

Yukon Minerals, Oil and Gas Overview 2007

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The following document will give readers an overview of Yukon's mineral and oil and gas industry. It aims to offer a high level look at what is currently happening in the industry and an idea of what is to come. The first section of the document explores Mineral Exploration and Development followed by a section discussing Oil and Gas Exploration and Development.

Mineral Exploration and Development

Introduction

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 8%).

Mine development expenditures also increased to an estimated total of \$72 million. The bulk of development dollars were spent on the Minto copper-gold-silver mine, which achieved commercial production on October 1, 2007 and at the Wolverine zinc-silver-copper-lead-gold 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—only 2% above the feasibility study estimate of \$98.1 million.

Yukon exploration activity at all levels, from grassroots stages to advanced exploration, pre-feasibility and feasibility stage projects experienced an increase in 2007. There were approximately 170 exploration projects in Yukon; 97 had expenditures of greater than \$100,000, with 29 spending more the \$1 million. The remaining projects were regional or grassroots generative projects.

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. The total Yukon placer gold production 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.

Mine Development

The **Minto** mine is a high-grade copper-gold deposit operated by Sherwood Copper Corporation (www.sherwoodcopper.com). Sherwood acquired the Minto project in June 2005 and, 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 expansion from 1,563 tonnes per day to 2,400 tonnes per day was completed on December 15, 2007 ahead of schedule. A pre-feasibility study has also been completed that lays out the basis for a Phase 3 mill expansion, to 3,500 tonnes per day of throughput, and incorporates a significant portion of the Area 2 resources (a new discovery). This expansion will result in a more than 40% increase in copper and gold production compared to the original feasibility study. Current total resources at the Minto mine, at a 0.5% copper cut-off grade, are 16,656,000 Measured and Indicated 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 and 2.05 g/t Ag (National Instrument 43-101 standard (NI)). The 2008 production at Minto is forecast at 24.9 million kilograms (55 million lb) copper and 746,472 grams (24,000 ounces) gold. Exploration to expand and upgrade known resource areas commenced in the spring.

Yukon Zinc Corporation (www.yukonzinc.com) further advanced the **Wolverine** project in 2007. This included receiving both a Type A Water Licence and a Quartz Mining Licence allowing the company to construct and operate the minesite until 2027. Completion of the all-weather tote road connecting to the Robert Campbell highway has significantly upgraded access to the property. Civil work consisting of site preparation for the construction camp was also completed. Final construction of the project will occur when final project financing is secured and a production decision is made. On May 6, 2008 Yukon Zinc Corp. approved an acquisition agreement pursuant to which Jinduicheng Molybdenum Group Ltd. and Northwest Nonferrous International Investment Company Ltd. will acquire, for cash consideration, 100 per cent of the outstanding shares, options and warrants of the company by way of plan of arrangement. The transaction is conditional on approval of 66 2/3 percent of the votes cast by shareholders at a meeting of Yukon Zinc shareholders, receipt of court and regulatory approvals, waiver of the Yukon Zinc shareholder rights plan, and other customary provisions such as no material adverse change. Jinduicheng is the largest producer of molybdenum and associated products in Asia and reportedly the third largest molybdenum producer in the world. It is publicly traded on the Shanghai Stock Exchange after a recent \$1.3 billion (U.S.) initial public offering. Jinduicheng's operations are concentrated in Shaanxi province, China. Northwest represents the Shaanxi state geological bureau. In terms of

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revenue and technical capacity, Northwest is one of the top five exploration and mining bureaus in China.

Advanced Exploration

Numerous exploration programs were conducted in 2007 with excellent results. The following is a brief summary of some of the highlights from that exploration and company intentions for 2008.

Yukon Nevada Gold Corporation (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 property. Just under 50,000 m of diamond drilling was completed in 363 holes making this the Yukon's largest drilling program in 2007. In addition to the upgrading of known resource areas, several new areas of mineralization have been discovered in the drilling. The company used drilling results from 2006 and 2007 to update the resource calculation on the property. As of year end 2007, Measured and Indicated resources are now 4,081,700 tonnes grading 4.93 g/t Au and Inferred resources are 1,075,600 tonnes grading 3.26 g/t Au. Yukon Nevada is completing a feasibility study and is planning to continue their drilling program in 2008.

