

EXPLORATION OVERVIEW NORTHWEST TERRITORIES January 2004



1.0 Summary

Diamonds continued to dominate both mining and mineral exploration in the Northwest Territories in 2003 and early 2004, with BHP Billiton's EKATI Diamond Mine now in its sixth year of production, and the Diavik Diamond Mine, with one full year of production. Diamond exploration is concentrated in the Slave Structural Province, but has also expanded to the Interior Plains north of Norman Wells, (Diamondex Resources Ltd.), central Victoria Island, (Diamonds North Resources Ltd.) and the Darnley Bay region.

A chapter in the mining history of the Northwest Territories came to an end with the closure of the Con Gold Mine after 65 years of production. Production from Miramar's Giant Mine is planned to continue until 2005. North American Tungsten's CanTung Mine was closed December 11, 2003, due to cancellation of the producer's purchase contracts.

The increase in the price of gold to over \$US 400 created renewed interest in the development of new resources at former gold producers such as the Discovery Mine of Tyhee Development Corporation, and the Salmita and Tundra Mines, by Seabridge Gold Inc. In addition, there is continued interest in iron-oxide-copper-gold deposits, with the polymetallic NICO deposit of Fortune Minerals Ltd. being developed as a gold-cobalt-bismuth prospect. Recent scoping studies on NICO suggested it could be operable as an underground mine with supplemental mill feed from smaller open pits, and extensive drilling has been done to increase resources.

Emeralds were added to the list of commodities actively being sought in the Northwest Territories. True North Gems Inc. extended their Yukon-based emerald exploration program across the border into the Mackenzie Mountains, north of the CanTung Mine.

Hydrocarbon exploration is becoming increasingly important in the Northwest Territories with production currently taking place in Norman Wells (oil), Fort Liard (gas), Cameron Hills (gas and oil), and in the Mackenzie Delta near Inuvik (gas). Several seismic and exploration drilling programs were also carried out in these and other areas.

2.0 Mining Activity *(updated Jan 2004)*

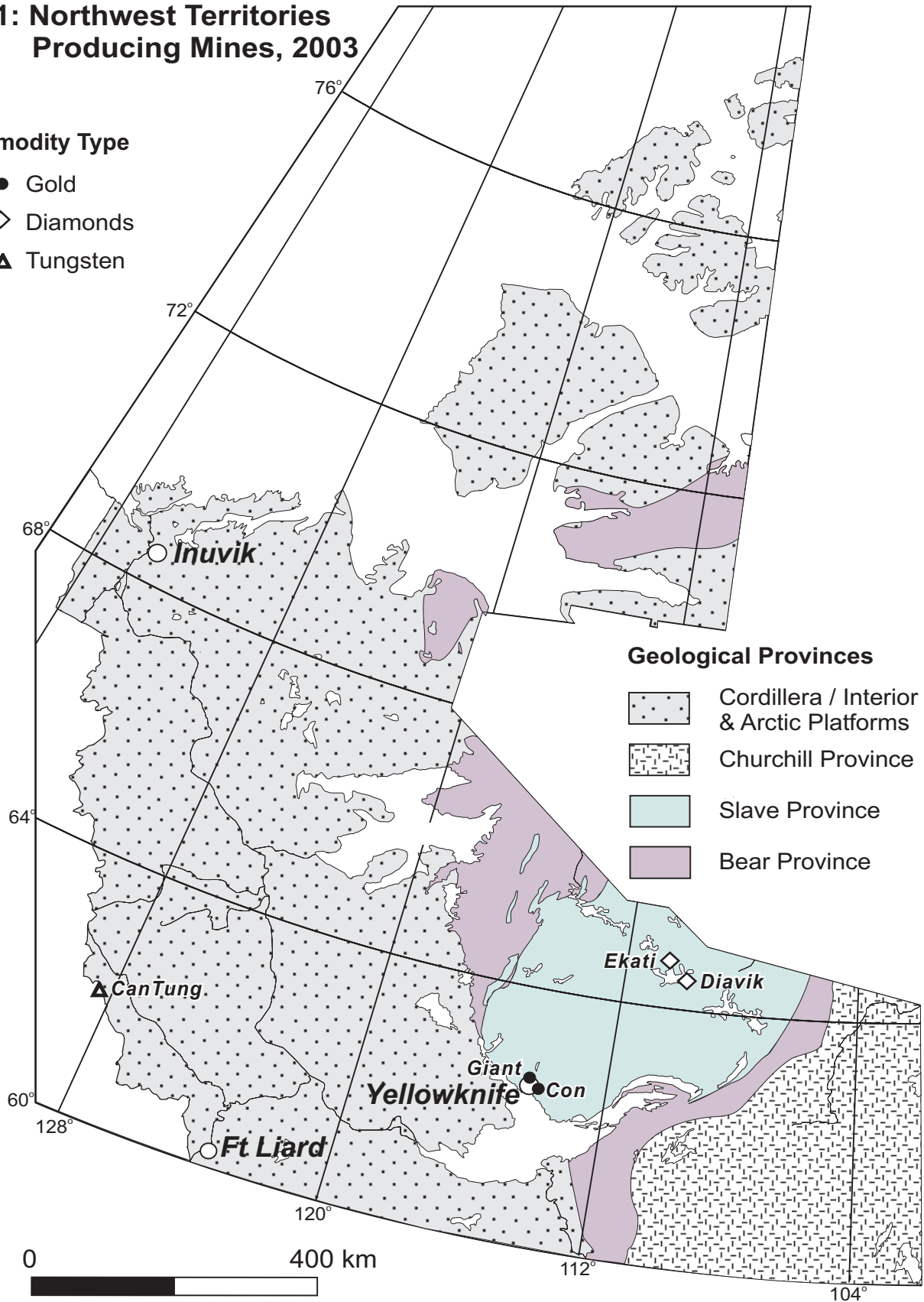
OPERATING MINES IN THE NORTHWEST TERRITORIES

There are currently three operating mines in the Northwest Territories: the EKATI and Diavik diamond mines, and the Giant gold mine. Underground operations at the Con Mine situated on the outskirts of Yellowknife were terminated as of November 2003, ending 65 years of gold production (Figure 1. Northwest Territories Producing Mines).




**Fig. 1: Northwest Territories
Producing Mines, 2003**

Commodity Type

- Gold
- ◇ Diamonds
- ▲ Tungsten

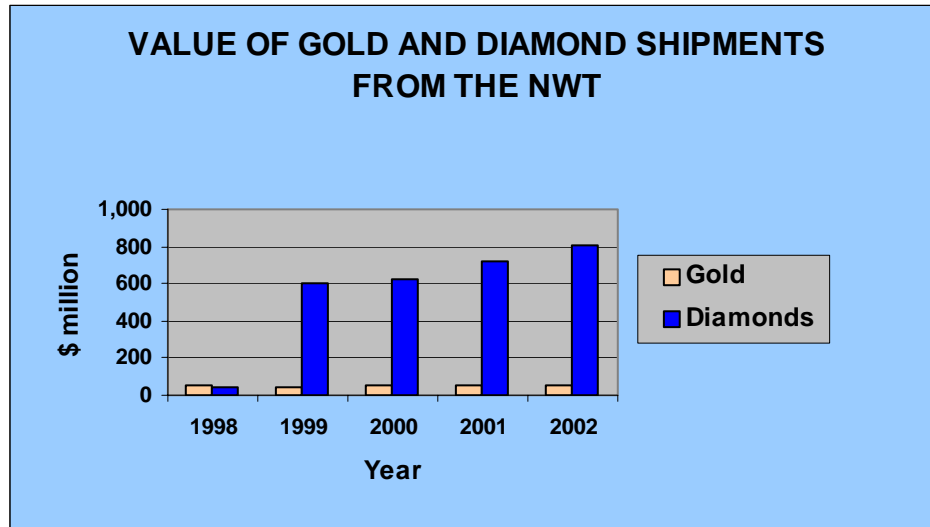


Geological Provinces

-  Cordillera / Interior & Arctic Platforms
-  Churchill Province
-  Slave Province
-  Bear Province

The values of gold and diamond shipments from the NWT for the five years preceding 2003 are shown in Figure 2.

