

# Northwest Territories Mineral Exploration Overview November 2004

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**NORTHWEST TERRITORIES  
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## **1.0 Summary**

Ekati and Diavik diamond mines continued production in 2004. The Miramar Giant gold mine was shut down July 2004; there are no longer any producing metal mines in the Northwest Territories.

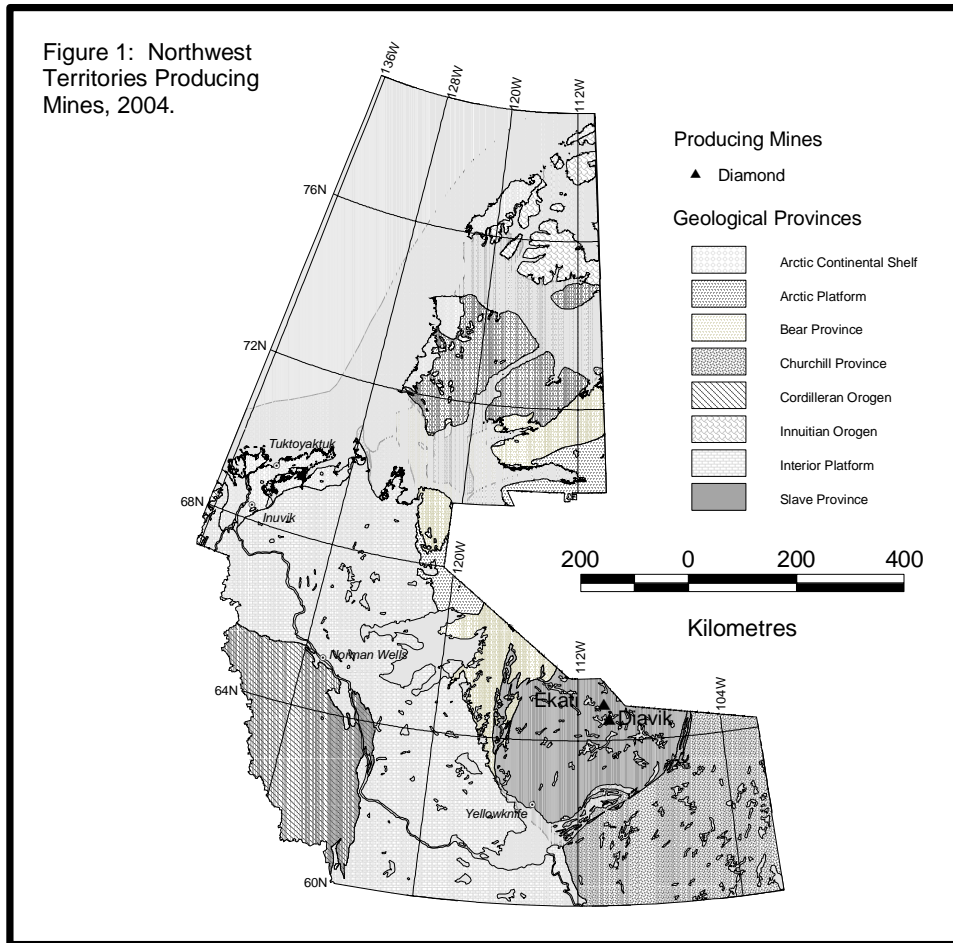
NWT diamond exploration expanded this year with nearly 26 million acres of permits taken out, largely in the north Interior Platform. Diamond exploration on the Slave Craton also continued at a reasonably constant pace. BHP Diamonds Inc. continued its programme of rapidly assessing land blocks outside of the Ekati Mine leases by joint venturing to smaller exploration companies and allowing them to operate the projects. Kennecott Canada Exploration partnered its landholdings and shared exploration data with Arctic Star Diamonds. Diamondex Resources Ltd. continued to be active exploring its Lena West permits as well as properties on the Slave Craton. GGL Diamond Corp. explored on most of their Slave Province diamond properties. With a revenue stream established from its production from the Diavik Mine, Diavik Diamond Mines completed an aggressive exploration programme on the Diavik leases. De Beers Canada Exploration Inc. started pre-production work on their Snap Lake Property and started pre-feasibility work; as well as continued exploration on the Gahcho Kué property. Stornoway Diamond Corp., Shear Minerals Ltd., and SouthernEra Diamonds Ltd. all with their respective partners, carried out exploration drilling on various Slave Craton properties. The Drybones Bay area also saw considerable activity by numerous companies. Further north, on Victoria Island, Diamonds North Resources Ltd. and partners continued to advance their properties with drilling.

Gold and base metal work in the Northwest Territories continued to be focused on better defining larger known deposits with little grassroots exploration reported. Anaconda Gold Corp. worked the Horseshoe Zone of the Damoti Lake property. Canadian Zinc Corp. launched a large infill and extension-drilling programme at the Prairie Creek Pb-Zn-Ag deposit. Seabridge Gold continued exploration on its Courageous Lake gold property. Tyhee Development Corp. conducted an aggressive surface-drilling programme in conjunction with underground development of its Ormsby gold property. Fortune Minerals Ltd. continued to collect data on their Nico Deposit to compile a bankable feasibility study.

## **2.0 Mining Activities in the Northwest Territories**

**BHP Billiton Diamonds** ([www.bhpbilliton.com](http://www.bhpbilliton.com)) (80%), **Stewart Blusson** (10%) and **Chuck Fipke** (10%) produced 4,015,000 carats of diamond from the **Ekati Mine** (Figure 1) during the first three quarters of the year. Third and 4<sup>th</sup> quarter 2004 production was substantially lower than previous years levels (Table 1) due to the depletion of a high-grade zone in the Koala pit. Open pit production was supplemented by underground mill feed from the Koala North kimberlite. The Koala North kimberlite is a small kimberlite body located between the Panda and Koala open-pits, and is being mined largely as a test area for underground production techniques. In May, BHP Billiton approved underground development for the Panda kimberlite. Using experience gained from Koala North, the underground mining of Panda is expected to produce 4.7 million carats over six years, beginning early in 2005.





The **Diavik Diamond Mine** (Figure 1), an unincorporated joint venture between **Diavik Diamond Mines Inc.** ([www.diavik.ca](http://www.diavik.ca)) (60%) and **Aber Diamond Mines Ltd.** ([www.aber.ca](http://www.aber.ca)) (40%), entered its second year of production. A lower-grade mud-rich kimberlite unit overlying the A154S ore body continues to dilute grade. The dilution from this source continued until the end of 2004 as mining advanced to the 320-metre bench of the A154S pit. A similar lower grade unit overlies the A154 North pipe and mill feed from this source will continue to depress grades. Despite the lower-grade material entering the millstream, the Diavik Mine produced just over 6 million carats (Table 1) of diamond during the first three quarters of 2004. The partners are on-track to exceed their forecast 2004 production of 7.5 million carats. Based on the excellent results the partners have forecast to increase mill throughput to 2.0 to 2.5 million tonnes/year by 2008.