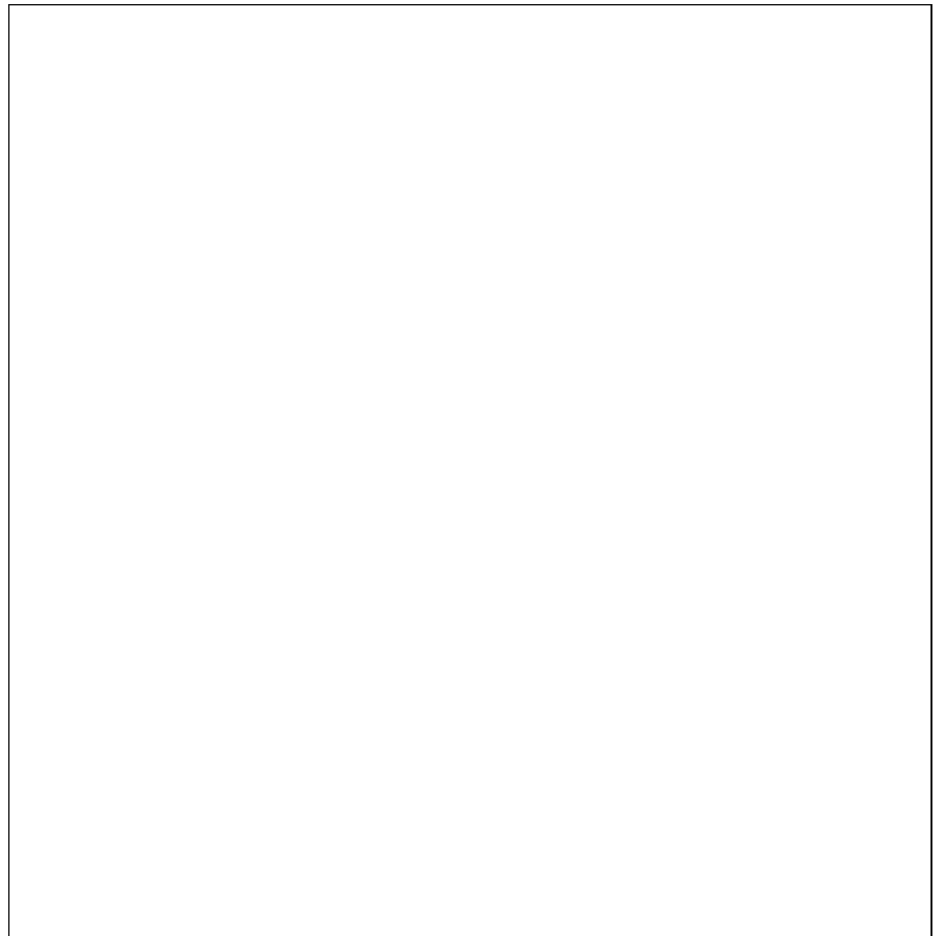
Dynamite Resources Ltd. (www.dynamiteresources.com) explored the **Mike Lake** property that covers a number of intrusive-related gold targets associated with Cretaceous Tombstone Suite intrusive stocks, dykes and sills. The upper skarn ridge area was drilled for the first time and resulted in a new 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. Dynamite will be conducting a large drilling program on this new discovery in 2008.

StrataGold Corp. (www.stratagold.com) discovered a new gold zone at its **Dublin Gulch** property. The Shamrock zone is located 3 km north northeast of the Eagle zone gold deposit which contains an Indicated resource of 66.54 million tonnes grading 0.916 g/t Au and an Inferred resource of 14.39 million tonnes grading 0.803 g/t Au (2,331,000 ounces or 75.5 million grams of contained gold). 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. Drilling was successful in intersecting additional mineralization outside of the resource area at the Eagle zone deposit. The success of the 2007

exploration has prompted the company to conduct a large 8,500 m drill program aimed at expanding the deposit and testing the newly discovered zones in 2008.

Northern Freegold Resources (www.northernfreegold.com) completed an extensive program on its **Freegold** Mountain property including diamond drilling of 57 holes totaling 11,428 m on six different targets. The Nucleus zone consists of Cretaceous granodiorite sills intruding metasedimentary rocks intruded by later quartz-feldspar porphyry dykes. 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. The best drill 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. At the **Goldy** zone, epithermal-style quartz veining and silicified zones associated with an altered quartz-feldspar porphyry body was intersected returning 53.75 m averaging 3.5 g/t Au, including an interval grading 15.45 g/t Au over 9.3 m. At the **Tinta Hill** zone an intrusion-hosted polymetallic vein deposit was expanded along strike and to depth. 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. The company commenced their 2008 exploration program in April and is planning on drilling a minimum of 25,000 m on a number of different targets.