Figure 2



Con and Giant Mines (Miramar Mining Corporation, 100%)

Con Mine began operating in 1938 and has produced over 5.5 million ounces of gold to date, at an average grade of over 0.5 ounces of gold per ton. Operations at the Con Mine were terminated in November 2003. Giant Mine was brought into production in 1948 and has produced over 7 million ounces of gold. Giant Mine is slated to close in mid-2005. Production statistics for Con and Giant Mines are listed in Table 1.

Table 1. Production Statistics and Mine Planning for Con and Giant Mines

Year	Production (ounces gold)	Operating Costs (\$US/oz)	Comments
2000	121,874	264	
2001	129,607	256	
2002	115,134	247	
2003 ^e	85,000	350	Mining operations at Con ceased
2004 ^p	37,500	350	
2005 ^p	22,500	350	

^e Estimated ^p Planned

EKATI Diamond Mine (BHP Billiton Diamonds Inc. - 80%, C. Fipke - 10% and S. Blusson - 10%)

The EKATI Diamond Mine, approximately 300 km northeast of the city of Yellowknife, was opened on October 14, 1998. Some 150 kimberlite occurrences have been identified on the 860,000 acre property, and 20 of these have been bulk sampled. Of the 20 pipes, eight are in the current mine plan.

The EKATI ore reserve at the end of 2002 stood at 58 million tonnes grading at 0.9 carats per tonne (one carat equals 0.2 grams). Open pit operations are currently underway at the Misery and Koala pipes, while the Koala North pipe is being exploited by underground methods. Pre-stripping is underway at the Fox and Beartooth pipes while underground development of the Panda pipe has commenced. Capital expenditures at EKATI totaled US\$ 52 million in 2002 and it is expected that 2003 expenditures will be reported at a similar level. The mine plan called for 4.2 million tonnes of ore to be processed from June 30, 2002 to July 1, 2003 with some 5 million carats of diamonds being produced.

Table 2. Annual Production Statistics for EKATI Mine

Year	Diamond Production (000 carats)**	Value of Production (\$ million)
1998	278	55.93
1999	2,496	606.25
2000	2,533	624.78
2001	3,691	717.78
2002	4,975	800.02
2003	6,963	

** recalculated to 100% from BHP Billiton's figures for their 80% of EKATI production as reported every three months

<http://ekati.bhpbilliton.com>
<http://www.bhpbilliton.com>

Diavik Diamond Mine (Diavik Diamond Mines Inc. - 60%, Aber Diamond Mines Ltd. - 40%,)

The Diavik Diamond Mine is located approximately 300 km northeast of Yellowknife, 30 km southeast of EKATI Mine. Permitting and licensing approvals were obtained from the federal government in late 1999 for the construction of Diavik Mine, which was completed in January 2003 at a cost of \$1.25 billion.

Reserves are estimated at 25.7 million tonnes of proven and probable ore grading at 4.2 carats per tonne. A 20-year mine life is envisaged with diamond production averaging 5.4 million carats per year. Diamond prices over the life of the mine are modelled at \$US 66.57 per carat. There are currently four kimberlite pipes included in the Diavik Mine plan, A154 South, A154 North, A418 and A21. Mill feed will initially be from open pits, with the A154 South and A418 pipes also being mined by underground methods toward the end of the mine life. Production commenced with the A154 South pipe.

Diavik Diamond Mine produced approximately 3.8 million carats of diamonds to the end of 2003. By September 2003, the mine had processed one million tonnes of kimberlite ore and 19 million tonnes of waste rock. Aber received \$US 96.22 per carat for the first parcel of diamonds sold by the company, substantially above the modelled value estimated in the feasibility study. The partners are planning to accelerate the production schedule for 2004 in light of the excellent results to date.

www.diavik.ca
www.aber.ca

CanTung Mine (North American Tungsten – 100%)

CanTung resumed operations in January 2002 and operated for two years, before shutting down in December 2003. Production statistics for the mine during this period are listed in Table 3.

Table 3. CanTung Mine Production Statistics

Period	Production (MTU) ¹	Loss for Period
Year ended September 30, 2002	228,676	\$5,231,865
Nine months ended June 30, 2003	289,000	\$1,891,510

¹ One MTU = 10kg of tungsten concentrate

In January 2003, North American Tungsten reported that tungsten production at CanTung Mine had exceeded, by 33%, the amount called for in the 2002 mine plan. This resulted in the production of more tungsten concentrate than the company was contractually obliged to supply to its existing customers. North American Tungsten determined that the sale of this excess material on the world market was not feasible, given the prevailing low market prices. Consequently, North American Tungsten decided to reduce production by shutting down the mine for five weeks commencing March 6, 2003. Operations were resumed on April 9, 2003.

The termination of tungsten sales contracts in December 2003 prompted the layoff of all staff at the mine, and the company has been placed under Company Creditors Arrangement Act protection.

www.northamericantungsten.com

3.0 Mineral Exploration and Developments (updated Jan 2004)

3.1 Diamonds

Locations of the main diamond exploration projects in the Northwest Territories in 2003 are given in Figure 3, and a summary of each project is given in Table 4.

Ashton Mining of Canada Inc., (89.4%) in joint venture with Pure Gold Minerals Inc. (10.6%), carried out ground geophysical surveys on the **Green** property, 150 km north of Yellowknife, across ten previously identified high-priority airborne geophysical anomalies. Several of the anomalies were associated with a previously delineated indicator mineral train. Two holes were subsequently drilled to test an EM target at the apex of this indicator mineral train. One hole intersected a 0.2 m wide kimberlite dyke at a depth of 80 m. A second inclined hole, collared 115 m to the north, intersected two kimberlite dykes, 0.1 and 0.2 m in width at depths of 24 m and 94 m, respectively. The kimberlite intersections failed to explain the observed mineral dispersion trend.

www.ashton.ca

ATW Resources Ltd. completed a till sampling program on the **Mackay Lake** property, south of Mackay Lake. Seventy-seven sonic drill holes were completed to better define a 20 km-long indicator mineral train within glacial till. Some garnets recovered from the program have well preserved kelyphitic rims and/or have kimberlite groundmass adhered to the crystal, indicating a proximal derivation of these grains. The Mackay Lake project is a joint venture between ATW Resources Ltd. (75%), Aberex Minerals Ltd. (15%) and SouthernEra Resources Ltd. (10%). ATW Resources Ltd. is in turn owned by Almanden Minerals Ltd., Troymin Resources Ltd. and Williams Creek Exploration Ltd.

www.almadenminerals.com

www.troymin.com

www.southernera.com

BHP Billiton Diamonds Inc. in joint venture with Archon Resources carried out drilling and till sampling in the buffer zone around the **EKATI Mine** site. A total of 2,800 m were drilled in 12 holes and 215 till samples were collected.

