2017 TECHNICAL REPORT

PROJECT EXPLORATION UPDATE AND FARADAY INFERRED MINERAL RESOURCE ESTIMATE

KENNADY NORTH PROJECT

NORTHWEST TERRITORIES, CANADA

63° 26' 04" to 63° 33' 50" North

108° 59' 12" to 109° 23' 48" West

N.T.S. 75N/6 and 11

prepared for:

KENNADY DIAMONDS

report prepared by:

AURORA GEOSCIENCES

2017 TECHNICAL REPORT
PROJECT EXPLORATION UPDATE AND FARADAY INFERRED RESOURCE ASSESSMENT
KENNADY NORTH PROJECT
NORTHWEST TERRITORIES, CANADA

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ABBREVIATIONS and TERMINOLOGY

Abbreviation	Definition	Abbreviation	Definition
OLV	olivine	CD	chrome diopside
OLVp	olivine phenocryst	MUS	muscovite
OLVm	olivine macrocryst	MB	marginal breccia
CR	country rock	Xeno	xenolith
CRX	country rock xenolith	KIMB	kimberlite
CRXb	basalt country rock xenolith	CKt	CK transitional
CRXs	sedimentary country rock xenolith	HKt	HK transitional
MC	magmaclast	KPKt	KPK transitional
SPN	spinel	TKB	tuffisitic kimberlite breccia
PER	perovskite	FOV	field of view
CPX	clinopyroxene	PPL	plane polar light
PHL	phlogopite	XPL	cross polar light
PHLp	phlogopite phenocryst	PLAG	plagioclase
CAR	carbonate	f	fine-grained
GNT	garnet	m	medium-graind
ILM	ilmenite	c	coarse-grained
BIO	biotite	f-m	fine- to medium-grained
FEL	feldspar	f-m+c	fine to medium + coarse-grained
CHL	chlorite	f-c	fine to coarse grianed
SER	serpentine	f-c+vc	fine to coarse+verycoarse grained
MONT	monticellite	Ga	billion years
RFW	requires further work	Ma	million years
RVK	resedimented volcaniclastic kimberlite	mm	millimetre
KPK	kimberley-type pyroclastic	cm	centimetre
VK	volcaniclastic kimberlite	m	metre
VKSE	volcaniclastic kimberlite	km	kilometre
CK	coherent kimberlite	l	litre
HK	hypabyssal kimberlite	ct	carat
f	fine	cpt	carats per tonne
m	medium	Mt	million tonnes
c	coarse	st/t	stones per tonne
		SFD	size frequency distribution

1 EXECUTIVE SUMMARY

Aurora Geosciences Ltd. (AGL) was commissioned by Kennady Diamonds Inc. (KDI) to prepare an updated independent, Canadian National Instrument 43-101 Resource Assessment, for the Kennady North Property, located in the Northwest Territories, Canada.

The Kennady North Property is wholly owned (100%) by KDI. The property was originally acquired through Mountain Province Inc's (MPV) joint venture with De Beers Canada Ltd. The ground which became the Kennady North property was removed from the joint venture ground under an agreement with DeBeers. MPV then transferred the ground and related data to the Kennady North project into a subsidiary company called Kennady Diamonds Inc. (KDI). This would allow DeBeers Canada Inc (51%) and MPV (49%) to concentrate on the development of the Gahcho Kué Mine.

KDI filed a maiden resource statement included in a report filed to Sedar on January 23, 2017 - "2016 Technical Report -Project Exploration Update and Maiden Mineral Resource Estimate, Kennady Lake North – Northwest Territories, Canada".

This report will provide details of the 2017 exploration work and an updated compliant NI-43-101 Inferred Resource for the Faraday kimberlites.

1.1 PROPERTY DESCRIPTION, LOCATION, ACCESS and PHYSIOGRAPHY

The Kennady North property is 100% owned by KDI. The land package comprises twenty-two (22) mineral leases and fifty-eight (58) mineral claims, totaling 160,997.16 acres or 65,154.66 hectares. The property covers an area roughly 30 kilometres long and up to 30 kilometres wide. The project area is located 290 kilometres east-northeast of Yellowknife, NT and centered geographically at approximately 63°29' North latitude and 109°11' West longitude.

Yellowknife, NT, provides the closest business and commercial centre for the project. Access to the property is via a winter road, float- and/or ski-equipped aircraft year-round or via larger Dash 7 aircraft landing on an ice strip in the winter. The KDI project also has a license agreement to use the airstrip at Gachcho Kué.

The property area is part of the Barrenlands on the edge of the zone of Continuous Permafrost. The area is characterized by heath and tundra (low shrubs and alpine-type vegetation) with occasional knolls, surface outcrops and localized surface depressions, interspersed with lakes.

The Kennady North project features low to moderate relief, ranging from 400 metres to 550 metres ASL (above sea level). Elongate north-northeast trending outcrop expressions vary in height from a few metres up to 20 metres.

1.2 HISTORY

Numerous exploration programs have been completed on the Kennady North property since 1992 by multiple operators including GGL Diamond Corp, Winspear Resources Ltd., SouthernEra Resources Ltd., Canamera Geological Ltd. and the joint venture comprising Mountain Province Inc. A joint venture agreement was signed with Monopros Ltd. (now DeBeers Canada Exploration Inc. – DCEI) MPV and Camphor Ventures Inc. in 1997 turning over operatorship of the large ground package to DCEI.

Subsequent to forming the joint venture with DCEI, all activity on the MPV ground was either undertaken by DCEI directly, or by sub-contractors under the supervision of DCEI personnel. The commissioned writer was involved in field operations during the time DCEI was operator on the current KDI property.

KDI has completed extensive programs of till sampling, ground geophysics, diamond drilling and large diameter reverse circulation drilling (LDD) since obtaining 100% ownership in 2012. A maiden resource for the Kelvin kimberlite was established in January of 2017 and stands at 8.5 million tonnes, grading 1.6 carats per tonne for a total of 13.62 million carats.

1.3 REGIONAL and LOCAL GEOLOGICAL SETTING

The Kennady North property covers a portion of the southeastern Slave Geological Province, an Archean terrane ranging in age from 4.03 Ga to 2.55 Ga (Bleeker et al., 1999). The area consists of granodiorite intrusions, high-grade gneisses and migmatites, along with volcanic and sedimentary supracrustal rocks typical of many greenstone belts in the Slave Province.

