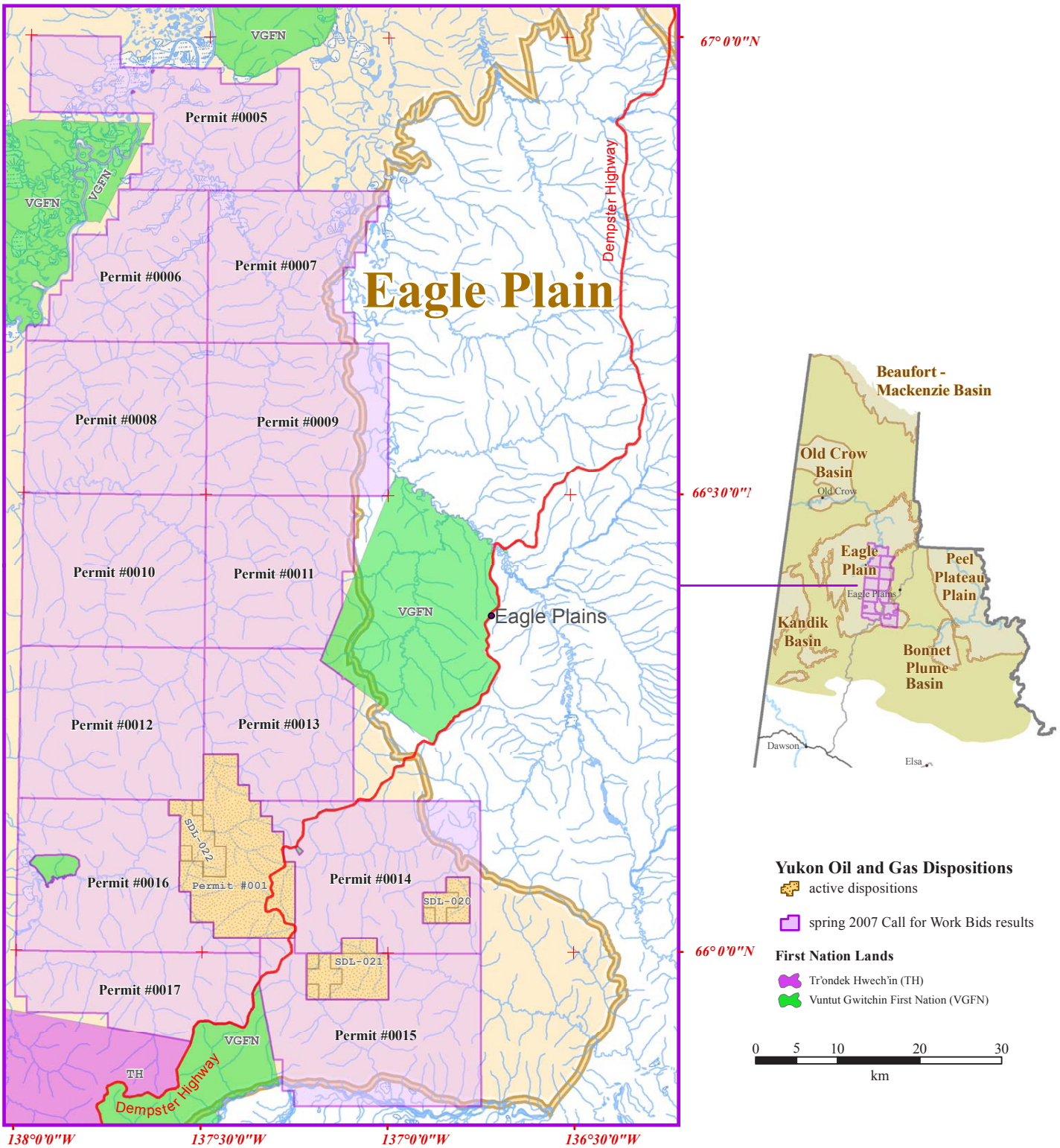


Figure 1. *Yukon's oil and gas exploration regions.*



Request for Postings submissions are a result of an invitation from the Minister of Energy, Mines and Resources of Yukon for expressions of interest for the identification of locations for Oil and Gas Permits. For an explanation of the Yukon Oil and Gas Land Division System, refer to the Yukon Oil and Gas Disposition Regulations, sections 2 to 4. The Oil and Gas Land Division System Poster is available at http://www.emr.gov.yk.ca/oilandgas/mapsdata.html.

Figure 2. *Spring 2007 oil and gas disposition locations.*

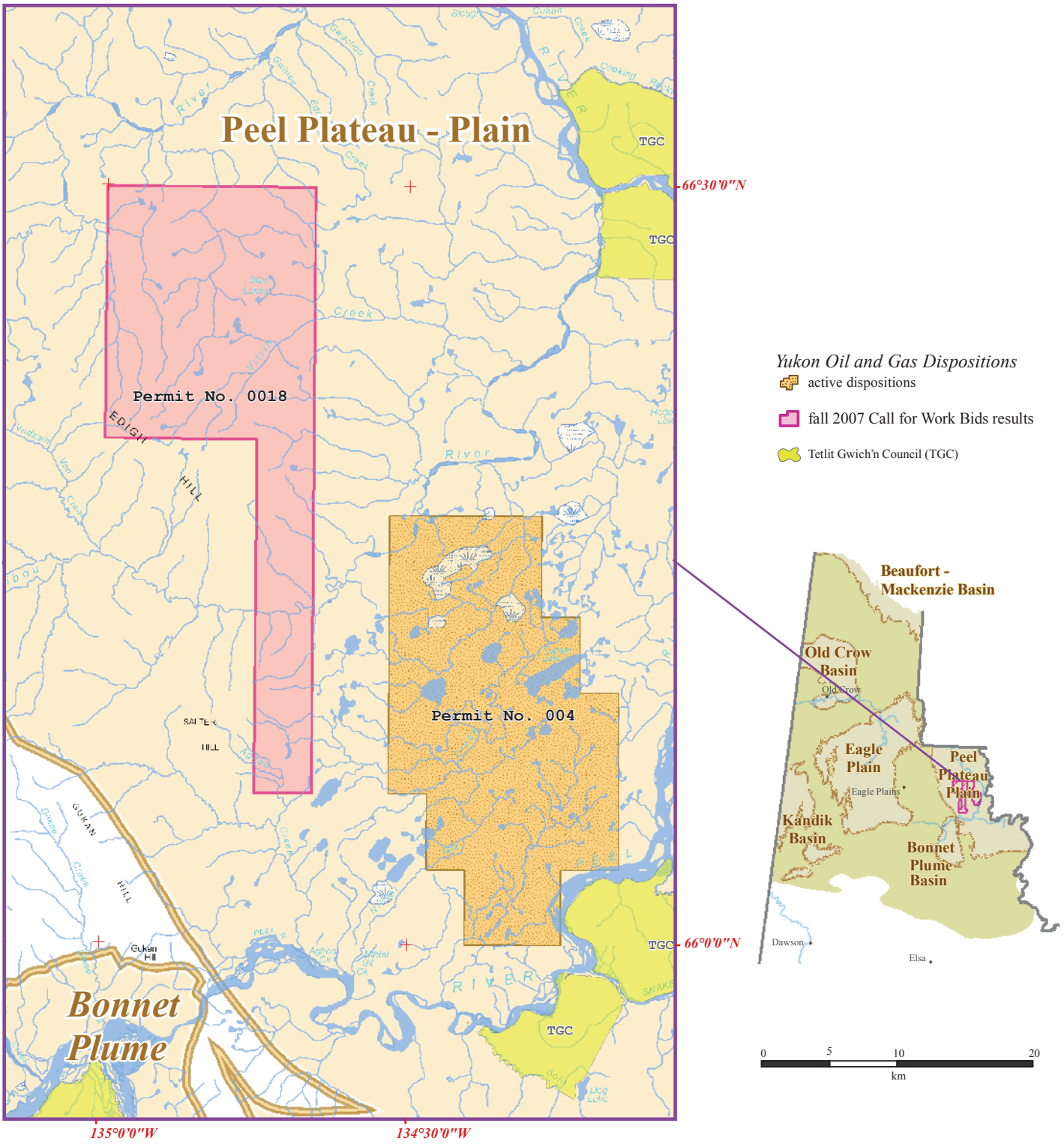


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Figure 3. *Fall 2007 oil and gas disposition locations.*

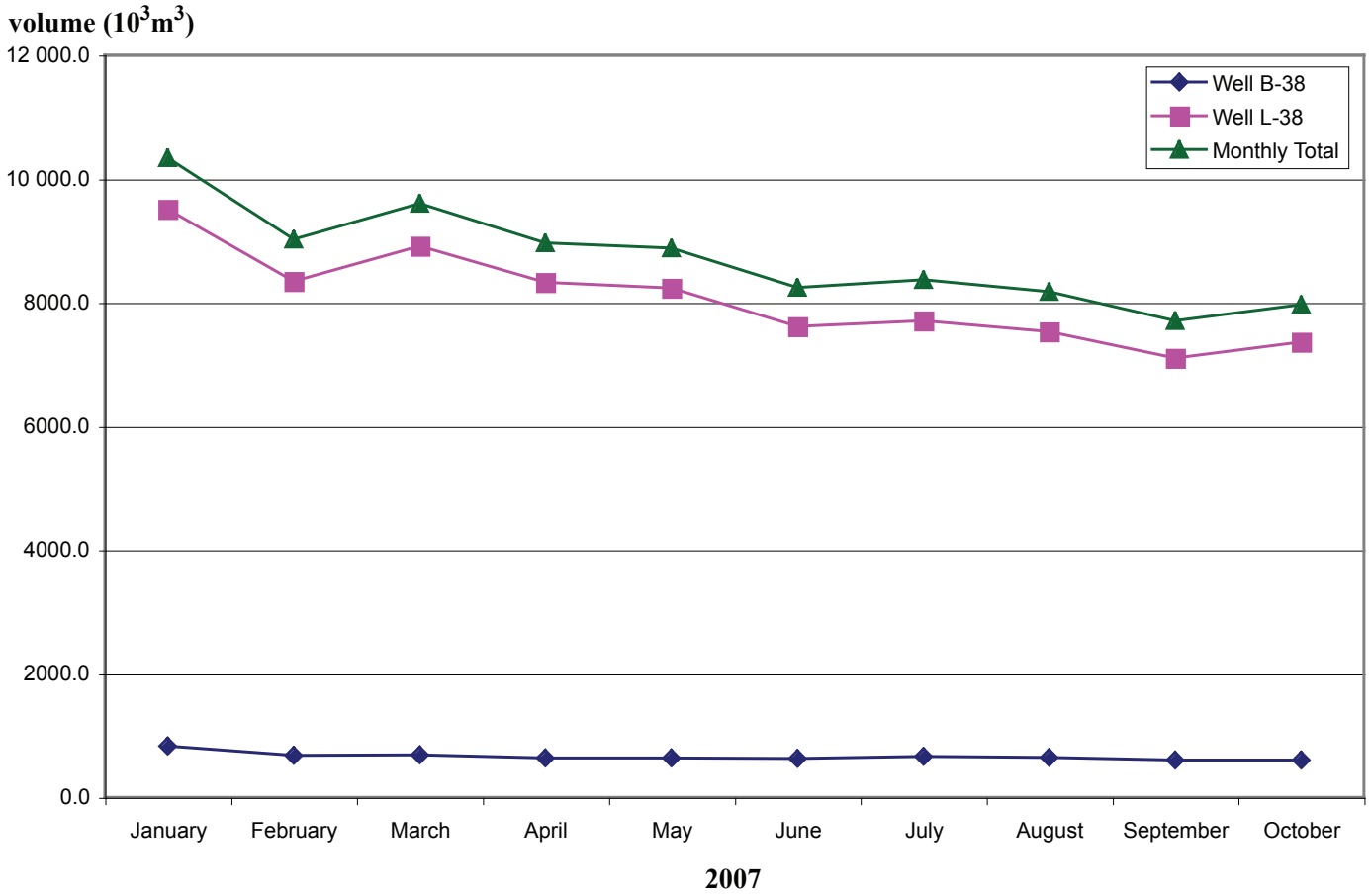

Figure 4. *Yukon natural gas production, from Kotaneelee field, southeast Yukon..*

NATURAL GAS PRODUCTION

In southeast Yukon, natural gas is produced from the Kotaneelee Field in the Liard Basin. The two producing wells (B-38 and L-38) yielded 87 265 10^3m^3 of natural gas in the period from January 2007 to October 2007 (Fig. 4)[1]. The field is in the later stages of life, with gas production and reservoir pressure declining slowly and water cuts increasing. Recovery factor to date is 54% of initial gas-in-place, which is considerably better than similar nearby fields in the basin.

