DE BEERS CANADA EXPLORATION
KOAMAOGAKTOK/NAPAKTULIK PROJECT DESCRIPTION

INTRODUCTION

De Beers Canada Exploration Inc. (DBCE – formerly Monopros Limited), a Canadian company with a regional office in Yellowknife, has prospected and explored for diamonds in the Rockinghorse Lake (Koamaogaktok) area of the Slave Geological Province from the 1990s until the present day. DBCE would like to continue that activity, and by means of the accompanying Nunavut Water Board (NWB) application, requests continued permission to use water at its camp, located on claim *TL 91* on Inuit Surface-Rights Parcel #CO-05*,* at 65° 58' 48" N (lat.) and 111° 45' 00" W (long.), and in support of exploration activities on the main Rockinghorse block and the new adjacent blocks, "RHL" and "TQ" on Napaktulik (*Map 1, Map 2* and *Map 4*).

The Rockinghorse (Koamaogaktok) main block lies southeast of Napaktulik (Takijuq) Lake within the parameters 65° 45' - 66° 15' N and 111° 35' - 112° 25' W and currently (i.e., prior to surveyed claims going to lease) comprises 92 claims totalling 197 832.80 acres, of which 115 178.50 acres are on Crown land. The balance of acreage – 41.78% or 38 *TL* claims – are on IOLs and lie in #CO-05 (86H/16 and 76E/13). The Rockinghorse block (*TL* claims, *TAK 1* and *MOR* and *TK* claims) straddles the boundaries of NTS areas 76E/76L/86H/86I, intersecting Rockinghorse Lake at the claim block's southwest corner. The new "RHL" block lies approximately 9km NW of the NW corner of the main Rockinghorse block and is comprised of 12 claims on the east shore of Napaktulik Lake within the parameters 66° 13' 40" – 66° 20' N and 112° 35' – 112° 44' W; once all claims are recorded, the acreage will be a total of 24 130.87 acres. The new "TQ" block lies approximately 32.5km NW of the NW corner of the main Rockinghorse block and is comprised of 22 claims on the west shore of Napaktulik Lake within the parameters 66° 20' – 66° 29' N and 113° 31' – 113° 50' W; once all claims are recorded, the acreage will be a total of 47 518.00 acres.

Authorisation will be sought from the Crown to add the new "RHL" and "TQ" blocks to the existing INAC land-use permit.

STATUS OF PERMITS AND AUTHORISATIONS

DBCE maintains an Indian and Northern Affairs (INAC) "Class A" Land Use Permit *(#N20000021)* for exploration on mineral claims it holds on Crown Land and a separate "Class 3" Land-Use Licence *(#KTL301C029)* issued by the Kitikmeot Inuit Association (KIA) in respect of those claims which lie on Inuit surface-rights land (#CO-05) south of the IOL boundary. *#KTL301C029* is valid between 01 March, 2002 and 28 February, 2004. *#N20000021* is valid between 13 March, 2000 and 12 March 2003, and a new INAC land-use permit will be sought in advance of that date.

An NWB water licence, *#NWB2ROC0002*, is valid between 19 April 2000 and 01 November, 2002, and application is herewith made for a new water-use authorisation to cover domestic and drilling use on the Rockinghorse (Koamaogaktok) property, and the new adjacent "RHL" and "TQ" claims.

Drilling privilege from the Workers' Compensation Board is valid until 31 December, 2002, and is renewable.

In addition to exploration on our *TL* claims and *TAK 1* claim, DBCE also explores under an option agreement certain mineral claims within the same area staked by Inmet Minerals but now held in the name of DBCE; these 10 claims (the *TK* and *MOR* claims) are collectively known as the "Hood River property" and are located entirely on Crown Land (*Map 1)*. Collectively, all the claims are referred to simply as the "Rockinghorse property". The *MOR* claims of interest have been surveyed by a Canada Lands Surveyor along with the *TAK 1* and *TL* claims (*Map 5*), and application has been made to INAC to take all the surveyed claims to lease, with DBCE as lessee. The 6 *TK* claims remain in good standing and were not surveyed at this time.