During 2004, a 3-D seismic imaging and deep drilling programme were used to characterize the lower portions of the A154 pipes. Information gained will be used to refine the resource model and mine plan at deeper levels. Delineation drilling of the A418 pipe is ongoing to improve the reliability of the resource model. Exploration drilling identified two new kimberlite bodies in 2004, there are now 64 known kimberlites on the property. The partners have committed

approximately 3 million dollars a year over the next five years to continue evaluation of known pipes and exploration for new kimberlite bodies.

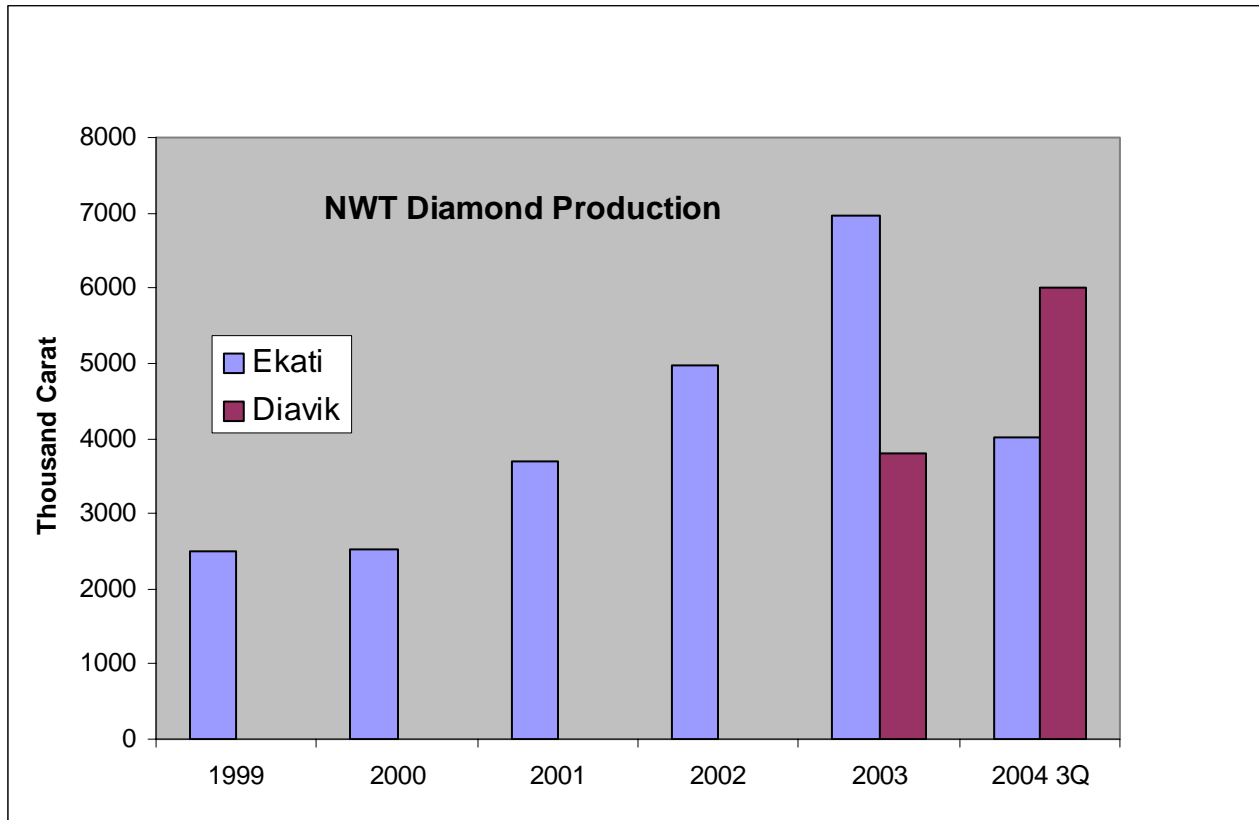


Figure 2. Northwest Territories diamond production, 1999 to the 3<sup>rd</sup> quarter of 2004.

In May 2004, a Water License and Land Use Permit were issued for the **Snap Lake Diamond Project**, allowing **De Beers Canada Ltd.** ([www.debeerscanada.com](http://www.debeerscanada.com)) to start Phase One underground pre-production development. The programme will include additional sampling and processing in the existing bulk sample plant. De-watering of the underground infrastructure has been completed, and test mining of approximately 150 bulk samples of 80 tonnes each is underway. The bulk samples will aid grade estimation and allow tuning of beneficiation systems. The Phase One technical programme is planned to advance underground workings by approximately 4000 metres. Phase Two of the programme will begin early in 2005 and is designed to take the project to full production by 2007. The resource is currently estimated at 22.8 million tonnes grading 1.46 carats per tonne at US\$76/carat.

The **Miramar Giant Mine**, wholly-owned by **Miramar Mining Corp.** ([www.miramarmining.com](http://www.miramarmining.com)) ceased production in July 2004. The mine produced well below forecast production grades and tonnages, producing 11,855 oz (368 kilograms) of gold. With the closure of the Giant Mine there are no longer any operating metal mines in the Northwest Territories.

### **3.0 Diamond Exploration in the Northwest Territories**

The locations of diamond exploration projects in bold typeface may be referenced in Figure 3. They are also summarized in Table 2.

**Arctic Star Diamonds** ([www.arcticstardiamond.com](http://www.arcticstardiamond.com)) (100%) and Kennecott Canada Exploration ([www.kennecottexploration.com](http://www.kennecottexploration.com)) (maintains an 80% back in right) completed four BX diamond drill holes for a total of 450 metres on their **Credit Lake** property. A granite breccia zone with a dark chrome diopside-bearing mud was intersected in one hole that targeted a weak electromagnetic anomaly. Arctic Star also collected 428 till samples for kimberlite indicator mineral (KIM) and geochemical analysis, and completed four ground magnetic grids totaling 25 line-kilometres. KIM grains recovered from the till sampling programme define several indicator trains and have chemistry consistent with sampling the diamond stability field. Gold anomalies arising from the geochemical sampling were also ground checked.

**Arctic Star Diamonds** ([www.arcticstardiamond.com](http://www.arcticstardiamond.com)) also completed reconnaissance sampling in other areas of the Northwest Territories. This work led to the acquisition of 44 prospecting permits totaling 2.05 million acres in the Rae province in the southern NWT. Twenty-eight till samples were collected from the area, and several returned indicator minerals including pyrope, chrome diopside, orthopyroxene and chromite. The property has been dubbed the “**Fort Smith project**”.

**Ashton Mining of Canada Inc.** ([www.ashton.ca](http://www.ashton.ca)) carried out till sampling, mainly on properties in Nunavut, but also in the Northwest Territories, where it has three properties covering approximately 216,000 hectares.

**Consolidated Gold Win Ventures Ltd.** ([www.v-cgw.com](http://www.v-cgw.com)), earning-in on an option with **New Shoshoni Ventures Ltd.** ([www.newshoshoni.com](http://www.newshoshoni.com)), carried out ground magnetic surveys over four airborne anomalies on its **GSL** claims in the Drybones Bay area. Three drillholes totaling approximately 500 metres were drilled on three of these anomalies. No kimberlite was intersected.

