

MINING NORTH

AN OFFICIAL PUBLICATION OF THE NWT & NUNAVUT CHAMBER OF MINES • 2014

GOING FORWARD

Even in tough times, the Northern mining industry makes major strides

ON THE COVER:

THE GAHCHO KUÉ DIAMOND PROJECT IS ON TRACK TO BECOME THE NORTH'S NEWEST DIAMOND MINE.

Business Innovation

How the mining sector inspires entrepreneurs

Regulatory Roadmap

Improvements to the rules increase investment certainty

NOLINOR

Aviation



Building strong communities
with local partners across
Northern Canada

**With a fleet of Convair 580's,
Boeing 737-200's and Learjet 31A's**

QIKIQTANI REGION

Sarvaq Logistics

KITIKMEOT REGION

Kitikmeot Air

KIVALLIQ REGION

Sarliq Ventures

NUNAVIK REGION

Uppik Aviation

1 888 505 7025

514 978 1744

marketing@nolinor.com

nolinor.com

PRESIDENT

Brooke Clements | Peregrine Diamonds
 Vancouver, BC V6B 1C6
 P: 604-408-8881 F: 604-408-8881
 E-mail: brooke@pdiam.com

VICE-PRESIDENT, NWT

Gary Vivian | Aurora Geosciences Ltd.
 Yellowknife, NT X1A 2H1
 P: 867-920-2729 F: 867-920-2739
 E-mail: gary.vivian@aurorageosciences.com

SECRETARY

Don Bubar | Avalon Rare Metals Inc.
 Toronto, ON M5H 3P5
 P: 416-364-4935 F: 416-364-5162
 E-mail: dsbubar@avalonraremetals.com

VICE-PRESIDENT, NUNAVUT

Barry McCallum | Areva Resources Canada Inc.
 Saskatoon, SK S7K 3X5
 P: 306-343-4596 F: 306-343-4044
 E-mail: barry.mccallum@areva.ca

TREASURER

Alex Buchan | TMAC Resources Inc.
 Cambridge Bay, NU X0B 0C0
 P: 867-983-2385 F: 867-983-2386
 E-mail: alex.buchan@tmacresources.com

NUNAVUT DIRECTORS

John Laitin | Sabina Gold & Silver Corp.
 North Vancouver, BC V7P 3N4
 P: 604-998-4175 F: 604-998-1051
 E-mail: jlaitin@sabinagoldandsilver.com

Greg Missal | Baffinland Iron Mines Corporation
 Toronto, ON M5H 1T1
 P: 416-364-8820 F: 416-364-0193
 E-mail: greg.missal@baffinland.com

Brad Ryder | Glencore

Toronto, ON M5X 1E3
 P: 416-775-1400 F: 416-775-1493
 E-mail: bryder@glencore-ca.com

Sahba Safavi | MMG Resources Inc.

Vancouver, BC V6E 2K3
 P: 778-373-5600 F: 778-373-5598
 E-mail: sahba.safavi@mmg.com

Adam Chamberlain | Borden Ladner Gervais LLP

Vancouver, BC V7X 1T2
 P: 604-640-4095 F: 604-687-1415
 E-mail: achamberlain@blg.com

Larry Connell | Agnico Eagle Mines Ltd.

Toronto, ON M5C 2Y7
 P: 416-947-1212 F: 416-367-4681
 E-mail: larry.connell@agnicoeagle.com

Darcy Hirsekorn | Cameco Corporation

Saskatoon, SK S7M 1J3
 P: 306-956-6362
 E-mail: darcy_hirsekorn@cameco.com

Julie Ross | Golder Associates Ltd.

Yellowknife, NT X1A 3S3
 P: 867-873-6319 Fax: 867-873-6379
 E-mail: julie_ross@golder.com

NWT DIRECTORS

Lane Dewar | Cassidy Point Exploration Services

Yellowknife, NT X1A 2N8
 P: 867-873-1871
 E-mail: lanedewar@lincsat.com

Chris Hrkac | GGL Resources Corp.

Vancouver, BC V6B 1N2
 P: 604-688-0546 F: 604-608-9887
 E-mail: chris.hrkac@gglresourcescorp.com

John Kearney | Canadian Zinc Corporation

Toronto, ON M5J 2W4
 P: 416-362-6686 F: 416-368-5344
 E-mail: kearney@canadianzinc.com

Jason McKenzie | North American Tungsten Corp. Ltd.

Vancouver, BC V6E 4A2
 P: 604-684-5300 F: 604-684-2992
 E-mail: jmckenzie@matcl.ca

Corey McLachlan | Diavik Diamond Mines Inc.

Yellowknife, BC X1A 2P8
 P: 867-669-6508 Fax: 867-669-9058
 E-mail: corey.mclachlan@riotinto.com

Brent Murphy | Seabridge Gold Inc.

Toronto, ON M5A 1E3
 P: 867-445-5553 F: 416-367-2711
 E-mail: b.murphy@theedge.ca

Glen Koropchuk | DeBeers Group of Companies

Yellowknife, NT X1A 1P8
 P: 867-766-7300 F: 867-766-7347
 E-mail: glen.koropchuk@debeerscanada.com

Roy Erasmus Jr. | Det'On Cho Corporation

Yellowknife, NT X1A 2N9
 P: 867-873-6533 F: 867-873-5308
 E-mail: r.erasmus@detoncho.com

Robin Goad | Fortune Minerals Ltd.

London, ON N6A 5P3
 P 519-858-8188 F: 519-858-8155
 E-mail: rgoad@fortuneminerals.com

Chantal Lavoie | Dominion Diamond Ekati Corporation

Yellowknife, NT X1A 3T1
 Phone: 867-669-6100
 Fax: 867-766-6501
 E-mail: chantal.lavoie@ekati.ddcorp.ca

Trevor Teed | DEMCO

Yellowknife, NT X1A 2R1
 Phone: 867-873-5325
 Fax: 867-669-7525
 E-mail: teed@denendeh.ca

MINING NORTH

VOLUME 18 • NOVEMBER 2014

President's Message

The mining industry in the NWT and Nunavut has the potential to create a prosperous future. To get there, we're focused on improvements. **P4**

DEPARTMENTS

News Portal

Mary River starts production — welcome to Nunavut's second mine. Plus: NWT Mineral strategy update, wind farming at Diavik, and much more **P6**

Profiles: Faces in Mining

Northern mining companies rely on the individuals who make their projects work. Meet seven people from the front lines. **P14**

Field Notes

Take a tour of the Winner's Circle with our sampling of Northern people and projects earning recognition. **P62**

COLUMNS

NWTUpdate

Despite the economic climate, optimism increased in 2014 with new projects advancing toward production and a revitalization of diamond exploration. **P21**

NunavutUpdate

Fewer projects were active in 2014, but Nunavut's resource sector still found success with a new mine, the development of advanced projects, and in early exploration. **P25**

FEATURES

Gathering Strength

Soft commodity markets created headwinds for the minerals industry last year. The NWT and Nunavut did not escape the challenges. But with project approvals stacking up — and a brand new mine going into production — the North has a story to tell. **P28**

Northerners Mean Business

The mining sector creates important opportunities for entrepreneurs in the NWT and Nunavut. Those entrepreneurs are meeting the challenge with creativity — and innovation. **P34**

Unlocking the Potential

Infrastructure is key to developing the world-class opportunities presented by the North's mineral resources. Creating that infrastructure is a slow and expensive process. But it's not out of sight — and it's not out of mind. **P40**

Steps Toward Certainty

The regulatory systems in the NWT and Nunavut are going through changes. New features include more efficient processes and set timelines, adding up to greater certainty and predictability. Here's what you need to know. **P47**

Mining North is published for:

NWT & Nunavut Chamber of Mines
 P.O. Box 2818, Yellowknife, NT X1A 2R1
 Tel: 867-873-5281 Fax: 780-669-5681
 Publisher: Tom Hoefler, Executive Director
 www.miningnorth.com

Published by Inukshuk Publishing

PO Box 20068 Yellowknife, NT X1A 3X8
 Tel: 867-920-2076
 ISSN No. 1193-8927.
 Printed in Canada
 Registered with the National Library of Canada.



Tom Hoefler
 Executive Director



Cheryl Wourms
 Office manager



Elizabeth Kingston
 General Manager, NU

COVER PHOTO COURTESY DE BEERS CANADA.



100% Dene owned exploration and mining company, DEMCo Ltd. is the general partner for DEMCo Limited Partnership, held by all of the Dene First Nations in the Northwest Territories, Canada, through partnership units in Denendeh Investments Limited Partnership.

DEMCo is established to explore, find and operate mines on and off selected lands in settled land claim areas and elsewhere in partnership with local Aboriginal communities.

Northern resources are our biggest strategic advantage and now is the time to initiate Aboriginal integration in an industry that is the driving force in the NWT economy.

DEMCo represents a new era of wealth creation that will benefit the Dene, our partners, the NWT and Canada, enhancing positive relationships between the mining industry and First Nations communities.

For more information contact:

Darrell Beaulieu, President & CEO
Trevor Teed, Vice-President
Suite 401-402 Denendeh Manor
4504 -49th Avenue
P.O. Box 2725 Yellowknife
NT X1A 2R1
(867) 920-2764 Fax: (867) 669-7525
www.denendehinvestments.ca



“A full-fledged mineral development strategy is now being implemented in the NWT, the subject of considerable work and consultation.”

“Nunavut is the home to a brand new mine.”

A Northern Perspective on Opportunity

It's a pleasure to invite you to read about the Northern minerals industry and to celebrate our successes. The 2014 edition of Mining North magazine is a showcase for stories about our world-class mines and world-class opportunities.

The last couple of years have been challenging to the mining industry as companies have faced volatility in the commodity market and a still uncertain global economy. I firmly believe there is a prosperous future for our industry despite these uncertainties. But, we have to remain focused on improvement in key areas such as our regulatory systems, while addressing challenges to our skills shortage and the infrastructure deficit in the North.

The Chamber continues to be engaged in the consultation process for the development of new legislation and regulations in the NWT and Nunavut that have important implications for the mining industry. There have been some recent developments that seek to improve the regulatory environment. The new Nunavut Project Planning and Assessment Act and forthcoming amendments to the Mackenzie Valley Resource Management Act, for example, aim to streamline the North's regulatory systems and make them more efficient. We are also seeing important steps being taken by Aboriginal governments under land claims, such as the creation of land-use plans in the Tlicho and Sahtu regions of the NWT, and a draft land-use plan for Nunavut currently under review. And of course, the devolution of power over natural resources in NWT is a major step forward. That, combined with the recent establishment of negotiators for a similar devolution track in Nunavut, will contribute to the positive momentum that is building with Northern efforts to improve investor certainty.

The NWT and Nunavut governments, in partnership with the Government of Canada, industry and Aboriginal governments are also making strides in the areas of training and business development. Overall, Canada's mining industry is the biggest employer of Aboriginal peoples. Even better, what we're seeing here in

the North is the upswing of Aboriginal owned businesses that employ local people to provide services and supplies to our industry.

Nunavut is the home to a brand new mine. Baffinland Iron Mines announced on September 8 that it has begun mining its high-grade iron ore at the Mary River project on North Baffin Island, nearly 50 years after its discovery. In other major milestones, water license approvals now pave the way forward for three proposed new mines in the NWT: Gahcho Kué (diamonds), NICO (cobalt, bismuth, gold), and Prairie Creek (zinc, silver), with Nechalacho (rare earths) close behind. In Nunavut, the Review Board has recommended that the Meliadine (gold) project proceed, and has provided indication of acceptability of Kiggavik's (uranium) environmental impact statement. The Back River (gold) project is well into environmental assessment, while the Doris North (gold) project plans to complete a pre-feasibility study by early 2015. In addition, Dominion Diamond is nearing completion of a pre-feasibility study on the Jay kimberlite pipe to extend the Ekati mine life for at least another 10 years.

A full-fledged mineral development strategy is now being implemented in the NWT, the subject of considerable work and consultation, and a key component in trying to attract new exploration investment to the NWT. It is critical to the economic future of the North that we have plans such as these to take full advantage of the opportunities the minerals industry presents, from grassroots exploration through to mining and then closure and reclamation. The Chamber is proud to be a partner in the development of this strategy, and we embrace similar initiatives to support and grow our industry in Nunavut.

You'll learn more about the opportunities and benefits offered by mining in the North as you read through these pages.

Brooke Clements
President
NWT and Nunavut
Chamber of Mines



Photo courtesy Baffinland Iron Mines Corp.

Welcome Aboard!

Nunavut is now home to a brand new mine, production begins at Mary River iron ore mine.

It takes many years to bring a mine into production, from discovery to approval to completion of construction. But eventually, there comes a day when all those efforts reach fruition and product starts leaving the mine site, en route to market.

Baffinland Iron Mines Corp. celebrated that moment on September 8, when it announced it had begun shipping iron ore from its Mary River mine — one of the world’s best undeveloped iron ore deposits — to the site of its port at Milne Inlet. The port is still under construction, so the ore itself won’t reach the markets for some months. But Baffinland says the project, located about 1,000 kilometres north of Iqaluit, is on track to start

shipping in the 2015 open-water season.

Baffinland president Tom Paddon described the start of production as “excellent news.” “We are now truly a mining company,” he said in a media statement. “We have drilled, blasted, crushed and transported final iron ore product to the port at Milne.”

Better yet, Paddon continued, the milestone was achieved over a three-year period without a single lost-time accident.

The Mary River project was discovered in 1962 by Murray Edmund Watt, a famed prospector and engineer who is also credited with discovering the historic Raglan deposit in Ungava, Quebec. After Watt’s death in 1982, the property was sold to Baffinland Iron Mines, which itself was acquired in

2011 by global miner ArcelorMittal SA and Nunavut Iron Ore Acquisition Inc., an investment firm. The project received final approval from the federal minister of Northern Affairs in December 2013.

At this point in the mine’s development, there are approximately 600 people working at the Mary River mine and Milne Port sites. In addition to jobs, Mary River will create substantial opportunities for Northern business and joint ventures with Northern companies. Social and community support is also a key element for Baffinland, which has completed an Inuit Impact and Benefit Agreement with the Qikiqtani Inuit Association.

Mary River

BY THE NUMBERS

3.5 Annual production of iron ore, in millions of tonnes, during the early phase of mining

18.5 Estimated annual production of iron ore, in millions of tonne, at full-scale production

21 Estimated life of the Mary River mine in years

600 No. of workers currently employed at the Mary River and Milne Port sites

200 No. of Inuit employees on the Mary River project

Working for You

How the mining industry helps the North — and Northerners

- **9,000:** No. of jobs that mining will create in the NWT, Nunavut and Yukon, if all projects at advanced stages go into production
- **20,000:** No. of person-years of Northern employment created by diamond mining between 1998 and 2013. More than half those jobs have gone to Aboriginal Northerners
- **No. 1:** The ranking of Northern mines on the list of top employers of Aboriginal people.
- **10 billion:** The dollar-value of spending by diamond mines with Northern business as of 2013. Just under half is with Aboriginal business.
- **768 million:** The dollar-value of spending with Nunavut-based business between 2007 and 2012 by Agnico Eagle for its Meadowbank gold mine.
- **Unlimited:** The support, both large and small, that Northern mining companies provide to communities. Here are some recent examples:
 - Bringing the dream a step closer to reality, Agnico Eagle donated \$5 million in April toward the creation of a Nunavut University
 - To help ensure students benefit from healthy eating, Baffinland sponsored a free lunch program for students at Nasivik High School in Pond Inlet, the nearest community to the mine
 - De Beers Canada raised more than \$50,000 in July at its annual Charity Classic Golf Tournament. The money will go to the Health & Wellness Foundation of Hay River and Hay River Junior Golf
 - Among its many community support initiatives, Diavik Diamond Mines added \$35,000 to the scholarship fund it runs in partnership with the Yellowknife Community Foundation. It also joined up with Crossworks Diamond Manufacturing to donate a diamond valued at \$16,000 to the foundation's annual fundraising gala
 - Dominion Diamond supported various local projects in 2013, including \$300,000 to Lynn's Place transition home and \$250,000 to Breakfast for Learning, among others.

Sounds Like a Plan

The NWT sets out specifics on how it will implement its Mineral Development Strategy

The Government of the Northwest Territories broke important ground last year when it released its much-anticipated NWT Mineral Development Strategy. In October, it put meat on the bones of that framework with the release of its first implementation plan, which covers the years 2014 and 2015.

The newly minted plan outlines key measures to support and improve the climate for mineral investment in the territory. In addition to identifying areas for support, it also sets priorities and timelines for various elements of the program.

In releasing the plan, David Ramsay, NWT minister of Industry, Tourism and Investment, said: "These initiatives will set the wheels in motion to restore a positive investment climate, which is important if we are to discover new deposits and establish new mines and grow our economy."

Highlights of the implementation program include:

- **Better Geoscience:** \$655,000 in new spending during the 2014-15 fiscal year to develop and disseminate geoscience data through the NWT Geoscience Office. The spending will include hiring a new surficial geologist and a geophysicist. A further \$650,000 will be spent in fiscal 2015-16. (CONT'D ON NEXT PAGE)



Photo courtesy TerraX Minerals Inc.

(SOUNDS LIKE A PLAN CONT'D)

- **Exploration Support:** Launch of a new Mining Incentive Program. The program provides financial support to prospectors and exploration companies. Six companies received grants this year, ranging between \$50,000 and \$80,000. A further \$400,000 is committed for 2015-16.
- **Infrastructure Planning:** Starting with \$200,000 in the coming year for a resource-access corridor study for the Slave Geological Province. Upcoming elements include \$31 million for a three-year energy program and seeking support from the federal Building Canada Plan program for a 10-year, \$600-million infrastructure program covering all regions in the NWT.
- **Improved Regulatory Guidance:** A “Pathfinder Support Service” will be established in the Client Services and Community Relations Unit of the territorial government’s Industry, Tourism and Investment department. The service will provide expert advice for navigating the regulatory process, assist with aboriginal engagement and consultation, and produce guidance documents for industry to follow.
- **Community Support:** Funding to help communities develop capacity-building plans. The territorial government will also help communities develop “engagement roadmaps” to help them benefit from exploration and development in their regions.

For more information, download the NWT Mineral Development Strategy Implementation Plan 2014-2015 from iti.gov.nt.ca

Scarlet Security

Scarlet Security is a Canadian corporation which currently operates 12 Aboriginal partnership corporations and Joint Ventures in Alberta, British Columbia, Ontario, Saskatchewan, NWT and Nunavut. These companies provide a full suite of security services to oil & gas, pipeline and mining industries, in addition to ice roads. We have experience providing for the security needs of both major projects and remote locations. In addition, Scarlet’s sister company, Twilite Security, provides facilities security, CATSA airport screening, and mobile patrol services.



SCARLET
Group of Companies

Phone: 867-669-7530
Fax: 867-873-3059

111-5109 48th Street
Yellowknife, NT
X1A 1N5

scarletsecurity.ca

A Look Under the Hood

Diavik passes its first anniversary as an all-underground mine — with results that speak for themselves

When the Diavik diamond mine went into production in 2003, it was an open-pit operation, and it remained so for the remainder of the decade. But even from the start, Rio Tinto and Aber Diamonds (the original partnership behind the project) knew they'd have to eventually go underground to capture the full value of the deposits.