<http://ekati.bhpbilliton.com>

<http://www.bhpbilliton.com>

**Fig. 3: Northwest Territories
Diamond Exploration**

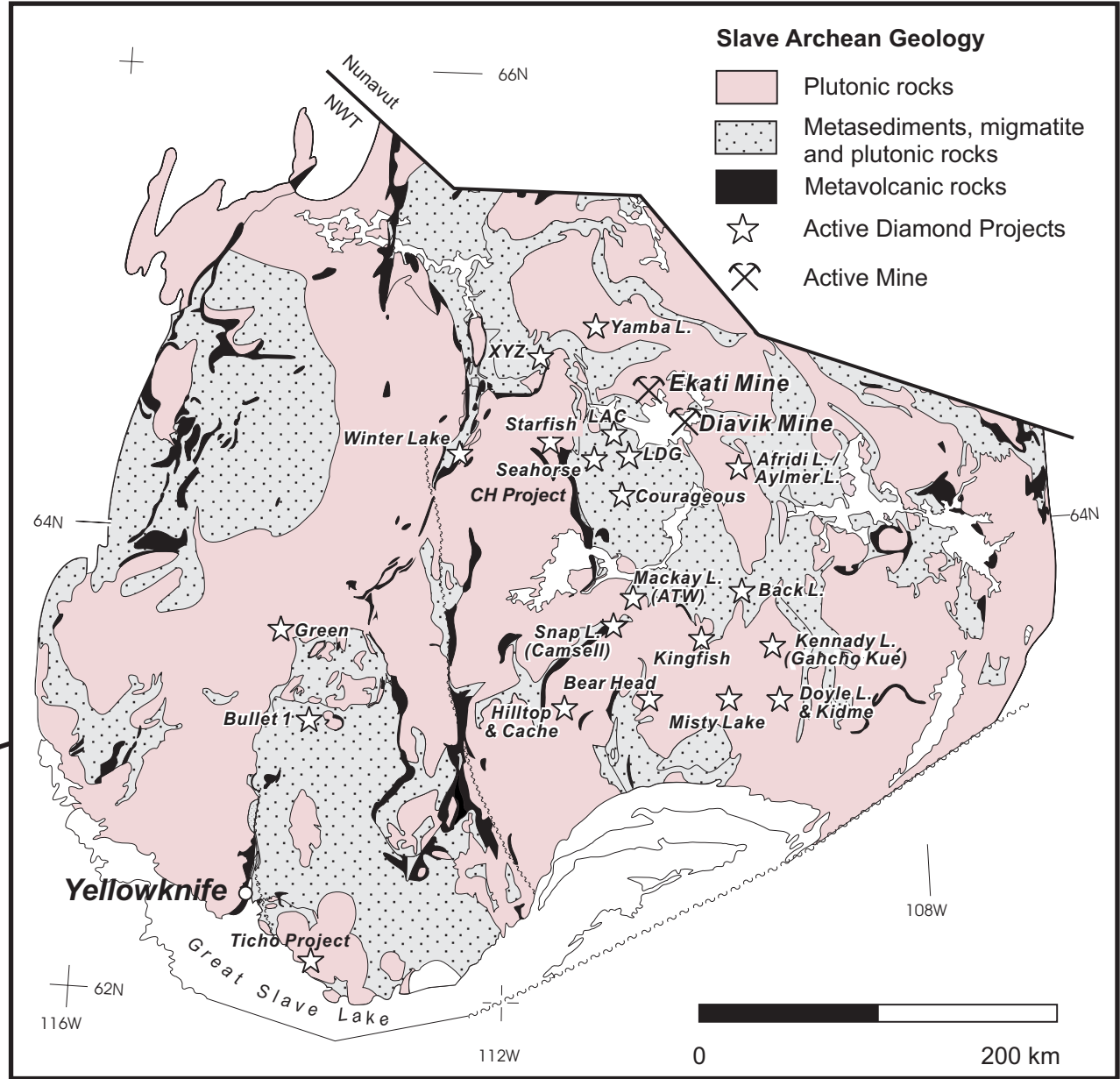
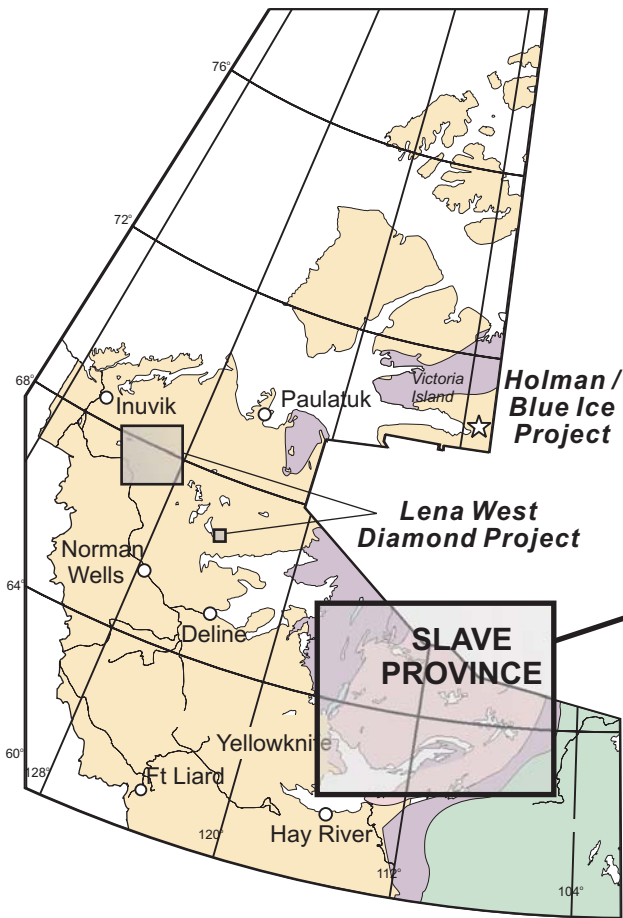