**Diadem Resources Ltd.** ([www.diademresources.com](http://www.diademresources.com)) has an option to earn-in to 50% in a joint venture with **Darnley Bay Resources Ltd.** ([www.darnleybay.com](http://www.darnleybay.com)). The partners completed 487.5 line-kilometres of ground magnetic survey over 22 airborne magnetic targets on its **Franklin** project area near Paulatuk. The grids were completed using a snowmobile-towed magnetometer. Eight high priority drill targets were defined.

**De Beers Canada Exploration Inc.** ([www.debeerscanada.com](http://www.debeerscanada.com)) (51%), **Mountain Province Diamonds Inc.** ([www.mountainprovince.com](http://www.mountainprovince.com)) (44.1%), and **Camphor Ventures Inc.** ([www.camphor.com](http://www.camphor.com)) (4.9%) commenced a 25 million dollar prefeasibility study on their **Gahcho Kué** property in January 2004. The study is designed to advance the project to the permitting stage and includes geotechnical drilling, environmental and engineering studies, pit design and optimization modeling, as well as civil engineering studies regarding the mine equipment infrastructure. Nine thousand and eighty metres of diamond drilling in 110 holes were completed for geotechnical characterization of the ore and country rock. Kimberlite recovered will also be used for petrographic characterization of the deposit, and beneficiation studies. The partners also carried out a ground gravity survey to locate larger kimberlite drill targets, and a

few diamond drill holes were completed on targets identified. A two metre wide kimberlite dyke was intersected southwest of, and on strike with the Faraday kimberlite, extending the interpreted length of the kimberlite-bearing structure by 700 metres.

**De Beers Canada Exploration Inc.** ([www.debeerscanada.com](http://www.debeerscanada.com)) (40%), in joint venture with **GGL Diamond Corp.** ([www.ggldiamond.com](http://www.ggldiamond.com)) (60%) is carrying out a large ground gravity survey on the **Doyle Lake Joint Venture** (LA 4-9 mineral claims) immediately south of Gahcho Kué. The Doyle Lake Joint Venture originally covered the LA 1-30 claims. De Beers relinquished its interest in the LA1-3 and LA 10-30 claims to GGL this year. The gravity survey has delineated a northeast trending series of anomalies over the diamond-bearing sill, as well as other discrete targets. Five potential kimberlite targets were identified: two in the northern part of Blob Lake, and three targets along the northeast structure. Of these three, two are land-based, while the northernmost target lies beneath a lake 1.5 kilometres south of Gahcho Kué.

**Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) explored its wholly owned 2,495,340 hectare **Lena West** permits, 310 kilometres north of Norman Wells. A 72,700 line-kilometre Fugro horizontal gradient magnetic survey was flown at 300 metre line spacing over the southern third of the area, as well as eight selected areas outside the main permit block. Over 80 prospective targets were identified, ranging in size from 300 metres to greater than 1,000 metres in diameter. The 2004 summer exploration programme, budgeted at \$2.6 million, consisted of twenty ground magnetic surveys, collection of 1100 stream and till samples following up on 2003 results, and sampling with an auger drill to depths up to 30 metres. Geophysical and sampling programs were followed up by 862 metres of diamond drilling in 6 holes. Drilling conditions were poor and all holes intersected a poorly lithified mud-siltstone.

**Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) completed a multidisciplinary exploration programme on its wholly owned **Bear Head** property, 220 kilometres northeast of Yellowknife. A 5022 line-kilometre Fugro Midas airborne magnetic survey, using a 50 metre line spacing, identified 26 good quality magnetic anomalies. The airborne anomalies were ground-checked, and sixteen were followed up by ground magnetic, resistivity, and gravity surveys. Five hundred and eight surface till samples, and 191 subsurface till samples (from 62 4" diameter auger holes) were collected and processed for KIMs. Additionally, 377 till samples were collected for enzyme leach analysis. Much of the sampling work was conducted to better define the Indian Hill Lake indicator mineral train.

**Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) performed sampling and geophysics on its wholly owned **Kingfish** property, approximately 260 kilometres northeast of Yellowknife. Sampling work entailed the collection of 391 surface and 12 subsurface (auger drill holes) till samples, which were processed for KIMs. In addition, 147 till samples were collected and analyzed using enzyme leach. Ground-proofing of 15 anomalies identified from airborne geophysics was followed by magnetic and resistivity ground grids, and gravity stations being established over ten grids for a total of 55 line-kilometres. Ground geophysics and auger drilling identified a high priority target for diamond drill testing.

On their wholly-owned **King** property, 480 kilometres ENE of Yellowknife, **Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) flew a 6461 line-kilometre magnetic and resistivity survey. The company also collected 35 till samples for KIM analysis.

**Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) (70%), in joint venture with **Majescor Resources Inc.** ([www.majescor.com](http://www.majescor.com)) (30%), worked their **Kelsey** property, 300 kilometres northeast of Yellowknife. The partners completed a 2215 line-kilometre airborne magnetic survey. Ground-proofing of 17 anomalies identified by the airborne survey justified the completion of 22 line-kilometres of ground magnetic, electromagnetic and gravity surveys in four grids. Four hundred and forty one till samples were collected and processed for KIMs.

On the **Carat** property, NE of the Ekati Diamond Mine, **Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) (70%), in joint venture with **Majescor Resources Inc.** ([www.majescor.com](http://www.majescor.com)) (30%), carried out sampling and ground geophysics. Sampling entailed the collection of 68 till samples for KIM picking, 569 till samples for enzyme leach analysis, and 74 samples for soil-gas hydrocarbon analysis. Ground-proofing of 22 prospective airborne geophysical targets led to 55 line-kilometres of ground magnetic, resistivity, and gravity follow-up surveys completed on ten grids.

On Victoria Island, **Diamonds North Resources Ltd.** ([www.diamondsnorthresources.com](http://www.diamondsnorthresources.com)) (70%) and **Teck Cominco Ltd.** ([www.teckcominco.com](http://www.teckcominco.com)) (earning in to 30%) explored their **Blue Ice Joint Venture**. This project includes the White Ice and Hadley Bay properties, the latter straddling the border between Nunavut and the Northwest Territories. Up to ten magnetic and electromagnetic targets identified from airborne geophysical surveys flown in 2003 and 2004, were to be drilled. Other geophysical anomalies were ground-checked. The drill programme was designed to collect larger samples from specific kimberlite bodies along both the Galaxy and King Eider kimberlite trends. These two northwest-trending linear arrays of kimberlites lie predominantly in Nunavut, but both cross into the Northwest Territories.

**Diamonds North Resources Ltd.** ([www.diamondsnorthresources.com](http://www.diamondsnorthresources.com)) (50%), and **Majescor Resources Inc.** ([www.majescor.com](http://www.majescor.com)) (50%) explored their Banks Island Project. The partners completed a stream sediment sampling program on the project, several samples yielded kimberlitic indicator minerals, some with delicate primary surface features. The work led the partners to acquire an additional 11 permits in 2005, the property now consists of 1.2 million acres.