That transition, an \$800-million undertaking, began in 2010 and was completed in 2012. Diavik now has a full year of results as an all-underground project — and they are very good, indeed.

At the top line, Diavik surpassed production targets, mining nearly two million tonnes of kimberlite ore. Diamond production for the year stood at 7.2 million carats. The benefits of a successful transition also flowed to the Northern business community. Diavik's spending for 2013 stood at \$362 million, with \$261 million going to Northern



Photo courtesy Diavik Diamond Mines

firms, the largest northern spend since 2006. Aboriginal business captured about one-third of the total budget.

In other company news, Diavik's award-winning wind farm posted another year of impressive results. Over 2013, wind power displaced 3.8 million litres of diesel fuel, reducing carbon emissions by more than

10,700 tonnes. In the first half of 2014, the wind farm delivered 10.3 percent of the mine's power needs and reduced diesel consumption by 2.5 million litres. It is currently on target to reach this year's goal of delivering 10 percent of power needs and replacing five million litres of diesel consumption.



Nuna group of companies
Dependable Project Development



We're at work on top of your world

All-weather Roads & Runways
Contract Mining
Dams & Frozen Core Dams
Dikes

Earthworks & Site Development
Exploration Support
Ice Roads & Runways
Large Diameter Drilling

Mine Reclamation – Care & Maintenance
Remote Infrastructure Planning
Site Services & Crushing
Training – Heavy Equipment – Field & Simulator

OPERATIONS & HUMAN RESOURCES OFFICE: EDMONTON 1.877.499.9114

EXECUTIVE OFFICE: VANCOUVER 1.888.734.5773

VANCOUVER BC | EDMONTON AB | YELLOWKNIFE NT | RANKIN INLET NU | PRINCE ALBERT SK | THUNDER BAY ON

www.nunalogistics.com

High Performance Commercial Grade Enterprise Networks



GALAXY
Enterprise Networks that Deliver



For 20 years, **GALAXY** has been providing reliable, affordable and innovative **enterprise communications** to companies with remote office and camp locations beyond the reach of fibre or cell coverage.

SKYDATA
Innovative, Reliable and
Affordable Network

SKYNET
Managed Services and
Network Solutions

SKYVOICE
Best Integrated
VoIP and Fax

SKYWARE
Rugged Fixed and
Auto-Deploy Systems

Supported by Local Partners across North America

1.877.463.9728
galaxybroadband.ca

PUMP | DIVE | BARGE | DREDGE | DEWATERING | SEDIMENT CONTROL

S
E
R
V
I
C
E

Effective Fluid Management Solutions For Mines

CANADIAN DEWATERING
FLUID MANAGEMENT SYSTEMS

24 hr: 800 328 3494
canadiandewatering.com

Calgary, AB 403 291 3313 Castlegar, BC 250 365 3200 Edmonton, AB 780 406 2260 Ft McMurray, AB 780 588 4230 Saskatoon, SK 306 343 8883 Surrey, BC 604 888 0042 Winnipeg, MB 204 553 2891 Yellowknife, NT 867 873 5400

PEREGRINE DIAMONDS LTD.

Chidliak Diamond Project, Nunavut
Building a Diamond Resource

TSX : PGD
201-1250 Homer Street
Vancouver, BC V6B 1C6
Tel: 604-408-8880
www.pdiam.com

Who Are You Gonna Call?

If you are talking about mine safety, start with these guys

When it comes to running a mine, make no mistake: Safety comes first. That principle was on display June 13-14 at the 57th annual WSCC Mine Rescue Competition, held in Yellowknife. This year's event brought together five highly trained teams from four mines in the NWT and Yukon. Here's how they fared.

Overall Surface Winner:
Dominion Diamond
Ekati Diamond Mine

Overall Underground Winner:
Dominion Diamond
Ekati Diamond Mine

First Aid:
Capstone Mining Corp.
Minto Mine

Surface Practical Bench:
Capstone Mining Corp.
Minto Mine

Fire Fighting:
Dominion Diamond
Ekati Diamond Mine

Rope Rescue:
Rio Tinto
Diavik Diamond Mine

Surface Written Test:
Dominion Diamond
Ekati Diamond Mine

Underground Written Test:
De Beers Canada
Snap Lake Diamond Mine

Surface Smoke:
Dominion Diamond
Ekati Diamond Mine

Underground Smoke:
De Beers Canada
Snap Lake Diamond Mine

Underground Bench/Field Test:
Dominion Diamond
Ekati Diamond Mine

Surface Obstacle/Extraction:
Dominion Diamond
Ekati Diamond Mine

Underground Obstacle:
Dominion Diamond
Ekati Diamond Mine

A special thanks to all the sponsors of this year's event: Workers' Safety and Compensation Commission, Rio Tinto, Dominion Diamond, Levitt-Safety, Nuna Logistics, Agnico Eagle, Draeger Canada, De Beers Canada.

PILLAR OF THE NWT ECONOMY

MINING



Diamonds. Zinc. Tungsten. Gold. Rare Earth metals.

Mineral resources have made the Northwest Territories a land with immense potential. The Government of the Northwest Territories is committed to further developing those natural resources in an environmentally responsible manner and attracting new investment that will provide economic benefits to residents, businesses and communities. The Department of Industry, Tourism and Investment provides programs and services to develop and profile the NWT's mining resources, through the following:

- Mineral Resource Division
- Mining Recorder's Office
- Northwest Territories Geoscience Office
- Financial Analysis and Royalty Administration
- Client Services and Community Relations
- Industrial Initiatives



A new Mining Incentive Program (MIP) was launched in June, 2014. The MIP was a key recommendation of the Mineral Development Strategy.

Mining: It's about the people



Joanna Oolateeta
Mary River

Joanna Oolateeta has had a varied career. Over the years, she has worked as an interpreter and translator, a community health representative, a school counsellor, and a mental health and wellness counsellor.

This past summer, her career moved in yet another direction: She joined Baffinland Iron Mines Corp. as one of two staff elders employed at the Mary River mine. (The other is Nick Arnatsiaq, who works a two-week cross-shift with Joanna at the project site, about 1,000 kilometres north of Iqaluit.)

This is Joanna's first job with the mining industry, and it comes with a schedule that includes teaching classes in basic Inuktitut and giving demonstrations of traditional cultural skills. Her most important contribution, though, comes from helping people from surrounding communities adjust to living and working at Mary River.

"It's an important role," Joanna says. "For example, with young women, they need a little bit of guidance to stick with it. When they get some guidance and support, they stick with it." Joanna adds that she feels both men and

women are comfortable coming to her with their concerns.

Originally from Igloolik, Joanna now lives in Pond Inlet, the closest community to the Mary River mine. She says projects like Mary River are good for Nunavut, especially for the jobs and opportunities they create for young people. She encourages people to get involved and says they shouldn't worry about the two-week rotations. "The first few days when people come here, they can have some discomfort," Joanna says. "But it's a welcoming place. They usually feel comfortable in a short time."



Doreen Apples
Snap Lake

People who work in mining are often required to spend long periods of time at remote sites. But not every mining job is like that. Take the experience of Doreen Apples, who joined De Beers Canada in March as a community liaison officer for the Snap Lake Mine. She works at the company's Yellowknife office with a Monday-to-Friday schedule that would be familiar to many people.

Her job does require travel, but it's the kind she truly enjoys.

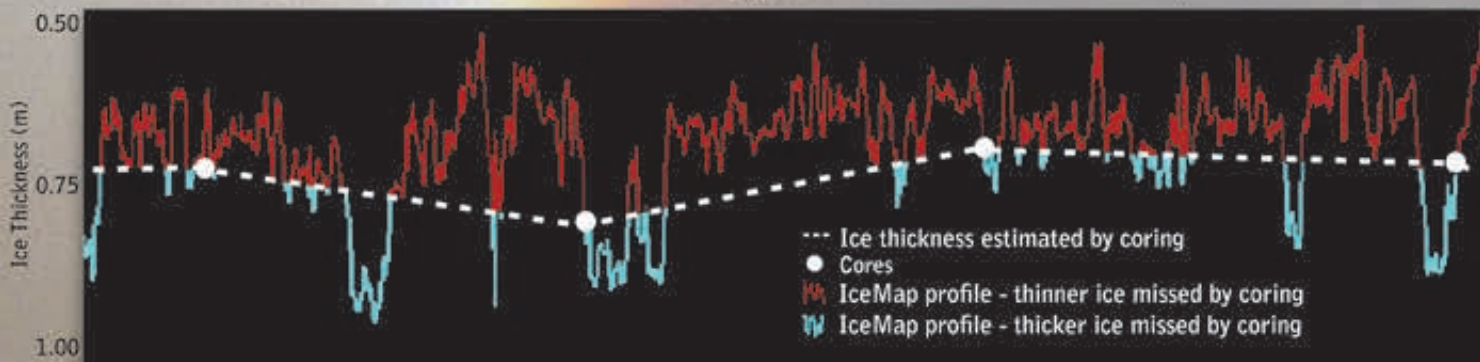
"Even though I live in Yellowknife, I still get the opportunity to go out to the communities and interact with the people," says Doreen, who is originally from Gamèti in the Tli Cho region north of Yellowknife.

As a community liaison officer, Doreen's job entails many responsibilities around the planning of company programs to foster De Beers' relationships with Aboriginal communities in the area near Snap Lake. "We do a lot of site

IceMap™ - Safer Ice Roads, Less Coring

Continuous Ice Thickness Profiling in Real-Time

Reduce Uncertainty, Save Time & Money



IceMap - the only dedicated Ice Profiling GPR

Build and maintain safer roads
Know exactly where to flood the ice
Save time with automatic reports



Ground Penetrating Radar (GPR) Technology

 **Sensors &
Software**

subsurface imaging solutions

Contact us to learn more 905-624-8909 info@sensoft.ca www.sensoft.ca

Profiles

THE FACES IN MINING

visits,” Doreen says. “We go to the communities and interact with the Aboriginal governments and Aboriginal businesses.”

In addition to work with De Beers, Doreen is an ambitious student, taking a Bachelor of Commerce degree online through Athabasca University and studying supply-chain management at Aurora College. Her educational ambitions were part of the reason she joined De Beers. “I know exactly where I want to be in five years,” she says. “I want to be a manager of procurement.”

For now, though, Doreen is excited by the job she has and the potential the mining industry offers for career growth, something she would share with others considering mining careers. “I would tell people to put their foot in the door,” Doreen says.

“Once you have your foot in the door, there’s a wealth of opportunities... a whole array of opportunities out there.”



Jamie Kataluk
Meadowbank

Mining projects may go through different owners on their journey from exploration to production. But that

doesn’t mean the faces of the people on the ground have to change. Case in point: Jamie Kataluk. He was hired as an environmental technician at Meadowbank when it was an exploration project owned by Cumberland Resources Ltd. When Agnico Eagle Mines Ltd. acquired Cumberland in 2007, Jamie stayed with the project.

His decision comes as no surprise: The job was a good fit. “I like working outdoors a lot,” he says, “so it was the right field for me.”

Jamie’s interest in the environmental field goes back to the earliest days of his career. After finishing high school in his home community of Coral Harbour, he settled quickly on the idea of environmental technology. “I started looking at my options, what I wanted to do,” he says. “Environmental technology immediately gained my attention.” So he moved to Iqaluit and enrolled in Nunavut Arctic College’s environmental-technician program. After graduation, Cumberland hired him for its project, “and I took it from there,” Jamie says.

Today, Jamie’s work involves several areas of responsibility, including water sampling, site inspections and, occasionally, wildlife deterrence. Off-shift, he lives in Baker Lake and enjoys spending time with his three daughters, working around the house, and hunting. And for those interested in the mining industry as a career, he has some advice: get a college diploma. “It’s better to have a diploma to start with if people want to get into the mining sector.”



Louis Beaulieu
Mary River

Traditional wisdom in the mining industry says that, when it comes to camp life, well-fed workers are happy workers. At Baffinland Iron Mines Corp., that maxim includes the hiring of Louis Beaulieu, a Montrealer who works at the company’s Mary River mine as a pastry chef.

With 33 years experience, Louis is a veteran of the pastry business and he says he loves his latest job, although the schedule would strike most as gruelling. “I work from 2 a.m. to 2 p.m.,” Louis says. “I start with the morning pastries and then, after that, I set up the rest of the day’s pastries.” It’s a lot of work, but Louis says it’s not that different from what you’d find in a hotel or other professional kitchen. “I think a 12-hour shift in the kitchen is quite natural,” he says.

And there are definite benefits to working at Mary River. Louis says he enjoys working with the kitchen team, and getting to know people from around the Arctic and around the world. He also gets to spend more time talking to the people

who enjoy his food, which doesn’t always happen in restaurants.

There are even benefits to his three-week rotation, which gives him time to take regular vacations. That said, he acknowledges camp life isn’t for everybody. “People realize very soon at the beginning whether they will be good for camp life or not,” he says. “In summer, it’s great. But in winter, well, it’s a little hard on the morale, but with such good people, you get through it.”



Kyla Gray
Diavik

When Kyla Gray graduated from high school in Hay River, she took some time to travel. The experience gave her a greater appreciation of her own home, especially its environment.

So, Kyla enrolled in Aurora College’s Environmental and Natural Resource Technology program. The program made her want to learn more and develop further skills, and she enrolled in the University of

CONSERVATION PLANNING IS A SOUND, PROACTIVE INVESTMENT IN A VIBRANT SUSTAINABLE FUTURE FOR THE NWT.

“The economic role of protected areas cannot be underestimated. The land is vital to the northerner’s quality of life. It provides many benefits including healthy outdoor recreation, and provides crucial natural resources such as local traditional foods, raw materials for cultural expression, tourism experiences and clean drinking water. Ensuring the land remains healthy is a priority of the GNWT and this includes protecting biodiversity for current and future generations.”

Honorable J. Michael Miltenberger

Minister of Environment and Natural Resources

“Protected areas are the foundation of a framework for sustainability, and an insurance policy for some of the concerns we have associated with resource development activities”.

Dr. Fiona Schmiegelow

Program Director—Northern Environmental and Conservation Sciences Degree Program University of Alberta

“My elders have told me that we are Dene and we come from the land. To protect the land is to protect our way of life, our culture and our people”

Dahti Tsetso

Resource Management Coordinator—Dehcho First Nations



COME SEE OUR BOOTH
IN THE GNWT SECTION AT
THE GEOSCIENCE TRADESHOW.



Lethbridge's post-diploma program in environmental science.

Today, she is putting her education to work as a co-op student on an eight-month placement at Diavik Diamond Mine.

"I thought it would be a great opportunity to make some money, to learn, and to come back to school refreshed and ready to learn," Kyla says of her decision to mix her education with work experience. So far, Diavik has more than delivered on Kyla's goals, giving her the opportunity to gain hands-on experience in projects such as water sampling, snow-core sampling and surveying. She has also completed training for underground work, and will be heading sub-surface to conduct water sampling before the year is out.

"I'm getting my fingers in everything," Kyla says. "They want me to do that. They encourage me — 'what do you want to do next?'"

Kayla will return to the University of Lethbridge in the new year to continue her course, which focuses on core science and higher-level studies on the social impacts of the mining industry, as well as subjects like GIS. (Her Aurora College program focused more on practical skills, mixing classroom study with fieldwork.) But her time at Diavik has left her with a strong desire to continue working in the industry. "It's one thing to learn all the theory," Kyla says. "It's great to be able to put it to use."



Adam Mercredi
Gahcho Kué

With Gahcho Kué poised to become the NWT's next major diamond mine, the project's joint venture partners, De Beers Canada and Mountain Province Diamonds, have their work cut out for them. For the moment, however, the number of project staff on the ground is still relatively small.

Among these early employees is Adam Mercredi, who works as a mining supervisor for De Beers. He and his team are responsible for overseeing the groundwork as the project heads towards its construction phase.

"We're doing a lot of road construction and dam construction," Mercredi says. "We're going to be starting on the airstrip pretty quick. There's lots of quarry work and road maintenance, all that good stuff."

Mercredi likes being in on projects at the early stage. It's how he got his start in mining at age 19, when he was hired as a labourer during construction of the Diavik diamond mine. From there, he moved up through the ranks.

He got into equipment operation, first as a haul-truck driver and then progressing to production-shovel operator in the mining pit.

As Diavik shifted to underground operations, Mercredi moved over to site services as a lead hand for Tlicho Logistics. He enjoyed the work, but mining was in his blood. So, when the current position opened up at Gahcho Kué, he jumped. "I'm more of a miner than a site-services guy, and this position appealed," Mercredi says. "I applied on it, and De Beers was gracious enough to take a chance on me."

A father of two who lives in Yellowknife, Mercredi is excited about being on the ground floor of a new project, just as he was when he first entered the mining industry. "You build a family up there," he says of working at remote sites. "Half your time is up there. It's a home away from home."



Morgan Hjorth
Meliadine

As a geologist with Agnico Eagles Mines Ltd., Morgan Hjorth has seen the company's Meliadine gold project from many perspectives. He started at the site in 2010 as an exploration geologist with its former owner, Comaplex

Minerals Corp., shortly before that company was acquired by Agnico Eagle. Today, he continues to work at the project as it makes its way towards development. (Meliadine was approved by the Nunavut Impact Review Board in October and is now awaiting the federal green light, followed by permit approvals.)

"The camp doesn't look the same anymore," Morgan says, commenting on the changes he's seen over the past five years. "When I started here... we were sleeping in tents. Now we're staying in trailers. We've got indoor plumbing and heavy machinery to do a lot of the physical labour."

Morgan's job has changed, too. During exploration, he would spend time at Meliadine during drilling programs, then head back to the office to study the results. Now he works a three-week rotation and spends his time on ramp development, working with the team that's figuring out the details for efficient mine development. "There are lots of veins, but you have to know which ones are the right ones," he says. "You have to choose the right path to get to the end."

In spite of the time he spends away from his home and family in Saskatoon, Morgan says long rotations are something you prepare for in his line of work. And there are upsides. "The Arctic has its own unique beauty," Morgan says, adding that he enjoys the opportunity to get to know Inuit people and learn about Inuit culture. **M**

ATR 72

Expanding our Horizons

Calm Air 

Proudly Introducing,

Calm Air's newest and most versatile aircraft; the **ATR 72**.
The answer to any air travel question is the **ATR 72**, this
complex aircraft can configure to your personal or business needs.

Passenger Loads Ranging from 22-62
Convert into Bulk-Fuel Tanker
Combinable Flights of Cargo & Passenger
Ice Strip & Off Strip Performance
General & Priority



Calm Air.com
Reservations 1.800.839.2256
Charter & Cargo 1.888.225.6247

Connected to the Mining Industry.

Solutions for connecting your northern workforce.

Northwestel has been on the leading edge in Canada's challenging northern frontier for more than 35 years. We provide Cellular, IP-Voice, Internet and Enterprise Solutions through Satellite and Microwave connections across all three territories.

To learn more about our in-the-field business solutions, call **1 888 423-2333** or email sales@nwtel.ca.



nwtel.ca/Solutions



 Northwestel



Kitikmeot Cementation Mining & Development

A mining partnership built on safety, success, and respect for the North.