The emplacement of kimberlite bodies in the Kennady Lake (Gahcho Kué) area occurred between 531-542 Ma +/- 2.5 to 11.0 Ma during the Cambrian Period (Heaman et al., 2003). ^{87}Rb-^{87}Sr geochronology indicates that the age of the 5034 pipe is 538.6 +/- 2.51 Ma (Heaman et al., 2003). Age dating for two samples of groundmass phlogopite (^{87}Rb-^{87}Sr geochronology) obtained from the Kelvin kimberlite has returned dates ranging between 536-551 Ma and 531-546 Ma both +/- 8 Ma (Bezzola, M. et al, 2017). These emplacement ages are coincident with the Gahcho Kué kimberlites. Erosional processes since emplacement may have been significant, stripping the kimberlites almost to their root zones but still preserving the hypabyssal and diatreme facies. This significant erosion has allowed KDI to document an unconventional style of kimberlite which approximates an ideal kimberlite pipe-like body, but inclined.

The Kelvin kimberlite has been documented to show excellent geological continuity along its length of greater than 700 metres, with respect to the distribution of the main pipe infills. The external morphology of the pipe is variable with increasing depth; it turns twice and becomes wider at depth. The kimberlite is comprised of a “north” and “south” limb. Detailed geological logging, petrographic work and diamond grade investigations have identified seven individual kimberlite units. Volcaniclastic kimberlite, classified as Kimberley-type pyroclastic kimberlite (KPK), and lesser amounts of coherent kimberlite (CK) are the two end member kimberlite types present. Lesser amounts of texturally transitional kimberlite occurs as well.

1.4 DEPOSIT TYPES and MINERALIZATION

Although kimberlite sheets are apparent at all locations, a new model for kimberlites has been identified at Kelvin and Faraday. Originally thought to be very small idealized kimberlite pipes, KDI has documented four (4) unconventional, irregular shaped, subhorizontal and inclined pipe-like bodies. These kimberlites (Kelvin, Faraday 2, Faraday 3 and Faraday 1) are composed primarily of volcaniclastic kimberlite classified as Kimberley-type pyroclastic kimberlite (KPK) and lesser volumes of coherent kimberlite (CK) and texturally transitional kimberlite between these two end members. A total of six kimberlite units have been identified at the Kelvin kimberlite.

The Kelvin kimberlite has been delineated over 700 m in strike length and varies in thickness from 30 m at the south end, to over 70 m at the north end. The kimberlite varies in height from 60 m at the south end, up to 200 m at the north end. The Kelvin has an indicated resource of 8.5 million tonnes at a grade of 1.6 carats per tonne for a total of 13.62 million carats. The deposit is open at depth.

The Faraday 2 kimberlite comprises seven (7) kimberlite units dominated by volcaniclastic Kimberley-type pyroclastic kimberlite (KPK), with lesser coherent hypabyssal kimberlite (CK-HK). Much like Kelvin, Faraday 2 also hosts a significant amount of texturally transitional kimberlite. Faraday 2 kimberlite has been delineated over 600 m in length and varies in thickness from 20 m to 90 m and in height from 20 m up to 60 m. The Faraday 2 kimberlite remains open to the northwest.

The Faraday 1 kimberlite was first identified in the spring of 2015 and is the smallest of the known unconventional kimberlite bodies. Faraday 1 is infilled with volcaniclastic kimberlite (KPK) but is associated with significant amounts of hypabyssal kimberlite. The proportion of marginal breccia versus other kimberlite material is also higher than that documented in the other kimberlites. During the 2017 drilling of Faraday 1 and 3 bodies, it has been determined that Faraday 1 and Faraday 3 coalesce to form one body at around the lakeshore of Faraday Lake. Faraday 1 has been delineated over 200 m in length, varies in width between 30-60 m and in height between 10-30 m.

Faraday 3 was the last of the unconventional kimberlite bodies discovered in early 2016 at Faraday Lake. The Faraday 3 body has been delineated over 400 m, varies in width between 40-150 m and in height from 20-50 m. A significant amount of detailed geology, both macroscopic and petrographic work, has been undertaken to help establish four kimberlite units. The primary texture, like the other kimberlites in the area, is dominated by volcaniclastic kimberlite (Kimberley-type pyroclastic kimberlite – KPK) with lesser amounts of hypabyssal kimberlite (HK). There is also texturally transitional kimberlite between these two end members dominated by volcaniclastic-type material. Of particular importance, was the discovery in 2017 that Faraday 1 and Faraday 3 coalesce to form one complex kimberlite body, around the lakeshore of Faraday lake. This kimberlite body is now referred to as the Faraday 1-3 kimberlite.

1.5 EXPLORATION and DRILLING

The focus of KDI'S work on the property, during 2017, was to establish an Inferred Resource for the Faraday kimberlites, as well as initiating ground geophysical coverage at Blob Lake. Blob Lake occurs southwest of the Gahcho Kué mine and underlies two of the four mineral leases that KDI acquired from

GGL Resources Corp. in 2016. A small diamond drill program comprising 2766 metres was completed at the Faraday 2 body and extended the kimberlite an additional 150 m to the west-northwest and also documented that the Faraday 1 and Faraday 3 kimberlites coalesce to form one body.

The large diameter reverse circulation drill program produced over 8000 metres of drilling and 580 tonnes of kimberlite material. Faraday 2 returned 275 tonnes of kimberlite, Faraday 3 returned 280 tonnes of kimberlite and Faraday 1 returned 25 tonnes of kimberlite material for processing at the Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan, for macrodiamond analysis.

At Blob Lake, ground gravity surveying (over 12,000 readings), OhmMapper© surveying (over 401 line kms) and total field magnetic surveying (over 450 line kms) has delineated at least four priority drill targets.

1.6 SAMPLING METHOD, APPROACH and ANALYSIS

Aurora Geosciences Ltd. (with assistance from SRK Consulting), on behalf of KDI, have established a best practices protocol using standard operating procedures (SOPs) for all diamond and large diameter RC drilling including: core/chip logging, sampling for caustic fusion and dense media separation (DMS), downhole surveying, collar surveying, shipping, sample descriptions of kimberlite and database management.