**Diavik Diamond Mines** ([www.diavik.ca](http://www.diavik.ca)) (60%) and **Aber Diamond Corp** ([www.aber.ca](http://www.aber.ca)) (40%) carried out an extensive exploration programme on the **Diavik leases** and claims. Geological work included the collection and processing of 1088 till samples and extensive Quaternary mapping at 1:100,000 and 1:25,000 scales. Approximately 2200 line-kilometres of airborne gravity survey was flown, as well as approximately 500 line-kilometres of time-domain electromagnetic survey. The airborne geophysical work was followed by 433 line-kilometres of ground magnetic survey over 62 grids, 912 line-kilometres of time-domain electromagnetic survey over 23 grids, 81 line-kilometres of horizontal loop electromagnetic survey over 19 grids, and 517 gravity stations collected from three areas. Thirty holes totaling 2700 metres were drilled to delineate known kimberlites, and test new targets. Two new kimberlites were identified, one approximately 55 kilometres northeast of Diavik, and second kimberlite about four kilometres east of the A154 pit.



**Diavik Diamond Mines** ([www.diavik.ca](http://www.diavik.ca)) (90%) and **SouthernEra Resources** ([www.southernera.com](http://www.southernera.com)) (10%) are bulk sampling the C12 and C13 kimberlite pipes on their **Commonwealth** project. About 75 tonnes of material from each pipe have been collected.

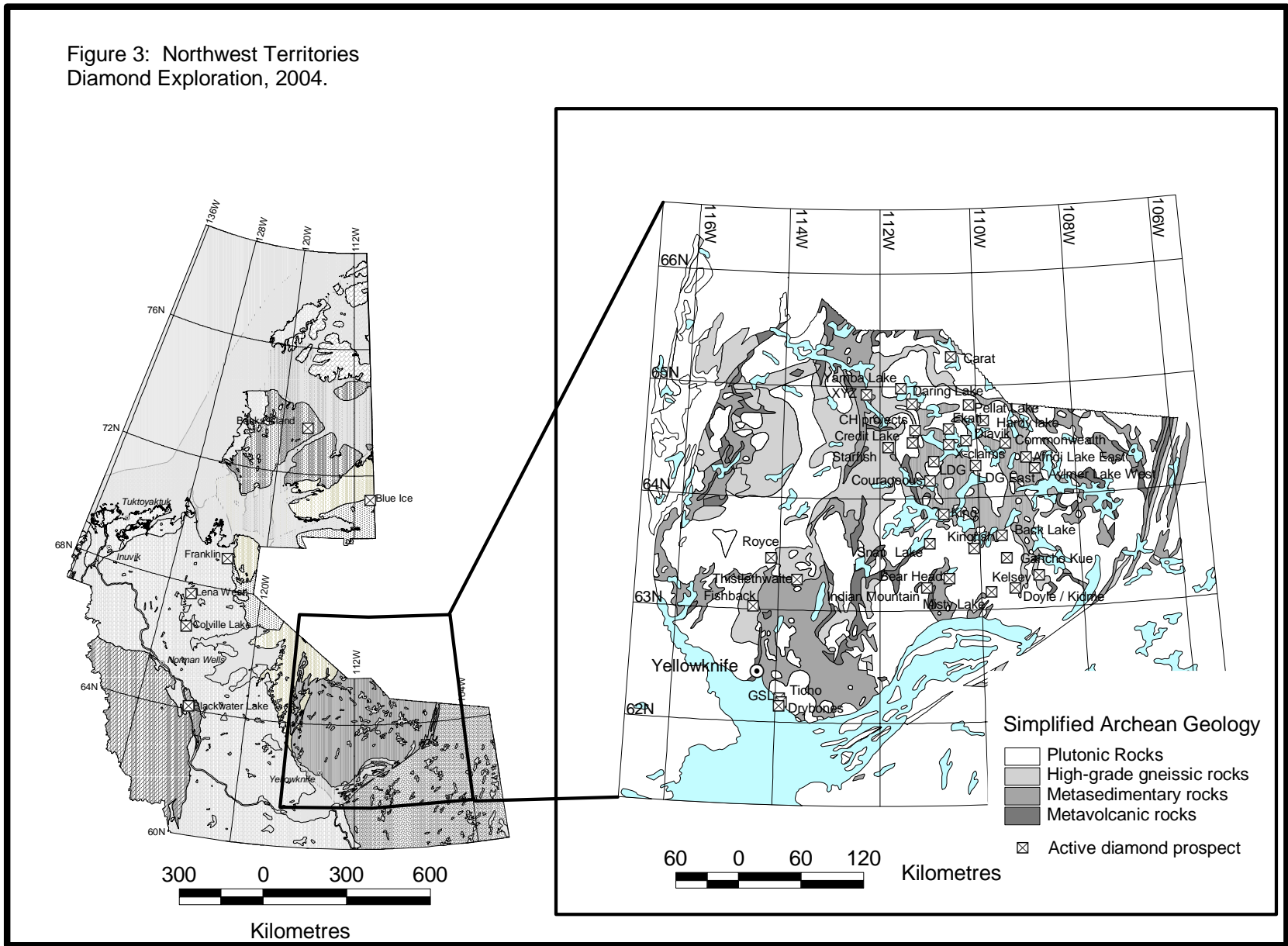
**Dunsmuir Ventures Ltd.** ([www.dunsmuir.com](http://www.dunsmuir.com)) in partnership with **Thelon Ventures Ltd.** and a private syndicate worked on the **Lac de Gras East** property. They completed a 6500 line-kilometre, 100 metre line spacing, Dighem magnetic-electromagnetic survey. Three airborne anomalies were followed up with 3 magnetic-electromagnetic grids. One 50 metre drillhole was completed. Eighty till samples were collected for KIM analysis.

**GGL Diamond Corp.** ([www.ggldiamond.com](http://www.ggldiamond.com)) explored their wholly-owned LA1-3 and LA10-35 claims; the **Doyle Lake** project (see Doyle Lake Joint Venture, above). The company collected 58 till samples to be processed for KIMs and geochemical analysis.

**GGL Diamond Corp.** (100%) carried out an exploration programme on several of the properties in their **CH** project area. The CH project is located in the central Slave Province west and southwest of Ekati Mine, and is comprised of the Zip-De, Zip-Da, Zip-Du, Starfish, Seahorse, G, MacKay, Winter Lake North, Winter Lake South, and Courageous claim blocks. One hundred and seventy six line-kilometres of ground electromagnetic and magnetic survey were completed in 22 grids. An additional 79 gravity stations were completed over 13 targets on six CH properties. The company drilled 292 metres in six holes on three targets on the Zip-De property, but no kimberlite was intersected. GGL flew a 7925 line-kilometre Fugro Resolve magnetic-electromagnetic survey at 60 metre line spacing over the heads of known indicator mineral trains on the Courageous, Seahorse, Winter Lake North and Winter Lake South claim blocks. Approximately 22 targets on the six claim groups were identified by the survey, and are being ranked as potential drill targets.

**GGL Diamond Corp.** explored their wholly-owned **Fishback** property, 70 kilometres northwest of Yellowknife. Work focused on the "Big Hole" target: a deep, steep-walled depression in Awry Lake. A 262 line-kilometre Fugro Resolve magnetic-electromagnetic survey was flown over the target area, and outlined a significant electromagnetic conductor within a magnetically quiescent area. The airborne programme was followed up with a 12 line-kilometre ground-based gravity, magnetic and electromagnetic survey over the Big Hole target. Based on the geophysical results, and previously reported geological and KIM data, an 847 metre drill hole was completed. Deviation forced the shutdown of the hole prior to its target depth. The hole intersected zones of highly altered and brecciated granite intruded by mafic rocks, as well as carbonate-cemented breccias. Similar breccias found in float contained KIMs. The Fishback programme was rounded out with the collection of 39 additional till samples for KIM and geochemical analysis, as well as 1:2500 scale geological mapping.