PROPOSED ACTIVITIES AND THEIR NECESSITY

In order to determine if the claims area holds economic potential, active exploration comprised of prospecting, surficial sediment sampling, airborne and ground geophysical surveying and exploratory drilling of numerous targets over a number of years is necessary; without this level of care and effort, the four kimberlites of current interest – *Troll* (Crown land), *Voyageur* (Crown land), *Unicorn* (Crown land) and *Muskox* (IOL) – would not have been discovered. Without further prospecting and exploration, additional kimberlites cannot be discovered and the economics of the area remains unproven.

Furthermore, the remote location of the property, harsh weather conditions, a highly variable winter drilling window and short summers mean that many more field seasons are required to find, test, analyse and understand resources than would be required in southern Canada; further, the cost of carrying out a field programme in the near-Arctic is high (even from our northern-region base in Yellowknife), which can mean that there may be occasional years in which no programme is conducted at all. Oftentimes, a claim life of 10 years is insufficient to "source" multiple mineral indicator trains across a large claims area, and thus exploration may continue on claims after they are taken to lease. As noted above, 10 claims on IOL and 34 surrounding claims on Crown land have undergone legal survey, so that exploration may continue on these claims (*Map 5*). The purpose of taking the claims to lease is so that exploration for and evaluation of resources may continue past the 10-year life of the claims.

Drilling Plans at Rockinghorse (Koamaogaktok) for 2003

In spring, 2003 (approx. 05 April to 17 May), an LF-70 hydraulic core rig (Boart Longyear's "new generation" LF-70 with a PQ gear-driven head and with higher torque than the previous model used in 2001, *cf. Appendix 2A* and *Appendix 2B*) may be deployed to recover a total of 100t from the *Muskox* kimberlite 2.2km SW of Rockinghorse camp, after which the drill will be refitted for small-diameter NQ casing to drill up to a maximum of 8 holes on Crown land to test anomalies on the *MOR* and *TK* claims (approx. 20 May to 07 June). The drill programme would be served either via air, as per usual, or by means of a 32km access-route or trail spurring off the main Lupin winter road, as proposed to Regulators in December, 2001. (Archaeological activity was conducted for this purpose in 2001, and a report submitted to Regulators at that time). Should deviations be required to this trail, archaeological field followup would be conducted when the camp reopens in summer, 2003.

Surficial sediment samples – approximately 800 on the Rockinghorse property and 1 500 across the "RHL" and "TQ" claims – are planned for collection in summer, 2003 (approx. 15 July to 16 August). Sampling crews would be supported by helicopter, and would be based out of Rockinghorse camp.

Prospective Drilling Plans Elsewhere in the Region (Kikerk/Knife Lake)

It is currently unknown as to whether a drill programme will proceed on the *Knife* kimberlite, 86km NW of the Rockinghorse property in spring, 2003. Should such an evaluation programme proceed, it could occur either concurrently with Rockinghorse drilling by means of a second LF-70 or similar core drill fitted for PQ casing, or (less likely) following completion of the Rockinghorse drilling, commencing approximately 10 June to 28 June (ice conditions permitting). Separate land and water permits would be required; the current land permit is held by Rhonda Corp., and the Kikerk water licence held by DBCE expired in July, 2002.

Drilling Contractor and Core Handling

Boart Longyear Canada (*cf. Appendices 2A, 2B and 2C),* likely will be the drilling contractor for the Rockinghorse 2003 programme, as was the case for the 2001 and 2002 programmes. Core extracted by means of surface core drilling will be flown to Yellowknife, and core logging and initial petrographic analysis will be conducted in DBCE's Yellowknife warehouse.

Tentative Plans for 2004 and 2005 (includes Potential Winter-Access Route)

Depending on results in 2003, recovery of additional material from the *Muskox* kimberlite could occur in 2004 by means of an LF-70 or larger LF-140 diamond core drill or by means of LDDH (large-diameter) air-assist reverse-circulation production drilling to extract a mini-bulk sample; both the DDH core rig for delineation and the LDDH rig for mini-bulk sampling could be transported to drillsite via re-establishment of the winter-access route or trail (*Map 6*). The programme could occur in spring, 2004, over a 6- to 8-week period. Taking advantage of the presence of the drill(s) on the property, further drilling may be planned concurrently or following *Muskox* drilling to delineate and evaluate any or all of the *Unicorn, Troll* and land-based *Voyageur* kimberlites*.* A temporary winter haul route, following watercourses to the extent possible, would have to be constructed from *Muskox* north to *Unicorn, Troll* and/or *Voyageur*, in order to transport the drill rig(s) and fuel*.*

