

An Official Publication of the Manitoba Prospectors and Developers Association Inc.

# 007 PROJECT

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Published by: **DEL Communications Ltd.** Suite 300, 6 Roslyn Road Winnipeg, MB R3L 0G5 Toll Free: 1.866.831.4744

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Publications mail agreement #40934510 Return undeliverable Canadian addresses to: **DEL** Communications Inc. Suite 300, 6 Roslyn Road Winnipeg, MB R3L 0G5 Email: david@delcommunications.com

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## PRESIDENT'S MESSAGE **David J. Busch** MPDA 2011

The year 2010 was one of consolidation in our industry. Stronger commodity prices have generally meant activity levels have stabilized and started to improve. Continued growth is strongly dependent on commodity prices.

Membership in the MPDA has grown to the highest numbers in years and the organization has strengthened its financial health and structure. Among the activities we have participated in are:

- Mines Act Review. The new act will establish "map staking" and substantially change the way exploration is conducted in the province. Our efforts have been to ensure prospectors and developers are able to continue to explore and aid in the discovery and development of the wealth of Manitoba.
- The MPDA commissioned a study on the mineral potential of the East Side of Lake Winnipeg. Copies of this report were sent to all First Nations Chiefs and councils in the area affected.
- The MPDA has issued a scholarship for the first time.
- The MPDA wrote a letter to the Minister of Conservation after our opinion was sought on the Fisher River Park expansion.
   We urged the minister to utilize the MELC process that was established to deal with these matters and not rely on political expediency.
- MPDA members were active in promotional activities at The Forks during Manitoba Mining Week.
- The Web page is turning into a useful tool in communicating with members and the general public.

• Significant progress is being made in documenting materials for eventual donation to the archives at the University of Brandon.

The success of our organization is highly dependent on members' willingness to volunteer time and resources to our cause. Our cause is to have a healthy and vibrant prospecting and development sector in the province. Indifference and ignorance by the public, politicians, bureaucracy and competing interests threaten access to land that is essential for our existence.

Our efforts must continue to be to educate the general public and explain to bureaucrats the effects of policies and initiatives involving crown land. If anything, 2010 was a draw in this struggle. Without substantial sustained efforts by MPDA members our industry and the long-term wealth and prosperity of the province remains under threat.

After a number of years of thought it has occurred to me that we are not involved in an open field conventional battle between good and evil or reason versus chaos. No, this is a guerrilla conflict and we are the standing conventional army being constantly attacked and harassed at the time and choosing of the forces of ignorance and misguided do-goodism. If anyone knows how to win this kind of battle please advise. There should be no doubt that this is an ongoing struggle for our very existence.  $\Box$ 

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## MANITOBA 2010 EXPLORATION AND DEVELOPMENT HIGHLIGHTS

Base and precious metals by Chris Beaumont-Smith, Minerals Policy and Business Development Branch; specialty/industrial minerals by Jim Bamburak, Manitoba Geological Survey, Manitoba Innovation, Energy and Mines. Current as of October 2010

Manitoba's mining industry has experienced a modest recovery from the global economic downturn that occurred in the latter half of 2008 and in 2009. Exploration and deposit appraisal expenditures totalled \$97.8 million in 2009, down from the 2008 peak of \$152 million, and are projected to drop slightly in 2010 to \$85.9 million. This drop does not reflect the considerable exploration and development successes in Manitoba's minerals sector in 2010.

#### **BASE METALS**

Base-metal exploration and development highlights in 2010 reflect optimism, resulting from exploration success, and sadness generated by the closure of HudBay Minerals Inc.'s Flin Flon copper smelter. On June 11th, 2010 the Flin Flon copper smelter cast its final anode, ending more that 80 years of service. This was partially offset by a number of very positive exploration successes and announcements by HudBay.

HudBay Minerals maintained an aggressive exploration and development program in the Flin Flon–Snow Lake greenstone belt and announced two development projects in 2010. The company is proceeding with the 777 North expansion project, which will provide additional feed to its Flin Flon concentrator and zinc plant and additional exploration opportunities.

HudBay also announced a positive production decision for their Lalor deposit in Snow Lake, which will result in the construction of a 3500 tonne per day underground mine and upgrades to their Snow Lake concentrator. The project is projected to cost \$560 million with initial production commencing in late 2012 and full production in 2014. The Lalor deposit consists of three zones of stacked mineralization comprising the Base Metal, Gold, and Copper-Gold Zones. The Indicated base metal resource stands at 13.3 million tonnes grading 8.87% zinc with an inferred resource of 4.8 million tonnes grading 9.25% zinc. The Gold Zone inferred resource is 5.4 million tonnes grading 4.7 grams per tonne gold. HudBay anticipates additional gold resources will be delineated with further exploration to be conducted underground. Conceptual estimates indicate the potential for an additional 5.1 to 6.1 million tonnes grading between 4.3 and 5.1 grams per tonne for the Gold Zone and an additional 1.8 to 2.2 million tonnes grading 5.8 to 7.0 grams per tonne gold and 3.2% to 4.0% copper for the Copper-Gold Zone.

HudBay is advancing two exploration projects with jointventure partners that the company anticipates will proceed to the feasibility study stage. Along with partner VMS Ventures Inc., HudBay continues to drill the Reed Lake copper discovery south of Snow Lake and anticipates completing a National Instrument (NI) 43-101–compliant resource estimate for the deposit by the end of 2010.

HudBay also partnered with Halo Resources Ltd. on the Lost Lake joint-venture project in the Sherridon area. HudBay has initiated an accelerated evaluation program for the Lost deposit, including a 12-hole drill program and metallurgical testing to assess the feasibility of developing the deposit. HudBay has started pre-feasibility engineering, which is expected to be completed in early 2011.

Rockcliff Resources Inc. continued the evaluation of the Rail deposit, southwest of Snow Lake, with a 10-hole drill program. Rockcliff was successful in extending high-grade copper mineralization south of the previously known limit of mineralization and borehole geophysics detected a large, untested anomaly continuing south. Highlights of the most recent drilling include 5.05% copper over 3.62 m and 5.05% copper over 4.05 m. The Rail deposit remains open in all directions and has been intersected over a strike length of approximately 800 m. Rockcliff also drilled borehole targets on their Reed Lake volcanogenic massive sulphide (VMS) property and began initial fieldwork in preparation for a winter drill program at their Tower VMS property, north of Grand Rapids.

VMS Ventures Inc. continued to explore their Reed Lake property beyond the Reed Lake discovery zone. Geophysical



surveys identified additional electromagnetic (EM) targets at the Tower zone, east of the Reed Lake deposit, which forms part of the Reed Lake "Super Zone". The subsequent phase 2 Tower Zone drill program, which targeted seven surface pulse-EM survey (DEEP-EM) anomalies, was halted pending the conclusion of joint-venture negotiations with HudBay Minerals. An initial 5-hole drill program at the Copper Project failed to return economic mineralization and Manitoba government forest fire bans restricted VMS Ventures' summer exploration plans. The postponed geophysical and follow-up drill programs for their Sails Lake, Morton Lake, Puella Bay and Copper projects are planned for later this year.

Vale continues with the modernization program at its Thompson nickel refinery through the installation of automation equipment. The \$116 million project will allow the company to enhance the efficiency of its current electrolytic nickel production and improve working conditions. The first phase of an initiative to upgrade its tailings management area involving a \$25 million program to install new tailings lines and pumps to reduce water consumption also continues.

Crowflight Minerals Inc. temporarily suspended production at their Bucko Lake Nickel Project near Wabowden on October 1, 2010. Production was stopped to facilitate the introduction of the company's own underground mining equipment and team and to make adjustments to address certain operational issues. The shutdown follows the return to commercial production levels during the second quarter following a three-month production shutdown that began in November, 2009. The 2009 shutdown was required to adjust mining methods in order to deliver and sustain production of 1000 tonnes per day (tpd). The change in production methods improved grade control and increased head grades resulting in an increase in the average grade processed and in the amount of concentrate produced. Crowflight has successfully increased the Proven and Probable Reserves at Bucko to 3.71 million tonnes of 1.45% nickel, an increase of 22% in contained nickel from the 2007 feasibility study. Crowflight also has at least four other satellite nickel deposits in the Wabowden area that are within trucking distance of the mill. The company reported that recent drilling at the nearby M11A deposit was encouraging.

In the wake of positive results from a feasibility study for its Minago nickel deposit north of Grand Rapids, Victory Nickel Inc. continues to advance the project towards development with the initiation of the permitting process. The Definitive Feasibility Study (DFS) was based on mining open-pit reserves only and concluded that capital costs for development of an open pit and concentrator would be \$596 million. The DFS incorporated Proven and Probable Reserves of 25.2 million tonnes grading 0.43% nickel with average annual ore production of 3.6 million tonnes over a seven-year production life. The study also included the production of frac sand which could be a by-product of processing part of the overburden. The company plans to conduct 6000 m of drilling in 2010 to increase reserves. Recent drilling identified high-grade zones



within the open-pit shell that were originally thought to be waste. Grades ranging up to 1.34% nickel over 20.94 m were returned, including 18.37 m grading 1.14% nickel, 24.89 m grading 1.04% nickel and 31.21 m grading 1.02% nickel. The addition of this mineralization will upgrade the reserve base, enhance the project economics and demonstrate the potential for the extension of the projected mine life.

Prophecy Resources Corp. acquired the Lynn Lake nickel project from Victory Nickel and initiated a 3000 m drill program to test five recently identified induced polarization (IP) anomalies. The Lynn Lake nickel mine produced 20 151 146 tonnes of ore at an average grade of 1.023% nickel and 0.535% copper from two mines over the 24-year period. The remaining resource is estimated at 17 million tonnes with an average grade of 0.62% nickel and 0.31% copper.

Mustang Minerals Corp. continues work on the ongoing feasibility study of the Maskwa deposit near Lac du Bonnet and exploration work at the nearby Mayville property.

#### **PRECIOUS METALS**

San Gold Corporation continues to experience improved operational performance and exploration success at its Rice Lake and Hinge mines in Bissett. San Gold reported record production levels in 2010 and their first operational profit in late 2009. The company continues to develop and produce from the high-grade 98, 98 FW and RL East veins at the eastern ends of the 26 and 28 levels of the Rice Lake mine and from the Hinge mine. The improved operational performance is the result of increased production levels from the high-grade, ramp-accessible Hinge mine. Hinge mine ramp development successfully intersected the adjacent 007 zone at the 240 m level and bulk sampling and development are underway in preparation of production. An aggressive, multi-year exploration program has delineated a number of high-grade, nearsurface gold zones within easy Hinge zone ramp access. These include the 007, Cohiba, L-13 and Emperor zones. The measured and indicated mineral resources stand at 270,100 ounces of gold for the Rice Lake mine and 197,700 ounces of gold for the Hinge mine. The Inferred resources stand at 439,010 ounces of gold for the Rice Lake mine and 538,700 ounces of gold for the Hinge mine. The total reported project resource is 828,105 ounces of gold for the measured and indicated category, and 1,814,870 ounces of gold for the inferred.

Precious metal exploration and development in Manitoba has largely focused on the re-evaluation of past-producing gold mines. This year saw a marked increase in this exploration strategy with the evaluation of four past-producing gold mines.

Alexis Minerals Corporation acquired Garson Gold Corp. in a friendly takeover in late 2009 and completed a feasibility study for the reopening of the Snow Lake mine (formerly the New Britannia mine) in Snow Lake. The results of the feasibility study demonstrate positive economics for reopening the Main Mine and the No. 3 Zone with a combined 2000 tonnes per day production rate. The mine is forecast to produce



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80,000 to 90,000 ounces of gold per year and operate for a minimum of six years. Alexis has secured \$60 million in project financing and plans to begin pre-production development in January 2011. Gold production is scheduled to begin in early 2012.

St. Eugene Mining Corporation Ltd. completed the acquisition of the Tartan Lake gold mine northeast of Flin Flon. The Tartan Lake mine produced 45,000 ounces of gold between 1987 and 1989. St. Eugene is upgrading the Tartan Lake historic gold resources base to a NI 43-101– compliant resource in advance of mine de-watering and the initiation of an underground exploration and test mining program.

Auriga Gold Corp. is acquiring the past-producing Puffy Lake gold mine and adjacent Nokomis gold property south of Sherridon from Pioneer Metals ULC. Auriga has renamed the project "Maverick Gold" and intends to mount a substantial drill program and anticipates "near-term" gold produc-



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Following the recapitalization of the company, Carlisle Goldfields Limited is planning to restart exploration activity at the MacLellan Gold mine in Lynn Lake. The MacLellan gold mine produced 144,000 ounces of gold between 1986 and 1989. Carlisle released an updated NI 43-101-compliant open pit and underground resource estimate in August that increased the measured and indicated resource to 5.3 million tonnes grading 3.85 grams per tonne gold equivalent (includes silver) and the inferred resource to 4.4 million tonnes grading 3.56 grams per tonne gold equivalent. The total resource is reported at 1,035,200 ounces of gold and 9,344,000 ounces of silver. The MacLellan mineralization remains open along strike and down dip. Carlisle is planning a 120 line-km IP survey over the entire deposit area to assist follow-up drill targeting.

Bison Gold Resources Inc. continued to explore the past-producing Ogama mine on their Central Manitoba property southeast of Bissett. Bison completed a 9-hole drill program that successfully returned high-grade gold results from the Ogama Vein 1. Assays up to 34.99 grams per tonne gold over 4.73 m were intersected approximately 175 m northwest of the historic mine workings. Bison is encouraged by the strike continuity and apparent increase in the width of the Ogama Vein 1 northwest of the mine. A follow-up airborne radar elevation (LIDAR) survey is planned for the property. The past-producing Ogama-Rockland mining operation produced 45,440 ounces of gold from 1948 to1951.