FIRST NATIONS

OGR continues to build strong working relationships with First Nations through the ongoing development of a common oil and gas regime, and through regular consultation during the disposition and licensing processes. OGR supports the Aboriginal Pipeline Coalition and believes it has a very important role in ensuring that First Nations, the Yukon and federal governments are prepared for the Alaska Highway Pipeline Project. First Nation engagement and participation is essential to the development and implementation of an efficient pipeline regulatory process. The Government of Yukon, Natural Resources Canada and the Aboriginal Pipeline Coalition are continuing to work cooperatively to establish work plans and conclude long-term funding arrangements.

PIPELINES

Both the Mackenzie Gas Project (MGP) and the Alaska Highway Pipeline Project (AHPP) offer enormous economic opportunities for the north (Fig. 5). The Government of Yukon continues to work hard in order to ensure Yukon is pipeline-ready, benefits are maximized, and potential negative impacts are minimized. Work will

[1]*www.emr.gov.yk.ca/pdf/Non-Cofidential_Production.pdf*

also continue with our neighbouring jurisdictions — Alaska, BC, NWT and Alberta — to prepare for both projects.

AHPP will generate an estimated 375 000 person-years of employment over 24 years[2], while MGP estimates are 181 000 person-years over the same 24-year span[3]. The construction of these two projects will also inject billions of dollars into the North American economy. These projects would provide access for the Government of Yukon natural gas to southern markets, which could earn the Government of Yukon more than $40 million annually in royalty revenues from the production of natural gas resources.

ALASKA HIGHWAY PIPELINE PROJECT

OGR is encouraged by the recent response to the *Alaska Gasline Inducement Act* (AGIA), State of Alaska legislation intended to encourage the construction of an Alaska natural gas pipeline. Five companies expressed interest under the AGIA by the November 30, 2007 deadline for application, including TransCanada PipeLines Ltd., whose proposal would follow the Alaska Highway through Yukon to southern markets. ConocoPhillips, a major

[2]*www.emr.gov.yk.ca/pdf/informetrica_econreport_02.pdf*

[3]*www.iti.gov.nt.ca/pipeline/pdf/wright_mansell2004.pdf*

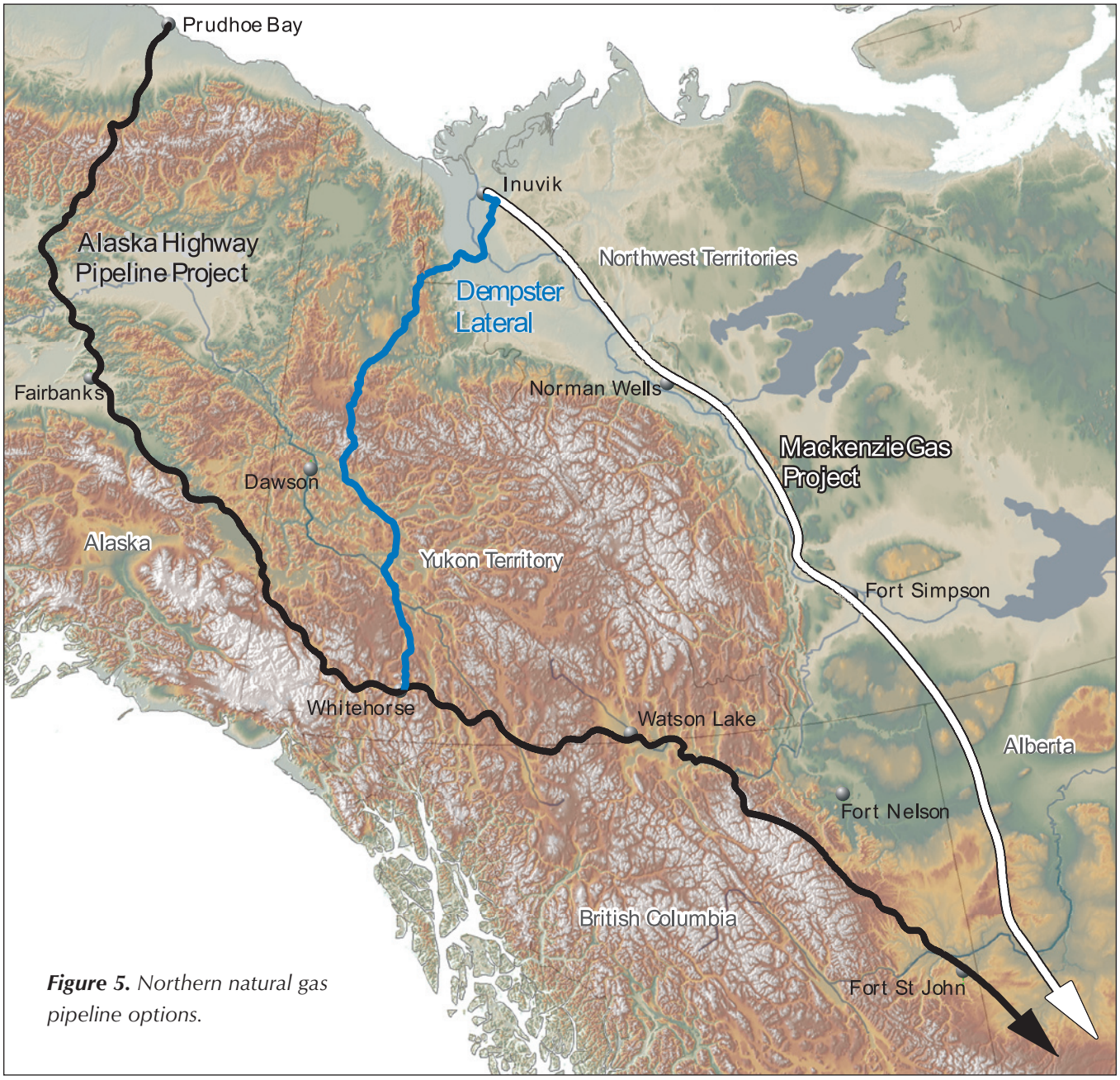

Figure 5. *Northern natural gas pipeline options.*

producer of natural gas in the North, submitted a bid that did not conform to AGIA's guidelines. Its proposed pipeline would also follow the Alaska Highway.

Should the route ultimately chosen follow the Alaska Highway, this will be important to the interests of the Government of Yukon. Yukon has seven well-documented Alaska Highway Pipeline Project interests: ensuring a net fiscal benefit to Yukon; enhancing positive socio-cultural impacts while mitigating negative socio-cultural impacts; promoting environmental stewardship; recognizing community and First Nation interests; advancing a clear and efficient regulatory process; supporting economic pipeline access for Yukon natural gas; and requiring gas take-off points.

OGR is also working closely with other jurisdictions that would be affected by an Alaska Highway pipeline. One initiative is the Strategic Action Plan Working Group, comprised of Yukon, BC and Alberta, which was created to deal with common issues expected to arise from the various inter-jurisdictional concerns over the Alaska project. Yukon continues to urge the Canadian government to demonstrate that they are prepared with a streamlined, efficient regulatory process.

MACKENZIE GAS PROJECT

OGR's intervention in the Mackenzie Gas Project hearings is also important. Yukon's interest in the construction of this project is significant, as there are benefits for Yukon to be derived from this pipeline both during and after construction. During construction, supplies will be transported to the Northwest Territories through Yukon. Construction will also provide employment opportunities for Yukon residents. The presence of a pipeline provides a means for Yukon gas to be transported competitively to southern markets, which means that potential Yukon gas would no longer be stranded.

OGR's intervention included written submissions, representation and presentations at both the National Energy Board (NEB) and Joint Review Panel (JRP) hearings. The NEB hearings are likely on hold until the fall of 2008 while they await receipt of a final report from the JRP. The JRP hearings concluded in late November 2007 and the panel has begun writing its final report.

OGR's intervention in the JRP hearings has resulted in the proponent, Imperial Oil, committing to take actions intended to enhance potential positive effects from construction and operation of the project and to mitigate potential adverse effects from the proposed project on Yukon's environment, communities and transportation infrastructure.

OFFSHORE

Although the federal government transferred responsibility for onshore oil and gas to the Government of Yukon, it continues to have responsibility for oil and gas management and development in the Beaufort Sea. Imperial Oil/ExxonMobil's recent record $585-million successful bid for exploration rights in the Beaufort Sea is clear indication that industry remains interested in the offshore, and that governments will need to respond to this renewed interest.

The Governmment of Yukon remains committed to finalizing a shared offshore oil and gas management regime and revenue-sharing arrangement with Canada in accordance with the Canada Yukon Oil and Gas Accord. As an interim step, Yukon is drafting with Canada a Memorandum of Agreement to identify Yukon's enhanced role in offshore management. OGR is developing an Offshore Strategy to advance Yukon's offshore interests, including the following: governance, economic benefits, resource revenues, financial considerations, infrastructure, capacity development and sustainable development.

OGR is actively participating with other governments and industry on a number of Beaufort Sea planning initiatives, with the most important from an oil and gas perspective being the Beaufort Sea Strategic Regional Plan of Action. Another is the Beaufort Sea Regional Coordination Committee, which is tasked with developing an integrated management plan for the offshore.

Taking an integrated management approach to all offshore planning is essential to ensuring an efficient and effective planning and decision process. OGR is jointly working with Indian and Northern Affairs Canada in undertaking a review of the call for nominations map for the Beaufort Sea to look at the possibility of including the area immediately off the Yukon coast in future disposition processes. Yukon is actively involved in the Frontier/Offshore Regulatory Renewal Initiative, which is a process to review and update the offshore oil and gas regulations. This is a federal/provincial/territorial government joint initiative, involving regulators such as the National Energy Board and the East Coast offshore petroleum boards.

Finally, Yukon is pleased that Canada has made northern sovereignty and security a national priority. Given the

significant oil and gas resources in the Beaufort Sea and international interest in the Northwest Passage, Canada's sovereignty in the region must be recognized.

Federal Indian and Northern Affairs Minister Chuck Strahl recently appointed an adviser to find ways to improve the northern regulatory system, which has long been criticized for being too complicated and costly. This will have implications to Yukon's interests in the Beaufort Sea and northern pipeline development. The goal is to strike a balance between economic development and environmental protection, while making the regulatory system more predictable.

OIL AND GAS ROYALTY REGULATIONS

In conjunction with Yukon First Nations and industry representatives, the Government of Yukon has just completed development of Oil and Gas Royalty Regulations and expects to bring them into effect shortly. The purpose of the draft regulations is to provide compensation to the Yukon for the use and depletion of a public resource. The proposed regulations are fair, competitive and simple to administer, and will provide economic certainty to industry.