At land-based *Voyageur,* trenching also may occur in 2004 or 2005 if heavy equipment (e.g., bulldozer, loader and end-dump) is driven in to excavate overburden and extract kimberlite; blasting, e.g., by NWT Rock Services or similar contractor, would be required to break up country rock for excavation. Length and dimensions of any trenches would be determined by delineation drilling. Again depending on results, the winter-access route from the main Lupin winter road could be reopened in 2004 and 2005. As noted above, if bulk sampling is considered necessary, this could occur by means of LDDH flood-reverse RC drilling, such as employed by DBCE at Kennady Lake, NWT (where a Layne Christensen Canada TH-150 air-lift RC production rig was used in 2001 and 2002), to recover a large-diameter [e.g., 30cm] mini-bulk sample from *Muskox* and/or other lake-based kimberlites *(cf. Figure 1 – Layne drill and water-circulation schematics).* A suitable natural depression would be selected with the assistance of a geotechnical engineer, if sufficient drillwaste were anticipated to require containment.

It should be noted, however, that plans beyond 2003 are necessarily highly speculative and subject to change, depending on results and year-to-year budgets. The NWB, other Regulators and Kitikmeot residents, principally of Kugluktuk, shall be kept fully apprised as plans evolve.

After 2003, prospecting, till sampling, ground geophysics and test drilling of anomalies would continue intermittently in selected locations of the claims that have been taken to lease and on the new adjacent claims on "RHL" and "TQ".

DURATION OF PROJECT

As the Koamaogaktok/Napaktulik Project remains active – with 34 new claims added in 2002 – the maximum length of time for water use is requested – that being two years (from November, 2002 to November, 2004), plus the option to extend the new permit if required. The reason for requesting a 2004 expiry is that the current licence *#NWB2ROC0002* expires on 01 November, 2002, and no work is possible until the new year, 2003, when ice is sufficient to support the weight of drills and aircraft, and when the Lupin winter road is operational (approx. mid-February to mid-April), so that a drill or drills could be transported south by road, if necessary.

The Rockinghorse camp which serves all programmes is seasonal only; it is open only in the spring and summer, not in autumn (when ice is newly forming) and, to date, not in winter (when daylight is minimal and the main Lupin road is not operational). At the end of the summer sampling programme and claims surveying in August, 2002, the Rockinghorse camp was winterised, shut down and secured; it would be reopened in April, 2003, should a drill programme be conducted. At seasonal closure in 2003 and in succeeding years, the Rockinghorse camp would again be properly closed.

METHOD OF TRANSPORTATION

The drill(s), tooling, other equipment (such as generators, compressors, pumps, Poly-Drill filtration tank), fuel drums and personnel likely will be moved from site to site by helicopter; it is expected that Great Slave Helicopters of Yellowknife will provide this service, as in the past. Should a temporary winter-access trail be constructed, then the drill(s) and fuel drums could be driven to drillsite by haul truck or Nodwell and removed by the same means.

A single helicopter (Hughes 500D with pilot and engineer) likely would be based at camp to support the exploration and evaluation drilling, with up to two helicopters (2 pilots, up to 2 engineers) based at the camp for the summer sampling programme. Fixed-wing service will be required to mobilise, supply, resupply and demobilise the Rockinghorse camp and to transport core samples in spring and till samples in summer; it is expected that Air Tindi of Yellowknife will provide this service. A Twin Otter and other aircraft will be deployed on a regularly-scheduled basis.

Around camp, or to very proximal drillsites, such as *Muskox,* transportation will be by snowmobile; two Bravo snow machines will be based at camp for the use of camp personnel. Snowmobiles are to be used for loading/offloading and transferring fuel drums to tents – not for overland travel off prescribed lake-based routes. Several snowmobiles used by the drilling contractors also may be based at drillsites, to load/offload fuel and travel to and from camp, should haul routes be established.

Due to the remote location, there are no viable alternatives to the aforementioned modes of transportation.