Kitikmeot
Corporation
ᑭᑭᑭᑭᑭᑭ ᑭᑭᑭᑭᑭᑭ



Cementation
WE BUILD MINES

kitikmeotcorp.ca 705.472.3381 cementation.com

DEVELOPMENT • MINING • SHAFT SINKING • MECHANIZED RAISING • RAISE BORING • UG CONSTRUCTION • ENGINEERING

KBL



Environmental LTD.

Waste Management Services:

- Classification
- Packaging
- Labeling
- Manifesting
- Transporting
- Recycling & Disposal

Complimentary Services:

- Staffing placement
- Emergency response
- Environmental products

Whitehorse 867.393.4373
Yellowknife 867.873.5263
info@kblenv.com

Yellowknife - Whitehorse - Edmonton

WWW.KBLENV.COM



Photo courtesy Diavik Diamond Mines

BY HENDRIK FALCK, DISTRICT GEOLOGIST, NWT GEOSCIENCE OFFICE

Diamonds Return to Centre Stage

Progress at Gahcho Kué and Kennady Lake helped breathe new life into NWT exploration in 2014. Major metals project also passed important milestones.

For many years, the NWT has led Canada in diamond and tungsten production, and this record continued for 2014.

Current diamond production has surpassed expectations from both the Ekati and Diavik diamond mines with Ekati producing 1.36 million carats in the first six months, and Diavik producing 5.69 million carats during the first nine months. Those figures were augmented by 900,000 carats produced from Snap Lake in the first nine months. Meanwhile, production decreased modestly at the Cantung tungsten mine, but exploration and an infrastructure improvement program has extended the mine life to 2017.

Despite the economic climate, a number of announcements generated optimism, including Gahcho Kué's advance towards production and the results from 15,300 metres of delineation drilling and bulk sampling from the adjacent Kennady Lake property. The news spurred a re-vitalization of diamond exploration in the Lac De Gras and Gahcho Kué areas, with a number of new entrants joining in the search.

A highlight in metals exploration is the advancement of the Prairie Creek lead-zinc

project to the development stage with the initiation of underground rehabilitation work.

Despite a poor financial market for gold exploration, two projects had substantial drill programs in 2014: Nighthawk's Colomac Gold Project and TerraX's Yellowknife City Gold Project. Market conditions, however, have delayed advanced projects, such as Fortune Minerals Ltd.'s NICO gold-bismuth-cobalt-copper and Avalon Rare Metals Inc.'s Nechalacho rare-earth elements projects.

Natural Resources Canada preliminary estimates (March 2014) of \$71.5 million in intended expenditures on exploration and deposit appraisals for the NWT largely reflect major capital expenditures at advanced projects, while grassroots exploration spending languishes. New projects are few and far between, as evidenced by lack of prospecting permits issued for 2014.

By the beginning of November, however, 410 new claims totaling 430,000 hectares had been staked in the NWT. This marks a notable increase from the low levels experienced in 2013, with 163 claims. The resurgence can be attributed mainly to companies

conducting a selective second look at existing diamond targets. Since 2005, the amount of land covered by mineral tenure in the NWT has fallen from 19.8% to the current level of 2.1%.

ACTIVE MINES

Snap Lake Diamond Mine Owned by De Beers Canada Inc., Snap Lake recovered 900,000 carats during the first nine months of 2014. This production rate is in keeping with the exceptional production of 1.31 million carats reported for 2013.

The Snap Lake ore deposit has probable reserves reported to be 5.6 million tonnes grading 1.12 carats per tonne, and the current mine plan forecasts steady production through to 2028. The estimate represents an 18-month rolling reserve, as high costs associated with development have meant that ongoing drilling is required from the underground infrastructure.

Diavik Diamond Mine By third calendar quarter of 2014, the Diavik mine, owned by Rio Tinto plc (60%) and Dominion Diamond Corp. (40%), had recovered 5.69 million carats from 1.76 million tonnes of ore. Mining

during the summer and fall. The work augments Canterra's existing indicator mineral database and geophysical data sets.

A geophysical program was also undertaken utilizing the HeliFALCON(r) gravity gradiometer system, combined with airborne magnetics. A digital terrain model, together with detailed bathymetry, was also completed. This data will help identify high-definition gravity and magnetic anomalies. Results from the till sampling program, as well as the airborne gravity survey, are expected by late 2014.

De Beers Canada Inc. (51%) & Mountain Province Diamonds Inc. (49%) released a revised 2014 feasibility report in April for their Gahcho Kué joint venture, located about 150 kilometres south-southeast of the Ekati and Diavik mines. It reported total probable mineral reserves of 35.4 million tonnes containing 55.5 million carats for three kimberlite pipes.

The feasibility study also gave the project an estimated 11-year mine life, based on three open pits. Excavation of the pits will be staged, with production of three million tonnes of kimberlite per year. The annual production target is 4.45 million carats.

The NWT government has now approved a "Type A" Water License for Gahcho Kué. De Beers has also negotiated an Impact Benefit Agreement with the Lutsel K'e Dene First Nation, which followed previously signed agreements with the North Slave Métis Alliance and the Tlicho government.

Denendeh Exploration and Mining Company (DEMCo) acquired 13 mineral claims near Lac de Gras and Munn Lake. These properties include eight known kimberlite pipes, including seven pipes at Hardy Lake and the CI-25 kimberlite near Munn Lake. An additional six claims were acquired to cover electromagnetic and magnetic targets near Lac de Gras.

Kennady Diamonds Inc. continued to explore the Kennady North project, which now consists of 16 leases and 58 claims (61,000 hectares) north of Gahcho Kué. This property includes the diamondiferous Kelvin, Faraday, MZ, and Doyle kimberlites.

In February 2014, ground-penetrating radar and Ohmmapper surveys were used to improve definition of the Kelvin and Faraday kimberlites. The geophysics was followed by approximately 27,000 metres of delineation drilling of the Kelvin and Faraday kimberlites and large diameter drilling to extract a

mini-bulk sample. Partial results of 2.16 carats/tonne for 29 tonnes of Kelvin kimberlite and 5.1 carats/tonne based on one tonne of Faraday kimberlite were reported.

Kennady's summer program also included wide-spaced overburden till sampling by reverse circulation drilling at approximately 270 sites across the Kennady North project area, as well as ground geophysics, LIDAR

airborne mapping of the project area, and infrastructure upgrades to support an expanded 2015 winter exploration program.

Margaret Lake Diamonds (formerly JDV Capital Corp.) announced an option agreement with Harsbo Minerals Ltd. to acquire up to a 70% undivided interest in the 19 mineral claims of the Margaret Lake property. These claims, located 300 (CONT'D. ON P.50)



NCC Investment Group Inc.
NCC ᐅᓐᓇᓇᓇᓇᓇᓇᓇᓇ ᐅᓇᓇᓇ
NCC-kut Piqutinginnik Katimayit Havakvinga
Groupe d'investissement NCC Inc.

NCC Investment Group Inc. - Corporate Structure

**NCC Properties Ltd. and NCC Development Ltd.
are subsidiaries of NCC Investment Inc.**

Shares in NCC Investment Group Inc. are equally owned by the four Inuit birthright corporations of Nunavut which are, Nunasi Corporation, Kitikmeot Corporation, Sakku Corporation and Qikiqtaaluk Corporation.

NCC Properties Ltd.

We offer commercial residential and industrial space, built to standards of excellence by NCC. Our Nunavut real estate portfolio includes 10 office buildings including the Nunavut Legislature, 264 residential units including Inuksugait Plaza, our premiere development which leases space for homes and offices and finally NCC/AC Industrial Park in Iqaluit.

NCC Development Ltd.

NCC Development has completed construction projects valued at over \$300 million including offices and housing for the Government of Nunavut, Inuksugait Plaza Phase 1 to 3 and the Canadian North Hangar, 28-plex recently completed in Iqaluit and individual houses as per our Home Ownership Program. At NCC Development, our first priority is customer satisfaction.

All properties are owned and managed by the Inuit of Nunavut

NCC Investment Group Inc.

P.O. Box 850, Iqaluit, Nunavut X0A 0H0

Tel: 867-979-8900 | Fax: 867-979-8901

www.nig.ca



HAUL TRUCKS AT THE MEADOWBANK GOLD MINE
 Photo courtesy of Agnico Eagle Mines Ltd.

BY ABORIGINAL AFFAIRS AND NORTHERN DEVELOPMENT CANADA (AANDC) – NUNAVUT REGIONAL OFFICE, MINERAL RESOURCES

A Quieter Year — But Still Active

Economic conditions dampened exploration in Nunavut in 2014, but several projects — covering diverse minerals — are still moving forward

Nunavut’s mineral resource sector continued to find success in both the development of advanced level projects and in encouraging results from earlier stage exploration prospects in 2014. Fewer projects were active in the territory this year compared to last, but those that are active span multiple commodities: iron, gold, base metals, diamonds, and uranium. The continuing activity indicates that Nunavut remains an attractive destination to explorers, while the variability highlights Nunavut’s potential for a diverse resource sector contributing significantly to its growing economy.

The territory now has two operational mines, an advanced gold project seeking its project certificate and regulatory authorizations to allow mining, and multiple projects at various stages of the environmental assessment process. The area held under Crown mineral tenure (including claims, leases and prospecting permits) totaled more than 8.1 million hectares in 2014, of which approximately 200,000 hectares was acquired in 2013.

Nunavut is divided into three regions, the Kitikmeot (Western Arctic), the Kivalliq (Central Arctic and west coast of Hudson Bay), and the Qikiqtani (Eastern and High Arctic). Exploration activity focusing on a variety of commodities occurred in all three regions. The overall focus remained on precious metals, however projects for uranium, diamonds, iron, and base metals were being actively explored. Diamonds, in particular, experienced renewed exploration efforts compared to recent years.

Natural Resources Canada’s annual mineral statistics survey estimates

that \$166.5 million in exploration expenditures will be spent in the territory in 2014. This is a sharp decline from the estimated \$312.9 million in 2013, but the drop reflects similar trends displayed across the country. Tough market conditions and decreased commodity prices have made it increasingly challenging for companies, particularly juniors, to secure financing to fund exploration activities.

KITIKMEOT REGION

The primary commodities being explored for in the Kitikmeot region are gold and base metals. Sabina Gold & Silver Corp.’s Back River project continues to advance through Nunavut’s regulatory process. The company is currently working on a feasibility study for the project, and its Draft Environmental Impact Statement is being reviewed by relevant parties. The feasibility study is expected to reach completion in the first half of 2015. Sabina budgeted \$24 million for the 2014 field program, aimed at supporting the feasibility study and at upgrading existing resource estimates. New resource estimates released in March now demonstrate more than 7.25 million ounces of gold at Back River, up from 6.64 million ounces in 2013.

TMAC Resources Inc. owns the advanced stage Hope Bay gold project, 150 kilometres southwest of Cambridge Bay. In May, the company raised \$77 million to fund their 2014 program, which included drilling to upgrade existing resources and re-opening the Doris portal to advance underground exploration and mine design. TMAC’s timeline anticipates completing environmental assessments and bringing

the property to production by 2020. However, a preliminary economic assessment released in late 2013 states that the company needs at least \$651 million in capital to advance the project to the point of operation.

The Kitikmeot's established base metals properties include Glencore Canada Plc's Hackett River project and MMG Ltd.'s Izok Lake and High Lake deposits (Izok Corridor),

but infrastructure remains a key issue in this region. Plans between Glencore and Sabina for a collaborative effort on the Bathurst Inlet Port and Road (BIPAR) stalled last year, and on Sept. 8, 2014, MMG released news that the Izok Corridor deposits will not be economically viable without assistance from a third party for infrastructure development.

Despite the persisting market challenges,

some grassroots activity has been occurring in the Kitikmeot region. Tundra Copper Corp., a small private company, completed a short field program in late 2013 to confirm historical copper mineralization in the area southwest of Kugluktuk. A small drilling program was also planned for the 2014 field season, pending financing. Transition Metals Corp., which operates the early-stage Itchen Lake gold project, also acquired new parcels of land in the Kitikmeot, targeting both gold and base metal mineralization.

Elgin Mining Ltd., owner of the Lupin and Ulu properties, was acquired in the fall of 2014 by Mandalay Resources Corp., and Mandalay announced intentions to sell its newly acquired Nunavut properties when the opportunity arises.

KIVALLIQ REGION

The Kivalliq region of Nunavut was the busiest area for exploration efforts in 2014, mainly for gold and uranium. An operational mine, two advanced projects and some positive-looking prospects dominated headlines during the 2014 season.

Agnico Eagle Mines Ltd. has a significant presence in the Kivalliq region with three properties at various stages of development. Agnico's Meadowbank mine, located 70 kilometres north of Baker Lake, experienced record high gold production from its Portage and Goose deposits this year. Production commenced at the mine in 2010 and is expected to continue until 2017. In 2013, Agnico-Eagle signed an exploration agreement with Nunavut Tunngavik Inc. for a 400-square-kilometre property located on Inuit Owned Land, just 50 kilometres northwest of Meadowbank. This property has since been named Amaruq, and was previously referred to as IVR. Drilling at Amaruq commenced in July 2013. Since then, over 30,000 metres of diamond drilling has been completed, as well as the installation of a new exploration camp. Results have been encouraging for the company, and an initial resource estimate for the Whale Tail zone on the western part of the property is expected in early 2015. Estimated expenditures for the Amaruq project alone in 2014 are \$9 million. Agnico Eagle has also been proactively collecting data this year for environmental baseline studies which may be used eventually in the permitting process.

The company's third project, Meliadine, is located in the eastern (CONT'D. ON P.57)



**Kitikmeot Corporation is a
100% Inuit owned company capable of
fulfilling all your mining needs.**

Kitikmeot Cementation
underground mine development

Kitikmeot Caterers
camp management and catering

Nuna Group of Companies
open pit mining, earthworks
construction, large diameter drilling

Medic North Nunavut
remote site medical services

Kitikmeot Blasting Services
for all your blasting needs

Toromont Arctic Caterpillar
mining equipment

Kitnuna Group of Companies
cat trains, earthworks,
fuel and supplies

Diamonds International Canada
diamond valuation

867.983.2200
www.kitikmeotcorp.ca



*Kitikmeot
Corporation*
ᑭᑭᑭᑭᑭᑭ ᑭᑭᑭᑭᑭᑭ



By Land, Air, Ice & Sea



Supply Chain • Sealift • Freight Forwarding • Air Cargo • Field Personnel

4 Decades Strong

www.bbex.com



Marisa Mabbitt
Millwright Apprentice

TOGETHER WE SHINE

Working hard, finding solutions and setting a positive example

Marisa Mabbitt is a Métis member from Fort Smith, NT. She joined the Ekati Diamond Mine in 1998 with the Mobile Maintenance department, where she quickly advanced within the company. In 2011, Marisa enrolled in the four-year Millwright apprenticeship program.

Now in her third year, Marisa acknowledges the job satisfaction she feels when she sees a problem with a piece of machinery, finds a solution and returns it to the field in good working order. Her long-term goal is to earn her Red Seal Journeyman ticket.

Marisa is not only making her mark at Ekati, she is also leading by example for the youth in the North, "I want to see my family and the next generation strive to do better and be better. I want them to expect more out of themselves."

To learn more about how Dominion Diamond is creating opportunities for northerners, visit ddcorp.ca





GATHERING STRENGTH

THE REAL STORY OF NORTHERN MINING STANDS BEHIND THE HEADLINES

When it comes to mining in Nunavut and the Northwest Territories, 2014 was a year for cautious optimists. The reason for caution is clear: The business climate was not inviting. Commodity prices remained soft, and companies faced ongoing challenges in financing development and exploration.

So why the optimism? Simple: Whatever the headwinds, the mineral sector in the NWT and Nunavut achieved significant milestones in 2014. Times may be tough, but the Northern mining industry is moving forward.

Baffinland Iron Mines Co. trucked the first iron ore from its world-class Mary River project on Baffin Island in September to its stockpile at its under-construction port at Milne Inlet, marking the start of production at Nunavut's second mine. In June, Fortune

Minerals received its final land-use permit and water-approvals for its NICO property, a gold-cobalt-bismuth-copper project in the North Slave region of the NWT. NICO is now "shovel-ready," with construction slated to begin once financing is in place.

And in mid-October, the Nunavut Impact Review Board gave its approval to Agnico Eagle Mines Ltd.'s Meliadine project near Rankin Inlet, saying it was "optimistic that the project will leave a positive legacy if developed correctly." The decision to green-light

the proposed gold mine now rests with federal Northern Affairs Minister Bernard Valcourt.

Better yet, these approvals followed on a slate of other positive developments. In September 2013, the federal government approved the last of Canadian Zinc's permits required to construct the mine. (The company has recently triggered a new environmental review for an all weather road to improve project economics.) In November 2013, the Avalon Rare Minerals Inc.'s Nechalacho project at Thor Lake, southeast of Yellowknife, received environmental approval. The following spring, in April 2014, the project received the land use permit required for pre-construction and low-impact site activities. (It still needs a mining water license to allow full construction to proceed). In October 2013, the Gahcho Kué diamond project — a joint venture between De Beers



NEED TO KNOW

- Despite economic headwinds in 2014, Baffinland Iron Mines Corp. Mary River project, and De Beers Gachoukué went into production. Meanwhile, Fortune Minerals Ltd. received final permits for its “shovel-ready” NICO project in the NWT, and the Nunavut Impact Review Board approved Agnico Eagle Mine Ltd.’s Meliadine gold project.
- Projections for rising diamond prices are stimulating exploration in both the NWT and Nunavut.
- Recent increases in uranium prices may help stimulate interest in Nunavut’s two uranium projects, Areva Resources Canada Inc.’s Kiggavik Mine project and Kivalliq Energy Corp.’s Angilalk project.
- Aboriginal engagement in mining is breaking new ground with equity participation in Avalon Rare Minerals Inc.’s Nechalacho project and the formation of DEMCo LLP, a Dene-owned exploration and development firm.

Canada and Mountain Province Diamonds Inc. — also received its federal approval to advance to permitting and received the land use permit and water license by late summer 2014. It is now on the path to production, which is scheduled to begin in the third quarter of 2016.

This is all good news. And with more projects in advancing stages of exploration or in the regulatory process in both territories, it proves that the world-leading geological potential of the NWT and Nunavut remains a compelling reason to invest in the region. There are challenges, to be sure, but progress is being made on many fronts.

Heading into 2015, however, the most pressing issue continues to be the drag on investment created by weak markets for metals and minerals. When the markets will turn is anyone’s guess. At the 2014 Nunavut Mining

Symposium in April, Scotiabank commodities specialist Patricia Mohr predicted that the trough likely passed in early 2014. Likewise, TD Economics has predicted modest price gains for metals such as gold, copper, and nickel. Neither of these commentaries signal a rebound, however, and many Northern projects, like projects everywhere in the world, are in holding patterns against relatively flat outlooks.

Still, there are bright points. Take gold, for example. Even though it is no longer flirting with US\$1,900 per ounce like it was in late 2011, recent prices are still in the \$1,200 range. That’s well above the \$561 per-ounce cost Agnico Eagle Mines achieved at its Meadowbank mine, near Baker Lake, during the first three quarters of 2014. The result suggests that the right deposits, combined with an experienced operating team, can still produce

profit margins, even in remote Arctic sites.