SRC has completed all of the caustic fusion and dense media separation analyses since the program was initiated in 2012. SRC is an ISO/IEC 17025 accredited laboratory for caustic fusion analyses. The bulk sample retrieved during 2017 was under the supervision of Howard Coopersmith ("QP") and Mike Waldegger ("QP"). The processing and recovery of the diamonds was under the supervision of Howard Coopersmith.

The shipment of the bulk sample from site to SRC was under the supervision of Gary Vivian ("QP"). He visited the SRC lab on the 20th of June 2017, to verify the dense media separation process.

1.7 DATA VERIFICATION

Density measurements have been acquired by evaluating drill core in Yellowknife using a SOP designed by both SRK Consulting and Aurora Geosciences Ltd. incorporating industry best practices. Verification of densities measured has been completed by ALS Labs in Vancouver, BC. There is excellent correlation between Aurora's density measurements and those acquired by the independent laboratory.

The drillhole database continues to undergo significant scrutiny by field geologists, the site geologist, the Project Manager and the database manager all under the supervision of Mr. Vivian ("QP"). The drill database continues to be scrutinized by SRK Consulting as they support the geological database and the establishment of the 3-D internal and external models for the kimberlite bodies.

Microdiamond and macrodiamond results listed in the Aurora Geosciences Ltd. database have been compared to the Kennady Diamonds database. There are no inconsistencies.

The Faraday kimberlites bulk sample weights, moisture contents, diamond weights and size data were verified by an independent QP, Howard Coopersmith. Mr. Coopersmith was onsite at SRC to verify the full bulk sample process including confirmation of diamond sieve data. Mr. Coopersmith continues to refine the bulk sample process to efficiently handle the processing of any KDI kimberlite.

1.8 MINERAL PROCESSING and METALLURGICAL DATA COLLECTION

The SRC facility uses a 5 tonne per hour DMS plant, and processed the Faraday bulk sample from 2017 in June and July of 2017. SRC completed all processing for diamond recovery. Diamond recovery was completed at a bottom cut-off of +0.85 mm.

1.9 KENNADY NORTH MINERAL RESOURCE ESTIMATE

The Kelvin, Faraday 2 and Faraday 3 geological model domains have been adopted as the resource domains for the estimation of Mineral Resources. The volumes of these domains were combined with estimates of bulk density to derive tonnage estimates.

The micro-[1] and macrodiamond[2] grade and size frequency distribution (SFD) characteristics of each kimberlite were assessed and were found to indicate limited local variation and no evidence for large scale trends or changes in grade or SFD along strike within any of the volumetrically significant domains. Continuity is considered to be well established on this basis and is further supported by geological logging and petrographic studies. The use of average (global) grade estimates is therefore considered to be appropriate.

Grade estimates in Kelvin are based on drill core microdiamond results from each domain applied to a calibration of microdiamond stone frequency (stones per kilogram, st/kg) to recoverable (+1 mm) macrodiamond grade (micro-grade ratio). Microdiamond and macrodiamond data from corresponding kimberlite sample material in each domain of Kelvin were selected, allowing for definition of total content diamond SFD models to which appropriate recovery correction factors were applied, hence defining the micro-grade ratio. Grade estimates in Faraday 2 and 3 are based on average LDD sample grades converted to +1 mm recoverable grades using the same recovery parameters as used for Kelvin.

Diamond values are based on the valuation of two parcels of 2,262.43 ct from Kelvin and 1,183.12 ct from Faraday 2 and 3. Average values were derived by applying Kelvin and Faraday best estimate value distribution models to models of recoverable diamond size frequency distribution (SFD) by domain. These represent estimated average values of +1 mm recoverable diamonds and correlate with the +1 mm recoverable grades reported. Modifications to process plant efficiency (and hence degree of liberation

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[1] The term microdiamond is used throughout this report to refer to diamonds recovered through caustic fusion of kimberlite at a bottom screen size cut off of 105 µm (~0.00002 ct). Rare larger diamonds that would be recovered by a commercial production plant are also recovered through this process and are evaluated as part of the microdiamond population.

[2] The term macrodiamond is used throughout this report to refer to diamonds recovered by commercial diamond production plants, which typically only recover diamonds in and larger than the Diamond Trading Company sieve category 1 (~0.01 ct).

and recovery of diamonds in the smaller size ranges), relative to that assumed for this estimate, will require an adjustment to these values.

The work outlined in this report has defined a total Indicated Mineral Resource for the Kelvin kimberlite of 8.5 million tonnes at an average grade of 1.6 carats per tonne and an overall average diamond value of US$63 per carat (Table 1-1). The estimate encompasses the entire body as defined by the current Kelvin geological model, extending from base of overburden (~400 masl) in the south-east to a depth of -100 masl in the north. An additional Inferred Mineral Resource for Faraday 2 and 3 has been defined, comprising 3.27 million tonnes at an average grade of 1.54 cpt and an average diamond value of US$98 per carat. The estimate encompasses both bodies as defined by the current Faraday 2 and 3 geological models, extending from base of overburden (~390 masl) in the south-east to depths of approximately 160 masl in the north-west. The Kelvin Mineral Resources have been assessed to confirm that they satisfy the constraint of reasonable prospects for eventual economic extraction. The analysis incorporated both open-pit and underground mining options and yielded positive cash flows for the project based on the declared Mineral Resource estimate and appropriate assumptions regarding average diamond value (JDS, 2016). In view of their proximity, comparable character and higher estimated ore values relative to Kelvin, the Faraday 2 and Faraday 3 kimberlites are inferred to have reasonable prospects for eventual economic extraction.

Table 1-1. Mineral reosurce Statement for the Kennady North project.

Resource classification	Body	Volume (Mm^3)	Density (g/cm^3)	Tonnes (Mt)	Grade (cpt)	Carats (Mct)	Value (US $/ct)
Indicated	Kelvin	3.49	2.44	8.50	1.60	13.62	63
Inferred	Faraday 2 and Faraday 3	1.35	2.43	3.27	1.54	5.02	98

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

The volume, tonnes, grade and average diamond value for two minor domains of Faraday 2 and for the entire Faraday 1 kimberlite are not sufficiently well constrained by available data to define Mineral Resources. These deposits are defined as Target for Further Exploration (TFFE) and estimates of the potential ranges of volume, tonnes and grade (where possible) contained within these bodies are provided in Table 1-2.