Figure 3: Northwest Territories  
Diamond Exploration, 2004.



**Klad Enterprises Ltd.** ([www.Kladenterprises.com](http://www.Kladenterprises.com)) earning in to 50% on the **Slave Diamond Syndicate's** wholly-owned **Courageous** property drilled three holes totaling 229.5 metres. No kimberlite was intersected during the programme. One hole intersected an interval of quartz sandstone with a chloritic matrix.

**Majescor Resources Inc.** ([www.majescor.com](http://www.majescor.com)) in a joint venture agreement with **De Beers Canada Exploration Inc.** ([www.debeerscanada.com](http://www.debeerscanada.com)) logged, sampled, and tested several 2003 drillholes on the **Hardy Lake property**. Caustic Fusion results for the four pipes are shown below.

Kimberlite	Hole	Weight (Kg)	Sieve Size (mm)				
			0.106	0.150	0.212	0.300	0.425
Penelope	HRD03-01	92.35	0	0	1	1	0
Petra	HRD03-02	65.80	1	0	0	1	0
Black Spruce	HRD03-05	167.15	7	3	2	2	0
Hanna	HRD03-06	55.35	0	1	1	0	0

*Table 1. Diamond counts by sieve opening, Hardy Lake caustic fusion results.*

**Patrician Diamonds Inc.** ([www.patriciandiamonds.com](http://www.patriciandiamonds.com)) flew a 1310 line-kilometre, helicopter-borne Fugro Midas magnetic gradiometer survey, with a 100 metre line spacing on their wholly-owned **Blackwater Lake** property. The survey covered the heads of several previously identified indicator mineral trains. Ground proofing and geological mapping of some of the 81 anomalies identified by the airborne survey, as well as ground geophysical surveys over selected targets, commenced in September and is ongoing.

**Peregrine Diamonds Ltd.** ([www.pdiam.com](http://www.pdiam.com)) flew a 14,530 line-kilometre Falcon airborne gradiometer survey on its wholly owned **Indian Mountain** property, 120 kilometres northeast of Yellowknife. Other exploration on the property included 165 till samples collected for kimberlite indicator mineral analysis, and the completion of six drillholes totaling 534 metres.

**Peregrine Diamonds Ltd.** ([www.pdiam.com](http://www.pdiam.com)) completed an exploration programme on its wholly owned **Thistlethwaite** property, 100 kilometres north of Yellowknife. Peregrine flew a 10,340 line-kilometre Falcon airborne gravity gradiometer survey over the property, and collected 57 till samples for kimberlite indicator mineral analysis.

**Peregrine Diamonds Ltd.** ([www.pdiam.com](http://www.pdiam.com)), earning in on **Dentonia Resources Ltd.** ([www.dentonia.net](http://www.dentonia.net)) and **DHK Diamonds Ltd.'s Pellat Lake** property, completed a 3878 line-kilometre Falcon airborne gravity gradiometer survey.

**Pure Gold Minerals Ltd.** ([www.puregold.ca](http://www.puregold.ca)) has an option agreement to earn in to 85% on **De Beers Canada Exploration Ltd.'s** ([www.debeerscanada.com](http://www.debeerscanada.com)) **Colville Lake** property south of the Diamondex Lena West property. Pure Gold collected 290 till samples to follow up on regional heavy mineral stream sampling by De Beers. A 29,000 line-kilometre airborne geophysical survey, flown in 2004, is being evaluated for kimberlite targets.

Table 2: NWT Diamond Exploration Summary, 2004.

Operator / Partners	Property	Drilling	Airborne Geophysics	Ground Geophysics	Sampling and Other Work
Arctic Star Diamonds Ltd./ Kennecott Canada Exploration Inc.	Credit Lake	four BX holes / 450 m		four grids / 25 line-km / magnetic	428 till, KIM and geochemistry
Arctic Star Diamonds Ltd.	Fort Smith				28 till samples, KIM
Consolidated Gold-Win Ventures Ltd. / New Shoshoni Venture Ltd.	Drybones Bay area	three NQ holes / 500 m		four grids / magnetic	
Diadem Resources Ltd. / Darnley Bay Resources Ltd.	Franklin Project			22 grids / 487.5 line-km / magnetic	
De Beers Canada Exploration Ltd. / Mountain Province Diamonds Inc. / Camphor Ventures Inc.	Gahcho Kué	110 holes / 9080 m		Gravity	Pit optimization studies, geotechnical studies
De Beers Canada Exploration Ltd. / GGL Diamond Corp.	Doyle Lake			Gravity	
Diamonds North Resources / Majescor Resources Inc.	Banks Island				Stream sediment sampling, KIM
Diamondex Resources Ltd.	Lena West	6 holes / 862 m	72,700 line-km, 300 m spacing, Fugro gradient magnetic	20 grids / magnetic	1100 till and stream sediment, KIM
Diamondex Resources Ltd.	Bear Head		5022 line-km, 50 m spacing, Fugro Midas	16 grids / magnetic, resistivity, gravity	508 till KIM, 191 subsurface till KIM, and 377 enzyme leach
Diamondex Resources Ltd.	Kingfish			ten grids / 55 line-km / magnetic, resistivity, gravity	391 till KIM, 12 subsurface till KIM, 147 enzyme leach
Diamondex Resources Ltd.	King		6461 line-km magnetic, resistivity		35 till KIM
Diamondex Resources Ltd. / Majescor Resources Inc.	Kelsey		2215 line-km magnetic	four grids / 22 line-km / magnetic, resistivity, gravity	441 till KIM
Diamondex Resources Ltd. / Majescor Resources Inc.	Carat			ten grids / 55 line-km / magnetic, resistivity, gravity	68 till KIM, 569 enzyme leach, 74 soil-gas hydrocarbons
Diavik Diamond Mines / Aber Diamond Corp.	Diavik Leases	30 NTW and BTW holes / 2700 m	2200 line-km gravity / 500 line- km TDEM	62 grids / 433 line-km / magnetic. 19 grids / 81 line-km, HLEM / 517 gravity stations	1:100K and 1:25K mapping, 1088 till KIM
Diavik Diamond Mines / SouthernEra Resources Ltd.	Commonwealth				two-75 tonne bulk samples
Dunsmuir Ventures Ltd. / Thelon Ventures Ltd.	Lac de Gras East	one hole 50 m	6500 line-km, 100m spacing Dighem magnetic, electromagnetic	three grids / magnetic and electromagnetic	80 till, KIM
GGL Diamond Corp.	LA 1-3, LA10-35				58 till, KIM and Geochemistry
GGL Diamond Corp.	CH Properties	six holes / 292 m	7925 line-km, 60m spacing Fugro Resolve / electromagnetic	22 grids / 176 line-km / magnetic, electromagnetic. 79 gravity stations	