CAMP AND STRUCTURES

The Rockinghorse camp *(see accompanying Map 2, Photo 1, NWB application form and the Introduction to this document)* is a small (25-person) fly-in tent camp located on the east shore of a small, unnamed lake within claim *TL 91*. It currently consists of 16 structures, mainly wall tents (*Photo 1*): An office, kitchen, dry (for washing and laundry), storage tent, core shack, generator shed, lavatory/outhouse (with 2 Pacto waterless toilets) and 9 sleep tents. The generator shed contains two Lombardini generators, of 16 and 20kw capacity. A bear fence is maintained around the campsite for safety; however, the camp is kept in a clean and tidy condition during operations, so as not to attract bears. A survival tent for weather-safety purposes had been maintained in the past in the vicinity of Muskox Lake, southwest of camp, but is extremely weathered and is scheduled for removal.

FUEL STORAGE

A fuel storage area (drums of diesel and Jet-B fuel) is located SE of the camp compound during drill programmes, and is sited the required distance from shore. A heli-pad (gravel area), with Jet-B drums, is located inside the bear fence; a storage area for P40 and P50 diesel drums is located west of the core shack and core storage area, also inside the bear fence. There is no other fuel cache on the property. There typically are 4-5 cylinders of propane stored by the dry tent (standard 100lb or 45kg size). Considering that up to two drills may be deployed in the field for approximately 6 weeks in 2003, it is anticipated that 500 drums of diesel per drill will be required (approx. 15 drums/drill shift). Approximately 150 drums of P50 diesel (heating fuel) will be required for camp

buildings, with only up to about 50 full drums actually stored on site at any one time. Empty drums will be rotated out regularly on backhauls. It is estimated that 250 drums of Jet-B and 250 cylinders of propane will be required; minimum amounts of other fuels also may be required, e.g., 5 drums of petrol (unleaded gasoline) and up to 3 drums of av-gas. Fuels are expected to be staged out of Lupin Mine, as occurred in 2002. Oils required for the generators and snow machines (typically 1- and 2-L size) are stored in the generator shed. Oils and greases required in the drilling operation are stored and secured at drillsites, and are the responsibility of the drilling contractor (*cf. Boart Longyear MSDS sheets on additives, Appendix 2C)*. A spill-kit drum is present in camp and at each drillsite, and absorbent pads and drip pails are present where fuel is transferred; transfer is by means of hand wobble, electric or diesel fuel pump. Camp fuel-handling is guided by a Spill Contingency Plan *(Appendix 6).*

Wooden cribs, such as those used for fuel-drum support at the kitchen and dry, were constructed in summer, 2002, for each of the 9 sleep tents.

POTABLE WATER, GREYWATER AND WASTES

Potable water is stored in the dry in a 1,136.5L (250gal) holding tank, supplied by self-insulated 3cm poly line. Greywater line is insulated and heat-traced within a plywood utilidor and outfalls to an authorised sump (1mX1mX1.5m) west of the kitchen, which sump is covered with a plywood top.

There are two Pacto toilets in the outhouse. Bagged toilet wastes are either burned or flown out for disposal in the Yellowknife landfill sanitary waste disposal area. Combustibles are burned with waste-fuel in a burn barrel (45gal/205L sized drum) at the southwest corner of the camp compound. Non-combustible garbage, including metal waste and other scrap that cannot be recycled, is flown out for disposal at the Yellowknife landfill. Camp management currently is actively seeking purchase of an environmentally-rated incinerator; the unit would have to be compact enough to be transported in a Twin Otter (either as an assembled unit or as component parts which could be readily reassembled on site).

POTENTIAL PROJECT IMPACTS

Potential impacts of the Koamaogaktok/Napaktulik exploration project locally, regionally and to the hamlet of Kugluktuk approximately 220km away, are minimal. The closest “settlement” is Echo Bay’s Lupin Mine, accessible by aircraft or winter-access route, which lies 26km from the southeastern edge of the property.