Table 1-2. TFFE estimates of the ranges of volume, tonnes and grade within Faraday 1 and minor units within Faraday 2

Body	Volume (Mm^3)		Tonnes (Mt)		Grade (+1 mm cpt)	
	Low	High	Low	High	Low	High
Faraday 1	0.2	0.5	0.6	1.2	1.5	3.7
Faraday 2	0.01	0.02	0.01	0.04	-	-

The estimate of TFFE is conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if future exploration will result in the estimate being delineated as a Mineral Resource.

2 INTRODUCTION

The Kennady North project is 100% owned by Kennady Diamonds Inc. (KDI) and is located 290 km east-northeast of the City of Yellowknife, NT.

KDI commissioned Aurora Geosciences Ltd. (AGL) to provide an update to the technical report submitted on January 23, 2017 titled, “2016 Technical Report - Project Exploration Update and Maiden Mineral Resource Estimate, Kennady Lake North – Northwest Territories, Canada”. The update will include all exploration work which has been completed on the property since January of 2017 as well as providing an inferred mineral resource for the Faraday kimberlites. Although all aspects of this report have been under the supervision of AGL, both SRK Consulting and Mineral Services Canada Inc. (MSC) have contributed significantly to this report. This submission is an update to the above-noted technical report submitted to Sedar on January 23, 2017. This report will be filed by KDI in accordance with applicable securities commissions following the guidelines of the Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1, and in conformity with generally accepted CIM “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines”.

The information contained in this report was collected by AGL for KDI. All information has been reviewed by third parties such as SRK Consulting and MSC. Detailed geological modeling and descriptions have been under the supervision of Casey Hetman, M.Sc., P.Geo. (SRK) and the grade valuation and mineral resource estimate has been carried out by MSC under the supervision of Tom Nowicki, Ph.D., P.Geo. Mr. Hetman has been to the Kennady North property on numerous occasions over the past five years.

This report is prepared by Gary Vivian M.Sc., P.Geol., a principal of Aurora Geosciences Ltd. of Yellowknife and Dr. Tom Nowicki, P.Geo., Technical Director of Mineral Services Canada Inc. (MSC), Vancouver, BC. Mr. Vivian has 41 years of exploration experience, over 34 years as a geologist and 29 years as a P.Geol. His disciplines include gold, base metal and magmatic sulphides, uranium-rare earth related and diamond projects within Canada and Alaska. He is a member in good standing with the NWT and Nunavut Association of Professional Engineers and Geoscientists (NAPEG Member # 1301). Dr. Nowicki has over 23 years of experience in mineral exploration and mining. His role includes oversight and supervision of technical work undertaken by MSC particularly in the evaluation of diamond potential, geological and resource modeling of kimberlites.

Mr. Vivian and Dr. Nowicki are Qualified Persons (QPs) as defined by the Canadian Securities Administrators National Instrument 43-101.

3 RELIANCE ON OTHER EXPERTS

3.1 SOURCES OF INFORMATION AND DISCLOSURE

This report is based upon all information which has been gathered by Aurora Geosciences Ltd. (AGL) as the exploration management contractor to KDI. AGL has relied on some experienced subcontractors to help with field programs, but all under the standard operating procedures administered by AGL. Internal reports written for AGL or KDI and public releases used for the purposes of information in this submission have all been referenced correctly.

Diamond valuation and value distribution modelling results have been incorporated as provided by WWW International Diamond Consultants Ltd. (WWW) and are used in Section 14.1.4 and 14.2.5 in the modelling of average diamond values for Faraday and Kelvin. WWW are recognized international leaders in the field of diamond valuation and the QP's for this report believe it is reasonable to rely on the diamond values and value distribution models provided.

4 PROPERTY DESCRIPTION AND LOCATION

The Kennady North property is located in Canada's Northwest Territories, approximately 290 kilometres east-northeast of Yellowknife, NT (Figure 4-1) and geographically centered at 63°29' North latitude and 109°11' West longitude. The property is comprised of 22 mining leases and 58 mineral claims, totaling 160,997.16 acres or 65,154.66 hectares (Table 4-1 and Figure 4-2). The claims cover an area roughly 30 kilometres long by 30 kilometres wide and are located on NTS map sheets 75N/06 and 75N/11. Table 4.1 summarizes the mineral claim and mining lease details current as at December 31, 2016. The property is 100% owned by Kennady Diamonds Inc.

The Kennady North property is part of a once larger group of original claims known as the AK property. The AK Property was staked by Inukshuk Capital Corp. in 1992, comprising 520,000 ha, and optioned to Mountain Province Mining Inc. later that same year. Only nine (9) mining leases remain of this original claim group.

Additional partners in the original AK Property included Camphor Ventures Inc. (Camphor Ventures), and 444965 BC Ltd., a subsidiary of Glenmore Highlands Inc. (Glenmore Highlands). At the time, Glenmore Highlands was a controlling shareholder of Mountain Province Mining Inc. as defined under the Securities Act of British Columbia. 444965 BC Ltd. amalgamated with Mountain Province Mining Inc. in 1997, to form Mountain Province Diamonds Inc. (MPV), and Camphor Ventures' interest in the property was acquired by MPV in 2007.

During 2013, KDI completed an agreement with GGL Resources Corp. to buy their Bob Lake camp and acquire 12 mineral leases. A total of 52 mineral claims were added in late 2013. Two of these claims have been allowed to lapse. KDI then completed an agreement in 2016 to purchase 6 leases along the southern boundary of the GK mine site from GGL Resources Corp. The current land package comprises 22 mining leases and 58 mineral claims.