The Government of Yukon is proposing a royalty rate of between 10 to 25% of the gross value of oil and gas production. The actual royalty rate will vary depending on the price of oil and gas, but it is important to note that a lower rate of only 2.5% will apply to the initial production from each well.

OIL AND GAS CONSENT AND ECONOMIC DEVELOPMENT AGREEMENT IN SOUTHEAST YUKON

There continues to be interest in oil and gas prospects in southeast Yukon. This region is of high interest to industry because there is existing pipeline infrastructure. If the area is further developed, it will also mean a significant economic boost to the residents in the area.

Discussions continue between affected Yukon First Nations and the Government of Yukon toward concluding a Consent and Economic Development agreement. OGR believes significant progress has been made, and looks forward to the conclusion of these discussions. If an agreement is reached, the Government of Yukon will begin consultations with all six First Nations who assert claims within the southeast Yukon and work with them to arrive at a common goal. Throughout the licensing process, the Government of Yukon will be consulting with affected First Nations about proposed oil and gas activities. The agreement contains provisions that facilitate economic development, as well as providing the certainty needed by industry. Once concluded, the agreement will be made public.

YUKON GEOLOGICAL SURVEY

Yukon Geological Survey geologists continued oil and gas related research studies on three projects. Two of these projects are located in northern Yukon, and one is located in southern Yukon.

Grant Lowey completed a short reconnaissance field investigation of Mesozoic and Tertiary sedimentary rocks in the Bonnet Plume basin as a precursor to a more detailed study in the 2008 field season.

The Government of Yukon continued its partnership with the Geological Survey of Canada, the Northwest Territories Geoscience Office, and industry and university affiliates to form a working relationship under the title 'Regional Geoscience Studies and Petroleum Potential, Peel Plateau and Plain, Northwest Territories and Yukon'. This four-year endeavour began in 2005. The project aims to gain a better understanding of the petroleum potential of the Peel Plateau and Plain in north Yukon. Tammy Allen and Tiffani Fraser are studying Upper Paleozoic and Cretaceous strata to better determine their potential as source rocks and reservoir rocks as part of this partnership (Allen and Fraser, this volume).

Stratigraphic (Grant Lowey) and structural (Maurice Colpron) studies are continuing in the Whitehorse trough (Lowey, this volume; Colpron and Friedman, this volume).

OTHER ACTIVITIES

OGR is assisting in the development of an over-arching Yukon Energy Strategy, designed to provide direction for the sustainable development, management and use of energy in Yukon. The scope of the strategy includes Government of Yukon roles and responsibilities in all aspects of energy development, management and use in the territory.

OGR also continues to ensure the Government of Yukon's oil and gas interests are taken into account during the land use planning process.

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Yukon Mining Incentives Program, 2007

Steve Traynor
Yukon Geological Survey

Traynor, S., 2008. Yukon Mining Incentives Program, 2007. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p. 59-60.

The Yukon Mining Incentive Program (YMIP) received 56 applications for funding by the March 1, 2007 submission deadline. Contribution agreements totaling $719 850 were subsequently issued to 45 successful applicants. Proposals approved for funding included 4 under the Grassroots Prospecting module, 17 under the Focused Regional module and 24 under the Target Evaluation module.

The distribution of project proposals followed a pattern similar to that of recent years. Placer exploration and testing programs, all targeting gold, accounted for 25% of the applications. Hard rock projects accounted for the remaining 75% of the total and included 17 proposed programs targeting gold, 11 exploring for copper ± gold, 8 focused on zinc/lead, 3 on silver, 2 on uranium and 1 on molybdenum.

Success during the current program year is easily measurable; within the previous nine months, ten option deals have been signed on existing projects that had been advanced significantly with the assistance of YMIP funding. Additionally, a comparable number of new discoveries, which are already generating significant interest from junior companies, resulted from YMIP-supported exploration during this past field season (Fig. 1).

Analysis of recent exploration statistics reveals just how important the Yukon Mining Incentive Program is to the health of the Yukon's mining industry. In the past year, 75% of known greenfields exploration projects were undertaken through the YMIP program.

Continued positive response to the Focused Regional module, which assists prospectors and junior companies appraise the potential of under-explored or greenfield areas, contributed to a doubling of projects approved under this module in the last three years.

Greenfield prospecting and exploration generates new discoveries and attracts increasing amounts of junior exploration capital to the Territory as these projects are advanced.

Further analysis indicates that 14% of this year's advanced projects (projects with annual expenditures greater than $100 000) had earlier greenfield exploration supported by YMIP funding. During the 2007 season, these projects accounted for $6.4 million of exploration spending in the Territory and over 15 000 m of diamond drilling.

The Yukon Mining Incentives Program, the existence of which currently depends upon discretionary funding approved on an annual basis (Fig. 2), has assisted prospectors, partnerships and junior companies since 1986. Having survived its growing pains of the late 1980s and early 1990s, this program has evolved into a highly successful generator of early-stage exploration projects. Through continued and stable levels of funding, it has the potential to provide the foundation to Yukon's growing mining industry for years to come.

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RÉSUMÉ

Avant la date butoir du 1er mars 2007, 56 demandes de financement ont été formulées dans le cadre du Yukon Mining Incentive Program (YMIP), qui vise à stimuler l'industrie minière. Au total, 45 demandes ont été jugées admissibles et 719 850 $ ont été octroyés. Parmi celles-ci, quatre ont été acceptées dans le cadre du programme d'exploration primaire et de prospection du YMIP, 17 dans celui du programme régional du YMIP et 24 dans celui du programme d'évaluation de cibles.

La répartition annuelle des demandes est similaire depuis quelques années. Les projets de recherche et de sondage de placers, tous des placers aurifères, comptaient pour 25 % de toutes les demandes. Ceux visant des minéraux logés dans la roche dure représentaient les 75 % restants et comprenaient 17 projets ciblant l'or, 11 ciblant le cuivre et, dans une certaine mesure, l'or, huit le zinc et le plomb, trois l'argent, deux l'uranium et un le molybdène.

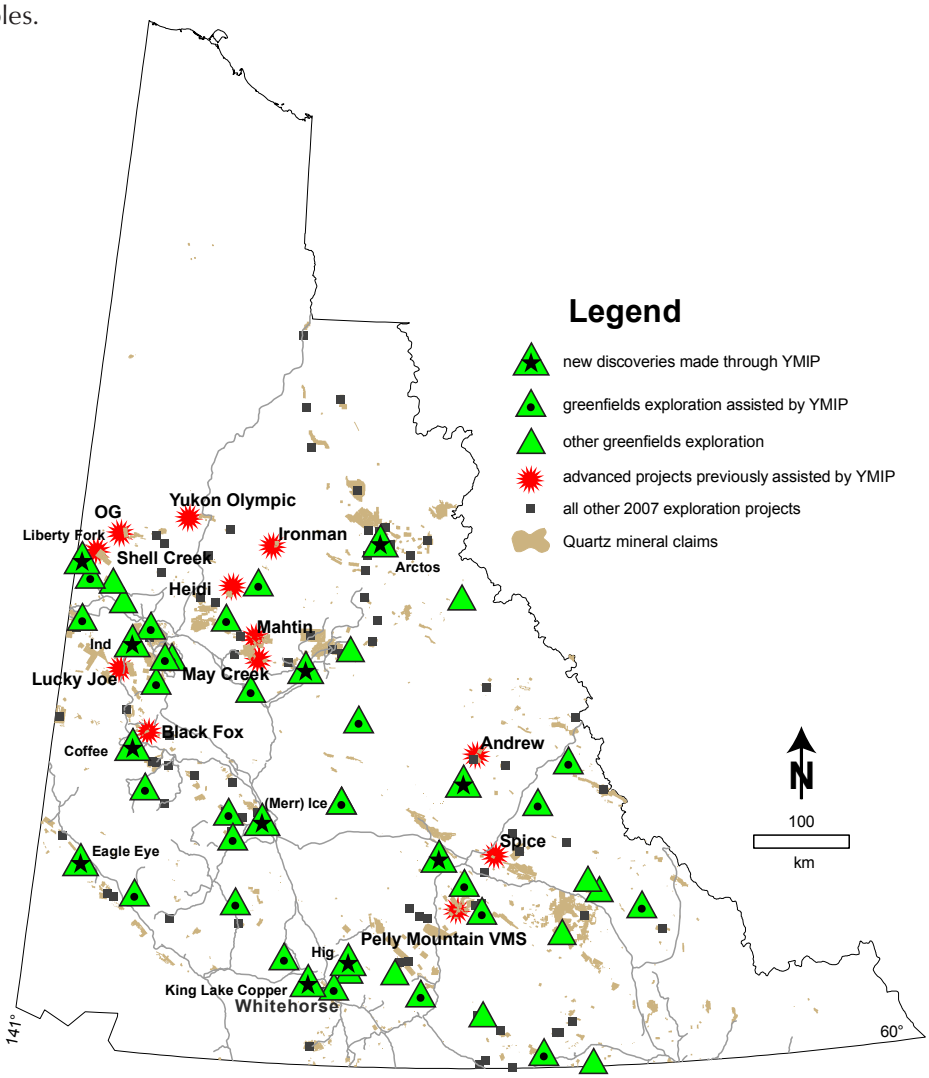


Figure 1. *Yukon exploration projects.*

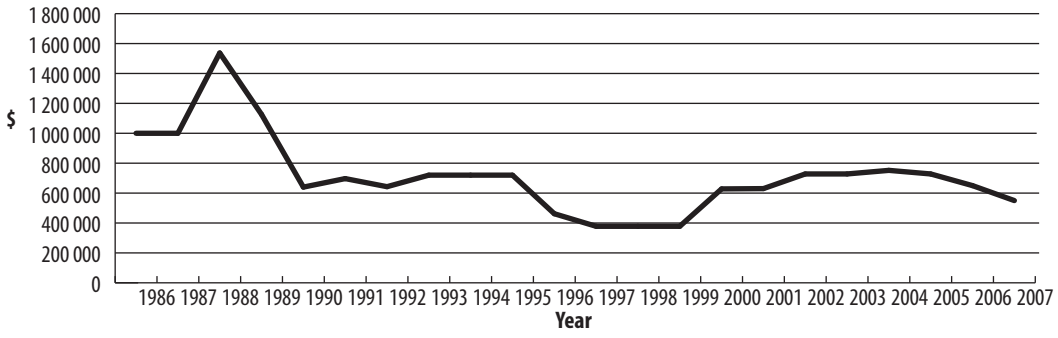


Figure 2. *Yukon Mining Incentives Program funding since program inception.*

GOVERNMENT

Yukon Geological Survey

Grant Abbott and staff
Yukon Geological Survey

La Commission géologique du Yukon

Grant Abbott et Maurice Colpron
La Commission géologique du Yukon

Robert E. Leckie Awards for Outstanding Reclamation Practices

Judy St. Amand
Mining Lands, Energy, Mines and Resources

Grant Abbott

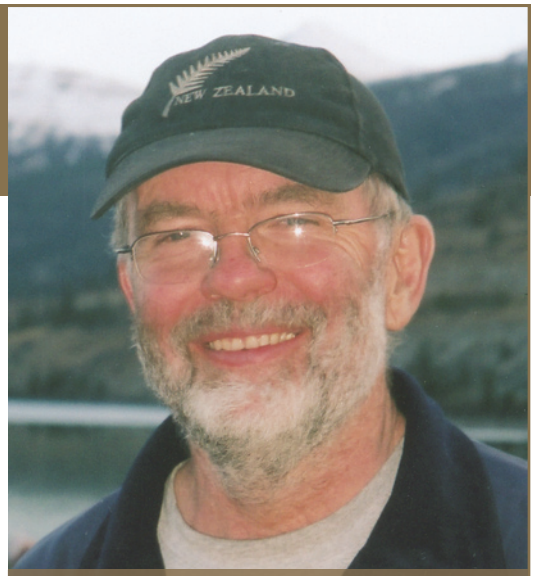
RETIREMENT

In this 2007 edition of Yukon Exploration and Geology, we would like to make special mention of Grant Abbott, who will retire as the Director of the Yukon Geological Survey (YGS) in 2008. Grant's unwavering professionalism and dedication to excellence has been a hallmark of Yukon geology for more than 30 years.