Together, the camp and drillsites amount to only a few hectares, and the period of activity during any one year is limited. As per best practice, guided by the long-standing DBCE Environmental Policy (*Appendix 1C)* and the company-wide Environmental Policy (*Appendix 1B)* and new company-wide comprehensive Environmental Management System (*cf. accompanying CD-ROM)*, areas used are reclaimed when use ceases *(also cf. Abandonment and Restoration Plan, Appendix 9)*. In sampling, for example, overburden is replaced over hand-dug holes immediately after till is extracted, where practical to the terrain, so that there is no chance that grazing animals, such as caribou, may trip and fall. In the case of drillholes, holes are grouted and the small amount of water and sediment and oil that may collect on ice during lake-based drilling of a hole, despite use of drip pans and reporting of drillwaste to a Poly-Drill tank and land-based sump, is soaked up with absorbent pads or heat-steamed. Cleanup materials are either burned or flown out as bagged refuse and properly disposed of. Both the Rockinghorse camp and drillsites are regularly inspected by federal and KIA land-use inspectors, and by in-house personnel; site visits also may be organised for community visitors, such as elders.

The health and wellbeing of wildlife is of great concern to DBCE in all our operations (*Wildlife Sighting Form, Appendix 8)*. If numbers of caribou should enter an area where work is proceeding,

all work will cease until the caribou move on. In the coming drilling season, a Wildlife Sighting Form routinely used at other DBCE camps will be employed. Although the project area offers limited esker habitat, DBCE is aware of the importance of this habitat to bears, wolves, foxes and prey mammals, such as sik-siks, and limits habitat disruption wherever possible. Favourable esker habitat is located further south, off the property, at the south end of Rockinghorse Lake.

In regard to heritage sites, there are only 4 known archaeological sites on the main property (*Interim Archaeological Report, Appendix 10),* none known in the vicinity of the new "RHL" and "NQ" claims (*Map 7)* and no known deposits of carving stone. An archaeological overview was completed in 2000 and a preliminary field assessment in 2001, which was supplied to the KIA and other Regulators. An archaeological protocol (*Appendix 7)* guides field personnel, should a probable site (e.g., quartz debitage or a cairn) be located during operations.

Archaeological Assessment of Winter-Access Route

An archaeological survey was conducted in July, 2001, of a potential 120km winter-access route (route suggested by Inuit-registered firm, Nuna Logistics) which eventually could link Rockinghorse camp with the Kikerk/Knife Lake claims area 86km to the northwest (*Map 7)*. The only portion of the route which is being considered at this time is a 32km section which would link the *Muskox* kimberlite area and Rockinghorse camp with the terminus of the Lupin winter road. To take advantage of another company's plans for an ice route in the area in 2003, DBCE may consider construction of the Lupin-to-Rockinghorse-camp routing at the same time; if no access route is constructed, a push-in trail would be used instead to mobe/demobe drill equipment and fuel drums (several ploughings only). Co-ordinates of found archaeological sites will be provided to the road contractor for purposes of flagging, if necessary, and avoidance.

SPILL CONTINGENCY PLAN

The Rockinghorse Spill Contingency Plan is contained in *Appendix 6*; the plan is informed by our commitment to avoiding spills where possible, prompt action when spills occur and utmost concern for human health and safety, and the environment. The DBCE general Environmental Policy (*Appendix 1C)* is contained within an Environmental and Safety Policies and Procedures Guide, which is kept on site for reference by the Rockinghorse project manager and all staff and visitors, and has been made available to all Regulators. As stated elsewhere in this Project Description, a new, comprehensive company-wide Environmental Management System (EMS) came into effect in fall, 2001 and is included as a CD-ROM with this document. (Copies of the EMS were distributed to Regulators with our KIA Land-Licence application in December, 2001).

BENEFITS TO INUIT

In all its projects, DBCE hires locally to the extent possible. As the Koamaogaktok/Napaktulik Project is still at the exploration stage, there are fewer opportunities for non-technical employment than with a more advanced project. Currently, it is planned that two or more individuals from Kugluktuk will be hired directly during the programme of 05 April-17 May, 2003. Various Kitikmeot services have been used in past programmes, and use of local services is expected to continue in 2003 and beyond.

DBCE also plans to continue to visit Kugluktuk regularly in connection with its programmes to discuss what is planned or has occurred, both with Regulators and with community residents; the last community visit and meeting with Regulators occurred in November, 2001; a meeting in respect of current-year programmes is scheduled for the third week of October, 2002. If and when the project expands, the opportunities for direct employment, service provision and other benefits also will expand. Whatever the project outcome, the entire De Beers Canada family looks forward to a co-operative and mutually beneficial relationship with the citizens of the Kitikmeot.