Copper Reef Mining Corporation conducted drilling at their Gold Rock property west of Snow Lake. The Gold Rock zone lies on strike on the same shear zone hosting the North Star gold deposit. The 21-hole drill program confirmed down-dip mineralization conti-

MANITOBA HIGHLIGHTS

nuity of the Gold Rock vein and successfully delineated additional structures parallel to the Gold Rock vein. The new Richard vein, northeast of the Gold Rock vein, returned assays up to 14.4 grams per tonne gold over 3.3 m.

Wildcat Exploration Ltd. maintains an aggressive gold exploration program on their expanding portfolio of Rice Lake gold projects. The company conducted drill programs on the Jeep and Poundmaker properties and advanced a number of other properties towards the drilling stage. Wildcat also announced the acquisition of the South Thompson Nickel Property, located approximately 55 km south of Thompson in the Thompson Nickel Belt, through an option agreement with Anglo American Exploration (Canada) Limited. Wildcat can acquire 100% interest in the property by funding \$2 million of exploration expenditures over a five-year period.

#### SPECIALTY/INDUSTRIAL MINERALS

In December 2009, Westcore Energy Ltd. reported that it had entered into a binding agreement with Goldsource Mines Inc. in which the latter would apply its proprietary Coal Identification Matrix (CIM) to Westcore's Fugro airborne geophysical data for 100,000 Westcore common shares, plus other incentive agreement terms. Under the agreement, Goldsource provided Westcore with specific drill sites having a high probability of intersecting significant intervals of coal; three of these targets (Cyclops - Hole BD10-02; Ambit - Hole BD10-03; Athena - Hole BD 10-04) successfully returned very thick intercepts of coal during the 2009/2010 winter drilling program. The coal ranked from Lignite A to Sub-bituminous C.

In May 2009, Gossan Resources Limited successfully completed Phase I bench-scale testing of the Zuliani (high-efficiency magnesium) process for its Inwood Magnesium Project. Phase II tests designed to facilitate a complete mass balance and to confirm the quality of magnesium metal (and by-products), were completed in September 2009. In April 2010, Phase III bench-scale tests confirmed that the Zuliani Process produces magnesium metal, under atmospheric conditions, at exceptionally high raw-material efficiencies. Phase IV testing, with a hundred-fold increase in experimental scale compared to Phase III, was to begin in 2010.

Gossan Resources drill-outlined two zones of high-purity silica sand near Manigotagan on the east shore of the south basin of Lake Winnipeg. The zones extend for over 400 and 600 m in length and have thicknesses exceeding 5 m, and widths of over 15 m. In May 2010, Gossan Resources completed a series of proppant tests that indicated the sand exceeds all of the minimum oil and gas industry frac sand The standards. company also announced that a marketing study is underway to evaluate its use in the glass, construction metallurgical flux and other markets; in addition to frac sand.

In September 2009, Victory Nickel Inc. announced it had drilled a (NI 43-101–compliant) indicated resource of 15 million tonnes of Ordovician Winnipeg Formation silica sand (containing 84% marketable frac sand) above its Minago Nose nickel deposit, south of Thompson. The sand, which forms part of the overburden, must be removed before the nickel can be openpit mined. As of September 2010, 23 additional holes, passing through the sand, had been drilled, and another 60 holes are planned for completion by the end of May 2011.

Tantalum Mining Corporation of Canada Limited (TANCO) is currently mining pollucite, which contains cesium, to produce cesium formate (a drilling fluid for the petroleum industry). At least nine years of pollucite reserves have been identified underground; and additional resources are available on surface in tailings ponds. Staff levels have increased back to 67 employees, and could increase by another 30, following layoffs in 2009. Resumption of spodumene production is also contemplated. □

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## **MANITOBA MINERAL SECTOR HIGHLIGHTS**

#### SECTOR PROFILE

#### Size:

The mineral industry is the second largest primary resource sector of the Manitoba economy. The 2009 value of production for Manitoba's mineral industry totalled over \$1.9 billion, comprising:

- Metallic minerals (\$1.18 billion or 61%) including Nickel (27.4%), Copper (14.6%), Zinc (7.3%), Gold (7.2%), and Other Metals (4.2%),
- Industrial Minerals (\$144 million or 7%), and
- Petroleum (\$620 million or 32%).

In 2009, the mineral industry accounted for approximately 4.7% of provincial GDP and 7.8% of total exports. Employment in Manitoba's mineral industry averaged 5,400 in 2009, a 3.8% increase from 2008. In 2009, Manitoba's mineral industry invested \$461.1 million in capital expenditures.

#### Exploration and mining activity highlights:

- Industry statistics for 2009 reflect the downturn in the economy, with values decreasing from record highs of \$3.1 billion for value of production in 2007 and \$673.8 million for capital investment in 2008.
- As of September 2010, updated statistics for company spending on mineral exploration (excludes petroleum) totalled \$97.8 million for 2009, down 36% from the record high of \$152.1 million in 2008. Revised spending intentions stand at \$85.9 million for 2010.
- Crowflight Minerals temporarily suspended production at their Bucko Lake Nickel Project near Wabowden on October 1, 2010. Production was stopped to facilitate the introduction of the company's own underground mining equipment and team and to make readjustments to address certain operational issues. The Bucko Lake Nickel Mine, located in the prolific Thompson Nickel Belt, is expected to produce an average of 11 million pounds of nickel per year over its projected 7year mine life.
- San Gold Corp. continues to expand their mining operation at Bissett with the recent development of a third gold deposit, the Hinge mine. Within the past two years, the company has



discovered several high-grade, near-surface deposits (the Hinge, Cohiba, L-13, 007 and Emperor zones) and recently announced the discovery of multiple new high-grade zones at depth, collectively called the RL East zone. San Gold reported their first operational profit in 2009 and record production levels in 2010.

- Vale continues with its \$116-million initiative to modernize its Thompson Nickel Refinery through the installation of automation equipment and is also upgrading its tailings management area to accommodate mining activity for the next 20 years with an emphasis on sustainability. The company spent \$25 million in 2009 to install new tailings lines and pumps to reduce water consumption by 75 per cent during normal operation.
- HudBay Minerals Inc. continues to advance its 2007 Lalor discovery near Snow Lake. HudBay recently announced the development of a 3500 tonne per day mine at Lalor and expects to invest \$560 million to develop the Lalor mine which has the potential to employ up to 400 workers in a community of about 1,000 people. The Lalor discovery garnered the 2008 Prospectors and Developers Association of Canada's award for the most significant Canadian mineral discovery.
- Victory Nickel continues to advance the Minago nickel deposit north of Grand Rapids towards mine development based on positive results from a definitive feasibility study.
- In October 2009, HudBay Minerals restarted its Chisel North mine and concentrator in Snow Lake which was on care and maintenance since the first quarter of 2009 due to depressed zinc prices at the time. Restarting the mine means about 100 jobs return to the community.
- Along with partner VMS Ventures, HudBay continues to drill the Reed Lake deposit, a significant copper-zinc discovery south of Snow Lake. A resource estimate for the deposit is anticipated by the end of 2010.
- Alexis Minerals Corporation has completed a feasibility study to reopen the Snow Lake mine (formerly the New Britannia mine) with positive results. The mine is forecast to produce 80,000 to 90,000 ounces of gold per year and operate for a minimum of six years. Gold production is scheduled to begin in early 2012.
- Exploration projects moving forward with feasibility studies for new mine development include HudBay Minerals' Lalor gold-zinc-copper deposit near Snow Lake, Alexis Minerals' Snow Lake mine in Snow Lake, VMS Ventures/HudBay Minerals' Reed Lake deposit near Snow Lake, Mustang Minerals' Maskwa nickel deposit east of Lac du Bonnet, St. Eugene Mining's Tartan Lake gold mine northeast of Flin Flon, and Auriga Gold's Puffy Lake mine near Sherridon.
- Two agreements strengthening relationships between the mineral industry and First Nations were signed in 2009: the Memorandum of Understanding between Manitoba Keewatinowi Okimakanak. (MKO) and the Mining Association of Manitoba; and the Memorandum of Understanding between

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Sagkeeng First Nation and Mustang Minerals to work together on Mustang's Makwa Nickel Project. In May 2010, Rolling Rock Resources Corporation signed a Memorandum of Understanding with Red Sucker Lake First Nations to cover certain portions of the company's Monument Bay project that lie within the traditional lands of the First Nation.

#### **COMPETITIVE STRENGTHS**

#### Mineral Endowment:

- · Metal deposits in Manitoba's Precambrian Shield have been mined for decades. Ongoing development at Flin Flon will extend operations there until 2016 and at Snow Lake, the Lalor deposit is expected to support mining to 2030 and beyond. These developments will see mining activity in the Flin Flon-Snow Lake region extend over 100 years since the first mines were opened. The Bucko Lake Nickel Mine, located in the prolific Thompson Nickel Belt, is expected to produce an average of 11 million pounds of nickel per year over its currently projected 7-year mine life. Similarly, new investments in Vale's Birchtree project near Thompson are projected to extend mining operations there until 2016, about 60 years after initial production. In 2006, San Gold Corporation reopened the gold mine at Bissett where the mining history of the region's mineral-rich Rice Lake gold belt dates back to 1911.
- Large areas of high mineral potential in remote regions of the province remain under explored when compared with similar regions elsewhere in Canada. This represents a potential avenue for considerable growth in Manitoba's mineral sector and may provide significant employment opportunities for northern and Aboriginal communities near new mineral exploration and development projects.
- · Manitoba mineral resources with potential for future economic development include platinum-group elements (platinum, palladium and rhodium), rare earth elements, uranium, titanium, vanadium, chromite, silica, diamonds and potash.
- Although oil has been produced in Manitoba for over 50 years, the province is still relatively underexplored. Production has been obtained from only a small part of the total sedimentary sequence present in the province. Due to the relatively shallow depth of sedimentary rocks in Manitoba and the generally flat terrain, drilling costs are relatively low.

#### **Business Strengths:**

• In addition to mineral deposits and occurrences, Manitoba offers a number of economic advantages that support the minerals sector including: high mineral-potential, a comprehensive geoscience knowledge-base, financial incentives for exploration and mining, a transparent land-tenure system, competitive business costs, skilled labour, environmental



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- Since 1999, Manitoba has invested a total of \$19.5 million through its Mineral Exploration Assistance Program to support 558 exploration projects. These projects have generated \$185 million in company spending for exploration in the province.
- Recent initiatives to support exploration and mining in the province include:
  - A graduated mining tax that has contributed to Manitoba being rated among the most competitive provinces for mining activity in Canada, ranking number two in the country for the competitiveness of its mining tax regime, according to the PricewaterhouseCoopers (PWC) 2009 Canadian mining tax report.
  - An increased Mineral Exploration Tax Credit to 30 per cent in 2010 offers Manitoba tax payers the most generous mineral exploration tax credit in the country.
  - Manitoba introduced the Training and Workforce Retention Program and the Northern Essential-Skills Training Initiative to address skilled labour shortages in the mining sector.
  - The Manitoba government, in collaboration with industry, educational institutions, municipal and federal governments, established the Northern Manitoba Mining Academy. The academy, located in Flin Flon and

Thompson, will provide training to prepare thousands of workers over several generations for mining employment.

- A \$3-million partnership with the federal government to remap Manitoba's far north that will assist exploration for gold, base metals, uranium, platinum group elements and diamonds in the region.
- \$69 million in funding for 2010-11 to support the cleanup of 18 orphaned and abandoned mines in the province.
- Manitoba has been recognized nationally and globally as one of the best places for exploration and mining:
  - for over a decade, since 1999, Manitoba has consistently ranked as one of the top ten jurisdictions worldwide for mineral policies favourable to mining investment (based on the results of the annual Fraser Institute Survey of Mining Companies).
  - Manitoba is 2nd in Canada for competitiveness in mining taxes, according to the PricewaterhouseCoopers 2009 Canadian mining tax report.
  - For the second consecutive year, Manitoba is the best jurisdiction in Canada to invest in petroleum exploration and development, as rated by oil industry executives in the Fraser Institute's 'Global Petroleum Survey 2010'. For the 2010 survey's worldwide rankings, Manitoba is the only Canadian jurisdiction in the top 10, moving up to 8th position (of 133 oil- and gas-producing regions) from 21st place (of 143) in 2009. □

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MANITOBA PROSPECTORS AND Mewsletter

#### LAND USE IN MANITOBA; A FEW SIMPLE FACTS TO START MANITOBA COVERS 646,600 SQUARE KILOMETERS

#### THE FOLLOWING SHOWS HOW THIS LAND IS USED AND PROPOSED TO BE USED



Feature	Sq. Km	Number	% of Total	Source
Manitoba	646,600	100	GIS measured	
Provincial Park	46,624	144	7.211	GIS measured
Park Reserve	54,575	291	8.44	GIS measured
East Side World Heritage SITE	40,147	1	6.209	Parks Canada
Areas of Special Interest (no mining / exploration)	86,566	176	13.388	GIS measured
Large Lakes	73,145	229	11.312	GIS measured
Private Agriculture	77,293		11.954	Census Canada
Urban areas	3,395	32	0.525	Wikipedia
Indian Reserves	4,402	286	0.681	GIS measured
Roads/ RR/ Power lines	500		0.077	Estimate
Existing & Former Mines	15		0.002	Estimate
Uncommitted Crown Land	259,938		40	Balance of land

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Mines Branch Unit 360, 1395 Ellice Avenue, Winnipeg, Manitoba R3G 3P2 T 204 945-6527 F 204 948-2578 www.gov.mb.ca/iedm/mrd

#### MINING DISPOSITION STATISTICS AS OF SEPTEMBER 30, 2010

Dispositions	Totals	Area in ha
Mining claims (active & pending)	6,238	1,007,618
Mineral Exploration Licences (active & pending)	109	2,250,709
*Leases	3,906	143,978
*Leases include mineral leases and		
leases grouped under Order in Council.		

# of Dispositions

Area in hectares







🛯 Claims	
MELs	
🗆 Leases	

Courtesy of

Gerald Teichrib Acting Mining Recorder





INDEX MAP 2A

Complete By M. Ferdali Reserved Colonie III. (2010) Step for Restation pulpinest any. Context remainters foreign and Writes for more detailed information.