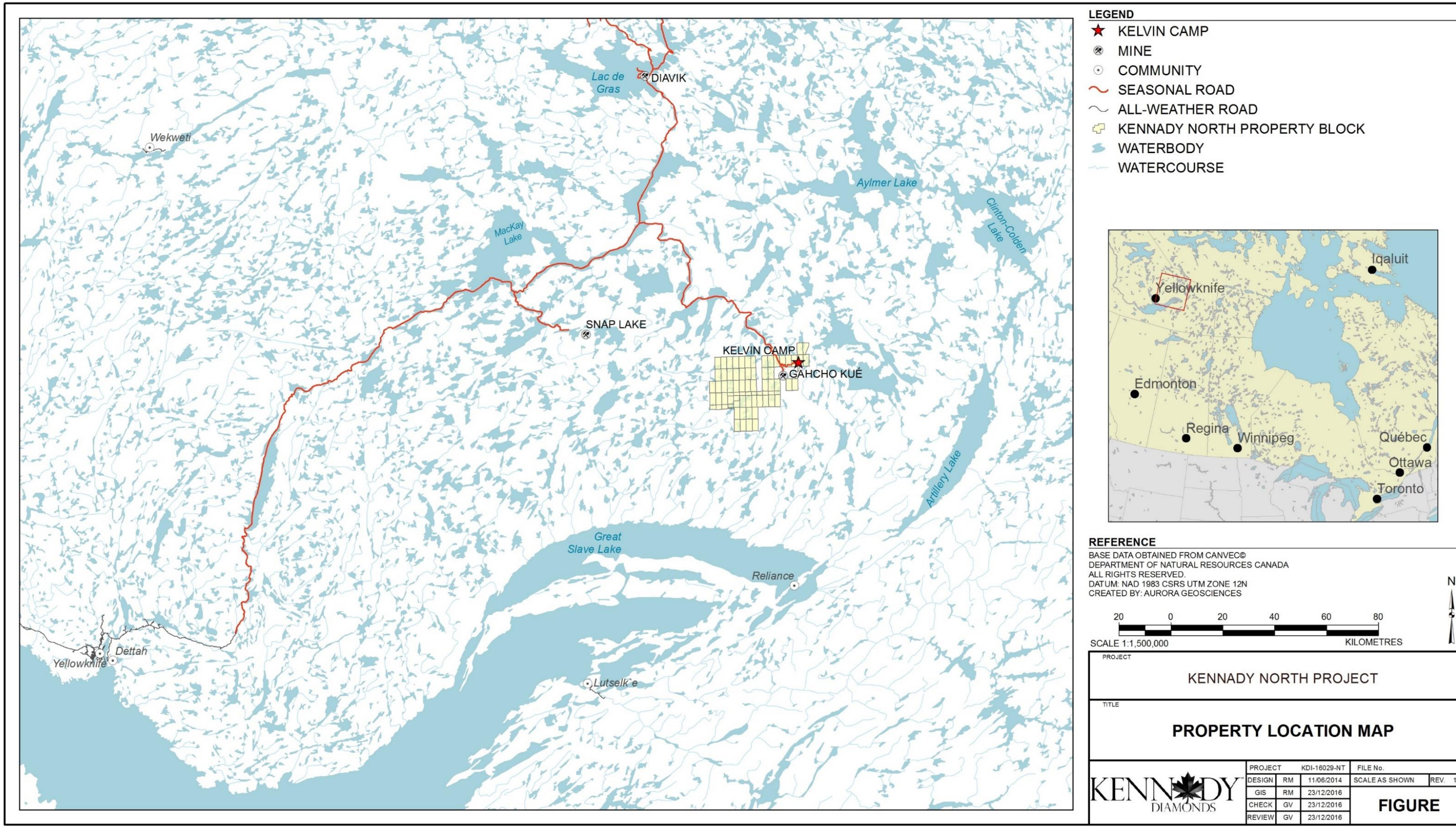

Figure 4-1. Location Map of the Kennady North project

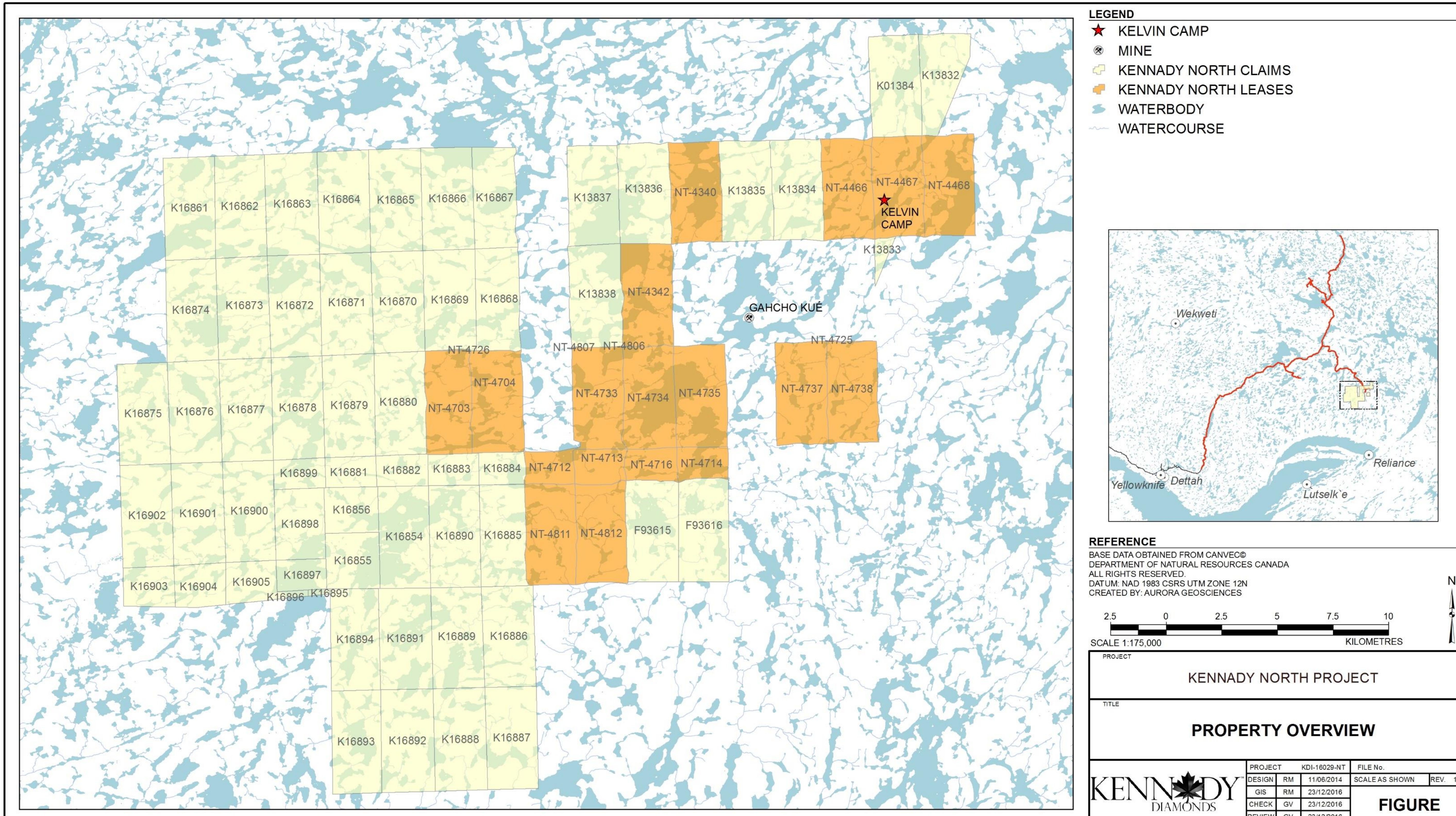

Figure 4-2. Claim location map of the Kennady North Property

Table 4-1. Mineral claim statistics for the Kennady North property

Claim Number	Name	Status	District	Lapse Date	Recording Date	Hectares	Owner
F93615	SOK 1	ACTIVE	NWT	06/06/2018	06/06/2013	1045.1	KDI 100%
F93616	SOK 2	ACTIVE	NWT	06/06/2018	06/06/2013	1045.1	KDI 100%
K16861	AL 1	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16862	AL 2	ACTIVE	NWT	13/09/2023	13/09/2013	1045.1	KDI 100%
K16863	AL 3	ACTIVE	NWT	13/09/2023	13/09/2013	1045.1	KDI 100%
K16864	AL 4	ACTIVE	NWT	13/09/2023	13/09/2013	1045.1	KDI 100%
K16865	AL 5	ACTIVE	NWT	13/09/2023	13/09/2013	1045.1	KDI 100%
K16866	AL 6	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16867	AL 7	ACTIVE	NWT	13/09/2020	13/09/2013	864.53	KDI 100%
K16868	AL 8	ACTIVE	NWT	13/09/2018	13/09/2013	909.94	KDI 100%
K16869	AL 9	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16870	AL 10	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16871	AL 11	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16872	AL 12	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16873	AL 13	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16874	AL 14	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16875	AL 15	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16876	AL 16	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16877	AL 17	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16878	AL 18	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16879	AL 19	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16880	AL 20	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16881	AL 21	ACTIVE	NWT	13/09/2017	13/09/2013	321.04	KDI 100%
K16882	AL 22	ACTIVE	NWT	13/09/2017	13/09/2013	325.37	KDI 100%
K16883	AL 23	ACTIVE	NWT	13/09/2019	13/09/2013	323.75	KDI 100%
K16884	AL 24	ACTIVE	NWT	13/09/2019	13/09/2013	290.81	KDI 100%