Recent increases in uranium prices might also help stimulate interest in Nunavut’s two projects, Areva Resources Canada Inc.’s Kiggavik Mine project, which has its final environmental impact review statement under review by the Nunavut Impact Review Board, and Kivalliq Energy Corp.’s Angilalk project, one Canada’s highest grade uranium resources outside of the Saskatchewan’s Athabasca Basin.

The most intriguing prospects, however, are occurring in the diamond sector, where rough stone prices could be headed for increases. According to a report by consulting firm Bain and Company, rough diamond prices should hold steady for the next three years, at which point global demand will start growing faster than supply. De Beers has published similar outlooks, citing increased

GLITTERING PROSPECTS

DIAMONDS RETURN AS ONE OF THE NORTH'S BRIGHTEST EXPLORATION PLAYS

During the 1990s, the discovery of the diamonds at Lac de Gras sparked one of the greatest staking rushes the world has ever seen. Now, as experts project rising prices for rough stones in the next few years, there's new life in the Northern diamond play – in both the NWT and Nunavut. Here, some highlights from the field. You may recognize some of the names.

CANTERRA MINERALS Led by Randy Turner, the geologist and mining executive behind the original diamond discovery at Snap Lake, Canterra is active in Turner's old stomping grounds. The company has five properties in the Snap Lake mine and Gahcho Kué project areas, now dominated by De Beers Canada. This summer, it ran till-sampling programs at all five properties to help identify and prioritize drill targets for future programs.

KENNADY DIAMONDS Kennedy Diamonds is focused on its Kennedy North project, which is next to the De Beers Canada-Mountain Province Gahcho Kué property. In 2013, the company made headlines with a 1.1-tonne sample from its Kelvin and Faraday kimberlite pipes that graded at 8.44 carats per tonne, a result CEO Patrick Evans (also of Mountain Province Diamonds Company) described as "exceptional." Exploration continues at the site, where grades have remained above a healthy two carats per tonne.

MARGARET LAKE DIAMONDS Margaret Lake Diamonds is exploring a property 300 kilometres northeast of Yellowknife, in the vicinity of the De Beers-Mountain Province Gahcho Kué project. The work is at early stages, but it's being led by an interesting team. The team includes Buddy Doyle, vice-president of exploration, who played a key role in the Diavik diamond discovery. Margaret Lake's CEO is Paul Brockington, a 50-year veteran of the mineral business, and the company's board includes retired NHL star Darryl Sittler.

NORTH ARROW MINERALS In the 1990s, Gren Thomas was the head of Aber Resources, the company that staked and explored the property that became the Diavik mine. Today, he is chairman of North Arrow Minerals, which is conducting diamond exploration at five sites in the NWT and Nunavut. It is currently processing a 1,500-tonne kimberlite sample from its Qilalugaq project on Nunavut's Melville Peninsula. It also has two projects in the Lac de Gras area, and two more in Nunavut, one northeast of the Qilalugaq project and one near Chesterfield Inlet.

PEREGRINE DIAMONDS Peregrine Diamonds, headed up by Eric Friedland, has three diamond-exploration properties in Nunavut and one in the NWT at Lac de Gras. The company is currently focused on its Chidliak property, about 120 kilometres northeast of Iqaluit. The site is home to 67 known kimberlites, eight of which the company says are potentially economic.



AGNICO EAGLE MINES LTD.'S MEADOWBANK GOLD MINE BEGAN PRODUCTION IN 2010. IN THE FIRST NINE MONTHS OF 2014, IT PRODUCED 366,162 OUNCES OF GOLD.
Photo courtesy Agnico Eagle Mines Ltd.

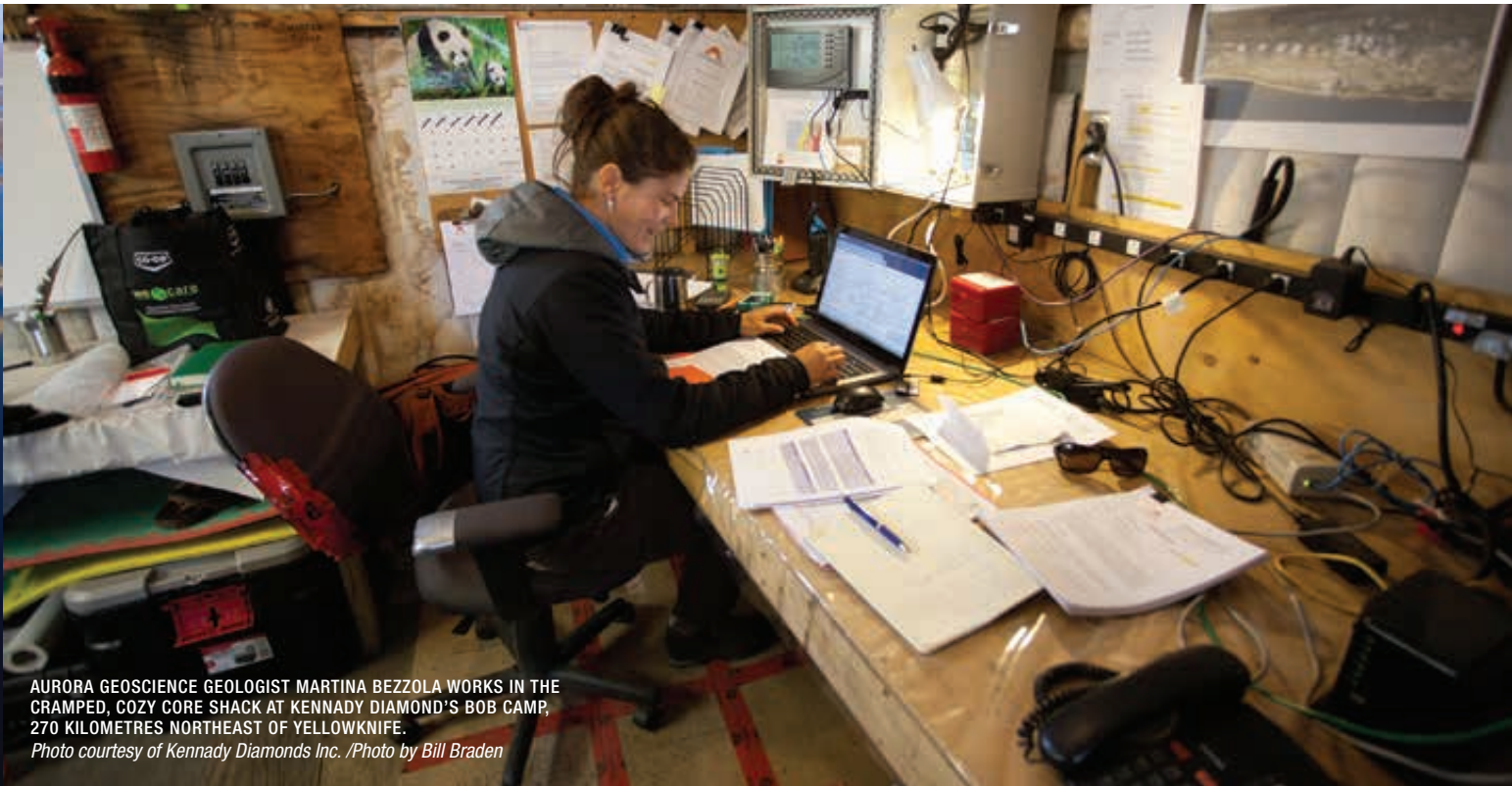
demand in the U.S. as its economy recovers and the continuing rise of middle class consumers in China and India.

Regardless of current challenges, the NWT and Nunavut share a fundamental quality that make them compelling regions for the mining industry: world-class geology, with rich and varied mineral endowments — from gold and diamonds to iron, copper, uranium, and rare earths — that have supported a mining industry for nearly a century.

And as Northern mining has grown, it has made massive contributions to Northern development. Since 1932, the Northern mining industry has produced metals and minerals valued at more than \$60 billion. It is the largest employer outside the public sector. If all new mines in the regulatory process or at advanced stages of exploration come into production, they will create a further 9,000 jobs in three territories, and generate billions in life-of-project expenditures.

This level of activity has spurred major investment by industry, government and communities to address the traditional challenges of working in the North head on. Considerable success has been seen on the training side. The NWT Mine Training Society, for example, has developed unique programs, in partnership with mining companies and education institutions, some of which can be delivered in communities in the impact region of a mining project and timed for the opening up of employment opportunities.

Several initiatives are also underway in Nunavut. A suite of programs offered through Nunavut Arctic College, many of them based out of its \$23-million Trades Training Centre in Rankin Inlet. The Kivilliaq Mine Training Society, a partnership between the Nunavut government, the Inuit and industry partners, has also been active in communities



AURORA GEOSCIENCE GEOLOGIST MARTINA BEZZOLA WORKS IN THE CRAMPED, COZY CORE SHACK AT KENNADY DIAMOND'S BOB CAMP, 270 KILOMETRES NORTHEAST OF YELLOWKNIFE.
 Photo courtesy of Kennady Diamonds Inc. /Photo by Bill Braden

throughout the region, delivering programs ranging from employment-readiness through to pre-trades, drilling, driver training, and underground mine training.

Employment, however, is only one side of the coin. Northern mining has also fostered the growth of a thriving mining and exploration services business sector. The rise of Aboriginal-owned business has been an especially notable success story. For example, Det'on Cho Corp., the economic development arm of the Yellowknives Dene, was launched in 1988 with a \$15,000 grant for seed money. Today, it is a major Northern corporation with annual revenue of \$40 million and 20 subsidiaries, many focused on providing services to the mining sector. One of its recent highlights has been the awarding of the contract to provide jet passenger service to Diavik Diamond Mine to the subsidiary Det'on Cho Logistics and its partners, Summit Air and First Air. In the North Slave region, Tlicho Investment Corp., owned by the Tlicho Government, has developed a large portfolio of firms. Its holdings include wholly owned subsidiaries such as Tlicho Engineering and Environmental Services, Tlicho Logistics, as well as partnership companies such as Kete Whii Ltd., Tlicho Orca Blasting Services and Tlicho Air.

Similar business organizations are developing in Nunavut. Some are well

established, such as Kitikmeot Corp., the investment arm of the Kitikmeot Inuit Association, and Kitikmeot Cementation Mining & Development Ltd. Others are at earlier stages due the mining industry's relatively short history in the territory.

That said, the most recent — and interesting — trends in Aboriginal engagement with the mining industry are happening on the equity side, with Aboriginal communities and organizations taking ownership roles in projects. In 2013, for example, Deninu K'ue First Nation signed a deal that will see it eventually receive a 3.3 per cent ownership stake in Avalon's Nechalacho project. Meanwhile, Nunavut Tunngavik Inc., the organization that administers the Nunavut land claim, has an option to acquire up to 25 per cent of Kivalliq Energy in the event that the company's Angilak uranium property becomes a working mine.

Perhaps the most intriguing development was the creation last year of DEMCo LP, a new firm launched by the Dene-owned Denendeh Investments Inc., to carry out mineral exploration and mining development. The new company currently has three

properties in its portfolio. Its flagship is the Terra property, where the company has a three-phase plan to mine high-grade silver, explore iron-oxide-copper-gold targets and conduct environmental remediation.



STAFF AT AGNICO EAGLE MINES LTD.'S MEADOWBANK GOLD MINE CARRY OUT A FISH STUDY AS PART OF ONGOING ENVIRONMENTAL MONITORING AT THE SITE.
 Photo courtesy Agnico Eagle Mines Ltd.

In addition to the pace of projects earning approvals and the evolving face of mining in the NWT and Nunavut, industry watchers are also following positive developments on the regulatory front. Two key features are the new Nunavut Project and Planning Assessment Act, which (CONT'D. ON P.59)

nwt & nunavut

Where We Work

A quick glance at the map — showing active mines, major exploration and grassroots exploration — makes one point abundantly clear: Canada’s North offers world-class potential for the mining industry. It’s a challenging environment. But it can also be rewarding, for both companies and communities, thanks to resource endowments that cover a wide variety of minerals, including diamonds, gold, iron, base metals, uranium and rare earths. For this reason, the NWT and Nunavut have played significant roles in mining’s past and present, just as mining has been vital to the development of the territories. Working in partnership, they can also create the potential for a brighter future.

This map provides an overview of mining activity and communities in the NWT and Nunavut. Unfortunately, not all communities and projects could not be shown here. For full details, visit miningnorth.com and follow the “Maps” link in the “Resources” section.

LEGEND

● ACTIVE ● MAJOR EXPLORATION ● GRASSROOTS EXPLORATION

- | | |
|----------------------|-----------------------------|
| GD GOLD | IO IRON ORE |
| DS DIAMONDS | SR SILVER |
| LZ LEAD, ZINC | CL COAL |
| CR COPPER | RE RARE EARTH METALS |
| TN TUNGSTEN | MM MULTIPLE MINERALS |
| UR URANIUM | |



ELLESMERE ISLAND

Arctic Bay

Resolute

BEAUFORT SEA

Tuktoyaktuk

Inuvik

Paulatuk

Darnley Bay

VICTORIA ISLAND

Cambridge Bay

Gjoa Haven

Kugluktuk

Norman Wells

Déline

MM High La Project

GD Hope Bay

DS Qitaaq

SR DEMCO

GD ULU

MM IZOK

GD Lupin

GD Three Bluffs

NWT

MM Hackett River

TN Mactung

LZ Selwyn

LZ Wrigley Property

TN Cantung

GD Indin Lake

DS Ekati

DS Diavik

DS HOAM Project Area

DS Redemption

DS Lac De Gras

MM NICO

GD Courageous Lake

Canterra

GD Back River

GD Meadowbank

Fort Simpson

Behchoko

GD North Belt

DS Kennady Diamonds

DS Gahcho Kué

MM Prairie Creek

GD Yellowknife Gold Project

RE Nechalacho

DS Snap Lake

UR Kiggavik

Baker Lake

Yellowknife

LZ Pine Point

Lutselk'e

UR Lac-50

GD Meliadine

Rankin Inlet

Hay River

GD Kiyuk Lake

ACTIVE MINES

Can tung Mine – North American Tungsten Ltd. Tungsten and copper property in western N.W.T. Mine-life projection extended in September to beyond 2017.

Diavik Mine – Rio Tinto (60%), Dominion Diamond Corp. (40%). Canada's largest diamond producer. 300 km northeast of Yellowknife. Underground operation. Mine life to 2024.

Ekati Diamond Mine – Dominion Diamond Corp. Canada's first diamond mine. Open pit and underground operations. Current mine plan calls for production to 2019.

Mary River – Baffinland Iron Mines Corp. World-class iron ore mine on Baffin Island, 1,000 km north of Iqaluit. First ore mined in September 2104 for shipping to market in 2015. 21 year mine life.

Meadowbank Gold Mine – Agnico Eagle Mines Ltd. Open-pit mine in Nunavut's Kivalliq region. 70 kilometres north of Baker Lake. Mine life into 2018.

Snap Lake – De Beers Group of Companies. Canada's first all-underground diamond mine. 220 kilometres northeast of Yellowknife. Mine life to 2028.

MAJOR EXPLORATION

Back River – Sabina Gold and Silver Corp. Gold project in Nunavut's Kitikmeot region. Feasibility study expected to be completed in 2015.

Chidliak – Peregrine Diamonds Ltd. Diamond project located about 180 km south of Pangnirtung. More than 60 known diamond-hosting kimberlite formations. Planning under way for resource-definition program in 2015.

Courageous Lake – Seabridge Gold Inc. Gold exploration project 240 km northeast of Yellowknife. Prefeasibility study estimates 6.5 million ounces in proven and probable reserves.

Doris North/Hope Bay – TMAC Resources Inc. Proposed gold mine 130 km south of Cambridge Bay. Covers majority of Hope Bay greenstone belt.

Gahcho Kué – De Beers Group of Companies and Mountain Province Diamonds. Received NWT land and water permits in September, paving the way for construction of proposed open-pit diamond mine.

Hackett River – Glencore Canada plc. Proposed open-pit zinc, silver, copper, and lead mine. 104 km south-southwest of Bathurst Inlet.

Izok Corridor Project – MMG Resources Inc. High Lake: Copper, zinc, silver and gold property 190 kilometres east-southeast of Kugluktuk. Izok Lake: High-grade zinc, copper, lead, silver deposit 225 km southeast of Kugluktuk.

Indin Lake – Nighthawk Gold Corp. Gold project in the greenstone belt that also hosts the old Colomac gold mine, 220 km northwest of Yellowknife. 2014 exploration program includes 14,000-metre drill program covering four deposits.

Kennady – Kennady Diamonds Inc. Located adjacent to the Snap Lake and Gahcho Kué diamond deposits, 280 kilometres northeast of Yellowknife. Exploration focused on the diamondiferous Kelvin and Faraday kimberlites.

Kiggavik – AREVA Resources Canada Inc. Proposed uranium mine 80 km west of Baker Lake. Environmental Impact Statement accepted by Nunavut Impact Review Board in October.

Lac 50 – Kivalliq Energy Corp. High-grade uranium deposit at Kivalliq Energy's Angalik project in central Nunavut.

Mactung – North American Tungsten Corp. Proposed tungsten mine located in Yukon by the NWT border. 160 km northwest of North American Tungsten's Cantung mine. Access through NWT. Yukon regulators approved project in September.

Meliadine Gold – Agnico Eagle Mines Ltd. Gold mine 25 km north of Rankin Inlet. Approved in April by Nunavut Impact Review Board. Received permits for pre-construction

Nechalacho – Avalon Rare Metals Inc. Proposed underground rare earths metals mine 100 km southeast of Yellowknife. Awaiting water license to finalize authorizations.

NICO – Fortune Minerals Ltd. Proposed open pit and underground cobalt, gold, bismuth, copper mine 50 km northeast of Wha Ti. Final land-use and water permits issued in June.

Pine Point – Tamerlane Ventures Inc. Proposed open pit and underground lead-zinc mine east of Hay River, in the old Pine Point mining district.

Prairie Creek – Canadian Zinc Corp. Proposed underground lead, zinc, silver mine located 120 km west of Fort Simpson. In October, Canadian Zinc announced it had contracted with Procon Mining and Tunnelling Ltd. to carry out mine rehabilitation, exploration, mine development and initial production

Qilalugaq – North Arrow Minerals Inc. Diamond exploration northwest of Repulse Bay on Nunavut's Melville Peninsula. Eight known kimberlites, including the largest diamondiferous kimberlite in Canada's eastern Arctic.

Selwyn Project – Selwyn Chihong Mining Ltd. Proposed open pit and underground lead-zinc mine in Yukon by NWT border. Access through the NWT.

Three Bluffs – North Country Gold Corp. Gold deposit north of Baker Lake. 2015-16 work-plan includes bulk sampling and drill testing for resource extensions, new mineralized structures, and satellite targets.

ULU & Lupin – Elgin Mining Inc. Gold projects southeast of Kugluktuk. In September, Elgin shareholders voted to approve sale of Elgin Mining to Mandalay Resources Corp.

Yellowknife Gold Project – Tyhee Gold Corp. Proposed open pit and underground gold mine 90 km northeast of Yellowknife. Two deposits, Ormsby and Nicholas Lake.