Grant graduated from the University of British Columbia in 1971 with a BSc in Geological Engineering, followed by a MSc in Geological Engineering from Queen's University in 1977. He wrote his MSc thesis on the structure and stratigraphy of the Mt. Hundere silver-lead-zinc property, which later became the Sa Dena Hes mine near Watson Lake. Since 1970, his career as a geologist has largely been spent in the Yukon, first as a student when he worked for Archer, Cathro and the Geological Survey of Canada, and subsequently as an exploration geologist for Archer, Cathro. Grant is widely credited for his part in the discovery of the Williams Creek copper deposit near Carmacks.

Grant (left) with running and geology buddies, Dirk Tempelman-Kluit and Charlie Roots, Midnight Dome, 1980.

Grant moved to Whitehorse in 1980 and joined the Exploration and Geological Services Division, Northern Affairs Program, Department of Indian Affairs and Northern Development as a project geologist. He undertook regional mapping and metallogenic studies throughout the Yukon. For the last decade Grant has been Chief Geologist for the YGS and its predecessor, the Yukon Geology Program.



Kusawa Lake, May, 2007.

During his career, Grant conferred with exploration geologists and prospectors, collected key samples and wrote germane articles that elucidated Yukon's geology. As a manager, he has skillfully led the Yukon Geological Survey, always soliciting advice before making decisions.

The staff of YGS, and Grant's colleagues in Yukon's Department of Energy, Mines and Resources, wish him the very best as he begins another of life's chapters, with a rock hammer in one hand and an airplane ticket in the other.

Skiing in the Yukon, 1982.

Yukon Geological Survey

Grant Abbott[1] and staff

Abbott, J.G. and staff, 2008. Yukon Geological Survey. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p 63-79.

OVERVIEW

The Yukon Geological Survey (YGS, Fig. 1) is rebounding from a difficult period in 2006 and is rebuilding with a number of personnel changes (Fig. 2). It is a pleasure to welcome Robert Deklerk back to the Mineral Services unit after his successful recovery from cancer. Ken Galambos is also back after a time with Economic Development. Ken has switched places with Steve Traynor to work on MINFILE alongside Rob while Steve takes over the Yukon Mining Incentives Program (YMIP). Mineral Services was also given a big boost from Lauren Blackburn and Catherine Welsh who are on temporary assignments. Our Map Sales desk is also in transition after the retirement of Ali Wagner last spring with Kim Murray temporarily filling in. Our GIS capacity was also given a boost with the addition of Aubrey Sicotte in a permanent position, and Bailey Staffen for the year. We were unable to recruit a project geologist and mineral assessment geologist in 2007, but are optimistic that these

Figure 1. *Yukon Geological Survey staff from left to right: Olwyn Bruce, Karen Pelletier, Tiffani Fraser, Don Murphy, Lee Pigage, Bailey Staffen, Charlie Roots, Grant Abbott, Steve Israel, Diane Emond, Ken Galambos, Lara Lewis, Maurice Colpron, Leyla Weston, Kim Murray, Tammy Allen, Jeff Bond, Carrie Labonte, Aubrey Sicotte, Panya Lipovsky, Lauren Blackburn, Grant Lowey, Steve Traynor, Catherine Welsh, Mike Burke, Rod Hill, Robert Deklerk and Bill LeBarge.*

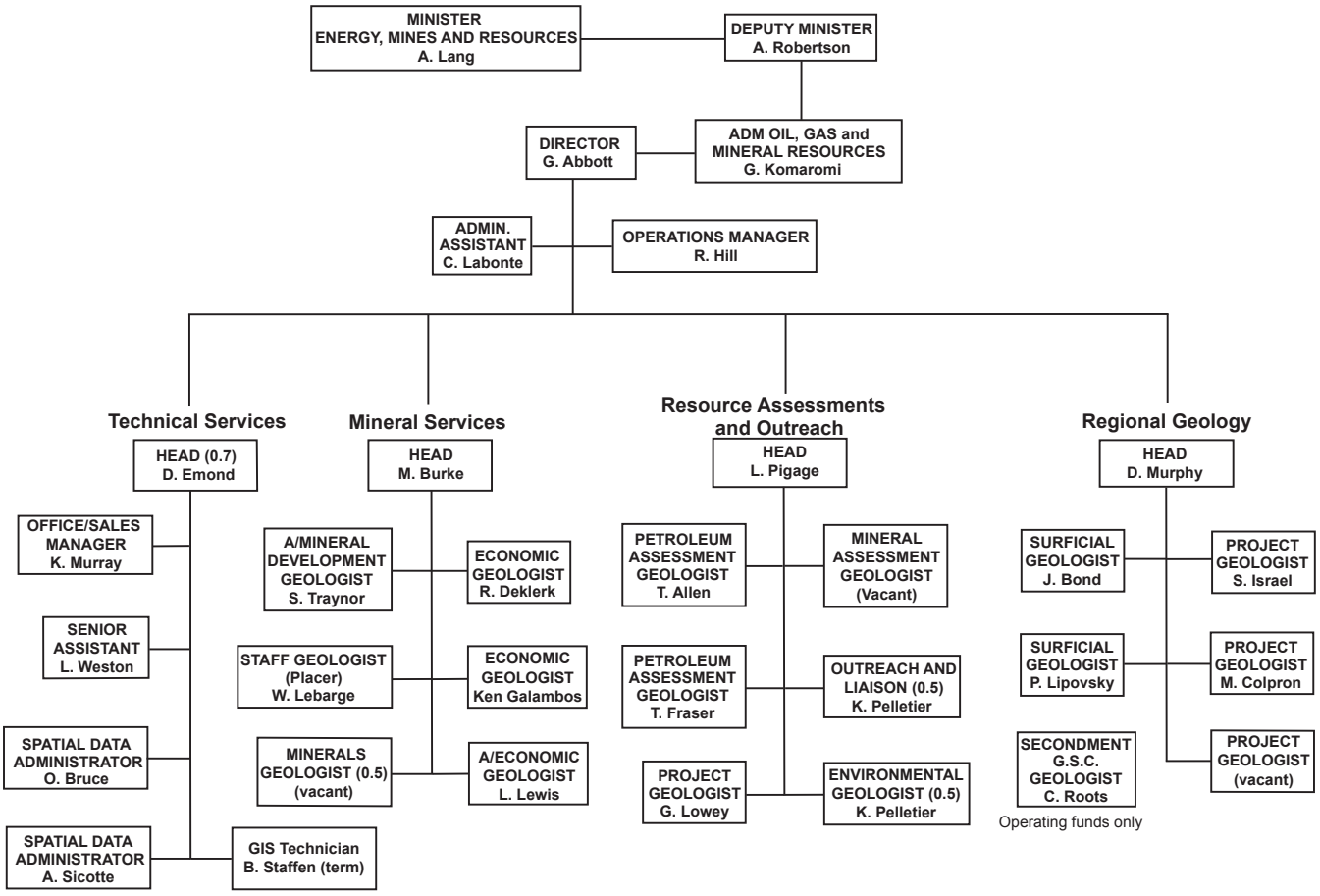


Figure 2. *Yukon Geological Survey organization chart.*

positions will be filled in 2008. Finally we are pleased to welcome Dr. Carolyn Relf as incoming Director behind Grant Abbott who is retiring in the spring. Carolyn comes to the position with an exemplary record as a scientist and manager, and we look forward to her leadership.

The Technical Liaison Committee to YGS reviews our program twice a year. We are grateful to Chair, Gerry Carlson and members Carmel Lowe, Jim Mortensen, Al Doherty, Rob Carne, Jean Pautler, Forest Pearson, Shawn Ryan and Jim Christie for their valuable support and constructive advice.

CURRENT PROJECTS

YGS continues to benefit from stable funding from the Government of Yukon; and Indian and Northern Affairs Canada (DIAND) funding programs such as SINED (Strategic Investments in Northern Economic Development). This has enabled the Yukon Geological Survey to undertake a wide range of projects that fulfill our mandate to provide the geoscience information needed to support the sustainable development of Yukon's non-renewable resources. Capacity constraints within YGS, the Geological Survey of Canada (GSC), universities and among geophysical contractors impeded our ability to undertake some projects and slowed others. For example, some promising mineral deposits studies could not proceed because of difficulty in attracting students and researchers. Regardless, we managed to carry out or fund over 24 field projects (Fig. 3), including bedrock and surficial mapping; mineral deposit, placer, hydrocarbon-related, surficial and topical studies; geophysical surveys; and outreach. We are partnering with GSC on many projects and are also supporting the research of a number of graduate students. Much of this work is put into context in Figure 4, which summarizes the coverage for bedrock mapping, surficial mapping, regional stream sediment and till geochemical surveys, and geophysical surveys for the Yukon.

BEDROCK MAPPING

1. **Don Murphy** is leading the multidisciplinary project to study the poorly exposed and little known Windy-McKinley terrane in the Stevenson Ridge map area of southwest Yukon. The project is a partnership with GSC, and benefited greatly from the participation of Cees van Staal. A significant proportion of funding was provided by SINED. The project also included a surficial mapping component lead by Jeff Bond. Initial reinterpretation of the regional geology indicates that the area may have significant mineral potential that has gone unrecognized. A high-resolution multispectral (magnetics, radiometrics, VLF) or versatile time-domain electromagnetic (VTEM) airborne geophysical survey planned for next year is expected to shed more light on these enigmatic rocks.

2. **Steve Israel** completed his mapping in the western part of the Kluane Ranges where magmatic nickel-copper-PGE (platinum group elements) targets such as Canalask are the focus of industry attention. Steve has made significant progress in unraveling the complex tectonic history of Wrangellia that includes Triassic extension, Cretaceous compression and younger transcurrent movement that continues to the present. Studies of recent deformation associated with the Denali fault are also taking place in collaboration with Don Murphy (YGS) and workers from the United States Geological Survey in Alaska.