K16885	AL 25	ACTIVE	NWT	13/09/2017	13/09/2013	925.35	KDI 100%
K16886	AL 26	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16887	AL 27	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16888	AL 28	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16889	AL 29	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16890	AL 30	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16891	AL 31	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16892	AL 32	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16893	AL 33	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16894	AL 34	ACTIVE	NWT	13/09/2019	13/09/2013	1045.1	KDI 100%
K16895	AL 35	ACTIVE	NWT	13/09/2017	13/09/2013	31.57	KDI 100%
K16896	AL 36	ACTIVE	NWT	13/09/2017	13/09/2013	36.95	KDI 100%
K16897	AL 37	ACTIVE	NWT	13/09/2017	13/09/2013	306.35	KDI 100%
K16898	AL 38	ACTIVE	NWT	13/09/2017	13/09/2013	702.82	KDI 100%
K16899	AL 39	ACTIVE	NWT	13/09/2017	13/09/2013	311.69	KDI 100%
K16900	AL 40	ACTIVE	NWT	13/09/2017	13/09/2013	1045.1	KDI 100%
K16901	AL 41	ACTIVE	NWT	13/09/2018	13/09/2013	1045.1	KDI 100%
K16902	AL 42	ACTIVE	NWT	13/09/2021	13/09/2013	1045.1	KDI 100%
K16903	AL 43	ACTIVE	NWT	13/09/2017	13/09/2013	409.34	KDI 100%
K16904	AL 44	ACTIVE	NWT	13/09/2019	13/09/2013	435.97	KDI 100%
K16905	AL 45	ACTIVE	NWT	13/09/2019	13/09/2013	411.32	KDI 100%
K16854	AL 46	ACTIVE	NWT	17/02/2017	17/02/2014	1045.1	KDI 100%
K16855	AL 47	ACTIVE	NWT	17/02/2018	17/02/2014	605.49	KDI 100%
K16856	AL 48	ACTIVE	NWT	17/02/2018	17/02/2014	495.42	KDI 100%
K01384	KWEZI 01	ACTIVE	NWT	22/11/2020	22/11/2010	1045.1	KDI 100%
K13832	KWEZI 02	ACTIVE	NWT	12/07/2020	12/07/2010	765.06	KDI 100%
K13833	KWEZI 03	ACTIVE	NWT	12/07/2020	12/07/2010	94.50	KDI 100%
K13834	KWEZI 04	ACTIVE	NWT	12/07/2020	12/07/2010	1045.1	KDI 100%

K13835	KWEZI 05	ACTIVE	NWT	12/07/2020	12/07/2010	1045.1	KDI 100%
K13836	KWEZI 06	ACTIVE	NWT	12/07/2020	12/07/2010	1045.1	KDI 100%
K13837	KWEZI 07	ACTIVE	NWT	12/07/2020	12/07/2010	1045.1	KDI 100%
K13838	KWEZI 08	ACTIVE	NWT	12/07/2020	12/07/2010	1045.1	KDI 100%