Operator / Partners	Property	Drilling	Airborne Geophysics	Ground Geophysics	Sampling and Other Work
GGL Diamond Corp.	Fishback	one hole / 847 m	262 line-km Fugro Resolve magnetic / electromagnetic	one grid / 12 line-km / magnetic, electromagnetic, gravity	39 till, KIM and Geochemistry
Klad Enterprises Ltd. / Slave Diamond Syndicate	Courageous	three holes / 229 m			
Majescor Resources Inc. / De Beers Canada Exploration Ltd.	Hardy Lake				Caustic Fusion
Patrician Diamonds Inc.	Blackwater Lake		1310 line-km, 100 m spacing Fugro Midas magnetic gradiometer		
Peregrine Diamonds Ltd.	Indian Mountain	six holes / 534 m	14,530 line-km Falcon gravity	19 grids / magnetic	165 till, KIM
Peregrine Diamonds Ltd.	Thistlethwaite		10,430 line-km Falcon gravity		57 till, KIM
Peregrine Diamonds Ltd. / Dentonia Resources Ltd. / DHK Diamonds Ltd.	Pellat Lake		3878 line-km, Falcon gravity		
Pure Gold Minerals Ltd. / De Beers Canada Exploration Ltd.	Colville Lake		29,000 line-km magnetic		290 till, KIM
Rockwell Ventures Inc. / GMD Resources Ltd.	Royce	two holes / 155 m		six grids / 12 line-km / NanoTEM, 60 line-km magnetic, 345 gravity stations	
Shear Minerals Ltd. / Mantle Minerals Inc.	Afridi Lake East	three holes		electromagnetic	
Shear Minerals Ltd / Diamond Resources Ltd.	Aylmer Lake West	two holes			
Shear Minerals / Hunter Exploration Group Ltd.	XYZ	three holes			
Snowfield Development Corp.	Ticho	7 holes			
SouthernEra Diamonds Ltd. / Diamonds North Resources Ltd.	KidMe / Misty				Ground proofed 34 airborne geophysical targets, till sampling, KIM
SouthernEra Diamonds Ltd. / Kennecott Canada Exploration Ltd.	X claims	824.7 m			Caustic Fusion
SouthernEra Diamonds Ltd. / Tanqueray Resources Ltd. / Mill City International Corp. / Techsite Strategies Corp.	Yamba Lake	seven holes		16 grids / 104.5 line km magnetic. 20.4 line-km HLEM	119 till, KIM
SouthernEra Diamonds Ltd.	Back Lake	three hole		21 grids / 101 line-km magnetic. nine line-km EM	202 till, KIM
Stornoway Diamond Corp. / Strongbow Exploration Ltd.	LDG / Daring Lake / Starfish	eight+ holes		40 grids	till sampling, KIM

Table 2: NWT Diamond Exploration Summary, 2004 (continued).

**Rockwell Ventures Inc.** ([www.rockwellventures.com](http://www.rockwellventures.com)), in option agreement with **GMD Resources Ltd. (100%)** completed a two-phase exploration programme on the **Royce Claims**, 110 kilometres north-northwest of Yellowknife. Detailed ground geophysical surveys (345 gravity stations, 12 line-kilometres of NanoTEM, and 60 line-kilometres of magnetic surveys) over six target areas were carried out at the heads of the Wheeler Lake kimberlite indicator mineral trains in the spring. Two holes, totaling 155 metres, were drilled to test a geophysical anomaly; neither hole intersected kimberlite. Rockwell will not be pursuing the option agreement.

**Shear Minerals Ltd.** ([www.shearminerals.com](http://www.shearminerals.com)) (60%) and **Mantle Minerals Inc.** (40%) performed ground electromagnetic surveys and diamond drilling on three geophysical anomalies at the **Afridi Lake East** property, 70 kilometres east of the Diavik Diamond Mine. The programme failed to intersect kimberlite. Based on the results, Mantle Minerals does not wish to continue earning in on the claims.

**Shear Minerals Ltd.** ([www.shearminerals.com](http://www.shearminerals.com)) (54.9%) and **Diamondex Resources Ltd.** ([www.diamondex.net](http://www.diamondex.net)) (45.1%) drilled two electromagnetic targets at the head of a KIM train, on the **Aylmer Lake West** property. No kimberlite was intersected, the anomalies were caused by a thick layer of glacial-lacustrine clays.

At the **XYZ** property, west of Ekati Mine, **Shear Minerals Ltd.** ([www.shearminerals.com](http://www.shearminerals.com)) (50%) and **Hunter Exploration Group** (50%) drilled three electromagnetic anomalies identified from previous airborne and ground geophysical surveys. No kimberlite was intersected in the drill programme.

**Snowfield Development Corp.** ([www.snowfield.com](http://www.snowfield.com)) began a 20-hole drill programme designed to delineate the Mud Lake kimberlite on the **Drybones 4** claim. Snowfield is earning 80% from owner **Dave Smith**. Seven holes have been completed on the west-dipping dyke. All have intersected kimberlite except for hole Mud-12 that was shut down due to poor hole conditions before reaching target depth. Step-out drilling is planned to test for connection of the Mud Lake dyke to the Snow dyke.

**Snowfield Development Corp.** ([www.snowfield.com](http://www.snowfield.com)) collected till samples on the **Ticho** Project area (various ownership), from the Aspen Lake and Sipper Lake locales, close to the Mud Lake kimberlite. Results suggested the presence of at least two more KIM trains that are separate and distinct from the Mud Lake KIM train.

**SouthernEra Diamonds Ltd.** ([www.southernera.com](http://www.southernera.com)) (SDM) and **Diamonds North Resources Ltd.** ([www.diamondsnorthresources.com](http://www.diamondsnorthresources.com)) (DDN) ground-proofed 34 geophysical anomalies and collected till samples on the **Kidme** (SDM 60%, DDN 40%), **Kidme2** (SDM 50%, DDN 50%) and **Misty** (SDM 60%, DDN 40%) project areas. These were identified from a detailed airborne geophysical survey conducted in 2003. At least five of the anomalies qualified as drill targets. The properties are located south of the De Beers/Mountain Province Gahcho Kué project.

**SouthernEra Diamonds Ltd.** (60%) and **Kennecott Canada Exploration Ltd.** ([www.kennecottexploration.com](http://www.kennecottexploration.com)) (40%) conducted a 824.7 metre diamond drill programme on their **X claims**. The drill programme was designed to test 17 high priority airborne geophysical targets, as well as delineate kimberlite EG-02, which was intersected in hole LDG04-09. Hole

LDG04-05 intersected a new kimberlite, EG-01b, from 23.40 to 74.70 metres. Representative samples from the two intersections have been sent for caustic fusion. This brings the number of known kimberlites on the X-claims to six, three of which are diamondiferous.

On the **Yamba Lake** property, **SouthernEra Diamonds Ltd.** ([www.southernera.com](http://www.southernera.com)) is earning in to 60% from partners **Tanqueray Resources Ltd.**, **Mill City International Corp.** ([www.millcitygold.com](http://www.millcitygold.com)), and **Techsite Strategies Corporation.** SouthernEra completed 104.5 line-kilometers of magnetic and 20.43 line-kilometres of horizontal loop electromagnetic ground surveys over 16 targets. The partners also collected 119 till samples to be analyzed for KIMs. Geophysics and previous sampling were followed up with a drill programme to test six targets. One kimberlite was intersected in two holes (DDH-006 and DDH-006a). The tabular intrusion contains coarse garnets up to five millimetres diameter. Micro-diamond results from the two intersections are pending.