GRASSROOTS EXPLORATION

Canterra – Canterra Minerals Corp. Five diamond exploration properties in the vicinity of the Snap Lake diamond mine and the Gahcho Kué project. Canterra is led by Randy Turner, former CEO of Winspear Resources, which discovered diamonds at Snap Lake.

Darnley Bay – Darnley Bay Resources Ltd. Darnley Bay is exploring a major magnetic anomaly near Paulatuk that is similar to other world-class mining districts.

HOAM Project – Olivert Resources Ltd. Diamond exploration in the Interior Plains region south of Great Bear Lake.

Kiyuk Lake – Prosperity Goldfield Corp. Gold project located in Nunavut near the Saskatchewan border.

Lac de Gras Diamond Project – Dominion Diamond Corp./North Arrow Minerals Inc. Diamond exploration project near the Ekati and Diavik diamond mines. Dominion Diamond has completed an overburden reverse-circulation drilling program as part of an option agreement with North Arrow.

Northbelt – TerraX Minerals Inc. Gold project located 15 km north of Yellowknife on extension of the geology that hosted the Giant and Con mines.

Redemption – North Arrow Minerals Inc./Arctic Star Exploration Corp. Diamond exploration in vicinity of Ekati and Diavik diamond mines. North Arrow has option to earn 55% interest in project, based on exploration expenditures.

Terra – DEMCo LLP. Exploration on silver belt that has hosted a number of mines. Project is a multi-phase venture than involves mining high-grade silver, exploring of IOCG targets and environmental reclamation.

Wrigley Property – Devonian Metals Inc. Lead-zinc project across the Mackenzie River from the community of Wrigley.



NORTHERNERS MEAN BUSINESS

THE MINING SECTOR CREATES SOME OF THE MOST IMPORTANT OPPORTUNITIES FOR ENTREPRENEURS IN THE NWT AND NUNAVUT. AND THOSE ENTREPRENEURS ARE MEETING THE CHALLENGE WITH CREATIVITY — AND INNOVATION. BY BILL BRADEN

The Northern mining industry is a driving force in the development of the Northern economy. It creates demand for a wide range of services. And with progressive commitments to doing business locally, it has stimulated the entrepreneurial spirit among Northerners.

Many stories are well known, such as the growth of Aboriginal-owned corporations such as Det'on Cho Corp., Tlicho Investment Corp., Denendeh Development Corp. and Kitikmeot Corp., all of which today are multi-faceted business organizations with important ties to mining and other industries.

Many more companies are independent entrepreneurial ventures. It's a mutually beneficial cycle: Businesses capitalize on the needs of mining companies, while the companies get the benefit of local connections and Northern savvy.

Best of all, this important relationship is fostering business innovation to the benefit of both. Here, Mining North profiles four such companies and explores how they found their niche and what they are bringing to the miner's table.



HARRY TOWTONGIE STARTED HIS FIRST COMPANY, ARCTIC HEATING, IN 1990.
Photo credit: Bill Braden

Harry Towtongie ○

LOCAL KNOWLEDGE, NATIONAL VALUE

Before Agnico Eagle Mines Ltd. started its Meadowbank gold mine, Kivalliq entrepreneurs had few clients on which to build their business. But that changed by the mid-2000s as Meadowbank's 11,000 tonnes per day operation near Baker Lake began construction, opening up a new universe of opportunities.

Harry Towtongie is one guy who's capitalized on the mining era. Up until Meadowbank's arrival in the Kivalliq region, he had been leveraging his trade as a certified oil-burner mechanic to build his own enterprise, Arctic Heating in Rankin Inlet. Towtongie launched his company in 1990.

By 1999, when division carved Nunavut from the NWT, he was keeping homes maintained and buildings warm across the region.

"I tried to be part of the change in Nunavut and I tried to hang in there and get my business off the ground," he says, speaking modestly of a company that continues to provide services across the region.

With Meadowbank's start, Towtongie took advantage of the workforce knowledge he developed with Arctic Heating. He struck up a three-year partnership with the Quebec industrial construction company, ABF Arctic Mines, to recruit and supply local labourers for ABF's journey-persons at the mine. "We know that the people that we sent are good workers, they're our reputation at the mines," Towtongie says. A bonus was that those workers, when they returned from work at Meadowbank, started passing their new skills on to their co-workers. "They learned a lot there," Towtongie says. "It kind of helped me train up the guys back in town."

Two years ago, Towtongie started a new company, Naqsana Inc., to build a network of joint ventures. The most active is with the industrial supplier Emco, primarily providing HDPE plastic pipe to Meadowbank, and for community water projects elsewhere in Nunavut. The Naqsana website also lists alliances with camp-services company Aramark, security provider Securitas, and business printer Unigraphics.

JOHN OLDFIELD, OWNER OF KBL ENVIRONMENTAL, DISCOVERED AN OPPORTUNITY IN HAZARDOUS WASTE HAULING WHEN DIAMOND MINING BECAME PART OF THE NWT ECONOMY.

Photo credit: Bill Braden



Although Towtongie's role as an entrepreneur is growing, he still prefers to be a hands-on businessman, and he's a bit uncomfortable with being the promoter of his companies. "Now it's my job to go around to trade shows and meet people... I'm not really good at it, but I'm getting better," he says.

Born in a sod hut just outside of Arviat in 1958, the father of three and grandfather of five embraces the benefits of business, but is wary of the impact big mining has on the environment and long-term economy. Still, Towtongie wants to see more Inuit trained up and on the mining payroll. That will take time, he says, and he wants development to be paced accordingly.

In the meantime, he's encouraging youth to enrol in the new Trades Training Centre in Rankin Inlet, and for mines to make every effort to grow the local workforce. "Only time will tell if they're actually going to use us and make us successful," he says.

John Oldfield ○

NO OPPORTUNITY WASTED

KBL Environmental Ltd. is the living embodiment of that old maxim, *Carpe Diem*. The company is a spin-off of Kavanaugh Bros. Ltd., which has 40 years experience as Yellowknife's hard-working municipal garbage and sewage collectors. When diamond

mining arrived in the NWT, Kavanaugh saw another opportunity — and jumped.

"When the diamond mines started, Kavanaugh Bros. helped them out with waste back hauls over the winter road," says KBL's enterprising owner, John Oldfield. "They kept calling. That's when we saw an opportunity for a niche company that specializes in hazardous waste."

That company is KBL Environmental. And while it started serving a niche, it has grown to capture virtually all of the hazardous-waste-handling business for all three major diamond mines. It also serves TMAC's gold project at Hope Bay in Nunavut, oil and gas explorers in the Sahtu and Beaufort-Delta regions, as well as government and other industrial clients in the North.

Better yet, KBL Environmental has found new opportunities outside its base in the NWT, and now employs 50 highly trained staff spread between Yellowknife, Edmonton and Whitehorse. It has also formed partnerships with Kitnuna in Cambridge Bay (KEL Environmental) and MYB Construction in Tulita (CME Environmental).

This has all earned accolades for the company — now completely separate from its Kavanaugh Bros. forerunner — as the NWT Chamber of Commerce 2014 Business of the Year. It also placed 30th this year in Profit magazine's 500 fastest-growing Canadian companies.

Success didn't come easily, however.

Handling toxic and dangerous goods is a technical and highly regulated business. When KBL Environmental applied in 2007 to open the NWT's first hazardous-waste transfer station in Yellowknife's Kam Lake industrial subdivision, the territorial government's Environment and Natural Resources Department had few regulations in place.

Undeterred, KBL and the department spent the next 18 months in collaboration to develop a set of rules that complied with provincial, national and international standards. The results speak for themselves. "We have a great working relationship," Oldfield says of KBL's relationship with the territorial government. "It's a lot of paperwork, tracking what comes in and what goes out. The system has worked out pretty well."

In the past year, KBL has managed some 17,000 barrels of hazardous materials and 50,000 tonnes of contaminated soils. What can't be managed on a mine or municipal site is sorted and shipped to some 18 different specialized southern agencies for recycling or proper disposal.

Throughout it all, KBL Environmental follows the Four Rs — reduce, reuse, recycle, and recover — for everything that passes through its yards. In fact, says Oldfield, some 75 percent of what's deemed to be hazardous today will be returned to industry in some new way tomorrow.

Has he been stumped by anything he can't handle? "Not yet," Oldfield confidently replies.

Varick Ollerhead

SURVEYORS TO MINING

“There aren’t many places we haven’t been,” says Varick Ollerhead, president and CEO of Ollerhead & Associates, a Northern land surveying and engineering firm. That’s not surprising. For the past years, 19 years, he and his crew have been measuring, scoping and plotting land all across the NWT and Nunavut.

While Ollerhead & Associates has served a wide range of clients over its history, Varick Ollerhead credits much of the company’s growth to the mining industry. “We grew with them,” he says. “We researched the technology they needed, filled in the gaps, and brought in the expertise to train our guys.”

Ollerhead & Associates was among the early crews on the ground at Diavik mine in 2002, and since then has maintained a continuous team on site. The company has also surveyed a big chunk of the NWT/Nunavut border, the land claim holdings of four NWT First Nations, and handled a wide range of civil work for communities and industry.

Among the innovations Ollerhead has brought to the field is the Swiss-built aBee drone, a flying Styrofoam wing that carries a programmable GPS and digital camera. Cameron Twa, who’s been with the company for 13 years, says the \$30,000 machine can do aerial topographic surveys of mineral claims,

mining pits or exploration sites in hours that would otherwise take days on the ground.

“It’s really keen to fly,” Twa says, but adds that the drone is far from a toy. “Pilots” need to be licensed and there are stringent rules about where and how it can be used. Pre-programming the GPS-guided flight plan also takes sophisticated training.

Ollerhead says it’s surprising what surveying companies can do these days, even those based in small towns such as Hay River and Yellowknife, where Ollerhead & Associates has offices. He adds that the success of his company comes down to the expertise that has developed among his 25-member staff, much

of which evolved to meet needs of the mining sector. “The skills they have grown are a result of working with mining clients,” he says.

With a solid track record behind him, Ollerhead is expanding his company’s reach this year with partnerships in related service companies in Manitoba and Alberta. His goal is to get a share of the civil, hydro and oil sands developments south of 60.

A certified Canada Land Surveyor himself, Ollerhead still likes to get out in the field and is proud to have played a role from the dawn

of diamond mining in the territories. It’s an interesting contrast with the work he’s also doing at the Con and Giant mine sites, which are being cleaned up after 60 years of production. “Surveyors are the first crew in, laying out a grid pattern to do exploration, and the last guys out after reclamation,” he says.

Debbi Ross

IT’S MY COMMUNITY, TOO

Many entrepreneurs who’ve hooked into the North’s mining industry have grown thriving new businesses. But a select few have chosen to stay small and still be happy. Debbi Ross, CHRP, is one such businessperson — a certified human resources professional who got her start in 1997 with Diavik Diamond Mines and its then 30 employees.

Ross stayed with Diavik for another five years, shepherding it to a production workforce of more than 450 workers (20 of which were her direct reports) before striking out on her own in 2003. Her client roster since has included many mining powerhouses, including BHP Billiton, when it was the majority partner in the Ekati mine, Newmont Mining and De Beers.

Toronto-born, Ross came to Yellowknife in 1979 as a swimming instructor at the city’s (now long-closed) Fraser Tower pool. Soon married, she and her family moved to remote Qikiqtarjuaq, formerly known as Broughton Island, just off the east coast of

“THERE AREN’T MANY PLACES WE HAVEN’T BEEN”



THE SWISS-BUILT ABEE DRONE IS ONE OF THE MANY SERVICES VARIK OLLERHEAD HAS INTRODUCED AT HIS FIRM, OLLERHEAD & ASSOCIATES. Photo credit: Bill Braden



DEBBI ROSS MOVED NORTH TO BE A SWIMMING INSTRUCTOR. NOW SHE RUNS A HUMAN RESOURCES CONSULTING FIRM BASED IN YELLOWKNIFE. Photo credit: Bill Braden

PETROLEUM RESOURCES

OIL & GAS



Investment. Strategy. Research. Education. Growth.

The Government of the Northwest Territories is committed to attracting new oil and gas investment to develop our petroleum resources in an environmentally and socially responsible manner.

Achieving this goal will provide direct economic benefits to NWT residents, businesses and communities.

The Department of Industry, Tourism and Investment (ITI) is working to attract oil and gas investment through research on hydrocarbon potential, oil and gas education, regulatory enhancement, strategy and policy development and building partnerships. Services are provided through:

- **Petroleum Resources Division**
- **Client Services and Community Relations**
- **Northwest Territories Geoscience Office**
- **Financial Analysis and Royalty Administration**



AURORA GEOSCIENCES

Kimberlite

If only it were this easy.
www.aurorageosciences.com

Yellowknife
 Whitehorse
 Juneau

Baffin Island. A five-year stint in Fort Simpson followed before they settled in Yellowknife in 1994.

Her immersion in Inuit, Dene, Metis and corporate cultures makes Ross uniquely qualified in her field. "I have a good understanding of aboriginal and Northern culture," she says, "and an understanding of the challenges

**"I HAVE A
 STAKE IN
 THEM BEING
 SUCCESSFUL
 BECAUSE
 IT'S MY
 COMMUNITY
 THAT'S
 BENEFITTING."**

a large, new corporation has in starting up in the North."

One of Ross's most challenging HR issues occurred a few years ago. It involved convincing a southern-based company, new to the North, that it had to radically change the way it compensated the local work-

force. "Even the Northern Store was paying more for their entry-level employees to stock shelves than we were paying for labourers, living apart from their families for two weeks," she recalls. "I kept saying, it's so obvious... but I had to work [within their rigid thinking] to make the case. It took six months. But we finally broke through and got a wage scale that was at least competitive."

What can small-business professionals like Ross, wise in the ways of the North, bring to the table for a multi-national? "The alternative is you go to a large consulting firm in the south, or smaller boutique firms, but they're hugely expensive. I have very little overhead and I'm here. So in many ways my clients aren't taking a huge cost risk."

And unlike a shiny southern consultant, who can be spotted a mile away, Ross says: "I look and smell a lot like an employee and can do the work without a lot of fanfare."

But her most compelling argument for choosing homegrown talent is her sense of shared ownership and a deep-seated bond with both the community and the client. "I have a stake in them being successful because it's my community that's benefitting. My kids work there, too, and I want those operations to be successful... and make the workplace more satisfying for people who go there." **M**



PIONEER
 SUPPLY HOUSE

www.pioneersupply.ca 867.873.3559

Your **TOTAL** Solution,
ONE Source

- Fall Protection
- First Aid Supplies
- Hard Hats
- Hearing Protection
- Protective Clothing
- Respirators
- Safety Signs
- Work Boots, CSA Approved
- Work Gloves
- Spill Response Products
- Environmental Containments
- Office Supplies and Equipment
- Janitorial Supplies
- Office Furniture
- Industrial Supplies
- Warehouse supplies

362 Old Airport Road • Yellowknife, NT X1A 3T4 • Ph: 867-873-3559 • Fax: 867-873-3397 • pioneer@theedge.ca



TETRA TECH

complex world | **CLEAR SOLUTIONS™**

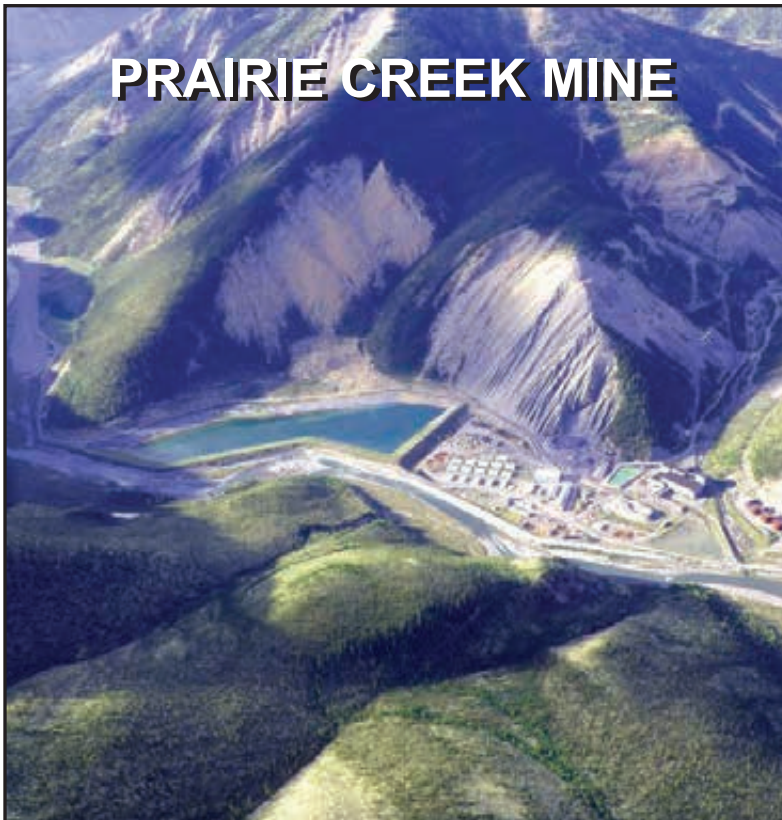
CLEAR SOLUTIONS FOR WATER, ENERGY, ENVIRONMENT, INFRASTRUCTURE AND NATURAL RESOURCES

From water and transportation projects, to renewable energy and mining services, Tetra Tech provides innovative solutions in consulting, engineering, construction, program management, and technical services worldwide.



tetratech.com | eba.ca

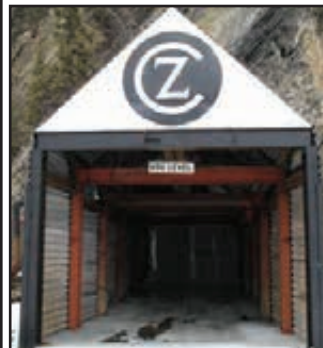
PRAIRIE CREEK MINE



MORE THAN A MINE

The Prairie Creek Mine is an advanced-stage zinc-lead-silver property situated just a half-hour flight west of Fort Simpson in the Northwest Territories. Access to the Project is via charter, either from Fort Simpson, NWT, 150 kilometres to the east, or Fort Nelson, BC, 300 kilometres to the south.

The Mine will bring substantial benefits to local communities in the form of business opportunities, training and jobs, and will be a catalyst for regional development, tourism and economic activity.



**SILVER - ZINC
LEAD - COPPER**

Canadian Zinc Corporation, 9926 101 Ave, Fort Simpson, NT X0E 0N0
Toll Free: 1-866-688-2001 Website: www.canadianzinc.com
Resumes: jobs@canadianzinc.com

TSX: CZN

UNLOCKING

the

POTENTIAL

A large tanker truck is driving on a snowy road in a winter landscape. The truck is a brown cab with a silver tanker trailer. The road is covered in snow, and there are snowbanks on either side. In the background, there are evergreen trees and a clear blue sky. The overall scene is bright and clear, suggesting a sunny day in winter.

INFRASTRUCTURE IS KEY TO DEVELOPING THE WORLD-CLASS OPPORTUNITIES PRESENTED BY THE NORTH'S MINERAL RESOURCES. CREATING THAT INFRASTRUCTURE IS A SLOW AND EXPENSIVE PROCESS. BUT IT'S NOT OUT OF SIGHT — AND IT'S NOT OF OUT MIND.