Manitoba





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Over 28 years experience in the Mining Industry

## iMaQS LEADS THE WAY IN MANITOBA BUSINESS TRANSFORMATION

By Jim Turner, Pacific Geotech Systems Ltd.



Manitoba is blessed with a variety of rich mineral deposits and mining exploration and quarrying development plays a significant role in the provincial economy. Like many other jurisdictions in Canada, the province is taking a 21st century approach to mining by transitioning from traditional ground staking and paper-based administration to an Internet-based online map staking system. This approach creates a lighter environmental footprint, levels the playing field for prospectors and promotes a positive administrative environment for increased mining exploration and development activity across the province.

#### THE CHALLENGE

Since 2005 Manitoba has been working toward a more efficient method of providing the mining industry with information and an effective system of administering mining and quarrying business. System integration was at the forefront of Manitoba's needs. In 2005, the business need was there, but not all of the pieces were in place to support the vision.

Today, Innovation, Energy and Mines is doing just what the name says: innovating. The business transformation arm of IEM – Business, Technology and Transformation (BTT) – has been working toward an electronic service delivery platform which, when complete, will support the Mines Branch vision of an "integrated mining and quarrying system" (iMaQs), information sharing, secure end-to-end business functionality, including payment and confirmation.

The current ground staking system, dating back the late 19th century, is both slow and costly. It could also contribute to ongo-

ing uncertainty with stakeholders, private land owners and Aboriginal groups as prospectors physically venture onto the landscape without knowledge of other possible interests. In response, the Province of Manitoba knew that a modernized process of mining claim staking by converting to an online map staking system was the answer. This would allow prospectors to gather information and stake their claim without ever setting foot on land and would also keep the public informed about what was happening in their communities. To make the transition, the province needed a proven mineral administration system supported by a robust spatial data warehouse that would facilitate a GIS-based map selection system.

#### THE SOLUTION

Manitoba Innovation, Energy and Mines, Mines Branch, selected Pacific Geotech Systems Ltd. (PGTS) to customize an online map staking solution based on ESRI technology. Using the government's centralized user authentication process - Single Sign On (SSO) and Central CRM SAP Service for managing clients (MBESO) a mining and quarrying application was developed using the PGTS proven Mineral Titles Online (MTO) framework.

iMaQs is an e-commerce, GIS web-enabled system for mining claim and lease acquisition and administration. It provides robust, secure and powerful geospatial capabilities, as well as electronic, graphic and attribute standards.

The Adobe Flex Viewer is leveraged to make iMaQs available through a standard web browser and a number of Map Viewers



were built to provide easy access to information. Pacific Geotech customized modules that encompass the specific business rules of Manitoba and the result is a fully functioning business application that completely integrates with the emerging and existing corporate infrastructure. Members of the mining and prospector communities from around the world can access maps, determine land status, carry out searches and register for their prospecting license. They can view existing claims and leases, roads, rivers, streams, parks and other features to determine where to locate a claim and overlay geology to pinpoint geological hotspots. Once a land acquisition is confirmed, the user can make a secure payment and the new claim is represented on a map.

#### RESULTS

The switch to an online map staking system will modernize Manitoba's process for mining claim staking, creating greater administrative efficiencies for both the government and industry. Using an Integrated Spatial Repository (ISR) digital base maps are managed with attribute information and meet emerging standards for warehousing data. These data sets are integrated with other online resources to secure claims. This efficiently completes the streamlining of the entire claim acquisition process, enabling faster resolution of disposition conflicts, faster referrals and faster issuance. Payments will also be made securely online, which further reduces processing time. This means that companies can spend less time on acquisition and maintenance and focus more of their resources and energies on the exploration stages.

iMaQs supports the development of better, more productive relations with private landholders and aboriginal communities by removing a major source of friction, as prospectors do not have to disturb the land to stake their claims. It improves communication by providing public access to information about land staking activities across the province and also encourages business development by allowing anyone with a license, from anywhere in the world, to stake a claim. This means that independent prospectors and junior exploration companies have access to land that may otherwise be too difficult or costly to stake.

Quote: "The transition to an online map staking system has enabled us to better support a vibrant mining community. By leveraging the latest technology, we are able to provide faster, more efficient services to encourage economic growth and expand opportunities across the province while protecting social issues of community and environment."  $\Box$ 



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## MANITOBA ROCKS AGAIN! NEITHER RAIN NOR WIND DAMPENS STUDENTS' ENTHUSIASM

By Elaine Stevenson



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Development • Mining • Shaft Sinking • Mechanized Raising Raise Boring • UG Construction • Engineering From May 27 to 29, 2010, Manitoba Innovation, Energy and Mines (IEM) presented the 12th annual Manitoba Rocks! event at The Forks in downtown Winnipeg. Even with strong winds and constant rain, more than 2,160 people visited the interactive mining displays. Manitoba Rocks! is an IEM outreach program and part of Provincial Mining Week activities, celebrating the importance of the mining industry to all Manitobans.

Among the visitors, 330 students from eight different schools and members of an adult English as an Additional Language class learned about the importance of minerals in their daily lives from Manitoba Geological Survey geologists. Many visitors brought special rocks to show the 'Rock Doc', a geologist who was on site to help them learn more about rocks and minerals.

Students and visitors enjoyed free activities like panning for gold, collecting mineral and fossil samples, exploring mining equipment, trying their luck at the Mining IQ Wheel of Fortune and entering draws for some great prizes.

Manitoba Rocks! was also at the Children's Hospital, where patients received a special visit from gold panning champion Yukon Dan and Ric Unruh from the IEM rock lab. The children enjoyed the gold panning and learned more about rocks and minerals.

Provincial Mining Week activities at The Forks also included the official launch of a new curriculum-aligned mineral-education learning resource for teachers and students. It was developed through the combined efforts of the Prospectors and Developers Association of Canada (PDAC) Mining Matters, Manitoba Education, and Manitoba Innovation, Energy and Mines.

The resource, Mining Matters II The Earth's Crust, supports a component of the Manitoba Grade 7 science curriculum. Teachers will be trained to use the new kit which emphasizes the importance of a renewed respect for planet Earth and securing natural resources in a responsible, sustainable way.

Minerals are Manitoba's second-largest primary resource industry, playing an important role in our economy. In 2009, the industry produced about \$1.9 billion worth of metals, industrial minerals and petroleum. It also employed about 5,400 workers directly and another 18,000 indirectly.

Nickel, copper, zinc and gold are the major metals produced in Manitoba. Other minerals and metals mined include aggregates, building stone, peat, dolomite, spodumene, silver, salt, lime and gypsum. Prospects for the future include mining diamonds, platinum group elements and potash.

Manitoba produces 10.2 per cent of Canada's copper, 28.3 per cent of Canada's nickel and 11.4 per cent of Canada's zinc. From toothpaste to computers, sinks to scooters, the minerals we mine contribute enormously to the quality of life for all Manitobans.

LAURA CLINTON AND HON. DAVE CHOMIAK LAUNCHING MINING MATTERS CURRICULUM IN MANITOBA.





GOLD PANNING WITH YUKON DAN.

Manitoba Rocks! is only possible with continued support from mining industry partners. They include the Mining Association of Manitoba, Mineral Society of Manitoba, the Manitoba Prospectors and Developers Association Inc., HudBay Minerals Inc., VALE, and Rodren Drilling Ltd. The Manitoba Museum, the Canadian Fossil Discovery Centre, Redd Rock Shop and the Manitoba Children's Museum also supported Manitoba Rocks!

In 2011, Manitoba Rocks! will take place May 26th to 28th at The Forks. It will also be featured November 17th and 18th, 2010 as part of the Manitoba Mining & Minerals Convention at the Winnipeg Convention Centre and will offer pre-booked school tours. For more information, call 204-945-6569 in Winnipeg; or 1-800-223-5215 (toll free) or go to www.manitobarocks.info.

#### **VOLUNTEERS ALWAYS NEEDED**

IEM welcomes people with mining industry experience who would like to have some fun and help teach the importance of



PAUL GILBERT, ROCK DOC, DISCUSSES MANITOBA'S GEOLOGY



HON. DAVE CHOMIAK ANSWERING QUESTIONS FROM STUDENTS.

mining to Manitobans. Call Elaine Stevenson at 204-945-6584 or e-mail Elaine.Stevenson@gov.mb.ca for more information about volunteering. □

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## **2010 MPDA** SCHOLARSHIP WINNER

The 2010 MPDA scholarship of \$1,000 has been awarded to Melissa O. Anderson, who did undergraduate study at Brandon University, finishing with a science honours degree in 2010. Since September, Melissa has been studying at the University of New Brunswick with the supervision of Dr. D. Lentz . Her Master's thesis is entitled "Trace Element Geochemistry of Muscovite in the Moose II Lithium - Tantalum Pegmatite Deposit and Associated Faulkner Lake Pegmatite Field, NWT." After graduation, she plans to pursue a career in mineral exploration.

In Melissa's description of her objective, she provides some important background information for her proposal. She indicates that commercial applications of rare lithophile elements, such as lithium, tantalum, cesium, beryllium, tin and niobium, have been increasing faster than production can supply them. Lithium is employed in batteries and in pharmaceuticals. Tantalum serves as a superalloy with nickel and cobalt in aircraft manufacture and is used to line reactors in chemical and nuclear industries. It also functions in the electronics industry for the manufacture of capacitors (mainly for mobile phones and computers), and it has various surgical applications. Cesium is employed in photoelectric cells and in infrared detectors. The cesium mined from the Tanco pegmatite at Bernic Lake, Manitoba provides cesium formate, dense brine which is used as a drilling fluid in offshore oil wells. Melissa's proposed tool for exploration of rare-element pegmatites containing those elements is the trace-element geochemistry of muscovite. Her focus for the project is a study of the trace-element relationships of the Moose II Li-Ta pegmatite deposit, NWT. Her main objectives are (a) to document and characterize the levels of trace-element enrichment, (b) to establish the ranges of trace-element contents, chemical variations and fractionation trends within the muscovite, (c) to establish paragenetic relationships within the deposit and (d) to develop a useful tool for further exploration for pegmatites in the vicinity of the Moose II deposit.

In Melissa's theoretical approach and methods, she states that the Moose II Li-rich pegmatite deposit within the Faulkner Lake Pegmatite Field is a Li-Cs-Ta system that has a history of production, and high-grade assays have been recently noted by International Lithium Corp, with potential for sizeable resources. A detailed geochemical study could enable an understanding of the evolution and mineralization of the Moose II pegmatite. With the knowledge that trace element partitioning is a functioning of thermodynamic controls, muscovite is an informative mineral because the element distributions reflect the trace element contents in either early pegmatite-forming fluids or later metasomitizing solutions. Additionally, muscovite is useful because it crystallizes in nearly all stages of pegmatite formation. Trace-element data can be determined by using analytical techniques and inductively coupled plasma-mass spectrometry. Relationships such as K/Rb, K/Cs, K/Ba, Nb/Ta, Th/U, and



Be, and Zn would help to understand

the formation of the deposit and

could help to vector toward potentially economic accumulations of minerals of interest. For instance, as the ratio of Ta/W increases and the ratio of K/Rb decreases, the potential for Ta mineralization improves.

Melissa states that most pegmatite research to date has been limited to a few studies on a regional scale, and she proposes that a detailed investigation of the Moose II pegmatite, with reliable, established paragenetic relationships, is needed to determine the evolution and potential mineralization of the deposit. She points out that, with demand for the rare-element minerals produced from pegmatite deposits dramatically increasing, her proposed, detailed study would provide significant advancement of scientific knowledge. She maintains that applications within the mining industry would be significant because upgrading the knowledge of elemental geochemical relationships within the muscovite will increase the reliability of that analysis as an exploration tool. Melissa's work could become part of a productive branch on the tree of knowledge of geoscience in Canada.

Contributed by Marjorie V. Reynolds

## CANADA AND MANITOBA INVEST IN SIMULATORS FOR TRAINING PROGRAM AT THE NEW NORTHERN MINING ACADEMY

GROUNDBREAKING CEREMONY FOR THE NORTHERN MANITOBA MINING ACADEMY. FROM LEFT TO **RIGHT: TOM GOODMAN, HUDBAY** MINERALS INC.; TOM THERIEN, MAYOR OF FLIN FLON; DR. DENISE K. HENNING, PRESIDENT & VICE-CHANCELLOR OF UNIVERSITY COLLEGE OF THE NORTH (UCN); HON. DAVE CHOMIACK, INNOVATION, ENERGY AND MINES; HON. LYNNE YELICH, MINISTER OF STATE FOR WESTERN ECONOMIC DIVERSIFICATION: PREMIER GREG SELINGER; GERARD JENNISSEN, MLA FOR FLIN FLON; HON. PETER BJORNSON, ENTREPRENEURSHIP, TRAINING AND TRADE



PHOTO SUPPLIED BY

Flin Flon, Manitoba – The Governments of Canada and Manitoba will invest more than \$1.7 million to support the development and delivery of a mining equipment training program at the Northern Manitoba Mining Academy in Flin Flon.

Funding under the Canada-Manitoba Western Economic Partnership Agreement (WEPA) will be used to purchase two state-of-the-art training simulators that will enable miners to learn how to operate underground mining equipment, undertake proper safety measures and cope with an underground emergency situation.

"Providing more than 5,400 jobs as well as spinoff employment for suppliers, contractors and exploration companies and others, mining is the bedrock of Manitoba's northern economy," said the Honourable Greg Selinger, Premier of Manitoba. "The academy and these new mining simulators strengthen the mining sectors as a major resource to strengthen community and industry partnerships and allow northern residents to train close to home for high-wage, high skilled jobs."

"The mining sector is a major contributor to Manitoba's economy, and by investing in this program, our Government is ensuring that the sector continues to grow and provide highly skilled jobs for Northern Manitobans," said the Honourable Lynne Yelich, Minister of State for Western Economic Diversification.