Table 4.2 Mineral Lease Statistics for the Kennady North property

Lease Number	Status	District	NTS Sheet	Recording Date	Hectares	Owner
4703	ACTIVE	NWT	75N/5,6	22/12/2025	954	KDI 100%
4704	ACTIVE	NWT	75N/6	22/12/2025	1064	KDI 100%
4712	ACTIVE	NWT	75N/6	22/12/2025	327	KDI 100%
4713	ACTIVE	NWT	75N/6	22/12/2025	360	KDI 100%
4714	ACTIVE	NWT	75N/6	22/12/2025	329	KDI 100%
4716	ACTIVE	NWT	75N/6	22/12/2025	337	KDI 100%
4725	ACTIVE	NWT	75N/6	22/12/2025	7.65	KDI 100%
4726	ACTIVE	NWT	75N/6	22/12/2025	6.55	KDI 100%
4733	ACTIVE	NWT	75N/6	30/03/2026	1035	KDI 100%
4806	ACTIVE	NWT	75N/6	13/02/2028	1.86	KDI 100%
4807	ACTIVE	NWT	75N/6	13/02/2028	0.945	KDI 100%
4811	ACTIVE	NWT	75N/6	21/02/2027	1027	KDI 100%
4812	ACTIVE	NWT	75N/6	21/02/2027	1004	KDI 100%
4340	ACTIVE	NWT	75N/6,11	15/07/2023	1024	KDI 100%
4342	ACTIVE	NWT	75N/6	15/07/2023	1056	KDI 100%
4466	ACTIVE	NWT	75N/6,11	15/07/2023	1017	KDI 100%
4467	ACTIVE	NWT	75N/6,11	15/07/2023	1030	KDI 100%
4468	ACTIVE	NWT	75N/6,11	15/07/2023	1034	KDI 100%
4734	ACTIVE	NWT	75N/6	30/02/2026	1069	KDI 100%

4735	ACTIVE	NWT	75N/6	30/02/2026	1066	KDI 100%
4737	ACTIVE	NWT	75N/6	30/02/2026	1059	KDI 100%
4738	ACTIVE	NWT	75N/6	30/02/2026	1029	KDI 100%
					15838.01	

To the east of, and bordering on, some of the claims and leases, Parks Canada and the Łutsel K'e Dene First Nations have withdrawn lands for the proposed Thaidene Nënė National Park Reserve. No staking or mineral exploration is currently allowed in this area although there is a suggestion the reserve boundaries could be moved and finalized by April 1, 2018. To the west, is the very large interim land withdrawal of the Akaitcho First Nations. Land claims negotiations with the Canadian Federal government have stalled, and as such this withdrawal represents one of the largest land packages removed from industry access in history.

There are no environmental liabilities associated with the Kennady North property and there is a fully accessible Class 'A' land use permit and Class 'B' water license covering this project. KDI received a new land use permit and water license to accommodate an advanced stage exploration program.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESS, INFRASTRUCTURE and LOCAL RESOURCES

The Kennady North project is located in the Northwest Territories approximately 290 kilometres east-northeast of Yellowknife, 80 kilometres east-southeast of the Snap Lake Mine and 100 kilometres north of the community of Łutsel K'e. The property is 25 km north of the tree line with no permanent road access. Centered geographically at 63°29' North latitude and 109°11' West longitude, the property covers an area roughly 30 km long and up to 30 km wide.

Access to the property is easiest via ski- and/or float-equipped fixed wing aircraft and helicopters. The Gahcho Kué Mine Site, just seven kilometres to the south, has a 120 kilometre long winter spur road, leading north to join the Tibbitt to Contwoyto Winter Road (TCWR) at MacKay Lake. KDI has an agreement in place with the Gahco Kué (GK) joint venture (DeBeers Canada and MPV) to use the spur road to access the Kennady North property. Annually, KDI builds a 10 km spur road from the Kelvin camp to access the GK spur road (Figure 5-1).

The Tibbitt-Contwoyto Lake Winter Road operates from late January to the beginning of April in most years to resupply the Ekati, Diavik, Gahco Kué and recently closed Snap Lake diamond mines. It connects with the Ingraham Trail (NWT Highway 4), a paved highway that runs for approximately 70 kilometres east of Yellowknife. Transportation within the Kennady North property is by helicopter, small ski- or float-equipped fixed wing aircraft, boats, snowmachines or on foot. KDI builds an ice strip every year to allow larger aircraft (Dash 7) to access the site. KDI also has an agreement with the GK joint venture to use the permanent airstrip at the Gahcho Kué mine site to allow larger aircraft such as an Electra or C-130 Hercules to move cargo as needed. Access encumbrances to the property are not considered significant.

The Akaitcho Interim Land Withdrawal (Figure 5-1) was instituted to put a halt to exploration in order to provide time for culminating the final Akaitcho Territory Land Claim. This agreement in principle has still not been finalized which creates uncertainty for exploration in the NWT. Figure 5-1 also shows the lands held under an interim withdrawal for the proposed Thaidene Nënė National Park Reserve abutting up against the GK mine site and the Kennady North property on the west.. It is proposed that some of the proposed reserve would be turned over to the Government of the NWT to operate as territorial lands. It is unclear how all of this will be represented on a final map, but parties have been working towards a final plan for April 1, 2018. The park and the interim withdrawal do not directly affect the Kennady North project but could certainly have a negative impact on streamlining costs.

Two camps exist on the Kennady North project, Kelvin and Bob, and provide all room and board at site. The newly amended land use permit will allow for 150 people at site with significant on-site equipment such as loaders, graders, trucks, etc.

Yellowknife is the largest supply centre in the area. This small city (pop. 19,000) has many amenities. It is serviced by four airlines with daily flights connecting to the south. A paved highway also extends from Yellowknife south to Alberta. All logistical support, labour and professional staff can be supplied from Yellowknife, NT.