By Bill Braden

NEED TO KNOW

- The NWT government is studying the potential of creating an all-season road along the southern portion of the Tibbitt to Contwoyto Winter Road Joint Venture's route. An all-season portion of the road could lengthen the winter resupply season.
- High costs are a major barrier to development of a larger hydro system in the southern NWT. Mining companies, meanwhile, are exploring new alternatives, such as wind and LNG, to power their projects.
- Environment Canada estimates the scale of Arctic shipping will double by 2020, largely due to mineral development in the region.

When it comes to infrastructure, it's no secret that the NWT and Nunavut are lacking — especially when it comes to the roads and power lines that backstop the investment climate for the mineral industry. This isn't an idle concern. It's a major impediment to development and economic well-being. In September, for example, MMG warned that it may not be able to go further with its proposed massive base-metal project in the Kitikmeot region's Izok Lake corridor if it has to carry the costs of major road, port and communications construction on its own.

How much different could the message be if mining companies working in the North had transportation and energy infrastructure to tap into?

Quite a bit different. And Northerners aren't the only ones making the case for progress. In its 2013 report, *the Future of Mining in Canada's North*, the Conference Board of Canada wrote: "The infrastructure gaps are often the greatest deterrents to mining development in Canada's remote northern region... To ease this financial burden on industry, governments need to invest broadly in northern infrastructure and make use of public-private partnerships to share risks, costs, and benefits."

The same point is made closer to home, coming from voices that include government, industry, business, and communities. "It's a compelling underlying fact... that any aspect of economic growth is linked to our lack of infrastructure," says Mike Bradshaw, Executive Director of the NWT Chamber of Commerce, which has helped lever infrastructure dollars for all three territories through its participation in the Canadian Chamber of Commerce. Gordon van Tighem, a former Yellowknife mayor and a member of the NWT government's 2013 Economic Advisory Panel, makes a similar case and echoes the conference board's call for public-private partnerships. Governments shouldn't shy away from bringing in the private sector when it comes to investment in infrastructure, he says.

Indeed, the challenge of improving infrastructure in the North is a priority. The good news is that some progress is being made. It may not be moving as quickly as many would like, but new ideas are being explored and established concepts are getting closer to becoming reality. Most important, the mining industry itself is taking a leadership role, investing in new concepts and promoting important ideas.

Here, *Mining North* explores three major infrastructure themes and the work now underway to move them forward.

ROADS

FROM WINTER TO ALL-SEASON ROUTES

One of the most renowned features of the NWT is its 320-kilometre ice road, built and managed each year by the Tibbitt to Contwoyto Winter Road Joint Venture, a partnership between Diavik Diamond Mines, De Beers Canada and Dominion Diamond.

At \$20 million to build and maintain each year, the road is the resupply lifeline for the Diavik, Ekati and Snap Lake diamond mines, and other projects. But it's vulnerable. The weak link is the forested southern section, which freezes later and thaws earlier than the colder, wide-open stretch through the Barrenlands. Thus, the joint venture has only one month to build the whole road and then, in a marathon from late January to late-March, wrangle some 8,000 or more truck loads in and out.

Life could be better. As Dominion Diamond CEO Bob Gannicott argues — and he's not the only one — a "seasonal" overland road to Mackay Lake on the edge of the Barrenlands could add weeks to the season and avoid potential warm-weather shutdowns, as happened in 2006. The road need not go any further than Mackay Lake, as the colder Northern part stays safe long after southern sections start to melt.

But is it feasible? The NWT government has been researching a seasonal route for several years, says Department of Transportation spokesperson Megan Holsapple, and it is investing \$200,000 this year on how to do it. "Working with the diamond mines, we are assessing the feasibility of constructing the Tibbitt to Contwoyto all-weather road through a partnership approach such as a P3 model," Holsapple says. "This work will be concluded this fiscal year and the results will inform decision-making in future years."

Such a project won't be cheap. But consider the millions the three mines spend each year, and then watch melt away. "It's a large amount of money... that industry could afford to pay through tolls [for a government-built road]," Gannicott suggests. He adds such a road could also benefit base-metal projects in western Nunavut, providing them an alternative to ocean shipping to carry their concentrate to southern smelters.

Meanwhile, an all-weather road to the Barrenlands is not the only mining road project on the government's table.

In the western NWT, Canadian Zinc is continuing its 25-year odyssey to bring its Prairie Creek silver-lead-zinc deposit into production. Located inside Nahanni National Park Reserve, the company initially proposed annually trucking in its resupply and trucking out stockpiled silver-lead-zinc concentrates over a 180-kilometre seasonal winter road, groomed from a trail first cut in 1980.

Now the company is seeking approval to construct an all-season road through the park to its project, a significant development that would create a land link to Nahanni National Park Reserve. If that were to be approved, it could position government as a potential project partner, given the opportunity to increase tourism in the region.

"We'd love them to come in and help," says Steve Dawson, Prairie Creek's vice-president of corporate development. "If [approval of a year-round road] happens, then it does become a question of what could the government do, because it's obviously now a public avenue into the park."



DIAVIK DIAMOND MINES COMMISSIONED ITS DIAVIK WIND FARM IN 2013. THE FARM IS ON TRACK TO MEET 10 PERCENT OF THE MINE'S POWER NEEDS IN 2014.
Photo courtesy Diavik Diamond Mines

ENERGY

FINDING THE POWER

Building a fully integrated hydro grid in the southern NWT would cost well north of \$1 billion. That number comes from a report by the NWT Energy Corporation, the territorial government agency tasked with mapping out NWT's energy future, called A Vision for the NWT Power System Plan. And it's a deal-breaker that easily eclipses the territories' current \$800-million borrowing limit, the federally imposed debt ceiling. Finance Minister Michael Miltenberger has been lobbying to raise to enable these kind of investments.

Because it's not feasible at this time, "everyone has agreed to pull back from the vision's near-term objectives," says Andrew Stewart, the energy corporation's director of business development. The grand vision now has a horizon pegged at 20 years.

Given the scope of the challenge, the long timeline doesn't come as a surprise. The energy corporation's 2013 report details a number of scenarios and projections, including a comprehensive review of mining options. The billion-dollar-plus estimate comes from high-level costing for three components: linking the Taltson and Snare hydro grids around Great Slave Lake, running 1,400 kilometres of transmission lines,

including spurs, to communities and operating diamond mines, and setting up an inter-tie with either Alberta or Saskatchewan.

The crunch is the "incredible" cost of building transmission lines, Stewart says. "The sheer distance between customer and generation is a tough nut to crack." The estimate also does not include any new hydro plants, a whole new investment universe if a substantial load for a new mine is viable.

Faced with the prohibitive costs of improving the power grid in the North, many companies have been looking to alternatives to their traditional reliance on burning diesel to generate electricity. The Diavik wind-farm is a signature project. Work on the \$31-million farm started with a three-year meteorological study at the mine site, beginning in 2007, to determine if there was a sufficient wind resource. There was, and the farm received corporate approval in 2011, followed by a massive logistical effort to ship all the components to the site during the 2012 winter-road season.

In an impressive feat of project management, the wind farm began delivering power to the Diavik grid in September 2012. During its first

full year of operation in 2013, the farm generated 8.5 percent of the mine's electricity needs and reduced diesel fuel consumption by 3.8 million litres. This year, the wind farm is on track to meet its goal of supplying 10 percent of Diavik's electricity and reducing the need for diesel by five million litres.

The potential of liquefied natural gas is also being explored at some projects. Advanced Explorations Inc., for example, has spoken of the possibility of using LNG to generate electricity for a potential mine at its Roche Bay iron ore project, located on the coast of Nunavut's Melville Peninsula. According to the company's feasibility study, using

LNG would cut production costs by \$8 per tonne, to \$42. (In addition to LNG, Advanced Exploration has talked about the potential of wind power as a supplemental energy source.)

The most significant step towards LNG develop-

ment in Northern mining, however, is taking place in Yukon, at Western Copper and Gold Corp's Casino project. Plans for the proposed \$2.5-billion copper-gold mine, now in the Yukon environmental review process, call for constructing a 150-megawatt plant, which would be fed by 11 truck tankers of LNG daily.

Given the scope of the challenge, the long timeline doesn't come as a surprise.



PROHIBITIVE COSTS MEANS EXPANDING THE HYDRO GRID IN THE SOUTHERN NWT IS STILL YEARS AWAY. MINING COMPANIES ARE EXPLORING ALTERNATIVES.

Meanwhile in the NWT, the Northwest Territories Power Corp. has established an LNG power plant to generate electricity for the town of Inuvik, north of the Arctic Circle. Commissioned in February 2014, the project includes a 136,000-litre storage facility and a vaporization facility, which uses LNG trucked to the community from Vancouver, via the Dempster Highway.

There are other energy possibilities, too. Dominion Diamond's Bob Gannicott says the North may also be ignoring the potential for future hydro development. The last major new project in the NWT goes back to 1996, with the commissioning of the Snare Cascades project, a 4.3-megawatt plant in the Tlicho region north of Great Slave Lake. Since then, hydro development has stalled, in part due to concerns over the impact on surface lands.

Gannicott, however, says there are work-arounds. "Greenland and Norway have for years been building everything underground, largely to protect their tourism assets," he says. "It's like Niagara Falls, you don't stir up the surface."

"We should be doing anything we can to make the cost of living more affordable," he adds. "The Number One thing is the cost of heating and hydro. It's obvious. These are the things you should tackle."

SHIPPING

CHALLENGES & OPPORTUNITIES

Next summer, Arctic marine transport will mark a mining milestone when Baffinland Iron Mines Corp.'s first ore shipment from its Mary River project sails from the mine's port at Milne Inlet, bound for smelters in Europe. Before long, those shipments may have a lot more company. With the Arctic ice pack shrinking, Environment Canada estimates that resource development projects in the eastern Arctic have the potential to nearly double current traffic levels, which stood at 350 voyages in 2013.

While this prospect bodes well for Nunavut's economy, concern is steadily mounting over Canada's Arctic marine infrastructure. In an October 2014 report to Parliament, Canada's Environment Commissioner, Julie Gelfand, noted that marine infrastructure suffers from "a significant gap, given the importance of marine transportation to economic development and to communities in the North."

Gelfand's report went on to say none of four federal departments involved have a co-ordinated strategy, and that a scant one percent of known shipping lanes are surveyed to modern standards. She was especially critical of



- ICE ENGINEERING
- SAFETY & TRAINING
- OPTIMIZATION
 - Maximize Payloads
 - Reduce Costs
 - Extend Operating Season



Unparalleled experience in managing northern project risk, optimizing operations and improving safety on ice.

1-250-682-8834

info@norexice.com

norexice.com

Safety By Design



Mountain Province DIAMONDS

Best In Class:
Largest and
Richest New
Diamond Mine



Partnered with De Beers

TSX: MPV
NYSE MKT: MDM

www.mountainprovince.com



TSXV:NAR

North Arrow MINERALS INC.



Exploring Diamond Opportunities
in Canada

Suite 960, 789 West Pender St.
Vancouver, BC V6C 1H2
Tel: 604.668.8355
info@northarrowminerals.com

northarrowminerals.com
[northarrowminerals](https://www.facebook.com/northarrowminerals)
[@narminerals](https://twitter.com/narminerals)

PARENTY REITMEIER TRANSLATION SERVICES



Professional Translation Services
in over 100 languages including:

**French, Inuktitut
and Inuinnaqtun**

We translate technical and
business documentation:

- Manuals
- Catalogues
- Brochures and Marketing Materials
- Training Materials (Printed and Video)

We offer voice-over
and subtitling services for:

- Websites
- Software
- Audio and Visual Material



HELPING THE WORLD COMMUNICATE

www.parentyreitmeier.com
Telephone: 204.237.3737
Toll Free: 1.877.445.3737
Email: contact@prtranslation.com



TUNDRA TRANSFER

COFFEE ★ TEA BOTTLED ★ WATER

*#1 northern supplier
for Camp orders,
offices and hotels
for 20 years.*

- Coffee Beans, Pods,
K cups, & Portion Packs
- Specialty Tea's
- Keurig and Bunn Coffee
Brewers
- Corporate Gift Baskets
- Bottled Water
- Coolers and Crocks



Tundra Transfer Ltd.
325 Old Airport Rd.
Yellowknife NT

Toll Free: (888) 669-3990
Tel: (867) 669-3990
Fax: (867) 669-9197

email: service@tundratransfer.com | www.tundratrafer.com

the state of Canada's aging fleet of six icebreakers, all more than 30 years old. Replacing them with at least six patrol craft of lesser ice-breaking capability was announced in 2007; the first will only start construction next year at the Irving shipyards in Halifax.

None of this is new to the Nunavut government, of course. Gelfand's comments clearly mirror points it has raised in the past. The larger questions revolve around what progress is being made. So far, there are some positive signs. The Canadian government has pledged to prioritize hydrographic surveying efforts, review navigation-

Would Nunavut be open to seeking private investment in hugely expensive infrastructure? The short answer is yes

al aid systems and consider "modern and efficient solutions" for Coast Guard service delivery. A small-craft wharf was also recently completed in Pangnirtung, on Baffin Island's Cumberland Sound. Jim Stevens, assistant deputy minister in the Nunavut government's Economic Development and Transportation department, calls it a "gem" that was largely financed by the federal government to support the Eastern Arctic's thriving commercial ocean fishery.

The larger issue now facing the Nunavut government, however, is assessing what it can do to support mineral development. The MMG project is high on the priority list, Stevens says. "Our consideration will obviously promote that project going ahead, or, whether it holds tight." Would Nunavut be open to seeking private investment in hugely expensive infrastructure? The short answer is yes, Stevens says, citing the public-private partnership deal to build a new \$300-million Iqaluit airport.

Whether that political will carries over to the mining industry in the near future remains to be seen. But the concept is now established. If the opportunities, policy and timing line up, it may point the way to a better future. **M**

A new fleet of federal Arctic patrol vessels could start construction next year. Concept drawing courtesy Department of National Defence



Serving Mining & Exploration, Oil & Gas, Remediation Projects, Construction Sites



We've got remote under control.

- Connecting you to business
- Semi-permanent camps
- long term camps
- Phone, fax, computer network
- Flexible data packages
- Secure VPN
- Custom solutions
- Wireless networking
- Satellite TV
- On-call support
- Canada wide deployments
- Northern owned & operated



T: 867.765.2020
F: 867.765.2021
sales@cascom.ca

Looking for Business Opportunities?

Consider the Northwest Territories

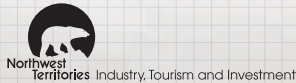
- » Tremendous oil and gas potential
 - » Proven Mackenzie Delta gas
 - » Shale oil prospects in the Sahtu
- » Gold, lead/zinc and rare earth mines are proposed
- » Three operating diamond mines, one in development
- » A dynamic and fast growing tourism industry
- » One of the lowest business tax rates in Canada

Whether you're an entrepreneur looking to invest in our natural resource industry, or an established operator seeking partners to develop a sustainable venture or business in our North, InvestNWT can help you make the right connections.

invest NWT

www.investnwt.com

Contact us at:
investnwt@gov.nt.ca



WHEN BUSINESS COMES NORTH...



Experience unparalleled service in the 95 room FROBISHER INN and enjoy Iqaluit's finest restaurant, conference centre and newly opened fitness centre.

www.FrobisherInn.com
Toll Free: 1.877.422.9422

At THE EXPLORER HOTEL in Yellowknife, enjoy the largest hotel in Canada's Arctic with 187 rooms, a 350 person conference centre and innovative cuisine.

www.ExplorerHotel.ca
Toll Free: 1.800.661.0892



...EXPERIENCE THE WARMTH OF CANADA'S PREMIER ARCTIC HOTELS

STEPS TOWARD CERTAINTY

The regulatory systems in the NWT and Nunavut are going through changes. Here, an introduction to improvements *you need to know*.

NEED TO KNOW

- The new NUPPAA Act will help harmonize processes of the Nunavut Impact Review Board, the Nunavut Planning Commission, and the Nunavut Water Board.
- Both MVRMA and NUPPAA now have timelines for environmental reviews and permitting processes, making them more consistent territorially with the Yukon and nationally with the Canadian Environmental Assessment Act.
- A new territory-wide land and water board will replace regional land and water boards in the NWT, except for lands in the Inuvialuit Settlement Area, making it more consistent with Nunavut and Yukon.
- The NWT has rolled out new mining regulations. Compared to the old regulations, there are some changes intended to improve certainty and predictability.

Devolution in the NWT

On April 1, 2014, the government of the Northwest Territories officially assumed responsibility for managing public land, water and, importantly, non-renewable resources from the federal government under the process of devolution.

The new regime transfers a host of regulatory authorities from the federal to territorial government, as well as more than 260 workers, mostly from Aboriginal Affairs and Northern Development Canada (AANDC), who have now become territorial government employees. The NWT government has created a new Department of Lands to oversee the administration of public land use administration, planning and enforcement. The Department of Industry, Tourism and Investment takes over responsibilities for mineral tenure, royalty collection and certain regulatory functions for oil and gas. Environment and Natural Resources inherits regulation of internal waters in the Mackenzie and Inuvialuit regions, the environmental laboratory research station and cumulative impact monitoring.

As a result of devolution, the NWT Government now approves environmental assessments and land and water licenses and permits. In early April, the NWT Minister of Environment, Michael Miltenberger, signed the first Water License amendments for the

Cantung Mine site near the Yukon border and for the now closed Con Mine in Yellowknife as part of its site reclamation work. In a statement Miltenberger said, "This demonstrates the success of Northern control over Northern resources and our capacity for undertaking these responsibilities." The first environmental assessment approved by the territorial government was for the Snap Lake Diamond Mine Amendment Project, and on October 31 the Minister of Lands approved the project to advance to the regulatory phase.

The territorial government has also rolled out its new mining regulations, which cover most of the territory. The rules largely mirror federal legislation, but since those regulations were amended just prior to devolution, there are some changes that miners should be aware of. A guide to the amended regulations is available online on the Mining Recorder's Office page of the Industry, Tourism and Investment website (iti.gov.nt.ca).

From this point forward, the NWT government will collect royalties from resource projects. Half of the money must be passed on to Ottawa as a "clawback" for federal transfer payments, and of what's left — estimated at \$60 million in this fiscal year — a quarter will be shared with Aboriginal governments. A quarter of the remaining \$45 million will be deposited into the recently created territorial Heritage Fund. The balance will be used for needs such as infrastructure investment and debt reduction.

Nunavut Planning & Project Assessment Act

Up until now, Nunavut has likely been the only jurisdiction operating without its own dedicated environmental legislation. Rather, it has been operating under the environmental structures and institutions of public government (IPGs) created under the authority of the Nunavut Land Claims Agreement, in its own right a powerful legal instrument.

With the creation of the Nunavut Planning and Project Assessment Act (NUPPAA), the authority for the IPGs, which include the co-management bodies of the Nunavut Planning Commission, the Nunavut Impact Review Board, and the Nunavut Water Board, now comes under that Act. NUPPAA aligns the territory legislatively with the Yukon and Northwest Territories, which each have similarly structured legislation which integrates land use planning, environmental assessment and land and water permitting through the co-management boards.