Two movable simulator training stations with four interchangeable consoles will be used to provide training. The training will be delivered at the newly announced Northern Manitoba Mining Academy in Flin Flon and Vale Inco in Thompson. The University College of the North, Northern Manitoba Sector Council, Manitoba Mining Association, Hudson Bay Mining and Smelting Co. Ltd., Vale Inco and the University of Manitoba will support this endeavour.

Simulator training has been used by the mining industry in

Australia and South Africa for over 10 years and has proven to be effective in training new employees within a shorter period of time, and without risking damage to multi-million dollar pieces of equipment.

"State-of-the-art simulation equipment ensures we can maintain a competitive advantage, now and into the future," said Doug Lauvstad, Executive Director of the Northern Manitoba Sector Council. "This investment in the academy and in the simulators, by the federal and provincial governments is welcomed and will further the mandate of the Northern Sector Council to assist in the development of a world class mining workforce."

"The need for skilled workers and re-skilled workers in the mining industry is critical as mining methods advance with complex, computerized and mechanized machinery utilized in Manitoba's changing environments," said Tom Goodman, Senior Vice-President of Operations for Hudson Bay Mining and Smelting Company Ltd. "This state-of-the-art equipment will assist with the intense and higher level training that is now required."

This announcement builds on an investment of \$920,000 from the Government of Canada's federal Economic Action Plan and \$950,000 from the Manitoba government, for a total of more than \$1.8 million to construct and equip the Northern Manitoba Mining Academy in Flin Flon. The academy will provide northern residents with training to work in the mining industry or upgrade their skills.

The investment by the Governments of Canada and Manitoba is made through the Canada Manitoba Western Economic Partnership Agreement. Both Canada and Manitoba are contributing \$25 million each, over four years to strengthen economic activity and improve quality of life in Manitoba communities. □

## **FORGOING MINERAL WEALTH IN THE WNO:** 'CHOICES FOR ETERNITY'



LOCATION OF WNO (WABANONG NAKAYGUM OKIMAWIN; EAST SIDE OF THE LAKE GOVERNANCE). THE WNO CONTAINS THE AREA BEING CON-SIDERED FOR A HERITAGE PARK. THE WNO COVERS AN AREA OF 120,700 SQUARE KILOMETRES OR 19% OF THE ENTIRE PROVINCE.

Establishing new parks covering the east side of Lake Winnipeg (WNO; Wabanong Nakaygum Okimawin) in Manitoba raises numerous questions. This paper examines the mineral potential of the area in the context of responsible stewardship of the land, its people and its resources. It is assumed that once made into a park, all commercial developments would not be allowed including mining, forestry and hydro development. The argument presented here is that it is not responsible stewardship to establish a park over an area (East Side Lake Winnipeg) where most of the mineral development and other potential are simply not known.

To deny the people of Manitoba and the region on the east side the possible benefits of tens of billions of dollars worth of development over future centuries is simply irresponsible. The current plan to develop a park over much of this area can only be viewed as a fanciful whim rather than responsible stewardship. This is especially true with the knowledge that the current geotechnical database is not complete and out of date and is not adequate to make informed decisions on these matters. Twenty-two per cent of Manitoba is currently set aside as Parks,



CURRENT EXPLORATION (2010) LAND POSITIONS.

Park Reserves, or areas of Special Interest. With 35 per cent of the WNO currently in these categories, one has every reason to question the need to set aside any new areas for parks. Should the World Heritage Park be established, 68 per cent of the WNO would have some form of protective designation.

It is argued here that the provincial government is morally obligated to bring the public domain geotechnical database up to modern standards before even thinking about new park designations. In addition, sufficient time must be allowed for this data to be processed and prospective areas systematically explored and evaluated. Only then can informed decisions be made in the best interests of the people of Manitoba and the residents of the WNO.

Provincial government ministers have argued that foreign interests determine types of development or nondevelopment by their threat of court action if their plans are not followed. This state of affairs essentially means that governance of the province is being ceded to foreign interests. This begs the question of who is looking after the long-term interests of the people of Manitoba and, in particular, the people of the WNO.  $\Box$ 

## **SHARPE LAKE GOLD PROJECT**

The 5,000-hectare Sharpe Lake Gold project is located 550 kilometres northeast of Winnipeg, Man. The project is centred on a portion of the east-west trending Stull Lake-Wunnummin Fault Zone (SWFZ). The SWFZ is a major, first-order Deformation Zone that is host to several important gold deposits, including the Monument Bay Gold Zones (3.38 million tonnes @ 6.45 g/t Au) which is located 30 kilometres east of Sharpe Lake.

The property is underlain by volcanic rocks of the Archean Superior Province. The Superior Province is the largest and most prolific gold producing Archean craton in the world and extends from northeast Quebec to northwest Manitoba. The Sharpe Lake property represents one of the few remaining gold-bearing greenstone belts in the Superior Province, which has never been drill tested.

The geologic setting at Sharpe Lake resembles other gold districts in the Superior Province. For example, the SWFZ is considered to be similar in style to the prolific Destor-Porcupine Fault Zone, which is host to the 60-million-ounce Timmins District. Also, large and pervasive altered zones associated with these fault zones have been identified at Sharpe Lake.

Minor previous work at Sharpe Lake consisted of an airborne Magnetic/Electromagnetic survey and some ground prospecting and geochemistry. The airborne survey helped map the extent of the SWFZ and preliminary prospecting of very limited rock exposure revealed grab samples up to 6.9 g/t Au along the trace of the fault zone. The airborne survey also helped identify a prominent geophysical feature interpreted as a sequence of folded, conductive, banded iron formation, which appears to have many similarities to the nearby producing Musselwhite Mine (>1.5 million ounces).

The property can be brought very quickly to the drillready stage by refining existing airborne geophysical targets and surface geochemical anomalies. Drilling can be carried out very efficiently by taking advantage of winter access roads.

A joint venture partner is currently being sought for this property. For more information, please contact: Doug Fogwill, P.Geo. fogwill@mts.net; Ph: 204-487-4684 or Rob Carpenter, President, Kaminak Gold Corporation robc@kaminak.com; Ph: 604-646-4520 □







## THE LEGACY OF JIM BROWN: PROSPECTOR, RESEARCHER AND ARCHIVIST

By Lisa Fattori

For almost 50 years, Jim Brown has been passionate about prospecting and the detective work involved in researching a potential find. The Winnipeg native has spent a large part of his career working in B.C. and the Yukon, as well as in Nevada, Oregon and Washington State. Notable discoveries include locating for a junior mining company, a new deposit within a closed mine in Mexico, which produced another 100,000 ounces of gold. Brown's contract and consulting work, together with his own prospecting projects, have given him a front row seat to how the industry has changed over the decades.

"Most of the surface type of prospecting that we used to do has run its course," says Jim Brown. "Now, we have to look for mineralization deeper in the earth. This requires new techniques to assay rock and soil. You can get down to parts per billion, but you need a lab to do this – something that the oldtime prospectors didn't have."



Brown caught the geology bug as a university student, when he spent summers working on the geophysical crew for Hudson Bay Exploration and Development. After graduating with a Bachelor of Science from the University of Manitoba, he worked full-time for the company for another four years. Brown then went out on his own to offer contract services to other mining companies.

"I grew up on a farm and was interested in working in the bush," he says. "I took a few geology courses in university, but I learned most of what I knew while working for Hudson Bay."



Jim Brown was a pioneer in using new technologies to aid in his research. He was one of the first to incorporate remote sensing in his work and was proficient with computers long before they became mainstream. Brown wrote his own programs to interpret data, and was in high demand by mining companies who sought out his expertise in this field.

"Jim was using remote sensing and computers right from the start," says colleague and prospector, Horst Petak. "He even had computers prior to those old Commodore 64 computers. He was associated with Don Anderson, a geology professor at U of



Manitoba. Jim did all of the computer work for him – working on satellite images, collecting data and producing maps. This type of work was, and still is, a large part of what he does."

As part of the close-knit group that worked together at Hudson Bay Exploration and Development in the late 1950s, Brown is well known in the industry and has a wealth of anecdotal stories about his time spent prospecting. "At Hudson Bay, it was like we were part of a fraternity, and we all kept in touch over the years," says George Delgatty, a colleague of Brown's. "I would see Jim from time to time and he always had great stories about being in the bush and his encounters with grizzly bears." In the 25 years that Brown has been a member of the MPDA, he has been invaluable to the Association. Contributions to the organization include his work as Secretary of the MPDA, and he volunteers each year for Mining Week and at the Manitoba Mining Convention. Brown is also spearheading an initiative to archive materials donated by retired prospectors or their families. Brown is compiling these personal notes and property reports, and is cataloging them to be used as reference materials by others.

"A lot of the material consists of personal notes, so it's information that's never been available to the public," Petak says. "The idea is to make this data available to everyone. Someone else, maybe, can do research on a particular area and learn something that may lead to a discovery."  $\Box$ 

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### **RESOURCE RANGERS**



With the leadership of Manitoba Keewatinowi Okimakanak (MKO) and the collaboration of 42 sponsors, including Manitoba Innovation Energy & Mines, PDAC Mining Matters, Calanan, HudBay Minerals, Vale and CrowFlight Minerals, the Natural Resources Youth Training Program (NRYTP) ran for a second year. Referred to as the Resource Rangers, 16 aboriginal youth representing six northern communities took part in the five-week program in July and August at the Egg Lake camp.

The program aims to develop career awareness and employability training in the resource sectors most prevalent in northern Manitoba: minerals, forestry and hydropower. For aboriginal youth across northern Manitoba,



the program not only delivers safe and structured training and work activities to facilitate their future employment and broaden their awareness of career opportunities in the fields of geosciences, mineral exploration, mine development, forest management operations and hydro-electric energy production, it also provides a meaningful cultural component and reinforces the value of acquiring high school and post-secondary education.

The 2010 NRYTP offered hands-on work experience, on-the-job training and a variety of educational, recreational and cultural activities for selected aboriginal youth for five weeks in a field camp setting at Egg Lake. Program supervisory staff maintained a schedule of daily work, training, meals and recreation, and industry partners assisted trainers and experts in delivering training sessions and hands-on work experience and tours. In addition, camp staff and local professionals provided life and professional development skills training.

Some of the activities the Resource Rangers were involved in included the Mining Matters workshop, where participants were asked to construct and test their own mine head frame, including shaft pulley systems. As well, Snow Lake Mayor Gary Zamzow met with the group to show them the Mining Museum in Snow Lake, Dale Wride from the Mining Recording Office showed participants how to complete forms for prospecting certificates, and tours of the Vale nickel mine and Bucko mine were conducted. A northern Cree cultural component was integrated into the program, through the contributions of on-site elders and attendance at cultural events, and three staff members, a cook and elders remained on-site at the Egg Lake camp through the five weeks.

All in all, the program was a real success, and the youth learned both life and employment skills, with a lot of positive feedback being received regarding performance on the job. The participants, as well as community and industry representatives, look forward to the program continuing and growing in the future.  $\Box$ 

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Norseman Supply has been supplying equipment and services to mining and exploration companies for over 25 years. The Winnipeg-based company – owned and operated by Dave Meek – has been successful in providing a complete full-service operation. Because Norseman's personnel are in the field with their clients, they're continually getting feedback about the wide variety of products they provide.

"Lately there has been a lot of emphasis on diamond saws that cut drill core," Meek says. "With all the drilling going on, geologists want saws that will keep up to their logging and sampling". Companies don't want a bottleneck at the core saw, and with that in mind, Norseman has several saws in their inventory to keep up with the demand. "We have a threehorsepower saw that can cut around 400 feet a shift," Meek adds. "It's important to have the proper saw with the right power source; it may be 110/220 volt or larger. Once you have the right saw in place, there may be some experimenting to get the right grade of diamond blade for the specific rock type your cutting." Norseman also carries a line of portable diamond saws for channel sampling. "It's critical to know what your saw peek rpms are so we can match the proper blade speed to allow for maximum blade performance."

Not only does Norseman have the equipment and expertise to cut core and channel samples, it also has a patent rack design to store core boxes indefinitely out of the elements. The racking system is portable, modular and easy to build, which is a favourite of exploration and mining camps around the world.

Along with the core cutting and storage, Norseman supplies and rents geological equipment every prospector or geologist requires to get the job done properly. They also have personnel to assist with projects by staking claims, cutting grids, sampling or building camps or core storage facilities, allowing the geologists to focus on their own duties.

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## WILDCAT EXPLORATION LTD.: 2010 AND BEYOND...

Wildcat Exploration Ltd. (TSXV-WEL) is an exploration company focused on precious and base metals in central Canada. Based in Winnipeg, Wildcat consolidated gold properties in the historic Rice Lake greenstone belt (RLGB) near Bissett, Manitoba, currently controlling in excess of 23,000 hectares (100% owned).

Recently Wildcat signed option agreement with Anglo American plc to explore the Burntwood Nickel Project in the Thompson Nickel Belt (TNB), one of the largest nickel mining camps in the world. Anglo American has completed airborne and ground geophysics in the area such that the project is a drill ready nickel property.

Wildcat's Reed Copper Zinc property in the Flin Flon-Snow Lake greenstone belt was extended through additional staking in 2010, in a southerly direction to within 600 metres of the HudBay/VMS Discovery Zone copper project. The Burntwood, Reed and Foster SEDEX/BHP-type zinc lead project in Saskatchewan round out the base metal portion of Wildcat's portfolio.

Wildcat also initiated a generative project in the Uchi green-



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Phone: 204.687.8247 Toll free: 1.866.323.4210 stone belt in order to identify potential gold properties for acquisition or staking in the Pickle Lake to Red Lake areas. This work resulted in the staking of the McVicar gold property, located 80 km west of Pickle Lake. Further work is planned to follow up this and other targets generated during the study. In addition, Wildcat acquired claims in the Rice Lake greenstone belt in vicinity of the Beresford Lake Shear zone, north of the historic Gunnar and Solo Oro Grande gold mines.