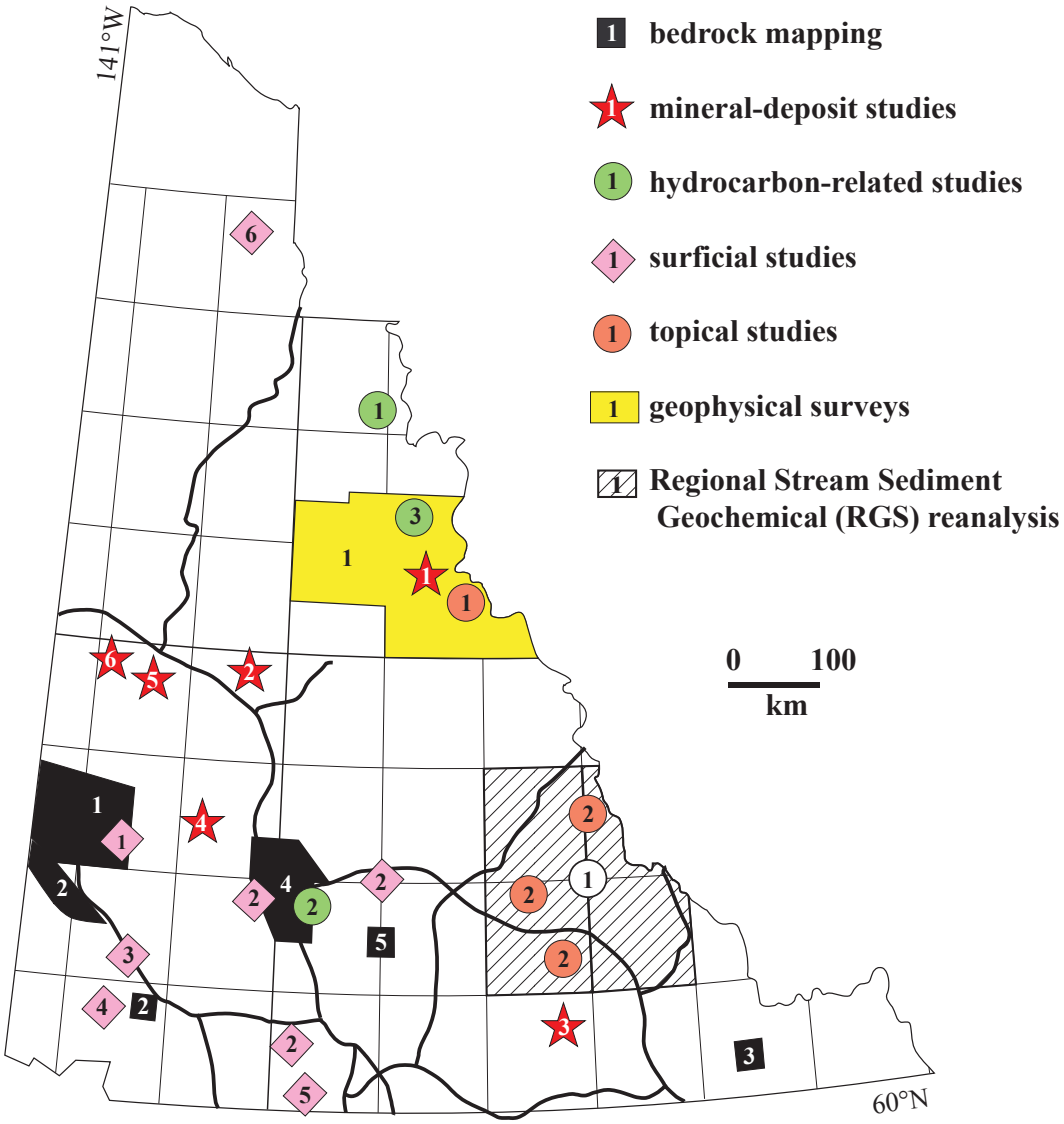


Figure 3. *Field projects carried out or sponsored by the Yukon Geological Survey in 2007.*

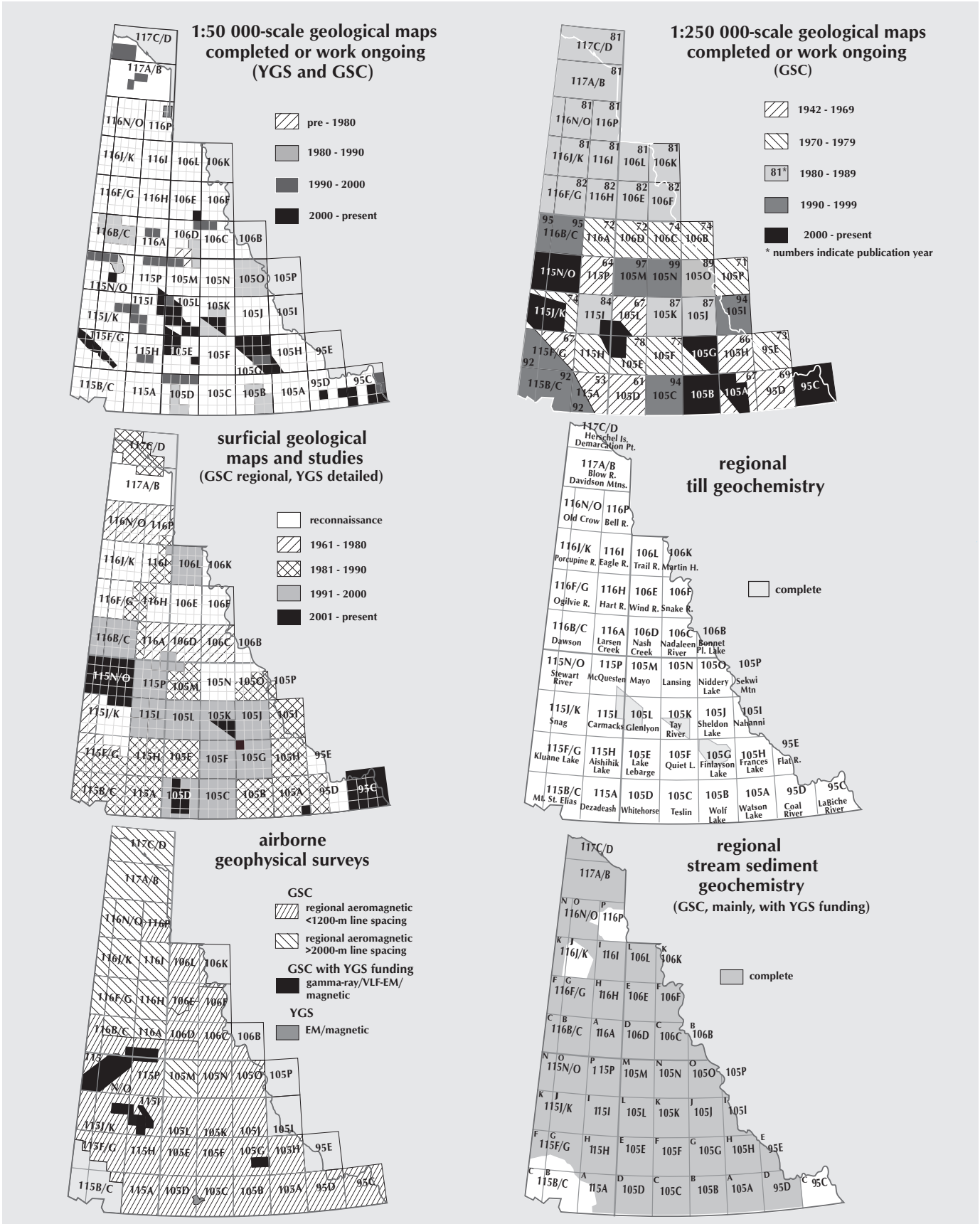


Figure 4. *Summary of available geological maps, and regional geochemical and geophysical surveys in the Yukon.*

3. **Lee Pigage** completed the Otter Creek bedrock geology mapping project in southeast Yukon. This work aims to improve the understanding of the regional geology along the south edge of Selwyn basin. This region contains some of the world's largest zinc/lead deposits including Howards Pass and Faro. The epigenetic Mel barite/lead/zinc deposit is located in the Otter Creek map area. The southeastern portion has significant potential for both sedimentary-exhalative (SEDEX) and epigenetic lead–zinc deposits but remains underexplored because of the lack of outcrop. Lee's work has resulted in significant revisions to the stratigraphic and structural framework of the area that should help to focus future exploration.
4. **Maurice Colpron** partnered with **Grant Lowey**, Don White and Steve Gordey of GSC, and Steve Piercey of Laurentian University to complete a new compilation map and synthesis of the north end of the Whitehorse trough. This work integrates surface mapping with the seismic surveys acquired in 2004. The work demonstrates that the Whitehorse trough is a west-verging fold and thrust belt. This reinterpretation has implications for the hydrocarbon potential of the Whitehorse trough and will form the basis for an assessment of this basin planned for 2008.
5. **Elizabeth Westberg** began a detailed bedrock mapping project in eastern Laberge and western Quiet Lake map areas as part of her M.Sc. thesis supervised by **M. Colpron** and **Dr. H.D. Gibson** through Simon Fraser University. Her study will help constrain the nature and location of the boundary between Yukon-Tanana and Cassiar terranes, and the timing and conditions of deformation and metamorphism in this region. This project will contribute to refining the geoscience database in a region prospective for gold, tungsten and base metals.

MINERAL-DEPOSIT STUDIES

1. **Lara Lewis** continued to gather data on intrusion-related and Wernecke Breccia uranium occurrences for a compilation on uranium exploration in Yukon. New age-dates for uranium mineralization are expected to provide constraints on timing of the mineralizing events.
2. **Jake Hanley** under the supervision of **Dr. E. Spooner** at the University of Toronto is completing a post-doctoral study of the evolution and generation of magmatic fluids in mid-Cretaceous granites in Yukon and their relationship to gold mineralization.
3. **Kirsten Rasmussen** began a PhD thesis under the supervision of **Dr. Jim Mortensen** at University of British Columbia (UBC) which will help wrap up 15 years of research into Cretaceous magmatism in the Yukon and adjacent portions of southwestern Northwest Territories and eastern Alaska by researchers from YGS and the Mineral Deposits Research Unit. During the two-year study, the research data will be brought into the new YGS Igneous Database, and all existing U-Pb age determinations will be finalized and major gaps in both crystallization age and lithogeochemical data will be filled. Comprehensive models will be constructed to explain the evolution of Cretaceous magmatism, and the project will investigate the influence of pre-existing crustal geometry (*i.e.*, 'lower-plate' vs. 'upper plate') during crustal shortening and melting.
4. **Thierry Betsi,** under the supervision of **Dr. David Lentz** at the University of New Brunswick, began Doctoral research on gold occurrences in the southern part of the Dawson Range Mineral Belt. There and elsewhere in the northern Cordillera, there appears to be a close link between Cretaceous magmatism and base- and precious-metal mineralization. They hope to formulate more robust applied exploration criteria for the region by narrowing down the specific timing and regional to local controls on precious metal mineralization.
5. **William LeBarge** continued his partnership with **Professor Vladimir Naumov** and graduate students Ilya Mukhanov, Vitalii Bryukhov and Sergei Gubin from Perm University to study both recent and paleoplacers along the Indian River south of Dawson. Their intention is to investigate the placer gold concentration and fine gold potential of low- to high-level alluvial terraces on the Indian River and to relate this information to a definitive stratigraphic framework. New interpretations of geology and data from this study may help to identify and locate undiscovered bedrock sources of gold, as well as new placer deposits in nearby drainages of unglaciated western Yukon. A complementary study with **Dr. Jim Mortensen** at UBC is using gold geochemistry to investigate the relationship between placer gold and bedrock gold, including possible paleoplacers such as the McKinnon Creek conglomerate.

6. **William LeBarge** and **Dr. Yana Fedortchouk** conducted a pilot program to explore the potential for alluvial diamonds in Yukon. They are visiting selected localities where diamonds have been reported, collecting samples for analyses and consulting with world class diamond experts including Dr. Valentin Afanasiev from the Russian Academy of Sciences in Novosibirsk, Russia. The samples are being processed and studied at the Earth Sciences Department of Dalhousie University for the presence of minerals that accompany diamonds in mature placer deposits.

HYDROCARBON-RELATED STUDIES

1. **Tammy Allen** and **Tiffani Fraser** are in the second year of a four-year project to assess the hydrocarbon potential of the Peel Region in northeastern Yukon. The study involves collaboration with GSC, NTGO (Northwest Territories Geoscience Office), industry and university affiliates. The program includes detailed sedimentological fieldwork, laboratory analyses, and subsurface analysis of existing well-log and seismic-reflection data. Tammy and Tiffani are focusing on the hydrocarbon potential of Upper Paleozoic units including the Canol, Imperial and Tuttle formations, among others. They are looking for source rock and reservoir potential from these units, and will be using these data to update the Government of Yukon's Petroleum Resource Assessment for the region.