The regulatory landscape in Nunavut is somewhat clearer compared to other jurisdictions thanks to the territory's single, settled land claim, with clearly marked pockets of Inuit-owned land with surface and subsurface rights. The passage of NUPPAA has been well received in the territory. "Communities and industry have more certainty now about how decisions are made

and how long they will take," Peter Taptuna, then economic development minister and now Nunavut premier, said when NUPPAA was passed. "This is essential to attracting new investment and the jobs that go along with it."

One of the Act's leading features is timelines for the regulatory process. It also clarifies the roles of the territorial and federal governments and Inuit birthright organizations in the regulatory process and creates a process to review projects located outside Nunavut's borders that may have an impact on the territory. In addition, it beefs up monitoring and enforcement.

Despite general support, the rollout of the Act has hit some hurdles. In August, the Nunavut Planning Commission filed suit against the federal government, alleging Ottawa withheld \$1.7 million it needs to complete its Draft Nunavut Land Use Plan. This doesn't impact the Nunavut Planning and Project Assessment Act directly, but it does leave much of Nunavut without a completed land-use plan as the new rules come into force.

Mackenzie Valley Resource Management Act, Part I

The mining industry has long said that improvements to the NWT's regulatory system would do much to rejuvenate the territory's investment

climate. Parliament's passage of the NWT Devolution Act in March — besides transferring responsibility for non-renewable resources to the NWT Government — also brought amendments meant to improve the MVRMA.

Of special significance to industry, this Act now also sets limits on the time it takes to get projects through the environmental review and regulatory processes. Projects that require an environmental assessment but no hearing, for example, must now receive a decision within 12 months. Environmental assessments that require a hearing have 21 months. Projects that go to a full environmental impact review will have 24 months. Similarly, there are time limits for the regulatory process. While there are nuances in each jurisdiction, the adoption of time limits brings the MVRMA into closer consistency with provisions in legislation in Nunavut, the Yukon, and the rest of Canada. By and large, proponents now know the rules on how long it should take to get through the environmental review and regulatory phases.

There are additional amendments that could help add clarity to developers in the NWT. The Minister is now empowered to issue binding policy direction to the Mackenzie Valley Environmental Impact Review Board and to land use planning boards, and can now establish regional studies. Additionally, government is now empowered to (CONT'D. ON P.61)



TerraX Minerals Inc. is exploring the gold potential north of the old Giant mine property near Yellowknife. Photo courtesy of TerraX Minerals Inc.



Drummed & Bulk Fuel

across the North and Canada



Fuel Flo Nunavut is a 60% Inuit owned Nunavut based company.

- JET B, JET A, Diesel & Arctic Diesel P50, Avgas
- Fuel recertification & testing
- Airstrip / Ice Strip building
- Final delivery by road, rail, air or water

1 867 446 FUEL (3835) | www.fuelflo.com



privateskyaviation.com



MODCAN
SOLUTIONS.COM

Your Shipping Container Solution

(CONT'D. FROM P. 23)

Northwest Territories & Nunavut Association of Professional Engineers & Geoscientists



NAPEG
WWW.NAPEG.NT.CA

If you are a Geoscientist or Engineer working North of 60°, don't forget to register as a Professional.

If you are already registered with a Canadian Professional Association, it is easy to add a northern registration.

NAPEG... Integrity and Excellence



10308 121 St. NW
Edmonton, AB T5N 1K8

Tundra Site Services provides consistent industrial manpower solutions across the Canadian heavy industrial sector.



www.tundrasiteservices.com

780.944.2704

SARVAQ
Logistics

- Expediting
- Cargo Logistics
- Labour Recruitment
- Material Supply
- Lubricants & Fuel Supply
- Food & Catering Services

Inuit-owned at the
Iqaluit International Airport

www.sarvaq.ca
logistics@sarvaq.ca
867-979-6258

Iqaluit



kilometres east-northeast of Yellowknife, are contiguous with the Kennady North Project. In response to a historical data review, four additional claims were staked, expanding the property to 23,199 hectares.

In 2014, CGG Canada Services Ltd. was contracted to conduct an airborne gravity gradiometer survey with the Falcon System incorporating gravity and magnetics. A bathymetric analysis was also undertaken to compliment the airborne gravity data under lakes. **North Arrow Minerals** intensified efforts to find the source of a prominent kimberlite indicator minerals train 32 kilometres south west of the Ekati mine as part of the Redemption Project. Ground geophysical surveys were conducted on the 11,500 contiguous hectares under an option agreement with Arctic Star Exploration Corp. Based on the geophysics, a 1,000-metre drill program was initiated in July on seven targets. None of the drill holes encountered kimberlite, however targets requiring an ice-based drill remain to be tested.

Prima Fluorspar Corp. In June 2014, Prima Fluorspar announced an option agreement with DG Resource Management Ltd. for an undivided 100% interest in 46 mineral claims (42,000 hectares) known as the Godspeed Lake property, immediately south of the Gahcho Kué property. This announcement was accompanied by a name change to Prima Diamond Corp. to better reflect the company's revised exploration focus.

In July, Prima Diamonds announced an agreement to acquire 19 claims (14,000 hectares) of the Munn Lake property from DG Resource Management Ltd. and Zimtu Capital Corp., located 40 kilometres northwest of the Gahcho Kué property. The property contains the Munn Lake kimberlite and the Yuri boulder field.

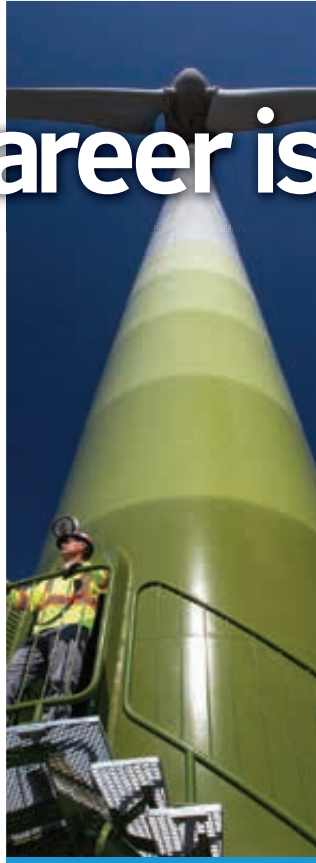
Proxima Diamonds Corp. A wholly owned subsidiary of Adent Capital Corp., Proxima diamonds staked 16 prospects consisting of 65 claims (72,000 hectares) in March and April of 2014. Nine of the 16 properties lie north of Lac de Gras, covering claims formerly held by SouthernEra and Tanqueray Resources Ltd. Another four properties are located southeast and southwest of Diavik, while three more are southeast of Snap Lake.

Subsequently, Proxima staked the Orlov block (18,775 hectares) on the east side of the Snap Lake mine to cover a kimberlite indicator minerals train.

RioTinto



My career is here



Looking to take your career in an amazing direction?

At the Diavik Diamond Mine in Canada's Northwest Territories, career opportunities go above and beyond mining.

- Proven underground mine
- Award winning wind project
- World-class diamonds
- Bright future

Diavik Diamond Mines Inc. – a top employer at the top of the world.



diavik.ca



ᐃᓕᓕᓐᓂᓐ ᐃᓕᓕᓐᓂᓐ
ᐃᓕᓕᓐᓂᓐ ᐃᓕᓕᓐᓂᓐ
ᐃᓕᓕᓐᓂᓐ ᐃᓕᓕᓐᓂᓐ

2015 NUNAVUT MINING SYMPOSIUM

SAVE THE DATE

APRIL 13-16 2015 | IQALUIT, NUNAVUT

For more information about registration, sponsorship opportunities call 1-877-477-2919 or email info@nunavutminingsymposium.ca

www.NunavutMiningSymposium.ca

Metal Exploration

Avalon Rare Metals Inc. Activity in 2014 continued at much reduced levels at Avalon’s Nechalacho rare earth elements project at Thor Lake, about 100 kilometres southeast of Yellowknife. In August, seven large diameter PQ drill holes totalling 1,773 metres were completed, resulting in three tonnes of Basal Zone ore material being collected. This core augments an existing inventory of eight tonnes for use in metallurgical optimization tests.

In April, Avalon received a “Class A” Land Use Permit from the Mackenzie Valley Land and Water Board, allowing it to start pre-construction work at Nechalacho. This allows site preparation, early camp construction, portal development, and roads, power and water treatment infrastructure.

Technical review sessions related to the full “Type A” Construction and Operations Land Use Permit and Water Licence were conducted in July with anticipation of a “Type B” Water Licence to be issued in the near future. Avalon also announced in February that negotiations for

a participation agreement with the NWT Metis Nation had been successfully concluded. No further drilling or site development work is planned before summer of 2015.

Canadian Zinc Corp. In 2013, Canadian Zinc was granted the permits and licences to allow for the construction, development and operation of the Prairie Creek mine as well as a 184-kilometre winter access road, which connects the property to the Liard Highway. By comparison, 2014 was a much quieter year for the zinc-lead-silver project, although several key milestones were achieved.

In April, applications were submitted to the Mackenzie Valley Land and Water Board and to Parks Canada for Land Use Permits to upgrade the winter road to an all-season road. The Mackenzie Valley Environmental Impact Review Board referred the applications to environmental assessment. A developer’s scoping document was presented to local communities and organizations, and the MVRB issued draft Terms of Reference for comment.

A helicopter-supported field program was completed in July along the road corridor to gather detailed data in support of the permit application.

In October, Canadian Zinc announced the start-up of its underground program starting with the re-opening and dewatering of the 650 metre-long decline tunnel of the 870 Level. An exploration diamond drill program will be staged from underground stations in order to upgrade a portion of the inferred resources. The 6000 metres of drilling will be completed on four sections.

Chihong Canada Mining Ltd. Chihong assumed ownership of the Selwyn project in 2013. The project includes 15 zinc-lead deposits and covers zones over a strike length of 37.5 kilometres. The bulk of the Selwyn project is located in eastern Yukon, but extends southeast across the border into the NWT.

In 2014, Chihong initiated a \$22 million drill program that targeted seven of the 15 known mineralized zones. 49,000 metres in 297 drill holes have been completed

We're Here to Help Your Small Business or Community Grow...

The Support for Entrepreneurs and Economic Development (SEED) Policy can help you get started.

Created by the Department of Industry, Tourism and Investment, each of these SEED Policy Programs is geared to providing basic contributions for starting out your business, improving capacity or skills, or helping small communities to economically expand...

With Entrepreneur Support – Start-up funding, capital assistance, operational support, and market and product development of up to \$15,000.

With Sector Support – Up to \$15,000 a year interest reduction for two years. Assistance is also available to research new opportunities.

With Community Economic Development – Support of up to \$25,000 for community-based business research or support for activities such as arts festivals or community economic promotions.

With Micro Business – Contributions of up to \$5,000 for self-employment activities, aimed at traditional economy, arts, film and similar self-employment activities.

With Business Intelligence and Networking – On travel costs in excess of \$1,500, assistance may be provided to a maximum of \$3,000 per individual, with applicant contributing a minimum of \$1,000 towards eligible costs of each trip.

More Information

To find out more about SEED and how the Department of Industry, Tourism and Investment can help your business to grow, contact your Regional Economic Development Officer at:

North Slave	Tel: (867) 920-8967	Fax: (867) 873-6109
Inuvik	Tel: (867) 777-7196	Fax: (867) 777-7321
South Slave	Tel: (867) 872-6430	Fax: (867) 872-4628
Sahtu	Tel: (867) 587-7171	Fax: (867) 587-3018
Dehcho	Tel: (867) 695-7500	Fax: (867) 695-7501



including three holes in the NWT on the XY Nose deposit. A bankable feasibility study is expected in mid-2015. In addition, Chihong began work to upgrade the Howards Pass Road and five bridges, which lie in the Northwest Territories.

Denendeh Exploration and Mining Company (DEMCo) has acquired four properties (approximately 24,000 hectares), in the Camsell River area from Fortune Minerals Inc., North Continental Energy Ltd., United Coal and Michael Magrum. The Camsell River area is a former silver mining district, located south of Great Bear Lake, and is also the host to IOCG-type deposits.

DEMCo also staked the historic Bugow gold showing at the north end of Russell Lake, directly north of Behchoko.

Fortune Minerals Ltd. Fortune Minerals' NICO deposit passed several milestones in 2014. In January, the Wek'èezhii Land and Water Board approved an interim land use permit to allow staging equipment and site preparation prior to completion of full mine permits. In February,

Saskatchewan's environment minister conditionally approved Fortune's proposed Saskatchewan Metals Processing Plant. In June the Wek'èezhii Land and Water Board issued the Land Use Permit and approved the "Type A" Water License required to construct and operate the NICO gold-cobalt-bismuth-copper mine. In July, the NWT Minister of Environment and Natural Resources gave final approval for the Water License required for mine construction and operation.

Nighthawk Gold Corp. continued the exploration of its Indin Lake property, located 210 kilometres north of Yellowknife. The land package (92,993 hectares) covers 90% of the prospective Indin Lake Greenstone Belt and includes a number of gold deposits, including the past producing Colomac mine. The Colomac portion of the larger Indin Lake property hosts five known gold deposits — Colomac Main, Grizzly Bear, Goldcrest, Dyke Lake, and 24/27 — of which, only the main Colomac deposit has been mined. In December 2013, Nighthawk

added the Kim and Cass gold deposits to its land package.

In 2014, Nighthawk initiated a drill program on the Goldcrest, Colomac Main, Cass and Kim deposits. The program concluded successfully with the drilling of 13,647 total metres. Results have been reported for the first 8,068 metres.

North American Tungsten Corporation Ltd. North American Tungsten's Mactung project received environmental approval from the Yukon Environmental and Socio-Economic Assessment Board in September. The federal and Yukon governments certified the assessment, with mandatory considerations to mitigate the mine's impact.

The Mactung property is in eastern Yukon and straddles the Yukon-NWT border. The deposit has an indicated mineral resource of 33 million tonnes at a grade of 0.88% WO₃. North American Tungsten has proposed the development of an underground mine with an 11-year mine life. **Seabridge Gold Inc.** In 2014, Seabridge continued exploration of the Walsh Lake



**Raise the bar
as high as you want.**

Challenging jobsites don't intimidate a Doosan crawler excavator. Hydraulic pump performance delivers fast, class-leading cycle times, with a synchronized engine and hydraulic system that boosts efficiency. It's designed to offer increased flotation in soft soil, while precision controls provide accuracy and power. Whether you're digging a trench, handling boulders or dumping debris, the Doosan crawler excavator keeps you productive no matter what.

Visit us to see what Doosan equipment can do for you.



Equipment Rental & Industrial Supply
103 Kam Lake Road | Yellowknife, NT
867-766-6025 | www.ronsauto.ca



Doosan and the Doosan logo are registered trademarks of Doosan Corp. in the United States and various other countries around the world. 13-D046.2

General Contracting
 Industrial & Commercial
 Construction
 Concrete Foundations &
 Concrete Works of all types
 Concrete Supply
 Bridge Construction
 Mechanical
 Underground & Surface Dewatering

PO Box 2076
 100 Nahanni Dr.
 Yellowknife, NT X1A 2P6
 P. 867.873.2975
 F. 867.873.9620

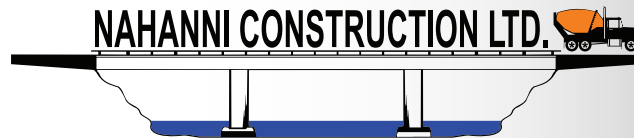
Email:
 Dwight@NahanniNCL.com
 Kenny@NahanniNCL.com



Cold Weather Construction Experts



*Nahanni Construction Ltd.
 Helping to build the Territory for a strong future.*

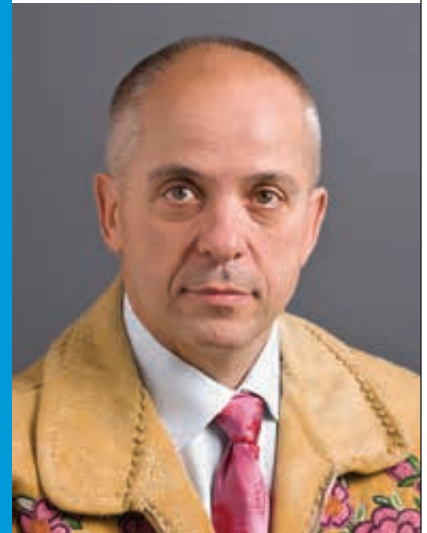


A Climate For Growth

In today's high-tech business environment, communications infrastructure can be as important to economic development as physical infrastructure.

The construction of a fibre optic link along the Mackenzie Valley is a strong case in point. Inuvik's satellite ground station is set to become one of the pre-eminent centers for remote sensing - not only in North America, but the world. This will increase opportunities for employment and value-added data processing facilities; and position the Aurora Research Center as one of the world's foremost facilities in which to conduct space-based Arctic research.

Real-time digital access will also expand and improve our Government's health and education services to residents in even our most isolated communities along the Mackenzie Valley - and enable NWT entrepreneurs here to become active participants in the international digital economy.



Michael Miltenberger
 Minister of Finance



discovery on its Courageous Lake property, about 240 kilometres northeast of Yellowknife. The Courageous Lake project consists of 27,263 hectares covering 53 kilometres of the Courageous Lake greenstone belt. The belt hosts several past-producing gold deposits and includes the undeveloped FAT deposit, with reported proven and probable gold reserve of 91.1 million tonnes at a diluted grade of 2.2 g/t Au (July 2012).

In 2014, Seabridge completed a geophysical survey to aid in drill testing the greenstone belt for more satellite deposits. In addition, the company announced a mineral resource estimate for the Walsh Lake deposit of 4.62 million tonnes of inferred resources grading 3.24 g/t (482,000 ounces of gold) based on a cut off grade of 0.60 g/t.


Tamerlane Ventures Inc. filed for receivership in January 2014, ceasing exploration of their Pine Point property, east of Hay River. The property and company reserves were turned over to Duff & Phelps Canada Restructuring for a sale of assets.

TerraX Minerals Inc. Exploration continued on TerraX's expanded Yellowknife City Gold project. The 9,350-hectare property now consists of five claim groups located immediately north of Yellowknife.

Much of the activity in 2014 focused on the Northbelt property, the northern extension of the shear system that hosted the historical Giant and Con gold mines. An extensive prospecting and structural mapping program identified multiple shear systems that host numerous gold showings but have seen limited historical drilling.

A winter program was started in March, with 13 holes totalling 2,363 metres completed. The company followed this with another 2,142 metres in 14 holes drilled during the summer.

Tyhee Gold Corp. Tyhee Gold has identified six separate gold deposits at its Yellowknife Gold project at Ormsby and Nicholas Lake, 80 kilometres north of Yellowknife. These include Ormsby, Bruce Lake, Clan Lake, Nicholas Lake and Goodwin Lake. The areas have a combined measured and indicated resource of 1,715,000 ounces of gold contained within 27,115,000 tonnes of ore.

In January 2014, Tyhee and Det'on Cho Corp. signed a non-binding Memorandum of Understanding to advance the Yellowknife Gold project and encourage business and employment opportunities for DCC and the Yellowknives Dene First Nation. 