Table 4: NWT Diamond Exploration Summary, 2003

Company / Partners (*operator)	Property / Claims	Diamond Drill Holes	Airborne Geophysics	Ground Geophysics	Sampling / Other
Ashton Mining of Canada Inc.* / Pure Gold Minerals Inc.	Green	2 / (150 m)		Magnetic and Electromagnetic	
ATW Resources Ltd.* / Aberex Minerals Ltd. / SouthernEra Resources Ltd.	Mackay Lake (ATW project)				77 till samples collected from sonic drilling.
BHP Billiton Diamonds Inc.* / Archon Resources	NWT Diamonds Project (EKATI)	12 / (2800 m)			215 till samples
De Beers Canada Exploration Inc.	Camsell Lake	2 / (?)		Magnetic on six targets	21 till samples
De Beers Canada Exploration Inc.* / Mountain Province Diamonds Inc. / Camphor Ventures Ltd.	Gahcho Kué	10 / (?)		Gravity and magnetic	21 till samples
De Beers Canada Exploration Inc.* / GGL Diamond Corp.	Doyle Lake	24 HQ / (?)		HLEM on two targets	31 till samples, microdiamond analysis from 160 kg sample
Diamondex Resources Ltd.	Lena West		63,770 line-km 300 m spaced Fugro magnetic / electromagnetic survey		1054 heavy mineral concentrate samples from streams
Diamondex Resources Ltd.* / SouthernEra Resources Ltd.	Cache (adjacent Hilltop)	2 / (439 m)		55 line-km of magnetic, resistivity and gravity on 8 targets	
Diamondex Resources Ltd.	Hilltop (SW of Snap Lake)			65 line-km of magnetic, resistivity and gravity on 8 targets	
Diamondex Resources Ltd.	Bearhead (E of Hilltop)		3,957 line-km 100 m spaced Fugro magnetic / electromagnetic survey	37 line-km of magnetic, resistivity and gravity on 6 targets	155 till samples
Diamondex Resources Ltd.	Kingfish (between Snap and Kennady Lake)		6060 line-km 100 m spaced Fugro magnetic / electromagnetic survey	18 line-km of magnetic, resistivity and gravity on 3 targets	288 till samples
Diamonds North Resources Ltd.* / Serengeti Resources Ltd.	Holman Project	1 BTW (2-1/4" dia.) / (155 m)	654 line-km Fugro magnetic / electromagnetic survey		
Diamonds North Resources Ltd.* / Teck Cominco Ltd.	Blue Ice Project (NT and NU combined)	5 BTW (2-1/4" dia.) holes / (1833 m)	11,360 line-km Fugro magnetic / electromagnetic survey	291 line-km unspecified type on twenty targets	Trenching, microdiamond analysis on 11 samples

Table 4: NWT Diamond Exploration Summary, 2003 (continued)

Company / Partners (*operator)	Property / Claims	Diamond Drill Holes	Airborne Geophysics	Ground Geophysics	Sampling / Other
GGL Diamond Corp. CH Project	BP Claims				79 till and 79 soil samples
	Courageous Claims			13 line-km	32 till and 269 soil samples
	Winter Lake N				38 till and 38 soil samples
	Winter Lake N Zip		2100 line-km Resolve magnetic / electromagnetic survey, 50 m line spacing		24 till and 801 soil samples
	Seahorse	2 / (217 m)		gravity and/or HLEM on 6 targets	71 till and 113 soil samples
	Shoe				71 till and 71 soil samples
	Starfish		6051 line km Resolve magnetic / electromagnetic survey		7 till and 7 soil samples
	GM claims				23 till and 206 soil samples
Kennecott Canada Exploration Inc.	Credit Lake (W of Diavik)			Time domain electromagnetic survey (TDEM), several targets	
Majescor Resources Inc.* / Tyhee Development Corp.	Bullet 1 Discovery Mine / Nicholas Lake	1 / (?)		Magnetic and bathymetric survey	
Navigator Exploration Corp.	Starfish LDG claims				115 till samples
New Shoshoni Ventures Ltd.* / Dave Smith	Drybones Bay	3 NQ			242.6 kg sample for microdiamond analysis
Shear minerals Ltd.* / Dasher Energy Corp. / International Samuel Exploration Corp. / Mantle Minerals Inc. and Shear Minerals Ltd.* / Diamondex Resources	Afridi / Aylmer Lake West			Magnetic and electromagnetic surveys	55 till samples
Shear Minerals Ltd.* / Hunter Exploration Group	XYZ		1190 line-km Fugro electromagnetic and magnetic survey	Magnetic survey over five targets	Some till sampling
Snowfield Development Corp.* / Dave Smith	Ticho Diamond Project (Drybones, Beck, Habenero, Faya and Pyrope Claims)	8 NQ / (694 m) and 2 AX / (56 m)			78 till samples
Snowfield Development Corp.* / Diamonds North Resources Ltd. / Dave Smith / Mike Magrum	Ticho Diamond Project (Gten 1,2,3,5 claims)	9			
Snowfield Development Corp.* / Fran Hurcomb	Hurcomb (Ticho Diamond Project)				34 till samples
SouthernEra Resources* / Diamonds North Resources Ltd.	Misty Lake	5	Yes		

Table 4: NWT Diamond Exploration Summary, 2003 (continued)

Company / Partners (*operator)	Property / Claims	Diamond Drill Holes	Airborne Geophysics	Ground Geophysics	Sampling / Other
SouthernEra Resources* / Diamonds North Resources Ltd.	Kidme		Heli borne electromagnetic and magnetic survey		
SouthernEra Resources* / Kalahari Resources Inc. / Island Arc Corp	Back Lake / Munn Lake				150 till samples
SouthernEra Resources* / Tanqueray Resources Ltd. / Mill City International Inc.	Yamba Lake	4		Grids on 29 targets	91 till samples
Thelon Ventures	Lac de Gras area		530 line-km Fugro magnetic and electromagnetic Resolve system survey, 100 line spacing		

De Beers Canada Exploration Inc. (60%) in joint venture with GGL Diamond Corp. (40%) resumed exploration on a diamondiferous sill that underlies the LA 26 to 30 claims of the **Doyle Lake** project area, in the southeast region of the Slave structural province. Twenty-four HQ (63 mm diameter) diamond drill holes were completed. Sixteen were drilled along the strike of a sill with an average thickness of two metres. A total of 84.5 kg of kimberlite from 13 samples across the dyke were submitted for microdiamond analysis. A total of 162 diamonds were recovered with a total weight of 0.016635 carats. All intervals sampled were diamond bearing. Three drill holes extended the strike length of the kimberlite sill to two km. Two additional holes, one 400 m south and the other 400 m north of the main intersections, did not encounter kimberlite. Two holes drilled 400 m east of the northern region of the sill intersected kimberlitic muds a few centimetres in thickness which contained garnets, suggesting potential for a second parallel kimberlite sill in this area. An additional hole, drilled one km north of the two previous holes, failed to intersect kimberlite. Ground geophysical surveys were completed in the vicinity of the sill and on a potential target on the LA-3 mineral claim. Thirty-one till samples were collected for kimberlite indicator mineral recovery on portions of the LA-1 to LA-4 mineral claims.

www.debeerscanada.com

www.ggldiamond.com

De Beers Canada Exploration Inc. (51%) in joint venture with Mountain Province Diamonds Inc. (44.1%) and Camphor Ventures (4.9%) explored the Kelvin, Faraday, Hearne and 5034 kimberlites of the **Gahcho Kué project** (AK claims at **Kennady Lake**, north of the Doyle Lake area).