2,3. **Grant Lowey** completed fieldwork for his three-year study of the sedimentology, stratigraphy and hydrocarbon potential of the Laberge Group in the Whitehorse trough between Whitehorse and Carmacks. The project will conclude in 2008 with a revised assessment of the hydrocarbon potential of the trough. Grant also undertook a reconnaissance assessment of the Bonnet Plume basin in northern Yukon in anticipation of a longer term study. The basin contains several large thermal coal deposits. This work will provide new information that will help to better assess the coal and gas potential of the basin.

SURFICIAL GEOLOGY MAPPING AND STUDIES

Terrain destabilization related to landslides and permafrost degradation have become a major concern in Yukon in recent years, driven by uncertainty surrounding the distribution and nature of permafrost and the effects of climate change. The influence of climate change on the occurrence of forest fires, glacial retreat and permafrost degradation is of prime importance to terrain stability. YGS is continuing efforts to characterize these issues in order to support impending development, infrastructure maintenance and land-use planning within communities and along infrastructure corridors.

1. **Jeff Bond** and **Panya Lipovsky** began mapping the surficial geology of the last unmapped part of southwest Yukon in Stevenson Ridge and northeast Kluane Lake map areas (NTS 115J and G). The area straddles the all-time limit of Pleistocene glaciation originating from the St. Elias Mountains. Multiple glacial limits are preserved and glacial deposits from early to middle Pleistocene local ice cap complexes are present. The area has excellent potential for the preservation of complex Quaternary stratigraphy and this mapping can significantly increase our understanding of Yukon's recent glacial history. The combination of favourable bedrock geology and large areas of unglaciated terrain make this region prospective for new placer discoveries. It also covers one of the proposed routes for a possible railway, which increases the need for surficial mapping as a base for engineering and feasibility studies.

2. **Panya Lipovsky** has recently studied the distribution, geomorphology and potential impacts of various terrain hazards in southern and central Yukon, using a wide variety of techniques, including detailed field-based geomorphological studies, regional landslide inventories, two-dimensional resistivity geophysical surveys, differential GPS surveys, and Interferometric Synthetic Aperture (InSAR) analysis. Panya is continuing to monitor active permafrost-related failures near Carmacks and Little Salmon Lake. Panya is also assisting Yukon Parks to implement a system for monitoring landslide hazards within the drainage basin located upstream of the Kusawa Lake campground.

3. A large volume of permafrost and surficial geology information (stratigraphy, texture, and ice character and content) exists in borehole logs drilled along the Alaska Highway and the proposed pipeline route over the last 30 years. **Panya Lipovsky** has been compiling this information in a borehole database which so far contains records from over 5000 boreholes drilled along the Alaska Highway between Beaver Creek and Haines Junction. This year, **Megan James,** a M.Sc. student with **Dr. Antoni Lewkowicz** at the University of Ottawa, will continue compiling borehole data from southeastern Yukon in order to analyse recent permafrost changes in the area. This digital GIS-compatible database will be extremely useful for a variety of planning purposes within the corridor, including predicting thaw settlement sensitivity and mapping the distribution of permafrost within the Alaska Highway corridor in greater detail than currently exists.

4. A large rock and ice avalanche occurred on the north face of Mount Steele, southwest Yukon Territory, on July 24, 2007. The ice and rock traveled nearly 6 km, with a vertical descent of over 2150 m, leaving a 3.66 km^2 deposit on the Steele Glacier. This was one of the largest landslides onto glaciers in the Canadian Cordillera since 1899. **Panya Lipovsky** has been working with a team of scientists from across Canada and the US to investigate the landslide using reconnaissance field studies, analysis of seismic records and an airborne Light Detection and Ranging (LIDAR) survey.

5. **Amber Church** began a study in the Wheaton valley southwest of Whitehorse for her M.Sc. thesis under the direction of **Dr. John Clague** at Simon Fraser University. This project sets out to address a series of questions pertaining to late Holocene glacial history and landscape change in the Wheaton River valley. Amber's thesis will primarily focus on the paraglacial-related mass wasting history in the upper reaches of the drainage. This information will help guide future land-use planning in recently deglaciated drainages of southern Yukon and northern British Columbia.

6. **Kristen Kennedy** began a project in the Eagle Plains area of northern Yukon for her M.Sc. thesis at the University of Alberta under the direction of **Dr. Duane Froese**. Regional mapping and stratigraphic and sedimentological studies are being carried out on the surficial materials with the intent to develop a process-based model of flood-channel development for the Eagle meltwater channel. This is a feature related to the late stages of the last continental glaciation (Laurentide); the channel is one of the few places in the area where aggregate resources are known. Aggregate resources are scarce in the area and the studies will help to identify construction materials necessary for part of development of oil and gas resources.

TOPICAL (SPECIALIZED) STUDIES

1. **Francesca Furlanetto** began her M.Sc. thesis research in the Wernecke Mountains at under the direction of **Dr. Derek Thorkelson** at Simon Fraser University. She will examine the age of the detrital minerals of the Wernecke Supergroup and compare the data to published results from other formations of approximately the same age in Canada and other continents. This new information on the Wernecke Supergroup should clarify the geological setting of many mineral occurrences in northern Yukon.

2. **Luke Beranek,** a PhD candidate at the University of British Columbia under the supervison of **Dr. Jim Mortensen**, has been steadily adding to the detrital-zircon age database for Late Paleozoic and Triassic rocks on both sides of the boundary between the North American continental margin sequence and Slide Mountain and Yukon-Tanana terranes. Luke's earlier work has shown that the terranes were already shedding debris onto North America by the Early Triassic, substantially earlier than previously thought. This work is changing our understanding of how and when these terranes formed and collided with one another.

AIRBORNE GEOPHYSICAL SURVEYS

1. **GSC** in collaboration with **YGS** completed an extensive aeromagnetic survey in the Wernecke and Mackenzie mountains that was begun in 2006. Results will be published in early 2008. Funding was provided by DIAND under the SINED program.

REGIONAL STREAM GEOCHEMISTRY

1. Regional stream geochemical coverage of the Yukon is nearing completion, with two areas with low mineral potential remaining outside of parks (Fig. 4). With SINED funding, YGS and GSC are now beginning to reanalyse samples from previous surveys using modern analytical methods. Eventually, data from key areas will be brought to a consistent standard to allow evaluation of data across large areas. Results from NTS map sheets 105G and 105J will be released in early 2008, and from map sheets 105H and 105I later in the year.

LIAISON TO INDUSTRY, FIRST NATIONS AND THE PUBLIC

YGS recognizes the importance of effectively communicating information on the geology and mineral and energy resources of the Yukon to a broad audience that includes industry, resource managers, First Nations and the general public. We are continuing to focus more attention on developing strategies and products that meet these needs.

Mike Burke and Bill LeBarge, our main links to the exploration industry, continued to monitor Yukon hard-rock and placer mining and mineral exploration activity, visit active properties, review reports for assessment credit, and maintain the assessment report library. This year, in order to respond to extraordinary levels of exploration, Lara Lewis and Steve Traynor have also contributed to this effort.

Karen Pelletier, Charlie Roots and other YGS staff continue to respond to increasing demands from educators and interest groups for information on the geology and non-renewable resources of the Yukon.

The types of outreach activities include:

Primary and secondary (* post-secondary)

- classroom visits*
- geology field trips*
- career fairs
- summer camps
- mining week activities

General public

- mining week displays and activities
- public talks
- public field trips

Adult activities

- training for teachers and interpretive staff
- group requests for speakers

In response to numerous requests for simplified geological information, particularly from travelers and educators, we have created various products of interest. These include new commodity and mineral potential brochures, upgrades to our websites, and a Yukon Geological Road Guide. The guide is expected to be available in spring 2008.

In 2007, Panya Lipovsky collaborated with **Dr. Kenji Yoshikawa** at the University of Alaska Fairbanks to establish a long-term permafrost health outreach program in the Yukon Territory. Boreholes were drilled at or near six schools (Beaver Creek, Whitehorse, Dawson, Faro, Ross River and Old Crow) to depths ranging between 3 and 15 m. Air and ground temperature data loggers were installed at each site and will be monitored annually by Grade 6 to 12 students who will post the results on a central website. The boreholes form part of a circumpolar network of permafrost monitoring stations that have been installed at schools throughout Alaska, Greenland, Russia, Mongolia and Scandinavia. In addition to actively involving school students, the program will contribute valuable data for scientific research.

PROGRAMS

YUKON MINING INCENTIVES PROGRAM

The Yukon Mining Incentives Program (YMIP) is administered by Steve Traynor. In 2007/08, funding totalling $719 850 was offered to 45 of 56 applicants. Proposals approved for funding included 4 under the Grassroots – Prospecting module, 17 under the Focused Regional module and 24 under the Target Evaluation module.

Projects targeting gold accounted for 22 of the approved projects and included 14 hardrock targets and 8 placer targets. Copper was the targeted commodity for 11 other projects receiving approval for YMIP funding and another 7 of the approved exploration projects focused on zinc-lead. Of the remaining five proposals approved for funding, three targeted silver, one explored for molybdenum and another for uranium.

MINING AND PETROLEUM ENVIRONMENTAL RESEARCH GROUP

Mining and Petroleum Environmental Research Group (MPERG) is a cooperative working group made up of government agencies, environmental, mining and petroleum resource companies, Yukon First Nations and

non-government organizations (NGOs). It was established to promote research into environmental issues for mining and petroleum development in the Yukon. Participants bring together their resources and knowledge to work cooperatively on industry-related environmental issues and projects. MPERG creates a favourable environment to facilitate finding solutions before environmental problems arise. The Group is funded by YGS and chaired by Grant Abbott, with administrative support from Karen Pelletier.

Five studies were approved for funding for 2007/08:

- Yukon Government, Oil & Gas Management Branch: Stage 2 investigation of seismic lines and associated disturbances and the development of a recovery curve for modeling the cumulative footprint of oil and gas development in North Yukon;
- EDI Environmental Dynamics Inc.: Guidelines for Industrial Activity in Bear Country;
- EDI Environmental Dynamics Inc.: Guidelines for Flying in Caribou Country;
- EDI Environmental Dynamics Inc.: Natural Sources of Contaminants in the Yukon (with a focus on selenium and other organophilic elements);
- Amber Church, Simon Fraser University: Contemporary glacial influences on the hydrology and geomorphology of Wheaton River, Yukon.

INFORMATION MANAGEMENT AND DISTRIBUTION

With the increasing volume of information generated by YGS and others, and rapidly evolving digital technology, the Survey continues to put significant resources into making geological information more accessible. Our website and Map Gallery have both undergone substantial revisions that make them easier to use and provide greater online functionality to the MINFILE and publications databases. A large part of our effort has gone into developing and maintaining key databases and making all of our information internet-accessible. Ongoing activities include support for the H.S. Bostock Core Library and the Energy, Mines and Resources (EMR) library (Elijah Smith Building).

DATABASES

Yukon MINFILE is a database containing over 2600 records on Yukon's mineral occurrences. It is maintained by Robert Deklerk and Ken Galambos. The database is now fully searchable online. As a result, the most current CD-ROM release dates back to November 2005, and will likely be the last CD-ROM of the database we release. Online searching of the database allows the user to access the most complete and up-to-date data, as it links to a non-static dataset. This new direction has required conversion of the database from Access to Oracle and the standardization of data and data fields. Now that two geologists are devoted to MINFILE, plans are to progressively streamline and update the database over the next year.

The Yukon Placer Database, compiled by Bill LeBarge, was updated and a new version was released in May 2007, with detailed updated information from placer mining activity between 2003 and 2006. The database is in Microsoft Access 2000 format and is a comprehensive record of the geology and history of Yukon placer mining. The database contains descriptions of 457 streams and rivers, and 1443 associated placer occurrences of which 130 were updated for this version. It also includes location maps in Portable Document Format (PDF). We are currently working towards bringing this database online.