**SouthernEra Diamonds Ltd.** ([www.southernera.com](http://www.southernera.com)) completed ground geophysics, till sampling and diamond drilling on its wholly owned **Back Lake** project. Twenty-one ground grids were established over targets, and 101 line-kilometres of magnetic, and nine line-kilometers of electromagnetic geophysics were completed in the spring. Five targets identified by the ground geophysics were ground checked and three were drilled but none intersected kimberlite. The source of two distinct indicator mineral trains remains unknown. In order to improve definition of the indicator mineral trains, three areas were sampled at very close spacing. Two hundred and two till samples were collected for KIM analysis.

**Stornoway Diamond Corp.** ([www.stornoway.com](http://www.stornoway.com)) is earning in to 51% in an option agreement with **Strongbow Exploration Inc.** ([www.strongbowexplortion.com](http://www.strongbowexplortion.com)) on the **LDG, Daring Lake** and **Starfish** properties. Stornoway performed ground geophysical surveys over approximately 40 grids, followed by drilling at the LDG property. On the Starfish property eight geophysical anomalies were drilled but no kimberlite was intersected. Till samples were collected for KIM analysis from the LDG and Daring Lake properties.

#### **4.0 Gold and Base Metal Exploration in the Northwest Territories**

The locations of exploration projects in bold typeface may be referenced in Figure 3. They are also summarized in Table 5.

**Anaconda Gold Corp.** ([www.anacondagold.com](http://www.anacondagold.com)) is earning in to 55% from **Double Star Resources** on the **Damoti Lake** property, approximately 200 kilometres north of Yellowknife. Anaconda staged a two-phase drill programme to better define resources contained in the Horseshoe Zone. Phase one drilling in the spring included 20 holes totaling 1421 metres. The second phase of drilling started in September and resulted in 14 holes totaling approximately 1300 metres. The drilling was designed to complete a resource study by late 2004, and allow for a feasibility study to be completed in 2005. The company also initiated an environmental review of the site, and is reviewing options for recommissioning the Ptarmigan Mill near Yellowknife in conjunction with the project.

**Boxxer Gold Corp.** ([www.boxxergold.com](http://www.boxxergold.com)) (earning in to 90%) completed a 6.3 line kilometre Induced Polarization and 10.3 line kilometre ground magnetic survey on the Gordon Lake gold project. The geophysics outlined a 1000 metre long anomaly between the Main and Union zones. A drill program is currently underway on the property.

**Canadian Zinc Corp.** ([www.Canadianzinc.com](http://www.Canadianzinc.com)) began a drilling programme of at least 6000 metres in 27 holes on their wholly-owned **Prairie Creek** Pb-Zn-Ag property. The programme includes infill drilling on the main deposit, south extension exploration drilling, and testing for northern down-dip extensions. Assay results for the first 15 holes of the deposit have been released. Four holes designed to increase confidence in the resource estimate returned grades and intersections comparable with the deposit model blocks. Two of eight holes drilled south of the resource block intersected high-grade vein mineralization. Intersections from these holes include 51.4% combined Pb-Zn and 367 grams/tonne Ag over 1.1 metres at 105 metres depth, and 38.1% combined Pb-Zn and 244 grams/tonne Ag over 0.7 metres. The southern holes encountered the mineralized structure but returned low metal concentrations. Assay results for holes testing the northern down-dip extension returned encouraging results, the best hole returning 22% combined Pb-Zn and 155 grams/tonne Ag over 29.5 metres.

**Seabridge Gold Inc.** ([www.seabridgedold.net](http://www.seabridgedold.net)) drilled eight holes totaling 3000 metres on their wholly-owned **Courageous Lake** property, and sampled core from 12 older drill holes, to increase the resources in three gold occurrences. The three occurrences are being modeled as high tonnage, very low-grade gold deposits. The largest resource is the Fat deposit that contains measured and indicated resources of 48.0 million tonnes grading 2.06 grams/tonne Au, using a 1.0 grams/tonne cutoff. One hole tested the center of the Fat deposit, and three holes confirmed the extension of the mineralized zones for at least 300 metres to the south. Three holes were drilled in the Olsen target and one hole on the Walsh Lake target, 3.5 kilometres and seven kilometres south of the Fat deposit, respectively. Based on the programme, the company has updated the resource estimate for the project. Using a 1 gram cut-off, resources are stated:

Measured			Indicated			Inferred		
Tonnes (000's)	Grade (g/t)	Ounces (000's)	Tonnes (000's)	Grade (g/t)	Ounces (000's)	Tonnes (000's)	Grade (g/t)	Ounces (000's)
3041	2.74	268	41,161	2.47	3269	65,501	2.32	4886

*Table 3. Gold resources, Courageous Lake project (Resource Modeling Inc. Tucson, Arizona, SEDAR).*

**Tyhee Development Corp.** ([www.tyhee.com](http://www.tyhee.com)) drilled 26 holes totaling 9945.7 metres on the **Ormsby Zone** of its wholly-owned Yellowknife Gold project. The Yellowknife Gold project includes the past-producing Discovery Mine, and satellite deposits, including the Nicholas Lake deposit and the Ormsby Zone. In addition to the surface drill programme, Tyhee widened and extended the existing decline, and completed a number of exploration drifts and raises in order to characterize the mineralization. Exploration drilling and underground workings were designed to increase confidence in the existing defined resource block, extend the area of known resources, and provide material for metallurgical investigations. An April 2004 calculation of



the undiluted measured and indicated resources for the Ormsby Zone estimates 2,056,450 tonnes grading 10.50 grams/tonne gold, using a 5.0 grams/tonne cut-off. 2004 drilling allowed the recalculation of the Ormsby resource, based on a one-gram/tonne cut-off and a 60 gram/tonne cap.

Measured			Indicated			Inferred		
Tonnes (000's)	Grade (g/t)	Ounces (000's)	Tonnes (000's)	Grade (g/t)	Ounces (000's)	Tonnes (000's)	Grade (g/t)	Ounces (000's)
1,692,426	8.82	480,000	1,314,252	9.03	382,000	1,222,590	7.57	298,000