Ground gravity and magnetic surveys were conducted across the Kelvin body as well as over and south of the Faraday kimberlite. Five holes were drilled in the vicinity of the Kelvin kimberlite, nine km northeast of Kennady Lake, and four of the five intersected kimberlite. Macrodiamonds were found in core from Kelvin-1b, a kimberlite 50 m west of the discovery drill hole with a true width of 25 m in two closely spaced intervals. Kelvin-1b yielded a 0.09 carat stone from a 65 kg sample. Two holes were also drilled in the Faraday kimberlite, 12 km northeast of Kennady Lake. Macrodiamonds were found in core from Faraday-1b, a kimberlite 100 m southwest of the main body with a true width of 5.6 m; and in Faraday-2, a kimberlite 520 m southwest of the main body with a true width of 21.5 m. Faraday-2 yielded a 0.4 carats stone from a 65 kg sample.

Two holes were drilled into the Hearne kimberlite, and one into the 5034 kimberlite, to test possible extensions of these bodies based on EM and ground gravity survey data. A small kimberlite was intersected south of the Hearne. De Beers Canada Exploration Inc. started work on a detailed cost estimate of a pre-feasibility study of the joint venture's Kennady Lake diamond deposits. A cost estimate presented to the De Beers Board in November 2003 was approved, and a pre-feasibility study commenced in early 2004. Early in 2003, modeled revenue per tonne and grade estimates for the 5034 and Hearne diamond pipes were released. The 5034 pipe has an indicated resource of 8.6 million tonnes and an inferred resource of 4.5 million tonnes, while Hearne has an indicated resource size of 5.5 million tonnes and an inferred resource of 1.6 million

tonnes, all to a depth of 290 m below lake surface. Modelled grade and revenue values for the Hearne and 5034 kimberlites are given in Table 5.

Table 5. Modelled Grade and Revenue for the Hearne and 5034 pipes

Pipe	Modelled Grade (carats /tonne)	Modelled Values (\$US /carat)	Revenue per tonne (\$US)
5034	1.67	62.70	104.70
Hearne	1.67	50.00	83.50

www.debeerscanada.com
www.mountainprovince.com
www.camphor.com

De Beers Canada Exploration Inc. carried out ground magnetic surveys over six grids, collected 21 till samples and drilled two holes on the **Camsell Lake property**, which includes the Snap Lake advanced diamond project.

www.debeerscanada.com

Diamondex Resources Ltd. carried out exploration on the **Bear Head, Cache, Hilltop and Kingfish** properties, in the southern part of the Slave Structural Province, and on the **Lena West** properties in the Mackenzie River valley north of Norman Wells.

Bear Head Property – A 3,957 line-km airborne magnetic and electromagnetic survey, using a 100 m line spacing, was flown over the north eastern part of the property. Six targets identified in the 2002 /2003 exploration program were investigated using ground magnetic, resistivity and gravity surveys. Two targets identified from these surveys were subsequently drilled (624 m in three holes) but yielded no kimberlite intersections. A five hole, 1,035 m drill program was completed in October 2003. A total of 155 till samples were collected, and ground prospecting over 41 airborne geophysical anomalies was also carried out.

Cache and Hilltop Properties – Ground magnetic, resistivity and gravity surveys were performed on 16 targets (eight targets on each property) identified from previous airborne geophysical surveys. Two holes (total of 629 m) were drilled to test a northwest trending structure at the head of an indicator mineral train on the Hilltop property. No kimberlite was intersected. Two targets (439 m of drilling) on the Cache property were also drilled, but no kimberlite was intersected. The Cache property is held 80% by Diamondex and 20% by SouthernEra Resources Ltd.

Kingfish Property – A 6,060 line-km, 100 m line spacing, airborne magnetic and electromagnetic survey, was flown. Three of 23 high priority anomalies identified by the airborne survey were followed up with ground geophysical surveys. Till sampling (288

samples in total), mapping and ground prospecting over the airborne geophysical anomalies was also carried out.

Lena West Property – A total of 1,054 stream-sediment samples were collected along selected stream systems on this 6.15 million acre group of prospecting permits, north of Fort Good Hope. Preliminary results were reported after approximately 18% of the samples had been analysed for kimberlite indicator minerals. Pyrope garnets were recovered from approximately 50% of samples, and picroilmenite grains were identified in about 80%. In addition, three diamonds, which measured approximately 0.8 mm, 0.6 mm and 0.5 mm in their longest dimension, were recovered from processed heavy mineral concentrates. A 63,770 line-km, 300 m line spacing, fixed-wing, horizontal gradient magnetic survey, was flown by Fugro Airborne Surveys over the northern and central regions of the property.

www.diamondex.net

Diamonds North Resources Ltd., 100% owners with option to Teck Cominco Ltd., completed ground geophysical surveys and drilling of the Snow Goose and Gosling kimberlites, and the Centaurus target on the **Blue Ice project**, Victoria Island. Twenty line km of ground geophysical survey was completed on, and three holes were drilled through the Snow Goose kimberlite. Based on drill and geophysical information, the footprint of the pipe is estimated to be approximately one hectare and the pipe diameter is estimated at 114 m. Two holes were drilled through the adjacent Gosling kimberlite. Samples from both kimberlites were submitted for caustic fusion analysis. One hole was drilled through the Centaurus target, but no kimberlite was intersected. The kimberlites lie along the 20 km long northwest trending Galaxy structure, straddling the Nunavut-NWT border. Kimberlites were also sampled from the ten km long segment of the Galaxy structure that is in Nunavut. Airborne magnetic surveys were conducted over parts of the Blue Ice project area.

www.diamondsnorthresources.com

www.teckcominco.com

Diamonds North Resources Ltd., (100% owners) with option to Serengeti Resources Inc., carried out a total of 9,300 line km of airborne magnetic surveys across the **Holman project** (as well as the western part of the Blue Ice project which is south of, and adjacent to, the Holman project area on Victoria Island). In addition, one hole was drilled on the Mon76 claim, which is just west of the main claim block of the Holman project area.

www.diamondsnorthresources.com

Diavik Diamond Mines Inc. explored the area around the **Diavik Mine** site from their Lac du Savage camp. A total of 450 line km of ground geophysical surveying, including total field magnetometer, HLEM and ground gravity were completed. A total of 27 diamond drill holes, totaling 4,300 m were completed, including delineation drilling on five known

kimberlites. A total of 400 regional and detailed glacial till samples were collected.
www.diavik.ca

Geodex Minerals Ltd. entered into a joint venture agreement with De Beers Canada Exploration Inc. in April for the **LAC** claims. The LAC 1 to 5 claims are approximately 30 km to the west of the Diavik diamond mine and southwest of an aligned group of kimberlites on BHP Billiton's EKATI Mine property. Results of a 2002 till sampling program were released: 85 till samples from widely spaced traverse lines yielded a total of 104 pyrope garnets and 19 chrome diopside grains from a mineral indicator train in the south-central part of the claims. Seventeen of the pyrope grains have a G-10 signature. In 2003, De Beers drill tested a circular ground magnetic anomaly located in the eastern part of the LAC 1-5 property. No kimberlite was intersected in the hole.
www.geodexminerals.com

GGL Diamond Corp., in joint venture with De Beers Canada Exploration Inc., drilled one hole, approximately 107 m in depth to test the potential of a geophysical anomaly within the **Bone Claim**, south of Lac de Gras. No kimberlite was intersected, and the source of the anomaly was determined to be pyrrhotite in brecciated quartz veins within metasedimentary rocks.
www.ggldiamond.com
www.debeerscanada.com