YGS, in partnership with GSC, is planning to update the Yukon Digital Geology compilation, which was last revised in 2003. The revised database will not only incorporate recent maps but will also conform to the North American Data Model. This standard, which is slowly being adopted by geological surveys across North America, allows users to generate a seamless map from more than one source (*i.e.*, two or more jurisdictions). The model will allow the selection of subsets of data to generate maps defined by lithology, age or map unit. It will also be possible to create generalized maps through a hierarchy of attributes (*i.e.*, Group vs. Formation or Paleozoic vs. Devonian). Jeff Bond and Panya Lipovsky began development of a Digital Surficial Geology Map of the Yukon in partnership with GSC and with SINED funding. The map database will have the same functionality as the bedrock database. Release is planned for early 2008.

The Yukon Regional Geochemical Database 2003, compiled by Danièle Héon, contains all of the available digital data for regional stream sediment surveys that have

been gathered in the Yukon under the Geological Survey of Canada's National Geochemical Reconnaissance Program. It can be viewed online through the Map Gallery and is available on CD-ROM in Microsoft Excel 2000 format and in ESRI ArcView Shapefile format.

The YukonAge Database, compiled by Katrin Breitsprecher and Jim Mortensen at the University of British Columbia with funding from YGS, was updated in 2004. It can be viewed on YGS Map Gallery in a version modified by Mike Villeneuve and Linda Richard of GSC. The database now contains 1556 age determinations derived from 1166 rock samples from the Yukon Territory. It is available in both Microsoft Access 2000 format and as a flat file in Microsoft Excel 2000 format so that the data may be viewed without Microsoft Access.

The Yukon Geoscience Publications Database is available online. It is current and contains more than 8000 references to papers on Yukon geology and mineral deposits, including YGS publications.

All open assessment reports (more than 5000) are now in PDF format and accessible over the internet through the EMR library website. In the Yukon, reports remain confidential for five years. In addition, we have acquired exploration records from the various companies that owned the Faro District. This acquisition includes both records of the Faro District as well as other projects. Most of the records are now available for viewing.

H. S. BOSTOCK CORE LIBRARY

Ken Galambos maintains the H.S. Bostock Core Library. The facility contains about 128 000 m of diamond drill core from about 200 Yukon mineral occurrences. Confidentiality of material is determined on the same basis as mineral assessment reports. Confidential core can be viewed with a letter of release from the owner. Rock saws and other rock preparation equipment are available to the public.

EMR LIBRARY

The Yukon Energy, Mines and Resources Library is the Yukon's largest scientific library and an invaluable resource. It is located in Room 335 of the Elijah Smith Building and is open to the public. The Library provides access to Yukon Mining Assessment reports, maps (geology, topographic and aeromagnetic), and aerial photographs. It holds many geology journals and a good selection of materials on general geology, Yukon geology, and economic geology. The Library is also the access point for Faro exploration records. In addition to geological information, the Library has books, reports and journals in other areas, such as oil and gas, forestry, agriculture, and energy, as well as a very comprehensive collection of Yukon publications.

INFORMATION DISTRIBUTION

YGS distributes information in three formats: 1) paper maps and reports are sold and distributed through our Geoscience Information and Sales office; 2) many recent publications and databases are available in digital format at much lower prices than for paper copies; and, 3) most of our publications are available as PDF files on our website (*www.geology.gov.yk.ca)* free of charge. A catalogue of assessment reports is also available online (*www.emr.gov.yk.ca/library)*.

We are pleased to make spatial data available through our interactive map server; the MapMaker Online (formerly the Map Gallery) can be accessed through the YGS website. We are continuing to improve MapMaker. Users are encouraged to provide feedback and suggest improvements.

Hard copies of YGS publications are available at the following address:

Geoscience Information and Sales
c/o Whitehorse Mining Recorder
102-300 Main Street (Elijah Smith Building)
P.O. Box 2703 (K102)
Whitehorse, Yukon Y1A 2C6

Ph. (867) 667-5200
Fax (867) 667-5150
E-mail: geosales@gov.yk.ca

To access publications and to learn more about the Yukon Geological Survey, visit our website at *www.geology.gov.yk.ca,* or contact us directly:

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To access the EMR Library:
Website: *www.emr.gov.yk.ca/library*
Ph. (867) 667-3111
E-mail: emrlibrary@gov.yk.ca

2007 PUBLICATIONS AND MAPS

YGS ANNUAL REPORTS

Emond, D.S., Lewis, L.L. and Weston, L.H. (eds.), 2007. Yukon Exploration and Geology 2006. 268 p.

Burke, M., Traynor, S., Lewis, L., LeBarge, W., Abbott, G., Colpron, M. and St. Amand, J., 2007. Yukon Mining, Development and Exploration Overview 2006. 79 p.

Galambos, K., Lewis, L.L. and Traynor, S. (compilers), 2007. Yukon Mineral Property Update 2007, 93 p.

LeBarge, W.P. and Welsh, C.S. (compilers), 2007. Yukon Placer Mining Industry 2003-2006, 235 p.

Traynor, S. (compiler), 2007. Yukon Mineral Deposits 2007, 14 p.

YGS DATABASES

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La Commission géologique du Yukon

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SOMMAIRE D'ACTIVITÉS

La Commision géologique du Yukon (CGY ; figure 1) a rebondie d'une période difficile en 2006 et a vue un nombre d'ajustements au personel en 2007 (figure 2). C'est avec plaisir que l'on acceuil le retour de Robert Deklerk aux Services minéraux après avoir vaincu un cancer. Ken Galambos est aussi de retour après quelques années avec le département du développement économique. Il travaille maintenant sur le MINFILE avec Rob. Steve Traynor remplace Ken au Programme d'encouragement des activités minières du Yukon (PEAMY). Les Services minéraux ont aussi grandemment bénéficier de l'aide temporaire de Lauren Blackburn et Catherine Welsh. Notre bureau de vente des cartes est aussi en transition après la retraite d'Ali Wagner au printemps dernier ; elle est remplaçée à titre temporaire par Kim Murray. Notre capacité en terme de l'Information géospatiale a aussi augmentée avec l'arrivé d'Aubrey Sicotte à titre permanent et de Bailey Staffen pour un an. Il ne fut pas possible de combler les postes vacants de géologues de projet et d'évaluation minérale en 2007, mais on demeure optimiste pour l'an 2008. Finalemment, c'est avec plaisir que l'on acceuil en 2008 la Docteure Carolyn Relf comme nouvelle directrice, remplacant Grant Abbott qui prendra sa retraite au printemps. Carolyn amène avec elle une expérience scientifique et administrative exceptionelle, et c'est avec anticipation qu'on attend sa direction.

Un comité de liaison technique à la CGY examine nos programmes deux fois par année. Nous remerçions le président, Gerry Carlson, et les membres du comité pour leur précieux appui et les conseils constructifs qu'ils nous fournissent.

CARTOGRAPHIE DU SUBSTRATUM ROCHEUX

1. **Don Murphy** est en charge d'une étude multidisciplinaires du terrane de Windy-McKinley dans la région de Stevenson Ridge : une région avec peu d'affleurements, donc peu connue. Ce projet est en collaboration avec la Commision géologique du Canada (CGC) et plus particulièrement Cees van Staal. Le projet inclut aussi une étude des dépôts meubles sous la direction de Jeff Bond. Les résultats préliminaires révèlent un potentiel minéral qui était jusqu'à maintenant inconnu. Un relevé géophysique aéroporté est prévu pour l'année à venir.
2. **Steve Israel** a complété la cartographie de la partie occidentale des monts Kluane, où des indices de minéralisation de nickel-cuivre et éléments du groupe du platine tel que Canalask sont présentemment examinés par l'industrie. Les travaux de Steve ont permis d'éclaircir l'histoire tectonique complexe de Wrangellia. Il est aussi impliqué dans une étude de la déformation récente assoçiée à la faille de Denali en collaboration avec Don Murphy de la CGY et des chercheurs de la Commision géologique des États-Unis (USGS).

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3. **Lee Pigage** a complété la cartographie de la région d'Otter Creek dans le sud-est du Yukon. Ce projet a pour bût d'améliorer nos connaissances de la stratigraphie, la structure, et le potentiel minéral à la limite sud-est du bassin de Selwyn. La région entoure le gisement de barityne-plomb-zinc épigénétique de Mel. Le bassin de Selwyn est bien connu pour ses gisements géants de plomb-zinc tel que Howards Pass et Faro, mais sa partie sud-est demeure peu explorée largement à cause de sa faible densité d'affleurements. Lee propose une nouvelle interprétation stratigraphique et structurale qui devrait être utile à la définition de nouvelles cibles d'exploration.

4. **Maurice Colpron** a collaboré avec **Grant Lowey, Don White** et **Steve Gordey** de la CGC, et **Steve Piercey** de l'université Laurentienne, pour complété une nouvelle compilation géologique de la partie nord de la fausse de Whitehorse. Cette compilation intègre la géologie de surface avec le relevé sismique acquit en 2004 et révèle un style de déformation de plis et chevauchements à transport vers le sud-ouest. Cette nouvelle interprétation sera importante lors de la réévaluation du potentiel pétrolier de la fausse de Whitehorse prévue pour 2008.

5. **Elizabeth Westberg** a entamé une cartographie détaillée à la bordure des régions de Laberge et de Quiet Lake dans le câdre de sa maîtrise à l'université Simon Fraser, sous la direction de **M. Colpron** et du Docteur **H.D. Gibson**. Cette étude tentera de préciser la nature du contact entre les terranes de Yukon-Tanana et de Cassiar, et déterminera l'âge et les conditions de déformation et du métamorphisme dans cette région.

ÉTUDES DE GÎTES MINÉRAUX

1. **Lara Lewis** a continué à recueillir des données sur les indices d'uranium assoçiés aux brèches de Wernecke et reliés aux intrusions, dans le cardre d'une compilation portant sur l'exploration pour l'uranium au Yukon. De nouvelles datations de la minéralisation en uranium devraient établir la chronolgie des événements minéralisateurs.

2. **Jake Hanley** et **Ed Spooner** (université de Toronto) ont complété une étude post-doctorale portant sur l'origine et l'évolution des fluides magmatiques, et leurs relations à la minéralisation aurifère dans les granits du Crétacé moyen au Yukon.

3. **Kirsten Rasmussen** a entammé une thèse de doctorat avec le Docteur **Jim Mortensen** (université de la Colombie-britannique [UBC]) portant sur le magmatisme d'âge Crétacé au Yukon et dans les parties adjacentes des Territoires du Nord-Ouest et de l'Alaska. Cette étude est la culmination de plus de 15 ans de recherches par la CGY et les chercheurs de l'unité de recherche en gîtes minéraux de UBC (MDRU). Cette étude contribuera entre autre à la nouvelle base de données sur les roches ignées de la CGY.

4. **Thierry Betsi** a débuté une étude doctorale des indices aurifères de la partie sud du Dawson Range, sous la supervision du Docteur **David Lentz** de l'université du Nouveau-Brunswick (UNB). La minéralisation en métaux de base et précieux semble être assoçiée aux intrusifs d'âge Crétacé dans la région, mais les facteurs contrôlant sa mise en place ne sont pas bien compris.

5. **William LeBarge** a poursuivit sa collaboration avec le Professeur **Valdimir Naumov** et ses étudiants gradués de l'université de Perm en Russie portant sur l'étude des placers récents et ancients de la région de la rivière Indian au sud de Dawson. Le bût de cette étude est de développer une nouvelle interprétation de la géologie dans l'espoir d'identifier de nouvelles sources d'or filonien, de même que de nouvelles ressources placériennes dans les ruisseaux avoisinants. De plus, le Docteur **Jim Mortensen** (UBC) utilise la composition géochimique de l'or afin d'établir la relation entre les dépôts filoniens et placériens, incluant la probabilité de paléoplacers dans le conglomérat de McKinnon Creek.