Field activities in 2010 began in the RLGB on the Jeep Gold Project with the completion of 2,822 metres of drilling in 22 holes. The most significant results being 5.59 g/t Au over 1.07 m intersected in hole JP-10-13 within a smoky-grey quartz vein, 11.49 g/t Au over 0.37 m intersected in hole JP-10-14 within a smoky-grey quartz vein, 3.5 g/t Au over 0.74 m intersected in JP-10-03 within quartz-carbonate veinlets in a shear zone and 3.4 g/t Au over 0.82 m intersected in a milky-white quartz vein containing chlorite and pyrrhotite mineralization in fractures within JP-10-05. A compilation of these results and data from previous drill programs, combined with structural studies, led to the identification of drill targets for the upcoming drill season.

Also in the RLGB, Wildcat geologists investigated the Mike Power gold prospect and the Garner Lake gold copper prospect. The Mike Power gold prospect is adjacent to the western boundary of the SanGold (TSXV-SGR)/Strikepoint (TSXV-SKP) joint venture area and may host the potential westward extension of the SanGold Cartwright deposit located some 1,500 metres to the east. Geological mapping by Wildcat geologists corroborated those volcanic rocks underlying the Mike Power property may be equivalent to rocks hosting gold deposits found on the SanGold mine lease at Bissett. More importantly, the regional structures responsible for mineralization to the east on SanGold property trend and continue onto the Mike Power ground. Northeast to southwest crosscutting shear zones were prospected, and drill targets have been identified.

The Garner gold copper project, comprised of 2,285 hectares, is located 35 kilometres southeast of Bissett, between Hwy 304 and the Ontario border. The western half of this property includes the southern extension of the Beresford Lake shear zone that hosted the historic Gunnar and Solo Oro Grande gold mines. Previous work by the company delineated two gold zones, which yielded rock grab samples containing in excess of 150 g/t. gold. The eastern half of the property is partially underlain by ultramafic flows and silicate facies iron formations with sporadic sulphide-bearing zones that in places are intensely deformed. These rock assemblages indicate a mineral potential including gold and nickel copper mineralization. In May 2010, the company conducted an airborne magnetic and EM survey over the property. Results of this survey, combined with the





results of the field work, were incorporated into the 2011 exploration plans by the company.

Field activities at the Reed Copper Project in the Flin Flon-Snow Lake greenstone belt commenced with the establishment of a camp in the Krug Lake area. This camp provided access to the northern half of the property and access to prospective mineralized zones associated with two copper discoveries made by Wildcat geologists in 2008. Rock samples containing up to 1.58% copper were collected near the southern border of Rockcliff Resources Inc. (TSXV-RCR) the Rail copper deposit. Hosting the mineralization are volcanic rocks consisting of rhyolites, andesites and tuffs, similar to the host volcanogenic massive sulphide (VMS) deposits in Flin Flon and elsewhere. In addition, chlorite alteration was mapped in association with the copper mineralization. Chlorite represents an important indicator alteration mineral associated with the hydrothermal activity that introduce copper and zinc sulphides in a VMS deposit. The camp also allowed access to the northwest quad-





rant of the property underlain by gabbroic rocks that have sulphide mineralization indicating potential for nickel-copperplatinum group elements mineralization.

Late-season activities saw crews mobilized to the Foster lead zinc Project in Saskatchewan and to the Siderock Gold Project in the RLGB. At Foster, additional field inspection provided further data regarding the potential for thickened areas of mineralization associated with the structural folds and additional observations regarding the origins of the high grade glacial boulder trains.

At Siderock Lake, Wildcat geologists concentrated on the eastern part of the property. They were successful in identifying a several metre long by 1 metre wide gossan occurrence hosted by intensely shear-folded felsic volcanic rocks. The showing contained up to 20% sulphides at the site of a coincident ground and airborne EM and magnetic high. This anomaly was historically probed with a drill hole that returned several metres of zinc bearing sulphides. Based on the occurrence of the favorable mineralized rocks, and highlighted by several geophysical anomalies, Wildcat plans to follow up these VMS targets in the near future. Exploration activities guided by Tom Lewis, P. Eng., Vice President of Exploration, assisted by Dr. Peter Theyer, P.Geo, both Qualified Persons under NI 43-101, are now in drill plan stages for the upcoming winter season.

John L. Knowles, Wildcat's President and CEO states, "Firmer economic conditions have strengthened investor confidence and increased demand for both precious and base metals. Bolstered by the market improvements, our field programs this year have positioned Wildcat for a very active winter. We are well-funded and in an excellent position to carry out drill programs on several projects in the 2010/11 winter exploration season."

#### THE COMPANY CAN BE CONTACTED AT:

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## **STANTEC: BRINGING GLOBAL** MINING EXPERTISE TO MANITOBA





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Stantec's resources go beyond our 225 Winnipeg staff and extend to the 10,000plus employees operating out of 150 locations across North America. This global knowledge base is readily available to Stantec clients throughout Manitoba. Putting this knowledge into practice is an on-the-ground team that has worked extensively in northern Manitoba.

Of particular note is a project in which Stantec helped create a practical longterm tailings management plan for East Mine Tailings Management Area (ETMA) in Lynn Lake. This abandoned acid-generating tailings area was a challenge to rehabilitate for the default owners - a private sector agri-chemical company and the provincial government - who shared its long-term liability.

In 2002, Viridian Inc. and the Manitoba Mines Branch commissioned Stantec to perform studies and other activities to assess the environmental impacts of, and determine potential mitigation strategies for, the ETMA. As a



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result, Stantec completed a risk-based assessment of potential long-term tailings management strategies, supported by two major initiatives:

- · Computer modeling of groundwater and surface-water flows to understand the movement of acid and dissolved metals to specific discharge points along the adjacent Lynn River
- Assessing impacts on large- and smallbodied fish, and key food-chain invertebrates, from ETMA groundwater and surface-water flows, including innovative studies using caged clams as an appropriate surrogate for sensitive aquatic life

Stantec's periodic on-site monitoring and scientific testing, coupled with detailed computer modeling and analyses, produced a strong understanding of site dynamics and interactions, allowing for a more focused approach to selection of tailings-remediation options. This led to the development and application of site-specific, ecological risk-based approach to tailings management, focusing on zinc and copper as the major contaminants of concern in the adjacent Lynn River ecosystem. Engineering interventions tailored to meet specific risk-based performance targets were developed for the reduction of metal loads being discharged to the river from the ETMA.

Accurate definitions of existing ecosystem health, environmental impacts and the current state of ecosystem risk were important for defining the practical options for environmental protection
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and/or improvement in ecosystem health for this high profile project. This approach is central to all of Stantec's mining work.

Stantec understands the complex challenges of modern-day mining, such as depleted mineral reserves, strict environmental regulations, rising operating costs and the impact of fluctuating mineral prices.



Winnipegger Mike McKernan, Stantec Principal, Environmental Management, has presented information on these concepts at previous Mining and Minerals Conferences, and he will participate in this year's conference, taking place November 18th to 20th at the Winnipeg Convention Centre. Be sure to attend to learn more information about some of



Stantec's key successes and lessons learned in the mining sector.

Visit the Stantec booth at the conference for information on how Stantec can benefit your organization or mining project. Stantec is proud to offer local expertise to the Manitoba mining sector, while being backed by an extensive global team.



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### **DEEP TIME-DOMAIN EM MAPS LALOR**

Circé Malo Lalande, Eng. (Abitibi Geophysics) and Roman Wasylechko, B.Sc. (Abitibi Geophysics)

Congratulations to the exploration team at Hudson's Bay Mining and Smelting for their perseverance while drilling a 780m deep conductor, which was mapped in 2003 with electromagnetic equipment available at the time. The results of the original survey in 2003 and subsequent surveys showing improved signal-to-noise ratios were presented by Mark Shore at the PDAC 2010, titled "Deep-seeking Geophysics Over the Lalor Lake Deposit". Mining companies want to explore deeper and deeper, and this has motivated Abitibi to be even more innovative.

How deep do you want to explore? Economics determines the answer to this question, as a large VMS body at



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1,000m depth may be more profitable and an easier geophysical target than a plunging cylindrical VMS deposit at half that depth. Time-domain electromagnetic (TDEM) systems are the primary tool used to explore for conductive VMS



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deposits. For this reason, Abitibi Geophysics undertook to review the efficiency of loop configurations and equipment available with the objective of enhancing depth penetration and sensitivity of its TDEM system.



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Typically, a TDEM system transmits an electrical pulse through a loop of wire laid on the ground, and the rate of change of the induced secondary electromagnetic field is measured by a receiver/sensor during the pulse off-time. The depth penetration of the system is a function of the initial power transmitted, the size of the loop, pulse repetition time and the geological environment. In 2003 Abitibi Geophysics developed and patented a unique loop configuration, known as InfiniTEM®, which is optimal for detecting sub-vertical, deeply buried conductors. The InfiniTEM® loop configuration consists of a distorted infinity sign () that generates a horizontal primary EM field, ideal for coupling with sub-vertical bodies at depth. In the case of Lalor, the deposit dips about 30° to the north. For this reason, a large square in-loop configuration generating a vertical field is preferred.

To determine the most effective way to improve the efficiency and depth of exploration of TDEM surveys, Abitibi Geophysics undertook an intensive numerical modelling study, combined with field tests. The two key conclusions were that a larger dipole moment was needed (this requires a strong primary field in a large loop) and a more sensitive receiver/sensor. Ideal equipment specifications were set and a market search was launched.

Five main transmitter criteria were identified: signal quality, output power, maximum voltage output, maximum current output and total setup weight. After a satisfactory transmitter couldn't be found that met these specifications, TerraScope Instruments was commissioned to design and build an 18kW transmitter powered by a portable triphase motor generator that outputs 30 amps into the loop at 30 Hz base frequency. The system generates a clean current waveform from frequencies as low as 0.2 Hz and, to further improve the signal-to-noise ratio, has programmable waveform shapes as well as variable repetition rates. The SMARTem receiver from ElectroMagnetic Imaging Technologies (EMIT) met all criteria regarding sampling rate, resolution, data processing and overall performance. A fluxgate Bfield sensor, also from EMIT, provided on-time and off-time full wave data at picotesla sensitivity and 3-component (X, Y & Z) simultaneous measurements. This fluxgate sensor has proven to be reliable in the field, logistically easy to manage and is minimally affected by external noise sources such as wind.

During the winter of 2010, this TDEM system was used by Abitibi Geophysics over the Lalor deposit. The profiles show data collected at 1.67 Hz over L 184 N and 87 EBL, where the deposit is at depths of 580 metres and 1,200 metres respectively.

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### **BALANCING NEAR-TERM PRODUCTION AND "BLUE-SKY" EXPLORATION AT SHERRIDON**

Halo Resources Ltd. received the best kind of Christmas present at the end of 2009 when the company finalized a joint venture agreement with HudBay Minerals on two copper-zinc VMS deposits, the Cold deposit and Halo's recently discovered Lost deposit. The two copper-zinc deposits are part of Halo's large 200square kilometer Sherridon VMS District that also includes the former producing East-West copper-zinc mine, operated by Sherritt Gordon during the Second World War at Sherridon, Manitoba, and a host of smaller copper-zinc deposits. The historic East-West Mine produced almost 8 million tonnes up to 1951, grading 2.5% copper and 5% zinc at which point Sherritt Gordon moved on to its Lynn Lake nickel operations.

Ore from the Cold and Lost deposits will hopefully form part of the solution to an upcoming shortfall in feed at HudBay's Flin Flon mill. HudBay's mill is 110 kilometers by road from Sherridon and will require additional new feed as mining at the Trout Lake mine winds down after 18 years in operation. The robust 777 mine will continue to supply ore for the 6,000 tonne per day mill, but because it is an underground mine it is difficult to quickly increase production rates from the current 4,000 tonnes per day.

This presents an opportunity for Halo and HudBay to work together on a mining scenario at the Cold and Lost deposits, to potentially satisfy HudBay's near-term ore requirements and Halo's objective to test mining methods for the future development of the district. Initial results from HudBay's in-fill drilling campaign at the Lost and Cold deposits has been very encouraging with intersections of up to 2.7% Cu and 4.1% Zn over 17.3 m, all within 75m of surface and represent the best ever intersection in the Sherridon VMS District.

In addition to controlling a geologically favourable environment, it also takes perseverance and determination to build mines, which Halo has displayed by vigorously exploring the Sherridon VMS District since 2006 with total expenditures of almost \$15 million to date.

Halo has generated mineral resources on four copper-zinc deposits within the Sherridon VMS District. In October this vear. Halo issued a revised NI43-101 compliant resource estimate for the Sherridon VMS District that incorporated drilling done since early 2008. The previously announced indicated resource tonnage almost doubled and the inferred resource tonnage increased by 50%. Resource estimates now stand at 6.5 million tonnes grading 0.85% copper and 1.22% zinc as Indicated Resources and an additional 15.9 million tonnes grading 0.68% copper and 0.84% zinc as Inferred Resources with precious metal credits. At least 75% of the material in both categories is contained within potentially economic open pits.

To take advantage of the increase in district-wide resources, Halo is consider-

ing the cost-benefit of processing lower grade ore material nearby. Elimination of trucking costs to Flin Flon creates many opportunities in the district. In general, companies look to have more than 10 years of mine life defined before embarking on major capital expenditures, and Halo is taking the conservative view of also wanting to add additional resources with similar grades to the past producer or recent intersections on the Cold-Lost deposit trend.