GGL Diamond Corp. explored for diamonds on several of their properties in their **CH Project Area**. On their **Zip claims** Gerle completed 2100 line-km of airborne geophysics at a 50 m line spacing, using a Dighem Resolve sensor. Twenty-four till and 801 soil samples were also collected on the **Zip claims**. Seventy-one till and 113 soil geochemistry samples were collected from the **Seahorse claims**. Several ground geophysical grids and 2 diamond drillholes 217, metres combined depth were also completed on the **Seahorse claims**, the drilling intersected no kimberlite. Exploration of the **Courageous** property entailed completion of several ground geophysical EM and magnetic grids, as well as the collection of 32 till and 269 soil geochemistry samples. A 6,051 line-km airborne EM and magnetic survey was completed over portions of the **Starfish** claim block. The **Shoe claims** saw the collection of 71 till and 71 soil samples. Thirty-eight till and 38 soil geochemistry samples were collected on the Winter Lake North claim group. The recently staked **BP** and **GM** claims saw collection of 102 till and 285 soil samples.
www.ggldiamond.com

Kennecott Canada Exploration Inc. carried out TDEM surveys on the Credit Lake property **Credit Lake**, 50 km west of Diavik.
www.kennecottexploration.com

Navigator Exploration Corp. ground checked numerous targets and collected 113 till samples from the **Starfish** and **LDG** properties, respectively west and south of Lac de Gras.

www.navigatorexploration.com

Majescor Resources, in partnership with Tyhee Development Corporation, carried out lake bathymetric and ground magnetic surveys over a deep round lake in the spring of 2003. Majescor drilled one angled hole in the **Bullet 1** magnetic anomaly on Tyhee's contiguous **Discovery Mine** and **Nicholas Lake** properties, 90 km northeast of Yellowknife, no kimberlite was intersected.

www.majescor.com

New Shoshoni Ventures Ltd., in an option agreement with Dave Smith, drilled three holes to assess the potential of the DB-02 kimberlite on the **Drybones Bay** claims, 50 km southeast of Yellowknife. The body was intersected in two drill holes (DDH03-02 and DDH03-03). Diamonds were recovered from each drill hole. A total of 128 diamonds from 78.06 kg, were recovered from drill hole DDH-03-02 and 142 diamonds from 164.54 kg, in drill hole DDH-03-03. DDH 03-03 intersected crater facies epiclastic kimberlitic tuff from 373 feet to 803 feet for a total length of 430 feet. The hole was terminated in kimberlite. In addition, numerous kimberlitic and diamond inclusion type indicator minerals were recovered from the sample, including G10 pyropes, Group I eclogitic garnets, diamond inclusion chromites, Ti-rich chromites, and picroilmenites. The largest diamonds from each drill core weighed 0.005 carats and 0.001 carats respectively. Some of the sub-calcic G10 pyropes have high chromium contents (10 to 15% Cr₂O₃), and approximately 17% of the eclogitic garnets have sodium (Na₂O) contents in excess of 0.07%.

www.newshoshoni.com

Shear Minerals Ltd., (25%) in joint venture with Dasher Energy Corp. (25%), International Samuel Exploration Corp. (25%), and Mantle Minerals Inc. (25%), on the **Afridi** property at Afridi Lake; and in a second joint venture with Diamondex Resources Ltd. (45.1%), on the nearby **Aylmer Lake West** property, collected 55 till samples from more than 40 prospective kimberlite targets.

www.shearminerals.com

www.internationalsamuel.com

www.diamondex.net

Shear Minerals Ltd., in an agreement with the Hunter Exploration Group to acquire an 80% interest in the **XYZ** claims, west of the EKATI Mine property, flew an 1,190 line-km electromagnetic and magnetic Fugro airborne survey. Shear also collected a number of heavy mineral samples and carried out ground geophysical surveys over five grids.

www.shearminerals.com

Snowfield Development Corp., (80%) in joint venture with Dave Smith (20%), drilled eight NQ holes totaling 694 m and two AX holes totaling 56 m through geophysical anomalies in the **Mud Lake** area. Kimberlite intercepts between two to ten metres apparent width were found in six of the eight NQ holes. Kimberlite was intersected in both AX holes, which also revealed a second smaller sill below the first. Drilling indicates a sill-like body at approximately 26 m depth, with a true width of approximately seven m and a dip of 14 to 15 degrees north. The lateral extent of the main sill has not been determined. In addition, 78 till samples were collected from the Drybones 4 claim. The property is located four km southeast of the Drybones Bay kimberlites, 50 km southeast of Yellowknife

www.snowfield.com

Snowfield Development Corp., (50%) in joint venture with Diamonds North Resources Ltd. (25%) and Magrum /Smith (25%), drilled nine holes to test geophysical anomalies on the **GTen claims** of the Ticho Diamond Project area, near Drybones Bay. Kimberlite was not intersected in any of the holes.

www.snowfield.com

www.diamondsnorthresources.com

Snowfield Development Corp., (80%) in joint venture with Fran Hurcomb (20%), collected 34 till samples over four magnetic anomalies on the **Hurcomb** claim ten km southeast of the Drybones Bay kimberlites.

www.snowfield.com

SouthernEra Resources Ltd., (60%) in joint venture with Diamonds North Resources Ltd. (40%), drilled five holes on geophysical anomalies on the **Misty Lake Property**, southwest of Kennady Lake. No kimberlite was intersected. An airborne geophysical survey, completed in April, identified 15 targets. Forty-two hundred line-kilometres of airborne electromagnetic, resistivity, and magnetic surveys were flown on the **Kidme property**, south of Kennady Lake, in the Doyle Lake area. Six ground geophysical grids were also completed.

www.southernera.com

www.diamondsnorthresources.com

SouthernEra Resources Ltd., (60%) in joint venture with Kalahari Resources Inc. (25%), and Island-Arc Corp. (15%), collected 140 till samples from the Munn Lake area of their **Back Lake Property**, north of Kennady Lake. Twelve of the hundred samples processed contain anomalous kimberlite indicator mineral populations. Numerous gold grains have also been recovered from the heavy mineral separates. Four diamond drill holes were completed but failed to intersect kimberlite.

www.southernera.com

www.kalahari-resources.com

www.islandarc.com

SouthernEra Resources Ltd., in an option agreement with Tanqueray Resources Ltd. (50%), and Mill City International Inc. (50%), collected 91 till samples down-ice of geophysical anomalies. Four diamond drill holes were completed on geophysical targets at their **Yamba Lake** property, 40 km northwest of Ekati Mine. One small kimberlite dyke was intersected in one hole. Ground geophysics was also carried out over 29 grids.

www.southernera.com

www.tanquerayresources.com

www.millcityinternational.com

Thelon Ventures Ltd. flew a 530 line km airborne geophysical surveys, using a DIGHEM Resolve system, over claims straddling the western arm of Lac de Gras, and at Thonokied Lake.

3.2 Emeralds

True North Gems Inc. extended their Yukon-based emerald exploration program across the border into the Mackenzie Mountains north of the CanTung Mine (Figure 4). No claims were staked.

www.truenorthgems.com

3.3 Metals

Locations of the main base and precious metal exploration projects in the Northwest Territories in 2003 are given in Figure 4, and project summaries are given in Table 6.