Tagish Lake Gold (www.tagishgold.com) continued its year-round underground exploration at the **Skukum Creek** property, located



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80 km southwest of Whitehorse. The company is conducting pre-feasibility work examining the economics of a 270,000 tonne-per-year operation producing 1,368 kg (44,000 ounces) of gold and 31,100,000 kg (1 million ounces) of silver per year.

Alexco Resources Corporation (www.alexcoresource.com) continued with a comprehensive exploration program on its Keno Hill project. Over the past century, the silver mines at **Keno Hill** have produced approximately 214 million ounces (6,656,000 kg) silver at an average grade of 40.4 ounces/ton (1,389 g/t) Ag, 5.62% Pb and 3.14% Zn. The company released a new NI 43-101 resource calculation for the historic Bellekeno mine. The total Inferred resource is stated at containing 537,400 tonnes of 1,016 grams per tonne Ag, 13.5% Pb, 10.4% Zn and 0.4 g/t Au. Although exploration efforts have focused on Bellekeno several other targets have been tested including Silver Queen, Onek, Silver King and Husky Southwest all producing excellent results. Alexco has begun their 2008 exploration program which includes a 660 m decline and approximately 2,300 m of underground rehabilitation at the historic Bellekeno mine. A total of 23,000 m of drilling is planned for Bellekeno and other targets in the district. The company's goal is to achieve a production decision for the Bellekeno deposit by early 2009.

Selwyn Resources Ltd. (www.selwynresources.com) completed an approximately \$25 million program on its **Selwyn** zinc-lead property in 2007. The program focused on expanding high-grade zones and upgrading mineral resources. The company also continued comprehensive baseline environmental studies and a technical program focused on metallurgy, mining techniques and project infrastructure. 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 of 10.2% Zn and 3.91% Pb, including 4.3 m grading 35.97% Zn and 16.01% Pb. An upgraded resource calculation based on the 2007 drilling has expanded the deposit to an Indicated resource of 154.35 million tonnes grading 5.35% Zn, 1.86% Pb and an Inferred resource of 231.54 million tonnes grading 4.54% Zn, 1.42% Pb making the deposit one of the largest zinc-lead resources worldwide. Work will continue in 2008, with environmental assessment, permitting, First Nations consultation, engineering and a modest exploration program targeting higher grade areas.

The **Andrew** zinc-lead-silver-germanium deposit was acquired by Overland Resources (www.overlandresources.com), an Australian-based exploration company. 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. Several drillholes returned significant results and the deposit remains open in all directions. Hole AN07-30, the deepest hole on the deposit, returned 10.9% Zn and 20.2 g/t Ge over 13.0 m. Overland is conducting a feasibility study in 2008 and has begun a 40,000 m drill program to expand the Andrew deposit and test other exploration targets on the property.

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** deposit. The NI 43-101 resource estimate at a 0.25% total Cu cut-off grade is 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. 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. The company is focusing on permitting of the project in 2008.

North American Tungsten Corporation Ltd. (www.natungsten.com) is conducting a definitive feasibility study on the **Mactung** deposit. The Mactung deposit has NI 43-101-compliant Indicated resources of 33.0 million tonnes grading 0.88% WO₃ (tungsten oxide) and an Inferred mineral resource estimate of 11.9 million tonnes grading 0.78% WO₃ making this the largest tungsten deposit outside of China. China's largest non-ferrous metals producer, Hunan Nonferrous Metals Corporation acquired a private placement in North American Tungsten to raise approximately \$19.4 million for development of the MacTung deposit.

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** property (Logtung deposit). The Indicated resource is 140.8 million tonnes grading 0.10% WO₃ and 0.026% Mo and the Inferred mineral resource is estimated at 253.2 million tonnes grading 0.10% WO₃ and 0.022% Mo. Largo is conducting a scoping study in 2008 and additional exploration and engineering and environmental studies on the project which is one of the world's largest known tungsten-molybdenum porphyry systems.