To realize the goal, Halo implemented an exciting new focused-exploration strategy employing a multi-disciplined approach based on new structural interpretations and intensive field work. Halo continues to be excited about the potential for additional discoveries. like that at Lost Lake, and increasing metal reserves around existing deposits in the district. Some key areas Halo is presently focusing on are the extensions of the Cold-Lost mineralized trend located on ground still held 100% by Halo. There is at least a sixkilometer corridor that hosts a series of high priority geophysical anomalies and also where several seasons of field work have provided the key to unlocking the geology at Sherridon. This corridor, or "track", has an additional feature in that it lies parallel to the stratigraphy that hosts the historic East-West Mine and is only 750 meters away. The historic mine extended over a strike length of almost six kilometers and was only mined to a depth of 300 meters. Cold and Lost have

Category	Mining Method	Tonnes	Copper (%)	Zinc (%)	Gold (g/t)	Silver (g/t)	Copper (Mllbs)	Zinc (Mllbs)	Gold (ozs)	Silver (ozs)
Indicated	Open Pit	5,317,000	0.80	1.23	0.34	7.21	94	144	58,829	1,233,373
	Underground	1,235,800	1.04	1.18	0.48	8.19	28	32	19,230	325,343
	Total Indicated	6,552,800	0.85	1.22	0.37	7.40	122	176	78,059	1,558,716
Inferred	Open Pit	12,240,000	0.62	0.77	0.26	5.29	168	208	103,921	2,083,390
	Underground	3,620,000	0.91	1.08	0.32	7.37	72	87	37,324	857,689
	Total Inferred	15,860,000	0.68	0.84	0.28	5.77	240	294	141,245	2,941,079

NOTES:

• MINERAL RESOURCES ARE NOT MINERAL RESERVES AND DO NOT HAVE DEMONSTRATED ECONOMIC VIABILITY. THERE IS NO CERTAINTY THAT ALL OR ANY PART OF THE MINERAL RESOURCES ESTIMATED WILL BE CONVERTED INTO MINERAL RESERVES.

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• THE MINERAL RESOURCES ARE REPORTED AT A CUT-OFF GRADE TO REFLECT REASONABLE PROSPECTS FOR ECONOMIC EXTRACTION, WHICH WERE EVALUATED BY DESIGNING A SERIES OF CONCEPTUAL PIT SHELLS USING THE LERCHS-GROSSMAN OPTIMIZING ALGORITHM.

COMMON VALUES FOR OPERATING COSTS AND SMELTER TERMS WERE ASSUMED



been drilled to depths within 200 meters of surface and over less than 1.5 kilometer strike length, leaving a lot of high potential stratigraphy on the parallel track to explore for additional higher grade deposits.

Halo's exploration strategy is not only "in the shadow of the head frame" but the favourable stratigraphy that hosts the East-West and Cold-Lost deposits also wraps around the kidney bean-shaped geological feature called the Sherridon Complex. In total, it is estimated that there is 22 kilometers of prospective track to explore on the west side of the Sherridon Complex that hosts the past producer and another 12 kilometers in the eastern part of the Sherridon Complex. Modern airborne geophysical targets have been identified within the tracks and these are the next round of prospective drill targets.

Halo's unique situation as a junior company with 20,000 hectares to explore and develop within a major VMS district means that there will always be a wealth of opportunities. In Flin Flon-Snow Lake, some 26 deposits have been mined over 80 years with an average size of 3.5 million tonnes, and the Sherridon VMS District has similar geology and deposit types. Both Sherridon and Flin Flon will continue to have deposits mined, drilled, discovered and targets tested to find the next mine, all concurrently, and all with an eye to a long and prosperous future for the region.

Halo Resources Ltd. is a Canadian mineral exploration company that trades on the TSX Venture Exchange (HLO) and on the Frankfurt Exchange (HRE).

For further information on Halo Resources Ltd. call Michael Joyner at 416-619-7539 or visit their website at www.halores.com. □



### SAN GOLD CONTINUES TO FIND SIGNIFICANT NEW HIGH-GRADE GOLD ZONES, CONFIRMING VALIDITY OF NEW GEOLOGIC MODEL



Gold producer San Gold Corporation's exploration program (TSX.V: SGR; OTC QX: SGRCF) continues to reveal evidence of a resource base large enough to drive mining operations well into the future.

SAN GOLD

The recent discovery of the high-grade, near-surface Emperor Zone is only the latest strike for the exploration team, which boasts seven new named zones in the past five years. The Emperor zone is located along strike just 400 meters to the east of the previously discovered 007 deposit. Drill cores obtained from a continuous quartz-carbonate vein show visible gold throughout with grades topping out at 179 g/t (5.22 oz/ton) over 2.1 meters (6.9 feet) at relatively shallow depths of 160 meters (525 feet) below surface.

San Gold's second quarter exploration program drilled 22,250 meters from surface, 10,700 meters underground in the Rice Lake Mine and 6,700 meters underground at the Hinge Mine. Initially, the program was focused on further defining and extending the Hinge, 007 and RL East zones but also included new targets such as the Emperor Zone.

"Our outstanding success in discovering new high grade gold deposits near surface has forced us to remain in a development mode longer than anticipated," says San Gold CEO Dale Ginn of a situation many mining companies would envy.

#### HIGH GRADE GOLD DISCOVERIES BELIEVED ONLY TIP OF ICEBERG

The most intriguing question surrounding San Gold's ongoing exploration results is whether these new discoveries are only showing the tip of the iceberg. "It's like the Energizer bunny – our model just keeps going and going," says lead exploration geologist Bill Ferreira.

The geologic model, first developed in 2007, is already responsible for two production areas in the past three years: the Hinge and 007. Two additional named zones – at Cohiba and L-13, – are showing excellent promise, and many more targets besides the Emperor Zone are awaiting further exploration.

When San Gold took over from Harmony Gold in March 2004, the exploration team started drilling at the edges of the existing exploration zone, an area that had been paying dividends for more than seven decades. However, San Gold's geologists thought higher grades might be found along the San Antonio Mine (SAM) unit thinner portions. They were right, and before long, San Gold had three new established resource zones at Cartwright, SG1 and SG2&3.

Following the same logic, they wondered if the gold-rich veins could have been forced outside the historic mining unit into nearby shears and tension fractures. Ferreira's team started looking at the old mine workings inside the Rice Lake Mine to see if they could find struc-



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SGR OTCQX:SGRCF T5XV:SGR OTCQX:SGRCF T5XV:SGR OTCQX:SGRCF T5XV:SGR OTCQX:SGRCF T5XV:SGR OTCQX:



A VIEW OF THE KIND OF ORE VEINS FOUND AT THE HINGE.

tural pathway trends that might reveal the location of these veins outside the SAM unit. By following the mine's old veins to the surface, two clear structural pathway trends emerged about 500 m away from each other. Once these pathway trends were identified, San Gold's geologists realized they needed to radically rethink where San Gold's resource could be found.



THE NEW HINGE MINE HAS BEEN IN PRODUCTION SINCE Q3 2009.

#### **ROCK SOLID EXPLORATION MODEL**

Now, after thousands of core samples, many hours of field work and one exceptional LiDAR study, Ferreira says the resulting exploration model has given rise to new drill targets that have led to new ore zones, a trend which should continue in the coming months and years.

The exploration model is based on the idea that the deposits within San Gold's claims area are controlled by an internal structural grid. The first part of the grid is made of the structural pathway trends that Ferreira and his team first identified in the Rice Lake Mine's old workings. These trend lines continue to repeat at roughly 500-metre intervals. Exploration drilling along these pathways led to the discovery of the Hinge, Cohiba, and then the 007 Zone. These trend lines also cross near old mine bulkheads and prospecting trenches.

"We knew Cohiba was going to be there before we even drilled it," says Ferreira, adding that they struck the zone with their first core sample in the area

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BRAD MULHALL SCALES HINGE MINE STOPE 9780-04 WHILE PREPPING TO BOLT AND SCREEN THE AREA.

further confirming the apparent validity of the model.

In 2009, other sets of structural lineations were found that showed the most likely locations of the deposits along the structural pathway trends. These lineations are made up of shears and tension fractures which were identified by a 2009 LiDAR study. Shears and fractures are breaks in the volcanic rock that act as natural hosts for gold-bearing quartz deposits. "When we saw the results, the lineations just jumped right out at us," Ferreira recalls.

Since the model was first developed, the results have been spectacular. Not only has the exploration team had remarkable success in striking gold, the grades have been impressive.

In the 76 years the Rice Lake Mine has been in operation, grades have traditionally hovered around a respectable 0.21 to 0.31 ounces per ton. The Hinge Zone currently has measured resources at 0.29 oz/ton while 007 has indicated resources at 0.75 oz/ton.

Since the structural pathway trends were first identified from mined out vein patterns in the depths of the old historic mine workings, the exploration team expects these near-surface deposits to also extend to depth. For instance, the 98 Vein on 26 Level appears to share the same structures that control the 007 deposit. The two deposits also share similar geologies, which strengthens the chance there is a relationship between them. The next step will be to cut a drift from 16 Level, the level reaching closest to the space between them, to begin exploration on the 2,600-foot unexplored gap between 007 and the 98 Vein.

While this is the most well-developed example of the relationship between the near-surface and underground discover-

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DENNIS CHRAPON SCALES HINGE MINE STOPE 9780-04 WHILE PREPPING TO BOLT AND SCREEN THE AREA.

ies, it is by no means the only one. The surface grid formed by the pathway lines and shears/fractures opens up dozens of



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potential places to look, all of which could reach as deep as the bottom of the Rice Lake Mine workings and beyond.

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#### SO MUCH MORE THAN JUST AN EXPLORATION COMPANY

As one of Canada's most exciting new gold exploration companies, it is easy to forget San Gold is also a gold producer with two operating mines: Rice Lake and The Hinge. Bulk sampling of the first ore from a third mine - the 007, began in July.

San Gold operates in Manitoba, one of the world's most politically safe and stable mining regions. Manitoba consistently places among the Top 10 global mining jurisdictions as ranked by The Fraser Institute. The company owns 12,000 hectares of mining claims along the Rice Lake Greenstone Belt of southeast Manitoba. Production at the company's 1,200-ton per day mill is expected to reach capacity this year and increase capacity to 1800 tpd in 2011. In addition to continued production and exploration at Rice Lake, San Gold recently entered a purchase agreement with SGX Resources Inc. to jointly acquire 18 mineral claims in Ontario's Cochrane District.

#### INVESTMENT CONSIDERATIONS

San Gold's assets have grown steadily since 2005. The company tripled revenues from 2008 to 2009 from \$8.7 million to \$27.8 million and is on track to double revenues again this year. The company's revenues totaled \$12.6 million for the second quarter and \$26.6 million for the year to date, and San Gold looks forward to lower mining costs and higher production volumes as near-surface zones increase their share of the production mix.





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TRENDS AND SHEARS – A SURFACE VIEW OF THE EXPLORATION REGION SHOWING THE INTERSECTIONS BETWEEN THE PATHWAY TREND LINES (RUNNING TOP-BOTTOM) AND THE SHEARS AND TENSION FRACTURE LINES (RUNNING FROM BOTTOM LEFT TO TOP RIGHT).

OTCQX: SGRCF • TSX.V: SGR CONTACT: DALE GINN, CEO BOX 1000, BISSETT, MANITOBA CANADA ROE 0J0

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HIGH-GRADE ORE SAMPLE FROM THE NEW NEAR-SURFACE 007 ZONE.

San Gold reported a record of 63,024 tons mined during the second quarter of 2010. A total of 58,098 tons of ore was milled – the equivalent of 638 tons each day. The company also completed 1,400 feet of ramp development toward the high-grade, near-surface 007 Zone where bulk sampling and further development will be carried out for the remainder of the year.

San Gold recently closed an \$80 million prospectus offering that will be used primarily for further exploration and development of the Rice Lake Project and equipment purchases. For investors, San Gold presents a compelling story: this is a company with large liquid assets, no debt, real and growing gold production, an expanding gold reserve and tremendous bluesky potential.  $\Box$ 



### COUGAR MINERALS CORP. – RICE LAKE PROJECT



Cougar Minerals Corp. is a Vancouverbased company exploring for gold in the Rice Lake greenstone belt of southeastern Manitoba. Cougar holds, by way of four option agreements, three non-contiguous properties in the Bissett area, approximately 200 kilometres northeast of Winnipeg. The company's PFG/Bill property immediately adjoins San Gold's Rice Lake Mine property, while the Wyatt and Vena properties are located to the southeast, in the highly prospective Gem Lake-Beresford Lake area.

The company acquired the Rice Lake area properties in 2009, and surface programs were done in the summer and fall of 2009 to prioritize and evaluate them for further work. Basic prospecting on the PFG/Bill, Wyatt and Vena properties was successful in discovering many new gold-bearing quartz veins which are untested by any previous work. On the PFG/Bill property, new discoveries include the Carbucketty and On The Mark showings, where surface rock samples returned values to 78.66 g/t Au and 13.44 g/t Au, respectfully. A new discovery on the Vena property, the North Nevada showing, assayed 61.28 g/t Au and on the Wyatt property, results to 16.5 g/t Au were returned from the Wanabe showing.

In the summer of 2009, stripping and detailed sampling was done at the Salerno and Manifold veins, on the PFG/Bill property, to prepare these known targets for drill testing. In both areas, trenching exposed large zones of shearing, quartz veining, folding, and strong ankerite-sericite alteration, with elevated gold values returned. A diamond drill program (11 holes, 2189 metres) was completed in February-March 2010 to test the zones down-dip and on-strike from the trenched exposures. Both the Salerno and Manifold zones were successfully intersected in drilling, but analytical results were low. During February-March 2010, drilling was also done on the company's former Conley property, east of the PFG/Bill property. Following the drill program, the option was dropped on the Conley property.

The company recently completed a spring/summer exploration program on the Rice Lake properties. Work included extensive stripping and sampling of the Wanabe and Main Zone showings on the Wyatt property, a LiDAR survey of the Wyatt and Vena properties and stripping and sampling from various targets

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on the PFG/Bill property, including the Carbucketty, On The Mark, and Napoli showings. At press time, results from the summer sampling program had not yet been received.

Cougar Minerals completed two financings in 2009, raising in excess of \$2 million for its ongoing exploration of the Rice Lake projects. Gold prices remain strong and the company is well positioned to move forward. With results from the summer program pending and further drilling planned, Cougar Minerals is an attractive prospect for investors interested in an exciting earlystage gold exploration opportunity. The company is currently in the process of moving its listing from the CNSX to the TSX-V exchange for better shareholder access to this opportunity.