6. **William LeBarge** et la Docteure **Yana Fedortchouk** ont conduit une étude portant sur l'évaluation du potentiel pour les diamants alluviaires au Yukon. Ils ont échantilloné plusieurs des localités où l'on a rapporté des rumeurs de diamants. Ces échantillons sont présentemment analysés pour la présence de minéraux indicateurs à l'université Dalhousie. Le Docteur **Valentin Afanasiev** de l'académie des sciences russe de Novosibirsk en Russie agit comme consultant sur ce projet.

ÉTUDES PORTANT SUR LES HYDROCARBURES

1. **Tammy Allen** et **Tiffani Fraser** sont dans leurs deuxième année d'une étude de quatre ans portant sur l'évaluation du potentiel en hydrocarbures de la région de Peel, dans le nord-est yukonnais. Ce projet est une collaboration de la CGY avec la CGC, le centre géoscientifique des Territoires du Nord-Ouest, et des partenaires industriels et universitaires. Leurs études sont centrées sur les unités du Paléozoïque supérieur, notamment les formations de Canol, Imperial et Tuttle, dans le bût de déterminer leurs potentiels en termes de roches sources et de réservoir.

2, 3. **Grant Lowey** a complété ses travaux de terrains dans le cardre de son étude de trois ans de la sédimentologie, stratigraphie, et le potentiel en hydrocarbures du Groupe de Laberge dans la fausse de Whitehorse. Ce projet se concluera en 2008 avec une réévaluation du potentiel pétrolier de la fausse de Whitehorse. Grant a aussi entamé une reconnaissance du bassin de Bonnet Plume dans le nord du Yukon dans le bût d'y poursuivre un projet à long terme. Ce bassin renferme plusieurs gisements de charbon et cette étude résultera en une meilleure évaluation de son potentiel en charbon et en gaz.

ÉTUDES DES DÉPÔTS MEUBLES

1. **Jeff Bond** et **Panya Lipovsky** ont entamé la cartographie des dépôts meubles dans les régions de Stevenson Ridge et de Kluane Lake ; région qui enjambre la limite Pléistocène des glaciers émanants des monts Saint Elias. La région renferme plusieures limites glaciaires et semble préserver une stratigraphie du Quaternaire complexe. Cette étude amènera vraisemblablement une meilleure compréhension des glaciations récentes au Yukon. Un socle rocheux favorable et de grandes étendues de terrains non-glaciaires sont propices à la découverte de nouveaux placers dans la région.

2. **Panya Lipovsky** utilise une vaste gamme de techniques afin de déterminer la distribution, géomorphologie et les impacts de divers accidents de terrains dans le sud et le centre du Yukon. Elle continue la surveillance des glissements de terrain reliés à la fonte du pergélisol et aide le département des parcs du Yukon dans l'établissement d'un système de surveillance en amont du terrain de camping du lac Kusawa.

3. Un grand nombre de données sur le pergélisol et les dépôts meubles sont contenues dans les forages géotechniques qui ont été fait le long de la route de l'Alaska au cours des 30 dernières années.
Panya Lipovsky a compilée cette information dans une base de données qui contient maintenant plus de 5000 forages entre Beaver Creek et Haines Junction.
Megan James continuera cette compilation au cours de l'année à venir dans le cardre de sa maîtrise avec le Docteur **Antoni Lewkowicz** de l'université d'Ottawa.

4. Une avalanche de roches et de glace majeure s'est produite le 24 juillet 2004 sur le côté nord du mont Steele dans le sud-ouest du Yukon. Des débris on voyagés sur plus de 6 kilomètres, avec une chute verticale de plus de 2150 mètres, et déposant près de 3,66 kilomètres carrés des roches et de glace sur le glacier Steele. Ce fût le glissement de terrains le plus important dans la cordillère canadienne depuis 1899. **Panya Lipovsky** étudie ce glissement de terrain avec plusieurs chercheurs canadiens et américains.

5. **Amber Church** a débutée une étude de l'histoire glaciare de l'Holocène tardif dans la vallée de Wheaton au sud de Whitehorse. Cette étude formera la base de sa thèse de maîtrise sous la direction du Docteur **John Clague** à l'université Simon Fraser.

6. **Kristen Kennedy** étudie les dépôts meubles dans la région d'Eagle Plain dans le cardre de sa maîtrise sous la direction du Docteur **Duane Froese** à l'université d'Alberta. Cette région renferme une des rares ressources en graviers du nord du Yukon ; ressource qui sera nécessaire pour la construction de routes pour le développement éventuel des ressources en hydrocarbures de la région.

ÉTUDES DÉTAILLÉES

1. **Francesca Furlanetto** a commencé une étude doctorale des minéraux détritiques dans les roches sédimentaires du Supergroupe de Wernecke sous la direction du Docteur **Derek Thorkelson** de l'université Simon Fraser. Ces données permettront de préciser les corrélations entre le Supergroupe de Wernecke et d'autre séquences sédimentaires au Canada et ailleurs, ainsi que l'environnement géologique de plusieurs indices minéraux du nord du Yukon.

2. **Luke Beranek** continue d'augmenter le nombre d'analyses des zircons détritiques dans les roches Paléozoïques tardives et du Trias de part et d'autre de la limite entre la marge continentale nord-américaine et les terranes de Slide Mountain et Yukon-Tanana. Cette étude forme la base de sa thèse de doctorat à l'université de Colombie-Britannique sous la tutelle du Docteur **Jim Mortensen.** Luke a démontré que des débris provenant des terranes s'accumulaient sur la marge nord-américaine dès le Trias précoce, beaucoup plus tôt que l'on le croyait auparavant.

RELEVÉS AÉROMAGNÉTIQUES

1. La CGC, en collaboration avec la CGY, a compléter un programme majeur de relevés aéromagnétiques des monts Wernecke et Mackenzie qui fût commencé en 2006. Les résultats seront disponibles en début 2008.

GÉOCHIMIE

1. La géochimie des ruisseaux est pratiquemment complètée au Yukon. On entame maintenant la modernisation des analyses dans le bût de standardiser ces données à l'échelle régionale. Les résultats de réanalyse des feuillets cartographiques 105G et 105J seront publiés en début 2008, alors que ceux des feuillets 105H et 105I paraîtrons plus tard dans l'année.

DIFFUSION DE L'INFORMATION

La Commission géologique du Yukon diffuse de l'information en trois formats : 1) les cartes et rapports sur papier sont vendus par le Bureau d'information et des ventes en géoscience ; 2) la plupart de nos publications et bases de données récentes sont disponibles en format numérique à prix réduit ; et 3) plusieurs de nos publications sont disponibles sans frais sous format PDF sur notre site internet (www.geology.gov.yk.ca). La liste des rapports d'évaluation de propriétés minières disponibles en format numérique est maintenant aussi offerte par internet (www.emr.gov.yk.ca/library).

Nous sommes fier de diffuser de l'information géospatialle par l'entremise de notre service de carte interactive 'MapMaker' (l'ancien Map Gallery), que l'on accède par le site internet de la CGY. Ce site de carte interactive est continuellement le sujet d'améliorations ; nous apprécions les commentaires des usagers.

Les publications de la Commission géologique du Yukon sont diffusées par le Bureau d'information et des ventes en géoscience. Elles sont disponible à l'addresse suivante :

Bureau d'information et des ventes en géosciences
a/s Conservateur des registres miniers
le ministère de l'Énergie, des Mines et des Ressources
le gouvernement du Yukon

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Robert E. Leckie Award for Outstanding Reclamation Practices

Judy St. Amand[1]
Mining Lands, Energy Mines and Resources

St. Amand, J., 2008. Robert E. Leckie Awards for Outstanding Reclamation Practices. *In:* Yukon Exploration and Geology 2007, D.S. Emond, L.R. Blackburn, R.P. Hill and L.H. Weston (eds.), Yukon Geological Survey, p. 85-88.

QUARTZ RECLAMATION

YUKON NEVADA GOLD CORPORATION

Yukon Nevada Gold Corporation is the recipient of the 2007 Robert E. Leckie Award for Outstanding Quartz Reclamation Practices. They are conducting a large drill program in the Ketza River area near Ross River.

The company has worked hard to design a vigorous cleanup program for this previously abandoned site. Their reclamation efforts include removing waste petroleum, contaminants and chemicals from the site; disposing of 600 empty barrels, removing 100 truckloads of trash, and eliminating scrap metal from waste sites (Fig. 1).

In addition to this waste-removal program, Yukon Nevada Gold has resloped and seeded three waste dump areas, as well as cleaned up the mill, and removed several old buildings. An incinerator now replaces the landfill, and the company has taken an assertive stance with their operators to ensure that sumps are in place for every drill site.

This award recognizes Yukon Nevada Gold's progressive policies and unwavering efforts to reclaim this mine site.

Figure 1. *Overview of the Yukon Nevada Gold Corp. site at Ketza River after removal of tonnes of debris and much reclamation.*

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HONOURABLE MENTION: Selwyn Resources Ltd. has received an honourable mention for the their project at Howard's Pass which straddles the border of Yukon and Northwest Territories. The company carried out an aggressive exploration drilling program in this area to aid in their feasibility study. The majority of the work was done in the Yukon.

This award recognizes this company's commitment to integrate progressive environmental and socio-economic practices into its operations.

Selwyn Resources used very modern equipment and sampling techniques to collect high-quality data for 18 environmental baseline studies, and they also have involved the Kaska Tribal Council in their 'hands-on' environmental fieldwork (Fig. 2). Selwyn Resources has also made significant contributions to Dechen la Camp in order to develop environmental awareness for over 20 young people within the Territory. The company's well rounded programs and 'best practices' are undoubtedly an asset to the mining industry.

Figure 2. *Selwyn Resources Ltd.'s site has been bio-engineered using willows collected from the property. This is one of several areas where these methods have been used for site stability.*

PLACER RECLAMATION

NO NAME RESOURCES INC.

No Name Resources Inc. is the 2007 recipient of the 2007 Robert E. Leckie Award for Outstanding Placer Reclamation Practices. The company has been placer mining at Ten Mile and Thirteen Mile creeks in the Dawson mining district since 2003.

Brent and Rosemary Pasareno took over several properties, which had been mined by previous operators since the 1970s, when no legislation existed to encourage reclamation practices.

They have cleaned both areas, and removed abandoned equipment, tanks and debris to a single storage yard for each site. They have sloped and contoured old mining works and camp areas, rehabilitating the two sites so they can now revegetate naturally (Fig. 3). They are considered exemplary operators.

Figure 3. *This is one of the sites where No Name Resources Inc. has removed the abandoned debris remaining from many years of placer operations. The site has been resloped and contoured in preparation for natural revegetation.*

HONOURABLE MENTION: Ross Mining Ltd. received an honourable mention for the work they are doing on Dominion Creek near Dawson City. Jon Rudolph has continued this company's tradition of responsible and exemplary reclamation works since becoming president.

At this site, stripping, mining and reclamation occur concurrently. The disturbed area is carefully contoured and topsoil is spread to encourage rapid revegetation (Fig. 4). There are extensive areas that are reclaimed with healthy regrowth. Reclaimed areas are aesthetically pleasing and complement the natural valley landscape.

In a pilot project with other private sector partners, Ross Mining is working to establish and market Yukon placer gold as a 'green' product; gold that is mined and produced using the highest environmental and human rights standards. This additional incentive could effect change in the placer industry as a whole and demonstrates the exemplary practices of Ross Mining Ltd.

Figure 4. *Ross Mining Ltd. have dumped topsoil for spreading on this sloped and contoured previously mined site.*