OIL AND GAS EXPLORATION and PRODUCTION

Introduction

Yukon has eight onshore sedimentary basins containing an estimated 17 trillion cubic feet (Tcf) of natural gas and 770 million barrels of oil with offshore estimates in the Beaufort Sea (north of Yukon) of 53 Tcf of natural gas and 4.5 billion barrels of oil.

New dispositions of oil and gas rights in the Eagle Plain basin, opportunities in southeast Yukon, and the construction of the Mackenzie Gas Project and/or the Alaska Highway Pipeline Project would significantly expand Yukon's oil and gas sector.

Oil & Gas Resources Branch (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.

Other OGR activities in 2007 included:

- Participation in preparations for the Mackenzie Gas Project and the Alaska Highway Pipeline Project;
- Development of *Oil and Gas Royalty Regulations*;

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- Cooperation with the Yukon Geological Survey in field and analytical work to discover potential source rocks and petroleum reservoir rocks; and,
- Development of new rights disposition processes.

Natural Gas Production

Production of natural gas yielded more than 80,000 103m³ from two wells in southeast Yukon.

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 10³m³ of natural gas in the period from January 2007 to October 2007.

The field is in the latter stages of its life with gas production and reservoir pressure declining 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.

Yukon's Oil and Gas Rights Disposition Process

In response to First Nations and industry recommendations, the Government of Yukon has developed a more streamlined and efficient process for granting oil and gas rights.

The disposition process can now be completed in approximately five months.

This new process provides an attractive investment climate for future development by creating:

- a disposition process that is efficient, streamlined and offers certainty;
- a disposition process that has a two-year rolling schedule which will provide companies with an opportunity to plan ahead; and,
- a minimum work commitment which has been lowered from \$1 million to \$400,000.

This new disposition process runs twice annually. The first process 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. This is the largest single disposition of oil and gas rights in Yukon's history.

AustroCan Petroleum Corporation was the successful bidder of the second disposition process on one location in the Peel Plateau and Plain oil and gas basin, with a bid of \$2.28 million.

2008 Exploration

Northern Cross Limited is currently in the application process for the drilling of two wells (NCY-Dalgliesh-F-19, NCY-McParlon-O-74) in the Eagle Plains Region during the summer of 2008. Both of these wells are in close proximity to the Dempster Highway (F-19 10.4km away, O-74 6.8km away) and will be accessed via two short access routes to be constructed using matting to disperse compressional forces.

Pipelines

Both the Mackenzie Gas Project (MGP) and the Alaska Highway Pipeline Project (AHPP) offer enormous economic opportunities for the North.

The Alaska project will generate an estimated 375,000 person years of employment over 24 years, while the Mackenzie project estimates are 181,000 person years over the same 24-year span.

The construction of these two projects will also inject significant dollars into the North American economy. These projects would provide access for Yukon natural gas to southern markets.

Alaska Highway Pipeline Project (AHPP)

The *Alaska Gasline Inducement Act (AGIA)* State of Alaska legislation (intended to encourage the construction of an Alaska natural gas pipeline) is in the process of reviewing the TransCanada PipeLines Ltd. proposal which would follow the Alaska Highway through Yukon to southern markets. ConocoPhillips and BP have also announced a similar project, the Denali Pipeline. Their proposed pipeline would also follow the Alaska Highway.

Yukon has seven AHPP interests which include the following:

- 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.

Yukon is also working closely with other jurisdictions that would be affected by an Alaska Highway pipeline. One of these initiatives 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 which the Alaska project may create.

Mackenzie Gas Project

Running the length of Yukon's eastern border, the Mackenzie Gas Project is also important for Yukon's stranded natural gas resources.

Yukon's interest in the construction of the Mackenzie 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. A pipeline would provide a means for Yukon gas to be moved to southern markets competitively.

Oil and Gas Royalty Regulations

In conjunction with Yukon First Nations and industry representatives, Yukon has just completed development and promulgation of the *Oil and Gas Royalty Regulations*. The proposed regulations are fair, competitive and simple to administer and will provide economic certainty to industry.

In short, Yukon is proposing a royalty rate of between 10 to 25 percent of the gross value of oil and gas production. The actual royalty rate will vary depending on the price of oil and gas, but a lower rate of 2.5 per cent will apply to the initial production from each well. **R**