For further information call Derek Huston, 604-657-5539 or visit www.cougarminerals.com

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Always on the lookout for work methods that are more accurate and better adapted to their requirements, Canadian geologists are sure to welcome the market introduction of Fordia's new core orientation system: the CorientR.

CorientR is a mechanical device that integrates seamlessly into drilling operations and provides easy marking of core samples to record their original orientation in the ground. This data allows geologists to plan campaigns more effectively and optimize drilling costs.

A specialist in the manufacturing of tools and accessories for drilling companies, Fordia tapped its expertise to develop a core orientation system that delivers accurate results for geologists, combined with ease of use for drillers.

Unlike other core orientation systems, CorientR is exceptionally user-friendly. Fordia believes that orientation should not be another obstacle for drilling teams. The manufacturer thus invites customers to opt for problem-free systems like CorientR.

CorientR requires no supplies, batteries or calibration and employs no fragile electronic components. For customers, that means fewer worries on site.

While core orientation has not yet been adopted as a standard measure at all mineral exploration sites, it is growing in popularity. The data it yields allows geologists to determine the precise orientation of a core prior to removal, for greatly improved analysis of faults and geological structure. This facilitates the definition of drilling campaigns and increases the likelihood of finding mineral deposits.

The CorientR system is now available for rental in Quebec and Ontario and it will shortly be launched throughout Canada. Developed entirely by Fordia, this tool is currently patent pending.

ABOUT FORDIA

Fordia offers global drilling solutions to its customers in the mineral exploration and geotechnical

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industries, with a complete range of diamond tools, equipment and accessories. The company is a worldwide leader in the industry, distributing quality products that meet the specific requirements of drilling companies, while offering outstanding customer service and technical support.

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### NO TOOLS REQUIRED WITH NORDEVCO'S NEW STEEL CORE RACK

Nordevco enjoys a twenty-plus year history and has always prided itself in its ability to meet its clients' needs, from large orders on short notice to special custom orders ranging from shorter boxes for underground work to lighter weight lower capacity NQ and BQ trays to reduce the strain on exploration staff. However, that ability was definitely challenged when we were approached by John Zbeetnoff, Chief Geologist for Brett Resources, to provide an all steel core rack that required no tools for assembly and eliminated some of the issues associated with traditional wood core racks.

After a number of conversations with John to better understand his specific needs and requirements, Nordevco was able to develop a list of requirements for the final design. The prefabricated racks had to be assembled by one or two people in remote and cold climates without using any nuts or bolts allowing staff wearing heavy mitts and gloves to easily assemble the racks. The



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racks also had to be easily disassembled to allow them to be relocated and re-used, while also providing lateral stability to prevent leaning. They also had to be strong enough to hold the core boxes without sagging and had to be produced with a durable coating to inhibit rusting.

Based on these very specific requirements, Nordevco was able to design its new EZ Assemble Steel Core Racks<sup>™</sup> (Patent Pending). The racks can be assembled or disassembled with no tools and are constructed of tubular steel to ensure stability and durability. This also allows us to build each rack taller to hold more core than traditional wood racks without any risk of sagging or collapse, reducing the total space required for your core racks. They are ideal for use at your core shack to manage core tray logging.

The NQ racks will hold up to 210 NQ grooved boxes with no sagging. In addition to its heavy duty construction, the units are powder coated to prevent rust and extend the life and look of the units. Variations on the rack design can be easily incorporated to allow any size of core boxes.

All units come with bolt-down pads to allow them to be secured to foundations if desired. EZ Assemble Roof truss kits and a pre-assembled Roof Panel system using wood and Tuftex (www.tuftexpanel.com) complete with all fasteners are also available. An optional loading tool is also available to assist in loading the racks.

The racks are available for all sizes of core trays.  $\Box$ 





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### GOSSAN RESOURCES LIMITED – LOOKING FORWARD



Gossan Resources Limited is engaged in the exploration and development of a broadly diversified portfolio of properties hosting gold, platinum group and base metals, as well as the specialty and minor metals (tantalum, lithium, chromium, titanium and vanadium). Gossan also holds a large deposit of magnesium-rich dolomite, an exclusive option on the world-wide rights to the Zuliani magnesium production process and a high-purity silica sand deposit. All of the properties are located in Manitoba and Northwestern Ontario.

Cap and Trade legislation pertaining to greenhouse gas emissions in North America will likely have a significant effect on the mining sector. The net global carbon footprint of new production facilities for metals, such as Gossan's Inwood Magnesium Project, may become an increasingly critical factor in determining their feasibility. Various new electronic storage technologies for batteries in electric vehicles to large-scale grid storage of renewable energy – wind, solar and hydro – will likely dramatically increase the demand for various metals, including lithium, vanadium and magnesium.

Gossan has established a substantial resource of high-purity dolomite (NI 43-101 compliant) at its Inwood Magnesium Project. Currently, the company is focused on the development of the Zuliani Production Process, a new potentially highly-efficient method for the production of magnesium. Bench-scale testing has been completed, and the next stage of testing is being planned and equipment is being sourced. Based on the experimental and current FactSage thermodynamic modeling work, the Zuliani Process has demonstrated calcined dolomite and silicon efficiencies both over 92%. At these efficiencies, raw material consumption is about 20% lower for dolomite and 30% lower for ferro-silicon than for a typical Pidgeon plant operating in China, where about 80% of global magnesium supply is produced.

These higher raw material efficiencies of the Zuliani Process, coupled with the use of hydroelectricity, would lower the environmental impact of magnesium production dramatically. Manitoba has abundant and inexpensive hydroelectricity. Gossan is currently undertaking a Carbon Emission Study for the Zuliani Process, and a several-fold reduction in GHG emissions is expected in comparison to the level of current producers.

As the lightest structural metal, increased demand for magnesium has recently come from the auto and transportation sector, where ongoing efforts are being made to lighten weight loads in order to improve fuel efficiencies and reduce GHG emissions. This is also important to the emerging electric vehicle market, where lighter weight can extend the travelling range between re-charging batteries. Recently, the US auto industry conducted a component-

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1-866-797-3300 WWW.TECHNOSUB.NET by-component study that indicated that the current magnesium use of about 10 lbs per automobile could be increased substantially to about 350 lbs per vehicle.

New additional demand could come from electrical storage, as a French technology is being developed utilizing magnesium to store hydrogen as a method of recycling electricity from off-peak to peak hours of demand. This technology could also reduce peak demand on the electrical grid, as the storage could be located where the energy would be used. If successful, future application of this technology would be a material driver of magnesium demand.

Gossan holds a 50% interest in a large vanadium and titanium deposit at Pipestone Lake. Vanadium in various forms has a number of unique attributes pertaining to an electrical charge. Research is well underway to use these attributes in two large tanks of solutions that have the capacity to accept and release an electrical charge at great speed. This particular re-dox technology would be utilized for largescale grid storage. Commercial adoption of this technology would provide a new use for vanadium and provide a steady and large increase in demand, which would allow for new entrants of primary vanadium producers into the market. Vanadium is also likely to see a substantial increase in demand for use in lithium-based batteries. including batteries for the e-vehicle market.

Gossan holds a high-purity silica sand deposit at Manigotagan that is consistently achieving ISO 8K and 9K



Proppant ratings for use as frac sand in the oil and gas industry. Demand for frac sand is strong, as the technology of drilling multi-fraced horizontal oil and gas wells utilizes large amounts of frac sand. A recent marketing study has recommended proceeding with the property to a prefeasibility study.

At the Bird River Project, Gossan holds an approximate 45% interest with its joint venture partner, Marathon PGM, which is currently being acquired by Stillwater Mining. An initial low-grade in-situ resource has been estimated for the Page Block and Ore Fault Zone containing nickel, copper, zinc, silver, gold and PGE's. For full details of the resource estimate, refer to the NI 43-101 Report conducted by P&E Mining Consultants Inc. (NR-09-01 of January 15, 2009). Hybrid vehicles currently use nickelmetal-hydride batteries, and PGE's are a fundamental component to catalytic converters which limit auto emissions.

Gossan trades on the TSX Venture Exchange under the symbol GSS and on the Frankfurt-Freiverkehr & the Xetra Exchanges. As at September 30, 2010, there were 29.1 million common shares outstanding.

Gossan holds a commodity-diverse property portfolio well positioned to meet the increasing demand for high technology and environmentally-beneficial applications, including electric vehicles and battery storage. For 30 years, Gossan has been focused on and committed to Manitoba - the Golden Boy Province. □



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### HUDBAY'S LALOR PROJECT: EXPLORING POTENTIAL

HudBay's fully owned Lalor project is located in the Chisel Basin of the Flin Flon Greenstone Belt, a prolific zinccopper-gold region in northern Manitoba where several other mines have been developed. In addition to its geologically favorable location, Lalor has the strategic advantage of being situated only three kilometres from HudBay's existing Chisel North mine and 13 kilometres from the company's Snow Lake concentrator, which generates zinc concentrate to the zinc plant in Flin Flon.

The Lalor development project is poised to become HudBay's next major underground mine. It contains one of the largest volcanogenic massive sulfide (VMS) ore deposits ever discovered in the Flin Flon Greenstone Belt and is being developed on an expedited basis as a vital component of the company's future.

Since the deposit was discovered in March 2007, Lalor has been the focus of intensive exploration activity. Work in 2008 led to the discovery of a new gold zone in early 2009. During 2009, exploration spending on the project was doubled to \$13 million, providing for additional electromagnetic geophysical surveys and as many as six drills turning simultaneously on the property. This led to the discovery of a new copper-gold zone, adding to the previously identified base metals zone and gold zone. These three zones are structured in a classic VMS sequence that mirrors geological characteristics of profitable mines at other locations within North America.

In October 2009, HudBay filed an updated National Instrument 43-101 (NI 43-101) compliant mineral resource estimate for the base metals zone as well as a conceptual estimate of the mineralization in the gold zone. At the same time, HudBay's board of directors approved funding for the construction of an underground three-kilometer ramp from the Chisel North mine to Lalor. To date, the underground ramp has been driven more than one kilometer and remains on track to be completed in the second quarter of 2012.

In August, 2010, HudBay made a full commitment to the development of the Lalor project by authorizing the \$560 million capital expenditure necessary



23 Delaurier Drive | PO Box 819 | St. Rose du Lac, Mb | ROL 1S0 P. (204) 447-2755 | F. (204) 447-2904 | TF. (866) 817-5720 | E. bodnar@mts.net Contact : Nick Bodnar or Steve Procyshyn to put the project into full production at a rate of 3,500 tonnes of ore per day.

"The confidence in our operating team and the significant progress we have made at our Lalor project have enabled our board of directors to commit fully to its development on a fast track basis," said David Garofalo, HudBay's president and chief executive officer.

Initial production from the access ramp is scheduled in the second quarter of 2012 and full production from the production shaft is anticipated in late 2014. The project's estimated capital cost of \$560 million is expected to fund full project development, including:

- the extension of power and water facilities to the site
- a 300-person camp
- surface and underground construction at the mine site, including the completion of the access ramp
- a production shaft and a ventilation shaft
- an upgrade to the existing tailings facility
- a comprehensive upgrade of the company's Snow Lake concentrator

In conjunction with the production decision at Lalor, HudBay also announced an updated NI 43-101 compliant mineral resource estimate for the base metal zone, which increases the tonnage in the indicated resource category by 8.1% from the resource announced in October 2009. HudBay also completed a revised conceptual estimate of the tonnes and grade of the remaining portion of the gold zone and the copper-gold zone.

HudBay currently has four drills at Lalor. The company has two drills at the copper-gold zone, which remains open and HudBay is continuing to drill the previously-announced copper-gold intersection that was recently discovered down-plunge from base metal zone 10. A fourth drill is testing other regional targets.

# LALOR: THE PATH FORWARD

At the Lalor project in northern Manitoba, intensive exploration has revealed distinct zinc, gold and copper-gold zones. Initial production is scheduled in the second quarter of 2012 and full production is anticipated in late 2014.

HudBay Minerals Inc. is a leading Canadian base and precious metals producer, with high-quality operations and a pipeline of exciting growth projects in North and Central America. Our largest and most promising growth project is Lalor, where we recently authorized \$560 million in expenditures necessary to advance the project into full production. Initial production is scheduled in the second quarter of 2012 and full production is anticipated in late 2014. When Lalor reaches full production it is expected to nearly double our annual gold production and increase our annual zinc production by 50%. That is why the Lalor project is HudBay's top priority and our path toward future growth.

HUDBAY

"We are very pleased with our assessment of the viability of developing the project, particularly when the gold and coppergold zones are included," said Mr. Garofalo. "HudBay has a proven track record of significantly expanding the size of its mines after production has begun and given its substantial exploration potential, we expect this will continue with the Lalor project."

HudBay also intends to conduct extensive underground exploration at Lalor, including definition drilling on the gold zone and copper-gold zone, starting in 2012 when ramp access to the deposit has been completed. Upon reaching the deposit, the ramp and ventilation infrastructure is expected to enable production of up to 1,200 tonnes per day of ore from the base metal zone.



The company has a rich mining tradition in the prolific Flin Flon Greenstone Belt in northern Manitoba, having developed 26 mines in nearly 85 years. During the construction phase of the Lalor mine, HudBay expects to employ 600 workers, with 400 workers employed during production. The province of Manitoba is assisting the Town of Snow Lake by cost-sharing a project manager to coordinate projects necessary for the growth that will accompany mining industry expansion of this magnitude.

Manitoba continues to work with the mining industry to ensure there are enough skilled workers to meet the industry's labour needs. Manitoba in collaboration with industry, educational institutions, municipal and federal governments established the Northern Manitoba Mining Academy. The academy, located in Flin Flon, Manitoba on land donated by HudBay, will provide relevant training to prepare thousands of workers over several generations for sustainable mining ventures.