Alberta Star Development Corp. explored the **Longtom** iron-oxide hosted Cu-Au deposit in the Great Bear Magmatic Zone, just east of Hottah Lake. Twelve drill holes (totaling 2,787 m) were completed as well as ground IP and gravity surveys. A total of 243 gravity stations at 500 m spacings delineated two large 2.5 to 3.0 mgal anomalies coincident with two strong magnetic anomalies.

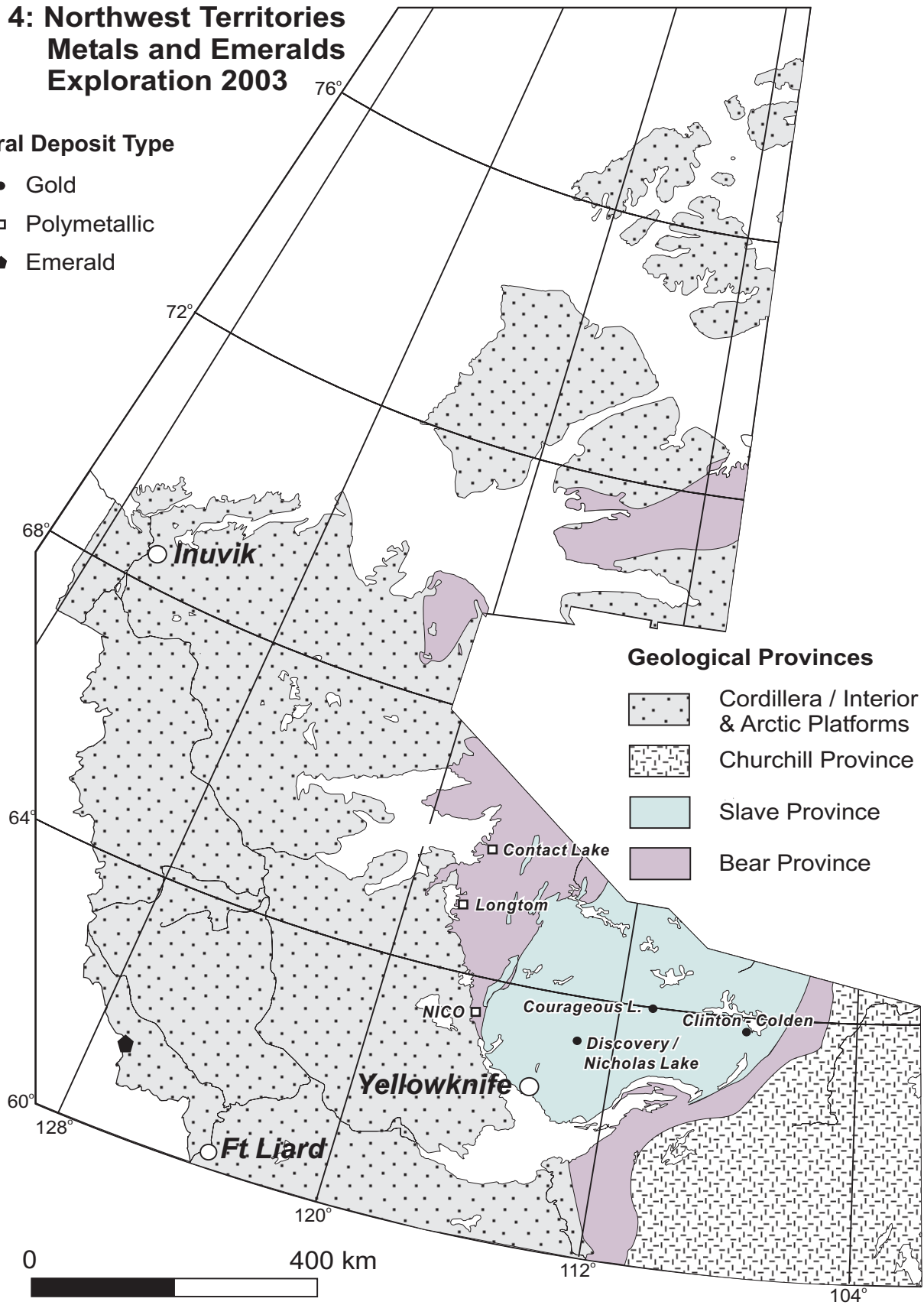
www.alberta-star.com

Fortune Minerals Ltd. drilled 35 holes into the **NICO** cobalt-gold-bismuth project, 160 km northwest of Yellowknife, in order to assess the continuity of the deposit away from its delineated reserves. Thirteen holes were drilled in the "East Pit" area, 12 of the 13 holes intersected mineralization and extended the strike length of the mineralized zone.

**Fig. 4: Northwest Territories
Metals and Emeralds
Exploration 2003**

Mineral Deposit Type

- Gold
- Polymetallic
- ◆ Emerald



Geological Provinces



-  Cordillera / Interior & Arctic Platforms
-  Churchill Province
-  Slave Province
-  Bear Province

Table 6: NWT Metal Exploration Summary, 2003

Company/ Partners	Property	Target	Diamond Drill Holes	Geophysical Surveys	Sampling and other surveys
Alberta Star Development Corp.	Longtom	Copper, Gold	12 holes / (2787 m)	Induced polarization and Gravity	Geochemical Sampling
GGL Diamond Corp.	Clinton - Colden	Gold			37 Soil samples, mapping
Fortune Minerals Ltd.	NICO	Cobalt, Gold, Bismuth	In-fill and step out drilling 35 holes / (2634 m)		Ongoing pit optimization study
Seabridge Gold Inc.	Courageous Lake	Gold			Core re-sampling (2588 re-assays)/ core re-logging program (8000 m) and metallurgical testing (1 tonne sample)
Tyhee Development Corp.	Contact Lake	Copper, Silver, Gold			
Tyhee Development Corp.	Discovery Mine / Ormsby Zone	Gold	12 holes (Discovery), 6 holes Ormsby Zone / (4100 m NQ combined)		Re-sampling of old core (300m)
Tyhee Development Corp.	Nicholas Lake	Gold			Geological Inspection

Significant results included a two-metre intersection grading 35 g/t gold, 0.12% cobalt, and 0.18% bismuth within a broader 21 m thick horizon, averaging 9.54 g/t gold and 0.05% cobalt. Similarly, eight holes drilled in the central part of the deposit have extended the high-grade core of the deposit to depth. Drilling was also carried out in the “West Pit” area. Recent scoping studies indicated that NICO could be operable as an underground mine with supplemental mill feed from smaller open pits. Conventional milling at the site would produce gold-cobalt and gold-bismuth flotation concentrates for sale or subsequent processing to higher value products. MICON International Limited has been retained to prepare a resource / reserve estimation.

www.fortuneminerals.com

GGL Diamond Corp. explored for gold on the **Clinton - Colden** property, at Clinton - Colden Lake, mapping and collecting 37 till samples for geochemical analysis.