Your Northern Geosynthetic Specialist

www.aatechnical.ca

al@aatechnical.ca Ph: 867 • 669 • 7022
bertha@aatechnical.ca Fax: 867 • 669 • 7077

327 Old Airport Road | Box 2922 Yellowknife, NT X1A 2R2

Specializing in:

- Cold Weather Installations
- Textured Geomembranes & Geotextiles
- Certified Welding Technicians
- Factory direct HDPE, LLDPE, Bituminous, GCL, geotextiles, prefabrication
- SAFE – QUALITY – PRODUCTION



www.topoftheworldtravel.com | 1-800-837-8922 | travel@topoftheworldtravel.com



Migrating to and from a mine site?

Gathering for a conference or meeting?

Top of the World Travel located in Yellowknife, NWT is the North's premiere travel planner for the mining sector.

- Exclusive Air and Hotel Rates • Northern Experience •
- Specializing in Rotational Travel •

First one in...
last one to leave



Providing remote camps in Nunavut,
Northwest Territories and
throughout Canada since 1991.

General Expediting | Camp Construction
Logistics Support and Camp Staffing
Environmental Clean-up
Remote Camp Rentals
(Camps range in size from 2 to 50 persons)

DISCOVERY
MINING SERVICES
a Discovery Air company



DENESOLINE
DISCOVERY

TLICHO
DISCOVERY

Tel: 867.920.4600 | E-mail: discov@ssimicro.com
www.discoverymining.ca



**HIGH-QUALITY,
COST-EFFECTIVE
ENVIRONMENTAL
SERVICES**

Hatfield's reputation for assembling expert teams ensures high-quality, cost-effective solutions. Senior personnel are involved technically in projects, providing hands-on oversight for cost-competitive and responsive client services.



Early Scoping and Strategic Planning
Baseline Data Collection
Environmental Impact Assessment
Coordination and Delivery
Mapping and GIS, Satellite Image
Acquisitions and Analysis

Charlotte Mougeot, Senior Manager, Mining and Natural Resources
cmougeot@hatfieldgroup.com www.hatfieldgroup.com

KITNUNA
GROUP OF COMPANIES

KITNUNA is a 100% Inuit owned company.

Through diverse partnerships we are able to provide professional services in:

- Civil Construction
- Vertical Construction
- Restoration and Repair
- Excavating and Earth Moving
- Heavy Duty Repair Facility
- Petroleum (supply/deliver)
- Expediting and Logistics
- Full Concrete Services
(from powder to batch plant)
- Full Service Hardware & Building Materials



HEAD OFFICE - CAMBRIDGE BAY
P.O. Box 92, 10 Omilik Rd
Cambridge Bay, NU X0B 0C0
P: 867.983.7500 F: 867.983.7501

www.kitnuna.ca

62°N

**COMPREHENSIVE
MEDICAL SOLUTIONS,
NORTHERN OWNED
AND OPERATED**

- First Aid Training
- Health Care Personnel
- Dual-role Kitchen Staff
- Remote Site Support
- Paramedic Services
- Drug & Alcohol Testing
- Supplies Procurement
- Equipment Rentals



62DEGREESNORTH.CA

(CONT'D. FROM P.26)

Kivalliq, 20 kilometres north of Rankin Inlet. The proposed open pit and underground mining operation hosts approximately 2.8 million ounces of gold in proven and probable reserves, with an additional 5.8 million ounces in the indicated and inferred categories. The final hearings for the impact review process took place in Rankin Inlet in late August, and the Nunavut Impact Review Board issued a positive recommendation to the Minister of Aboriginal Affairs and Northern Development on October 10. The board recommended that the project advance to permitting, subject to 127 terms and conditions.

The most advanced uranium project in the territory is located west of Baker Lake and owned by AREVA Resources Canada Corp. A Final Environmental Impact Statement was submitted in October 2014 to the Nunavut Impact Review Board. The proposed operation would include three to four years of construction, followed by an estimated 14-year mine life. Other uranium properties still active in the Kivalliq are Cameco Corp.'s Aberdeen-Turqavik and Kivalliq Energy Corp.'s Angilak, but both are still in early stages compared to the Kiggavik project.

Junior explorer Northquest Ltd. has been delivering encouraging results from its Pistol Bay gold property northeast of Whale Cove. Since exploration started in 2010, the company has completed three airborne geophysical surveys and over 13,000 metres of diamond drilling, approximately 4,500 metres of which was drilled in 2014. Other explorers in the region, Prosperity Goldfields Corp. and Anconia Resources Corp., remain active, but no work was completed on their projects this year.

Diamond exploration experienced some renewed efforts in the Kivalliq region this season. North Arrow Minerals Ltd. completed a 1,500-tonne bulk-sampling program on the Qilalugaq property located outside Repulse Bay. This is the first of two diamond bulk sampling programs occurring in Nunavut this season, the other in the Qikiqtani region.

QIKIQTANI REGION


The region is now home to Nunavut's second and newest operating mine, Mary River. And while field programs have been fewer this year, exploration covers a diverse range of commodities.

The Qikiqtani region reached a milestone in the fall of 2014 with Baffinland Iron Mines

Ltd.'s Mary River project becoming an operational mine. In early September, the company trucked its first load of ore to be stockpiled for seasonal shipping at Milne Inlet, just north of the deposit. The company has begun with its "early revenue phase" approach, which will have an initial production of up to 4.2-million tonnes of ore shipped annually via the port. The initially proposed 150-kilometre railway from the mine site to Steensby Inlet will be reevaluated later on in the mine's life. The Mary River project enjoys high-grade, direct-ship ore of 67 percent iron, whereas other iron projects within the Qikiqtani region, such as Roche Bay, Tuktuk, and Haig Inlet, generally have lower grades. Exploration at these other iron projects in the region remained idle again this year.

Peregrine Diamonds Ltd. continued aggressive exploration in 2014 at its wholly owned Chidliak project 120 kilometres northeast of Iqaluit, following positive results from the 2013 season. The preliminary bulk sample collected in 2013 returned an average grade of 2.78 carats per tonne on diamonds greater than 1.18 mm, and the company's initial resource, released in early 2014, had 7.47 million carats in 2.89 million tonnes of material to a 250-metre depth at a grade of 2.58 carats per tonne. More than 3,000 metres of diamond drilling and 1,000 metres of reverse circulation drilling were completed during the 2014 field season to delineate the extent of three potentially economic kimberlites. A more thorough bulk-sampling program is planned for these areas this coming winter. Peregrine is working to update the initial resource estimate and is planning on filing a Preliminary Economic Assessment in 2016.

On northern Somerset Island, Aston Bay Holdings has an option agreement with joint-venture partner Commander Resources Ltd. on the base-metal Storm property. Business developments in 2014 included a binding Memorandum of Understanding with Chilean producer Antofagasta Plc to advance the project, plus an option for Aston Bay to buy out the remaining interest held by Commander Resources. With these new agreements in place, Aston Bay was able to fund a small exploration program this summer that led to new discoveries of copper mineralization, increasing the surface strike length of the zone by over 20 kilometres.

For more information, visit www.cngo.ca 



fly efficiently | comfortably | safely



Fly efficiently, comfortably, & safely with the North's most versatile specialty airline. Call today to book us for:

- Remote Exploration
- Oil & Gas Support
- Air Ambulance
- Wildlife Surveys
- Mine Resupply
- Cargo Services
- Tourism Support
- Workforce Transport
- Scheduled Flights

1 888 545 6794

airtindi.com

Sustainable Solutions for the North

Associated Engineering is a Canadian, employee-owned consulting firm. We provide engineering, environmental science, and project management services in the water, environmental, energy, infrastructure, transportation, buildings and asset management sectors.

Sustainability is part of our business, as well as every project we undertake. We are committed to improving the environment and reducing our carbon footprint.



Offices in Yellowknife, Whitehorse & across Canada



BUILDING FOREVER

As the world's leading diamond company, we understand that it takes a strong, talented and diverse team to safely mine nature's treasures from deep under the ground.

If you like taking on new challenges, thrive on making decisions in the pursuit of excellence, and enjoy the support of more than 126 years of expertise, we have a place for you.

DE BEERS
GROUP OF COMPANIES



Everything you need for increased Business Capacity.



No matter what the project, we can help:

- Quality Management Systems Improvement
- RFP-style Bid Packages
- Integrated Marketing & Targeted Community Engagement
- HR Systems & Corporate Headhunting
- Aboriginal Partnership Development
- Custom Manufactured Corporate Gifts
- Newsletter Design & Production
- Other Strategic Writing & Business Support Services

curranandassociates.com | T 867-446-1997

Over 45 years' experience serving the North



Let us do the dirty work!

- General Contracting
- Water and Sewer Installation
- Ice Road Construction
- Crushing and Aggregate Supply
- Mining Support Services
- Industrial Remediation
- Ready Mix Concrete

Head Office
350 Old Airport Road
PO Box 1807
Yellowknife, NT X1A 2P4
Phone: 867-873-6271
Fax: 867-920-2661
info@rtl.ca
www.rtl.ca



CONSTRUCTION

(CONT'D. FROM P. 31)

was passed by Parliament last year, and fresh amendments to the Mackenzie Valley Resource Management Act (MVRMA).

In Nunavut, the new planning act will provide firm timelines and greater certainty for prospective resource projects. The hope is that it will pave the way for projects to advance more efficiently and make it easier to raise capital. In the NWT, changes to the MVRMA are expected to streamline the regulatory process by providing legislated timelines and by consolidating regional land and water boards into a single board for most of the territory. (The Inuvialuit region is not included.)

Glimmers of hope are also appearing on the infrastructure side. With devolution now underway in the NWT, the territory will earn a share of royalties from resource projects. In 2014-15, that revenue is expected to tally around \$60 million.

After a \$15-million share is distributed to aboriginal governments and another \$11.5 million stashed in the territorial heritage fund, the territorial government will have about \$33.5 million in new money. That's not a huge sum on its own, but it means the government is that much more invested in seeing the resource industry grow — and support for infrastructure is a good place to foster that growth.

In 2012, the federal government also increased the debt limit for all three territories, with the NWT limit rising to \$800 million from \$575 million and Nunavut's doubling to \$400 million. The NWT is pushing ahead with work on a fibre-optic cable and all-weather highway up the Mackenzie Valley. Premier Bob McLeod has also talked about seeking a further increase to the debt cap, which would fund a major expansion of the NWT's hydroelectric system.

The Government of Nunavut, meanwhile, is using some of its additional debt space to build a new \$300-million airport in Iqaluit, which is already a hub for the mining industry. It has also expanded marine laydown areas in some communities, and many business and civic leaders in Iqaluit believe the government should fund a deep-water port for the territorial capital.

Admittedly, these projects are not going to overcome the massive challenge lack of infrastructure plays in opening up the

NWT and Nunavut to the level of resource development their respective geologies can support. But they are steps in the right direction. Just as the approvals of new projects, the advancement of major exploration and the increasing participation by aboriginal communities in all aspects of the mining industry prove are steps in the right direction. They are not antidotes to current

market conditions, but they provide cause for optimism.

One day, the economic headwinds will falter. When they do, today's improvements to the North's investment environment — and the efforts by industry to press forward — will set the stage for a strong recovery in the mining and minerals sector. And that will be good news for everyone. **M**

ARCTIC SEALIFT YOU CAN DEPEND ON

“RELIABLE”

“OUTSTANDING CUSTOMER SERVICE”



“FLEXIBLE SCHEDULES AND EXPERT PLANNING”

“INUIT OWNERSHIP AND EMPLOYMENT”



R

RELIABLE

RELIABLE SERVICES ACROSS NUNAVIK AND NUNAVUT,
INCLUDING BAFFIN, KIVALLIQ, AND KITIKMEOT COMMUNITIES

Succeed with **NEALS** | Reserve online www.NEALS.ca | Reserve now 1-877-225-6327



AVALON
RARE METALS INC.

MATERIALS FOR CLEAN TECHNOLOGY

THE LEADING DEVELOPER
OF NEW SOURCES OF
CRITICAL RAW MATERIALS
IN NORTH AMERICA



TSX & NSYE MKT: AVL

www.avalonraremetals.com



THE NORTH'S BEST RENTAL SPOT!

Hertz

- Local rates by the day, weekend, week or longer
- Special replacement rates + direct billing to insurance companies
- Free local pick-up and return
- 24-hour emergency roadside assistance
- Federal / Provincial government employee rates
- Choose from compact to full size cars, minivans, SUVs and more

YELLOWKNIFE

Yellowknife Airport Terminal

867-766-3838

Hertz rents Chryslers and other fine cars.

aeroplan

Earn Aeroplan Miles with Hertz!

HERTZ.CA

KENNEDY
DIAMONDS

Highest
Grade
Diamond
Exploration
Project



TSX-V: KDI

www.kennadydiamonds.com



**NORTHBEST
DISTRIBUTORS**

LTD.

Bringing the Best Quality Foods North

**Meat and Groceries at
Wholesale Prices for the
Food Service Industry**

Beef, Pork, Veal, Poultry, Smoked Meats,
Fish, Bread, Eggs, Dairy Products,
Canned Goods, Paper Products

Ph: 867 873 2364

Fax: 867 873 6516

www.northbest.ca

347 Old Airport Rd. Yellowknife, NT

northbest@theedge.ca

(CONT'D. FROM P. 48)

create regulations governing Aboriginal consultation. As with the new NUPPAA in Nunavut, government can also create new regulations to allow the costs associated with environmental approval and permitting processes to be recovered from proponents.

This is a tall order no doubt, and the details behind many of these changes are being worked out through new regulations.

Mackenzie Valley Resource Management Act, Part II

Besides the addition of timelines, another significant change flowing from revisions to the Mackenzie Valley Resource Management Act is the consolidation of three regional boards responsible for processing and issuing land-use permits and water licences — the Sahtu, Gwich'in and Wek'èezhii (covering the Tlicho region) — with the Mackenzie Valley Land and Water Board. The result of the merger would see an 11-member Mackenzie Valley Land and Water Board responsible for most of the NWT, with the exception of the Inuvialuit Settlement region, which has its own process under its land claim.

The composition of the merged board, expected to be in place in the spring of 2015, will continue to incorporate aboriginal participation with the three land claim regions each nominating a member, to be appointed by the federal government. Ottawa will also appoint one member each in consultation with the Dehcho and Akaitcho regions, where land claims are still being negotiated. The balance of the board will include a chair, appointed by Ottawa, along with three other federal appointees. The NWT government will also nominate two members.

Additionally, the full board will not necessarily hear every project application that goes before it. The chair will be able to appoint smaller, three-member panels to adjudicate applications within the boundaries of individual regions, such as land-claim settlement areas. Such panels would include representation from the area.

The creation of the merged board has met with some controversy. The Sahtu Secretariat and Tlicho Government wish to retain their regional boards and have announced lawsuits against the federal government to block the merged board, arguing that the regional boards are enshrined in their respective land claim agreements. 



KAL TIRE


Mining Tire Group

WORLD'S PREMIER MINING TIRE SPECIALISTS


WANT TO KNOW MORE?
Visit www.kaltiremining.com or email tirenorth@kinglandford.com

917 Mackenzie Hwy Hay River NT X0E 0R8
867-874-2686

*Friendly. Clean.
&
Simply Super*



 **100% SMOKE-FREE!**
867 669 8888
308 Old Airport Road
www.super8yellowknife.com



Enhancing the Value of Courageous Lake

Finding higher grade gold is the key to improving the economics of the 6.5 million ounce gold reserve at Courageous Lake.

Last year's discovery of the Walsh Lake deposit helps.



SEABRIDGE GOLD

WWW.SEABRIDGEGOLD.NET

The Winner's Circle

People in the Northern mining industry know the value of a job well done. Mining North's sampling of recent awards and honours shows they're not alone.



Canadian Professional Geoscientist Award

Winner
Gary Vivian

Presented annually by Geoscientists Canada, the Canadian Professional Geoscientist Award recognizes individual contributions to the profession. This year's winner is Gary Vivian, president of Yellowknife-based Aurora Geosciences Ltd., who has made significant contributions to geological mapping, prospecting, sampling and geophysical surveying on various projects North of 60. Vivian is also a vice-president with the NWT & Nunavut Chamber of Mines.



Murray Pyke Corporate Award

Winner
Baffinland Iron Mines Corp.

Awarded by the Nunavut Mining Symposium, the Murray Pyke Award honours the contribution of a mining, exploration or related company to Nunavut's social and community development. Baffinland, which recently brought its Mary River iron ore mine into production, was honoured in 2014 for its contributions over many years and its recent signing of an Inuit Impact and Benefit Agreement with the Qikiqtani Inuit Association.



Business of the Year/ Business Person of the Year

Winner
NCC Development Ltd./Clarence Synard

Chamber member NCC Developments Ltd. came away from the Nunavut Trade Show in October with a pair of awards: Business of the Year, for the company itself, and Business Person of the Year for its CEO, Clarence Synard. Founded in 1999, NCC Developments is a wholly owned subsidiary of NCC Investment Group and is focused on infrastructure development in Nunavut. NCC Investment Group is owned by Qikiqtaaluk Corp., Sakku Investments Corp., Kitikmeot Corp., and Nunasi Corp.



TSM Environmental Excellence Award

Finalists
Dominion Diamond Corp. & Rio Tinto

The Mining Association of Canada recognized Dominion Diamond Corp., the owner of the Ekati diamond mine, and Rio Tinto, the majority partner in the Diavik diamond mine, as finalists in its TSM Environmental Excellence Awards. The companies were honoured for their collaboration on the Grizzly Bear DNA program. Launched in 2012, the study is developing baseline data on grizzly populations in their project areas to determine if mining activities affect grizzly bear distribution and abundance. De Beers Canada is conducting a similar program in the area of its Snap Lake and Gahcho Kué properties.



Mike Hine Award

Winner
Peter Tapatai

In recognition of his contributions to Northern mining, the Nunavut Mining Symposium honoured Peter Tapatai this year with the 2014 Mike Hine Award. A Baker Lake resident, Tapatai is the owner of Peter's Expediting Ltd. and has been a Nunavut entrepreneur for many years. Tapatai's company provides expediting and transportation services for Agnico Eagle Mines Ltd.'s Meadowbank mine. Peter's Expediting also does significant work on the local, regional and territorial level.



Group Leadership Award Canadian Wind Energy Association

Winner
Diavik Diamond Mines, 2013

Diavik Diamond Mines Inc.'s effort to reduce diesel consumption and carbon-dioxide emissions through development of a wind farm at its Diavik mine was honoured late last year for the contribution it has made to advancing wind energy in Canada. The Canadian Wind Energy Association recognized the project with its Group Leadership Award in October, 2013. The wind farm continues to produce power for Diavik and is on track to deliver 10 percent of the mine's power needs this year, reducing diesel consumption by five million litres.



Iconic brands.
Legendary service.



**midnight
sun energy**

sustainable mining & industrial solutions

353B Old Airport Road, Yellowknife, NT
(867) 873-6360
www.midnightsunenergy.com





Our Claim... a serious commitment to a resourceful future.

In the mining business, the stakes are high.
Getting crews and equipment to site could mean the difference between profit or loss.

At Canadian North we understand that,
and have the people and equipment to move you towards a resourceful future.

Call us. We're serious about your business.



CANADIAN NORTH
seriously northern