The combination of location, exploration results and mine development timing, attach high strategic significance to Lalor. The property is expected to more than double overall gold production and accelerate HudBay's zinc production over the next four years. In addition, current exploration data indicate considerable potential for further resource expansion. The property is also ideally located near HudBay's existing processing facilities and transportation infrastructure in the Snow Lake mining camp. These attributes make Lalor an extremely attractive development project and HudBay's top priority. □



# **THE BEST BET** FOR A MEGA URANIUM DISCOVERY IN THE ATHABASCA BASIN?

Led by power-hungry countries such as China, Japan, Korea and India, the number of nuclear power plants worldwide is expected to increase from 440 today to over 550 within the next two decades. As the world's existing sources of mined uranium supply presently meets only two-thirds of outstanding demand, massive new sources of uranium need to be discovered to fill this growing deficit. Correspondingly, the long-term price of uranium has increased from US\$9 per pound in 2003 to approximately US\$60/lb present-day.

#### WORLD'S MOST POTENT URANIUM IS IN THE ATHABASCA BASIN

The large high-grade uranium deposits in the Athabasca Basin produce the richest uranium mines in the world. The Cigar Lake and McArthur River mines of Cameco and AREVA each hold resources exceeding 200 million pounds, grading between 17%-25% U3O8 (uranium oxide). These deposits possess gross realizable values in excess of \$10 billion. The high grade is reflected in the price that Athabascan uranium ore can obtain per tonne. Uranium ore mined from McArthur River or Cigar Lake is worth in excess of \$30,000 per tonne compared to around \$25-\$150 per tonne elsewhere, such as mines in Australia, Kazakhstan or South Africa. CanAlaska is entrenched in the best position for the discovery of one or more of these "mega" uranium deposits.

#### **AGGRESSIVE EXPLORATION**

CanAlaska Uranium Ltd. (TSX Venture: CVV; OTCBB: CVVUF; FSE: DH7) is undertaking exploration across over 10,000 km<sup>2</sup> (4,000 square miles) of territory in Canada's prolific Athabasca Basin, home to the world's richest uranium deposits and supplier of 25% of all mined uranium. CanAlaska's team of seasoned geologists and geophysicists has considerable uranium exploration experience, particularly its VP Exploration, Dr. Karl Schimann, PGeo, who spent 20 years with uranium-giant Cogema/AREVA, where he was on the exploration team that discovered and developed the giant Cigar Lake uranium mine. Since 2004, CanAlaska has invested over CS70 million in the exploration of its projects and is poised for discovery success. The company ranks among the most active uranium exploration companies operating in the Athabasca Basin today.

#### **GLOBAL STRATEGIC PARTNERSHIPS**

CanAlaska has attracted the attention of major international partners to provide exploration funding. Japan's Mitsubishi Corporation has funded C\$12.5 million towards exploration on the West McArthur Project as a 50% joint venture partner. Similarly, a Korean consortium led by Hanwha, and comprising KEPCO, KORES and SK Energy, has so far invested C\$14.3 million in the Cree East Project under a C\$19 million option to earn a 50% ownership interest. Canadian miner Kodiak Exploration is working on the company's McTavish Project under a C\$4 million option to earn a 50% interest. As a result of these global funding partnerships, the company is able to maintain an aggressive exploration profile despite the depressed state of the global financial markets.

With 16 of 21 advanced projects 100% controlled by Can-Alaska Uranium, there are yet many opportunities for both strategic and retail investors alike to participate in highly-leveraged potential of this company's commanding position in the Athabasca Basin.  $\Box$ 



### **MUSTANG MINERALS: MAKWA AND MAYVILLE PROJECTS**



GEOTECHNICAL DRILLING PROGRAM AT MAKWA

Mustang Minerals Corp. (Mustang) is actively exploring for and developing nickel hosting properties in Manitoba and Ontario. The current focus of Mustang is nickel-copper-platinumgroup metals mineralization at its properties located in or near the Bird River Greenstone Belt, east of Winnipeg. The Makwa Nickel Project located near Lac du Bonnet is the most advanced stage property, with completion of a prefeasibility study in May 2008 for an open pit mine and concentrator at the Makwa site. Since that date, Mustang has continued work to

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enhance the project's economic potential and to advance it through final feasibility study. In October 2009, Mustang's consultants completed an updated resource estimate, followed by a new mine design, production plan and an updated reserve estimate in February 2010. Metallurgical and site studies were continued toward the feasibility study program. At the Mayville deposit, a systematic exploration program was started following an updated Mayville resource estimate in May 2010. Exploration drilling was also conducted at two properties in the Bird River area. Most recently, work has been conducted to examine the viability of combined production from Makwa and Mayville in a single processing and infrastructure complex.

Ongoing consultation with the Sagkeeng First Nation was productive, and a Memorandum of Understanding between Mustang and Sagkeeng FN was signed on November 19, 2009. The consultation process, implemented by visits to proposed work sites by Mustang and Sagkeeng representatives, was a key part of all applications for work permits.

During 2009, evaluation of the Makwa project included a significant program to re-examine and sample historic core. in following a second mineralized zone first discovered in 2007. Sampling included available core from Mustang's and previous operators' programs and the Manitoba Mines Branch core library. Assaying was performed by Accurassay Laboratories of Thunder Bay, Ontario. The data were combined with the previous drill hole database to create a revised block model, and an updated resource estimate was developed by consultants Micon International Limited in October



its and \$2.70/lb with byproduct credits. Site studies completed in early 2010 included a comprehensive soil and hydrology testing program to provide design data for the open pit mine, conducted by the Winnipeg office of Golder Associates and Paddock Drilling Ltd. of Brandon.

For the Mayville project, located close to Pine Falls, an updated resource estimate was completed in May 2010 by consultants Scott Wilson Mining using updated metal prices, metal recoveries and operating costs. An open-pit Mineral Resource, above an NSR cut-off value of CDN\$ 30.00 per tonne, is estimated to be 9,227,000 tonnes (Indicated category) containing 0.61% copper, 0.23% nickel and 0.174g/t palladium. Following this estimate, Mustang commenced an exploration program to examine the possible extension of the deposit along strike and in areas of favourable geophysical targets. An airborne geophysical survey (VTEM) was completed over a portion of the Mustang claims to examine possible extension of the known mineralization. The surface program included line-cutting of several grids, ground IP geophysical surveys and soil sampling. Drilling of attractive targets is anticipated in the fall of 2010. Additional claims in the Mayville area were also staked.



GEOTECHNICAL SOIL DRILLING AT MAKWA



CONSULTATION SITE VISIT MUSTANG AND SAGKEENG FN REPRESENTATIVES.

In July 2010 Mustang acquired an option on a group of Tantalum Mining Corporation claims which adjoin Mustang's claims in the Mayville area. Exploration on these claims will commence shortly, beginning with an airborne geophysical survey.

Exploration drilling was conducted by Rodren Drilling in the Bird Lake area on Mustang claims surrounding the historic Dumbarton mine and on optioned claims near Rumble Lake. Additional drilling at the Makwa deposit was completed to obtain fresh metallurgical samples and to in-fill parts of the mineralized zone.

A detailed metallurgical laboratory testing program was conducted by Process Research Associates in Vancouver with new composites from Mayville core samples, aimed at developing the process for recovery of separate copper and nickel concentrates from this deposit. Tests showed excellent grade in a copper concentrate (to 30% copper) at 88-90% recovery and potential to produce an acceptable nickel concentrate containing 9-11% nickel.

Further test work has been completed during 2010 to examine the potential of combining the Makwa and Mayville material for processing in a single concentrator. Initial results are positive, and work is continuing to optimize the single co-milling flowsheet. The cost of single concentrator and infrastructure to serve both deposits is being investigated by internal studies as a way to minimize the mining footprint and to provide efficiencies in operating cost. Initial work to establish the environmental baseline and access routes for Mayville has been conducted by Wardrop in Winnipeg. □



MUSTANG PRESIDENT ROBIN DUNBAR AND SAGKEENG FN CHIEF DONAVAN FONTAINE AT SIGN-ING OF MEMORANDUM OF UNDERSTANDING.



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### DUMAS RECOGNIZES MINING PROGRAM ABORIGINAL GRADUATES

TIMMINS, ONTARIO, 20 July 2010 – Dumas Contracting Ltd. ("Dumas") is pleased to announce the graduation of seven Aboriginal students from the Underground Mining Core Training Program at Crowflight Minerals Inc.'s (Crowflight) Bucko Lake Mine.

The students from Northern Manitoba undertook the sixmonth program, which was established in 2008. The program is an important part of Dumas' commitment to providing training opportunities for Aboriginal people with a view to real employment prospects within the Canadian mining industry.

The training program – a combination of theory and handson training – is delivered through a partnership between the Northern Manitoba Sector Council, the University College of the North (UCN), Cross Lake First Nation, the Wabowden Community Council, the Manitoba Métis Federation, the Manitoba Keewatinook Ininew Okimowin, Employment Manitoba, Crowflight and Dumas, who all committed to assist in the development and success of the training program and its graduates.

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On June 11, 2010, the students were recognized at a graduation ceremony held in Wabowden. The Honorable Dave Chomiak, Minister of Innovation, Energy, and Mines, Crowflight Chief Operating Officer Steve Davies and Wabowden Mayor Reg Meade attended the event, along with more than 80 other people.

Dumas President and Chief Executive Officer Daniel Dumas congratulated the graduates on their achievement. "Dumas is proud to recognize these graduates. Their achievement is testament to their hard work and dedication over the last six months," said Dumas. "We trust that this qualification will provide the graduates with a strong foundation for a safe and rewarding career within the mining industry."

These students make up just the second cohort to graduate from the new program. In May 2009, nine students graduated from the first program and all went on to secure full-time employment at the Bucko Lake Mine.

#### **ABOUT DUMAS**

Dumas is one of Canada's most successful underground mining contractors. Dumas specializes in technically challenging underground mining projects in mine construction, mine development, mine services and engineering.

For more information visit www.dumasmining.com.



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### **MPDA: WEBSITE ANALYSIS**

After a year of effort and six months of success, the following analysis of our web page was undertaken to determine the effectiveness of the site and ways it might be improved.

Visitors Overview Feb 6, 2010 - Mar				Mar 8, 2010 mparing to: Site	
		~		~~~~	Visitors  20  10  0
46 people visited this site	Peb 15		Feb 22	biar 1	Mi
105 visits					
46 Absolute Unique Visitors					
480 Pageviews					
4.57 Average Pageviews					
00:03:15 Time on Site					
33.33% Bounce Rate					
Technical Profile					
Browser	Visits	96 visits	Connection Speed	Visit	s % visits
Internet Explorer	40	38.10%	Unknown	4	44.76%
Opera	33	31.43%	DSL	21	5 23.81%
Firefox	16	15.24%	Cable	25	5 23.81%
Chrome	10	9.52%	T1		5.71%
Safari	з	2.86%	Dialup		1.90%

From February 6 to March 8, the website has received 105 views. On average these visitors are spending three to five minutes on the site, 42.86% of which are new visitors, meaning the word of our website seems to be spreading. This also shows what internet browser programs our visitors are using, along with their internet connection speed. So the majority of our visitors use Internet Explorer, Opera and Firefox browsing programs. With the speed being mostly high-speed DSL or cable, our visitors should have no issues with larger files such as the magazines.



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This shows the visits, average time and new visits to our website. This also shows a map from which we may pinpoint where we're being visited from. We've had most of our visits from Canada; there have been some from the United States, as well as Italy. We can see that 68.57% of the visits go directly to "mpda.ca", where 31.43% use a search engine such as Google or Yahoo. Also showing is the landing page visits, the pages with the most visits to them. So our Meetings,

Manitoba Exploration and Events pages are the most visited to date. It may also interest some, to know that we've had one view from the Canadian House of Commons.





This is a detailed look at the visits we've had from each country. The average time on site is quite low; this is normal for a newer site and will increase with more content and information.







#### **Top Traffic Sources**

Sources	Visits	% visits	Keywords	Visits	% visits
(direct) ((none))	72	68.57%	mpda.ca	9	27.27%
google (organic)	31	29.52%	mpda	3	9.09%
yahoo (organic)	2	1.90%	prospectors manittoba	3	9.09%
			manitoba prospectors	2	6.06%
			manitoba prospectors and	2	6.06%

With this we can see Direct Traffic vs. Search Engine usage along with the most used keywords that brought that visitor to our website. If you input almost anything with the words "Manitoba" or "prospector" into Google, you will most likely find our site on the first five pages.



ABC Fire & Safety Equipment Limited	52
Abitibi Geophysics	39
Accurassay	68
Actlabs / Activation Laboratories Ltd.	64
Alair MHA Enterprises Ltd.	44
Alex MacIntyre & Associates Limited	60
Allbutt Mining Supplies	IBC
ALS Minerals	50
Anglo American Exploration ( Canada ) Ltd.	7
Arkbro Industries	46
Atlantic Industries Limited	9
Atlis Geomatics	8
Atom-Jet Industries	62
Austin Powder Ltd.	63
B & B Dynamo & Armature Ltd.	19
Bluewater Aviation Services Ltd.	10
Bodnar Drilling Ltd.	58
Buhlmann and Associates Inc.	66
Calm Air	12
Canada Culvert	45
CanAlaska Uranium Ltd.	61
Cementation	22
Crane Steel Structures	60
Crone Geophysics & Exploration Ltd.	31
Custom Helicopters Ltd.	66
Dimatec Inc.	37
Discovery Mining Services	48
Dumas Contracting Ltd.	65
FastAir	28
Fordia	51
Gossan Resources Ltd.	57
Guertin Equipment Ltd.	51
Halo Resources	41
Hayles Geoscience Surveys Ltd.	69
HudBay Minerals Inc.	59
Jiminex Inc.	8
Kaminak Gold Corporations	27
Luke's Town Service	47

MacLean Engineering	23
Major Drilling Group International Inc.	6
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Norseman Structures	49
Norwest Manufacturing	6
Nuna Logistics	38
Nunavut Department of Economic Development & Transportation	19
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