www.ggldiamond.com

Seabridge Gold Inc. explored for gold on the 62,000 acre **Courageous Lake Project** area, which is underlain by the Courageous Lake - MacKay Lake volcanic belt, 270 km northeast of Yellowknife. Mineral showings, alteration and old drill core were examined and sampled along a 50 km length of the belt with the majority of work on the Salmita deposit (a past-producing gold mine) and the Tundra (FAT) gold deposit. A total of 8,000 m of drill core was re-logged and 2,588 core samples representing 4,000 m of drilling were collected for geochemistry. Re-logging and sampling were focused on mineralized alteration haloes surrounding higher-grade deposits and mined out zones, much of which had not been previously sampled. A 1,000 kg sample from Tundra (FAT) drill core was taken for metallurgical analysis. Seabridge is examining the potential for a large tonnage low-grade deposit, using a 1.0 g/t cut-off. Based on favourable metallurgical reports, Seabridge had their 2002 resource of the Tundra (FAT) deposit re-calculated to include 1,860,000 tonnes grading 3.11 g/t gold in the measured category and 46,103,000 tonnes grading 2.02 g/t gold in the indicated category.

www.seabridgegold.net

Tyhee Development Corporation carried out exploration on its **Discovery** and **Nicholas Lake** gold properties, 90 km northeast of Yellowknife, with most activity focused on the Discovery property. Eighteen holes totaling 4,100 m were drilled: six on the Ormsby zone, twelve on the Discovery zone, and 1,100 m to the north of Ormsby, to test the extent of the zones. Drilling of the Ormsby zone yielded 20 intersections averaging greater than 5 g/t gold over core widths greater than one metre, expanding the current dimensions of the deposit to the west, east and north. The more significant results included 21.46 g/t gold over a 1.5 m core length and a broader intersection of 6.57 g/t gold average over 6.40 m core length. Abundant visible gold was observed in the intersections. Preliminary results back from four of nine Discovery holes indicate that the high-grade past-producing West zone (30,000 tonnes with a grade of 12 g/t gold) is within a larger disseminated gold zone similar to the Ormsby-style gold mineralization (volcanic-hosted). Grades are similar to those of the Ormsby zone, with one 12 m

intersection averaging 3.17 g/t gold and a higher-grade intersection grading 13.28 g/t gold over a 1.5 m core length. In addition to the drill program, geological mapping was carried out between the Discovery Zone and Nicholas Lake.

www.tyhee.com

Tyhee Development Corporation prospected on iron-oxide-copper-gold targets at **Contact Lake**, in the Bear structural province. Chalcopyrite, arsenopyrite, native copper, and glaucodot-bearing altered andesites lie adjacent to the Contact Lake monzonite in this area.

www.tyhee.com

Tyhee Development Corporation prospected iron oxide-copper-gold targets on its **Terra Silver Mine** property. The program included grab sampling of surface showings, and re-sampling of archived diamond drill core. Approximately 200 metres of drill core from 11 holes was re-assayed. Encouraging results include 33.5 metres grading 0.15% Cu, 0.18 g/t Au and 1.5 g/t Ag.

www.tyhee.com

4.0 Oil and Gas Exploration *(updated November 2003)*

Hydrocarbon production is currently taking place in four regions of the NWT: Norman Wells (oil), Fort Liard (gas), Cameron Hills (gas and oil), and in the Mackenzie Delta near Inuvik (gas). Proponents of the *Mackenzie Gas Project*, a natural gas pipeline proposed for the Mackenzie River corridor, submitted a preliminary information package for the project in June. Exploration and development activities in the NWT are highlighted in the sections below.

Anadarko Canada Corp. completed drilling of nine wells in the **Fort Liard** region during winter. Seven holes were drilled on the company's **Arrowhead** property, approximately 60 km northeast of Fort Liard. Their *Liard River Geotechnical Exploration Program* took place in September. The company wants to construct a tie-in pipeline for its newest gas discoveries.

www.anadarko.com

Apache Canada Ltd., in partnership with Paramount Resources Ltd., drilled two wells (**Nogha** C-49 and M-17) and carried out seismic surveys in the **Sahtu** Region in winter. A 2D seismic survey was also completed in September at **Turton Lake** on Exploration License 414, approximately 100 km north of Norman Wells.

www.paramountres.com

Partners Chevron Canada Resources, BP Canada Energy and Burlington Resources Canada reported finding "commercial quantities" of gas in the **North Langley K-30** well

spudded in March in the Mackenzie Delta. Chevron also drilled a deep, delineation well (*Liard 2K-29*, about 3600 m) in the **Fort Liard** region during the winter drilling season.
www.chevron.ca

Canadian Natural Resources Ltd. carried winter exploration programs in the **Fort Liard**, and **Sahtu** regions. One well was drilled near Fort Liard and two shallow exploratory wells were drilled in the Colville Hills in the Sahtu area.
www.cnrl.com

Canadian Forest Oil Ltd. completed one well in the **Fort Liard** region; the **Mount Coty 2K-02** well was spudded in April and drilled to a depth of 4741 m.
www.forestoil.com

Devlan Exploration Inc. carried out winter exploration in the **Tsiigehtchic** area, where they drilled one new well and re-entered three previous wells.
www.devlanx.com

Devon Canada Corp., in conjunction with Shell Canada Ltd., drilled one well in the **Inuvik** region in winter. During the fall of 2003, Devon completed geologic mapping southwest of **Aklavik** on Gwich'in Settlement Lands, and in the **South Nahanni** region. A regional geochemical survey was undertaken in the Mackenzie Delta, between Inuvik and Tuktoyuktuk, on Significant Discovery License 62.
www.devonenergy.com/operations/op_canadian.cfm
www.shell.ca

EnCana Corporation completed a 250 km 2D seismic survey and a 144 km² 3D survey north of **Inuvik**, in winter. Fall 2003 exploration consisted of aerial gravity surveys near **Nahanni Butte** and **Fort Liard**.
www.encana.com

Paramount Resources Ltd. completed five new exploratory wells, re-entered three existing wells, and undertook a 77 km² 3D seismic program in search of new reserves in the **Cameron Hills** region.
www.paramountres.com

Petro-Canada and partner Devon Canada Corp. drilled one deep well (**Nuna I-30**, 3250 m) in the **Mackenzie Delta** region.
www.petro-canada.ca
http://www.devonenergy.com/operations/op_canadian.cfm

5.0 Further Information

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

Stephen P. Goff, *District Geologist, Indian & Northern Affairs Canada, C.S.Lord Northern Geoscience Centre, P.O. Box 1500, 4601-B, 52nd Avenue, Yellowknife NT, X1A 2R3*
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Giles Morrell, *Senior Geologist, Indian & Northern Affairs Canada, 10 Wellington, Gatineau /Ottawa ON, K1A 0H4*
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morrellg@ainc-inac.gc.ca

Useful websites relating to mineral and petroleum resources in the Northwest Territories are listed below:

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

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

Information on oil and gas activities in the NWT, can be found at the following websites:
<http://www.ainc-inac.gc.ca/oil> (includes annual reports, land calls, and oil and gas license maps in both PDF and ArcView® formats);
http://www.neb-one.gc.ca/stats/frontier/index_e.htm (has weekly statistics of oil and gas activities including drilling and geological/geophysical programs); and,
http://www.gov.nt.ca/RWED/mog/oil_gas/pub.htm (GNWT RWED and ECE *Oil and Gas Update* newsletter).