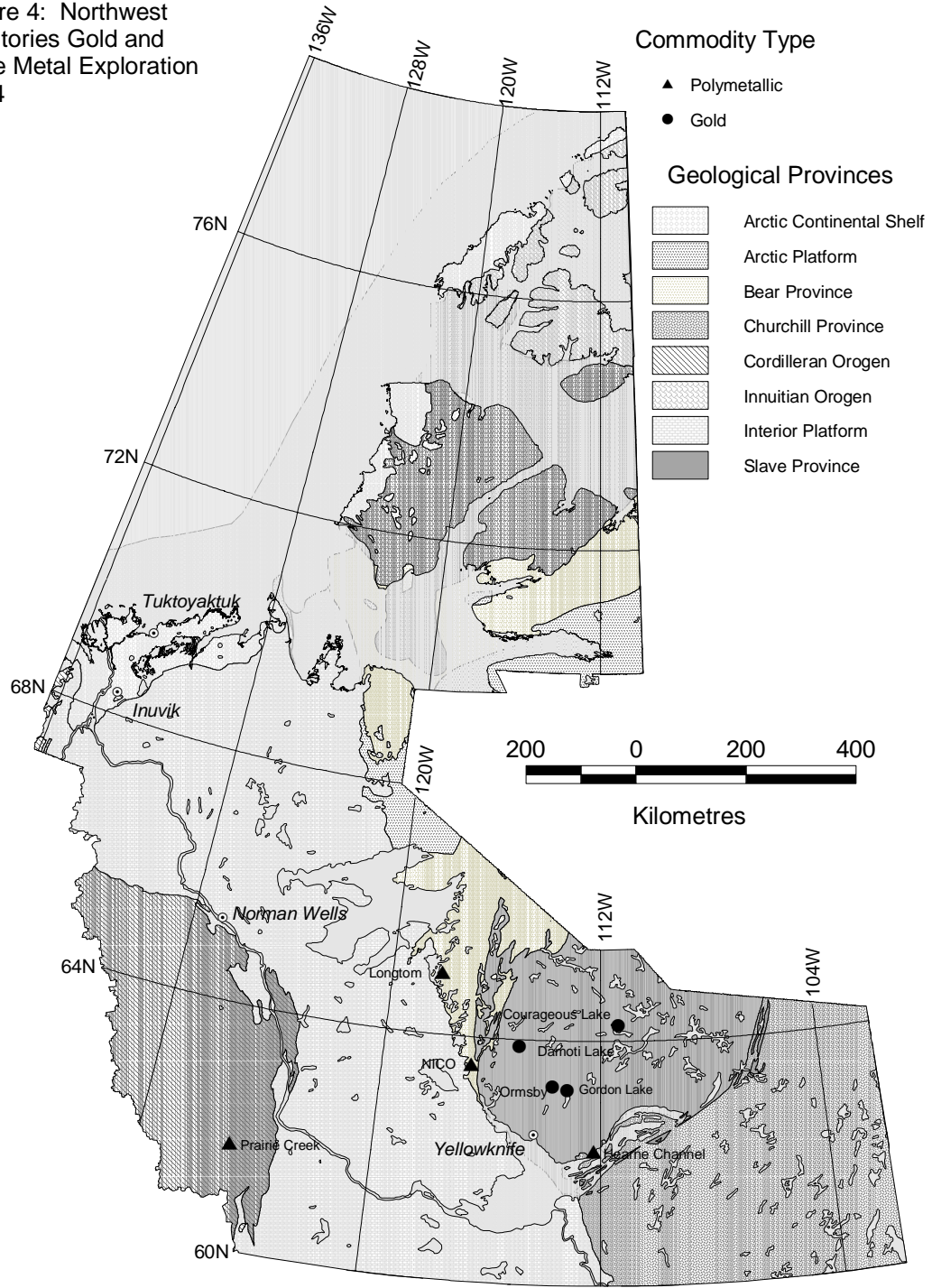
Table 4. Ormsby Zone resources, Feb 2005, (Pratico, Kirkam and Stewart, SEDAR).

**Fortune Minerals Ltd.** ([www.fortuneminerals.com](http://www.fortuneminerals.com)) (81%) and private investors (19%) advanced their **NICO** gold-cobalt-bismuth deposit, 160 kilometres northwest of Yellowknife. Using data collected from a 2003 drilling programme, a new resource estimate (aggregate resource from both underground and open-pit) is 15,527,000 tonnes of 1.61 gram/tonne Au, 0.14% Co and 0.16% Bi. Fortune Minerals is now coordinating a bankable feasibility study for the project.

**Northwestern Mineral Ventures Inc.** ([www.northwesternmineral.com](http://www.northwesternmineral.com)) is earning up to 50% from **Fronteer Development Group Inc.** ([www.fronteergroup.com](http://www.fronteergroup.com)) who is in turn earning in to 75% from **Alberta Star Development Corp.** ([www.alberta-star.com](http://www.alberta-star.com)) on the **Longtom** property, about 350 kilometres northwest of Yellowknife. Alberta Star in turn has a 50% joint venture with **Tyhee Development Corp.** on the property. In evaluating the property for Iron Oxide Copper Gold (IOGC) style mineralization, Fronteer Development Group completed a 2100 metre drill programme on the Damp Showing. Mineralized intersections from the best hole include 1.68% U<sub>3</sub>O<sub>8</sub> over one metre, and 0.16% U<sub>3</sub>O<sub>8</sub> over one metre. In conjunction with the programme, site visits were made to the Conjuror, Flex, Achook and McPhoo properties.

**Wyn Developments Inc.** ([www.wynddevelopments.ca](http://www.wynddevelopments.ca)) (100%) completed a detailed airborne electromagnetic and magnetic survey on their **Hearne Channel property**. A prospecting programme was also carried out on the claims. Assay results from the prospecting programme are encouraging, with grab samples returning high-grade nickel and cobalt mineralization. Petrography has delineated two distinct styles of mineralization on the property. Sulfide mineralization at the Hearne Channel showing is hosted in ankerite veins and breccias associated with felsic intrusive rocks, whereas, on the Easter Island showing nickel, copper and cobalt sulfides are hosted in a gabbro intrusive.

Figure 4: Northwest Territories Gold and Base Metal Exploration 2004



<b>Operator / Partners</b>	<b>Property</b>	<b>Drilling</b>	<b>Sampling and Other Work</b>
Anaconda Gold Corp. / Double Star Resources Ltd.	Damoti Lake	34 holes NQ / 2721 m	Pre-feasibility study, resource update
Boxxer Gold Corp.	Gordon Lake	underway	Ground induced polarization and magnetic survey
Canadian Zinc Corp.	Prairie Creek	27 holes / 6000 m	Resource update
Seabridge Gold Corp.	Courageous Lake	eight holes / 3000 m	Re-sampling previously drilled core. Ore reserve update
Tyhee Development Corp.	Ormsby	26 holes / 9945 m	Underground development. Ore reserve update
Fortune Minerals Ltd. / private investors	NICO		Reserve Modeling, Pit Optimization
Northwestern Mineral Ventures Inc. / Fronteer Development Corp. / Alberta Star Development Corp. / Tyhee Resource Corp.	Longtom	2100 m	Geological mapping, grab sampling
Wyn Developments Inc.	Hearne Channel		Prospecting, Airborne Magnetic and EM survey

*Table 5: NWT Gold and Base Metal Exploration Summary, 2004.*

## **5.0 Further Information**

Further information on mining and mineral exploration can be obtained from the following persons:

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## **6.0 On Line Resources for more Information**

Information on the location and status of mineral claims can be obtained from the SID Viewer Online, DIAND-NWT's Spatially Integrated Dataset:

[http://nwt-tno.inac-ainc.gc.ca/ism-sid/sidinfo\\_e.asp](http://nwt-tno.inac-ainc.gc.ca/ism-sid/sidinfo_e.asp)

NORMIN.DB the Mineral Showings Database for the Northwest Territories & Nunavut:  
<http://www.nwtgeoscience.ca/normin>

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