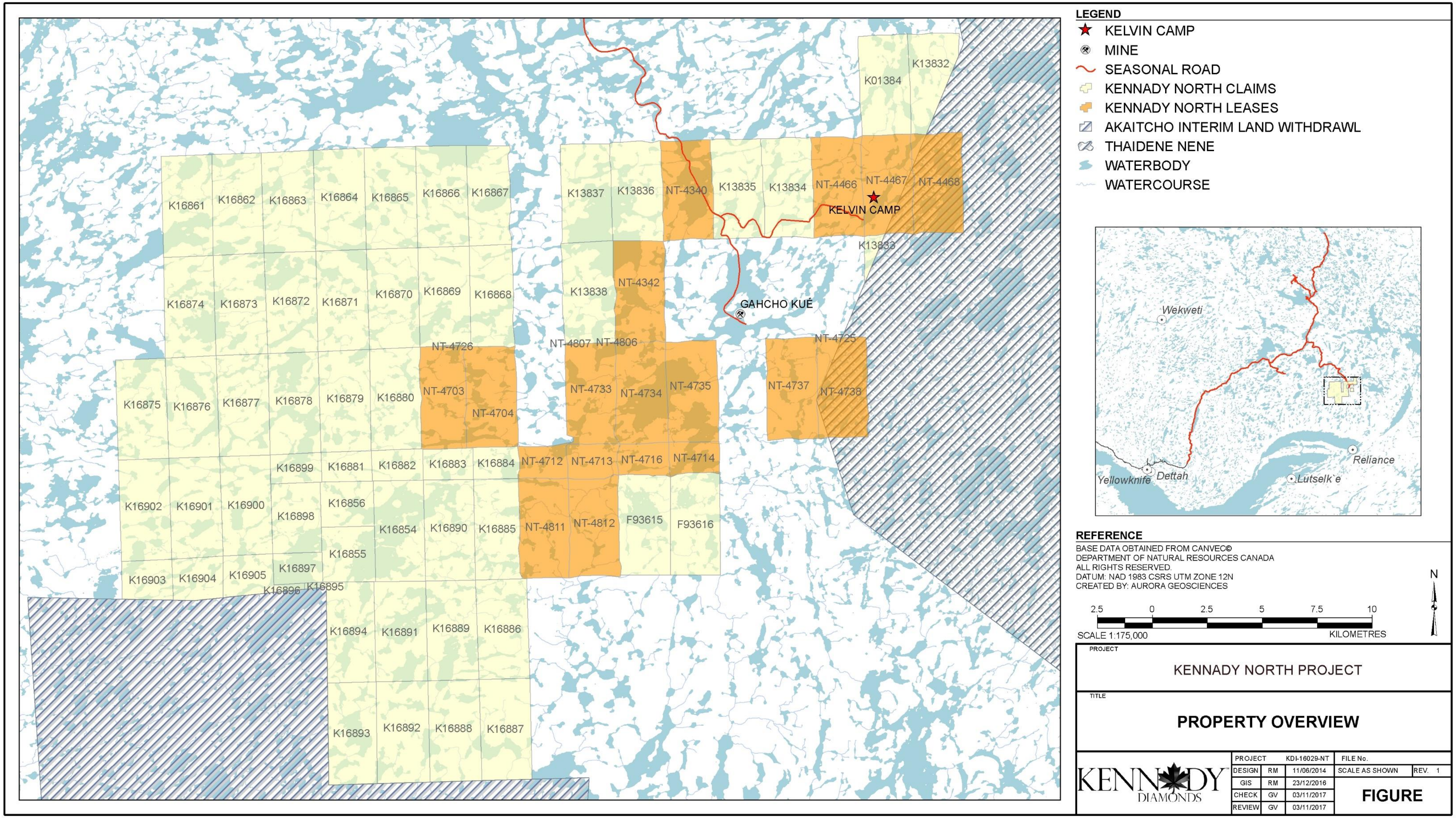

Figure 5-1. Location map showing Winter Road Access to the Kennady North project

5.2 CLIMATE

The Kennady North project is located 225 kilometres south of the Arctic Circle and experiences an extreme and semi-arid polar climate typical of the Taiga Shield Ecozone of Canada (Ecological Stratification Working Group, 1995). The area can further be classified as belonging to the Taiga Shield High Subarctic (HS) Ecoregion (*ibid*.). The area is dominated by long and cold winters with cool, nice summers. The Northwest Territories are classified as a polar semi-desert with limited precipitation, both in the winter as snow and summer as rain.

Winter temperatures average -25°C to -30°C but extreme temperatures due to wind chill, dropping below -50°C, are not uncommon. Freeze-up usually occurs around the first week of October and break-up is usually finished by mid-June. Summers are commonly cool and short, with average temperatures around +15°C but can reach +30°C for short durations. Exploration has occurred all 12 months of the year, but the most feasible times (daylight hours, temperatures, etc.) extend from early March to late October.

Daylight hours range from 4-5 during the Winter Solstice to effectively 24 hours at the Summer Solstice. The spring and fall (vernal and autumnal) equinoxes occur in March and September, respectively, at which time the daylight hours equal night time hours.

5.3 TOPOGRAPHY and PHYSIOGRAPHY

The KDI property is part of the Barrenlands on the edge of the zone of Continuous Permafrost. The area is characterized by heath and tundra (low shrubs and alpine-type vegetation) with occasional knolls, surface outcrops and localized surface depressions, interspersed with lakes. Thin, discontinuous cover of mineral soil, organic materials and glacial drift overlie shallowly buried bedrock.

The area is characterized by low to moderate relief, ranging from 400 metres to 550 metres ASL (above sea level). Elongate north-northeast trending outcrop expressions vary in height from a few metres up to 20 metres. Local topographical relief can be up to 40-50 metres and as such, one can usually see tens of kilometres in any direction. Outcrops are separated by numerous small ponds, lakes and marshy depressions. In some places, overburden is very extensive and there may be as little as 5% outcrop in an area, but this can vary widely across the property.

5.4 FLORA and FAUNA

The local habitat represents the transition from sub-Arctic taiga coniferous forest to treeless tundra. Year-round fauna includes: red fox, Arctic fox, Arctic ground squirrel (sik-sik), Barrens grizzly, wolf, wolverine and ptarmigan. Migratory species include Barrenlands caribou and many species of birds. During the summer months (mid-June to mid-August), heavy concentrations of biting flies (mosquito and blackfly) are present (NWT Department of Environment & Natural Resources web site).

Vegetation in the area is characteristic of Arctic tundra, with moss, sedges, lichens and dwarf species of willow and birch. Some small stands of stunted spruce occur in the areas near streams and rivers and can be found as far north as Kirk Lake (Ecological Stratification Working Group, 1995). The trees may reach up to two metres in height under ideal conditions of slope, drainage and insolation.

6 HISTORY

The History of the Kennady North property area prior to 2012 has been summarized in the Technical Report submitted in July of 2012 (Sedar-Kennady Diamonds Inc.; Vivian, 2012). The most recent work from 2012-October of 2016 was compiled in the Technical Report submitted in January of 2017 (Sedar – Kennady Diamonds Inc.; Vivian, 2017) and includes a maiden indicated resource for the Kelvin kimberlite of 8.5 million tonnes grading 13.62 million carats.

KDI has completed extensive ground exploration work on the Kennady North project since mid-2011. Table 6-1 summarizes this work. A detailed description of the historical work can be ascertained from the "2016 Technical Report-Exploration Update and Maiden Mineral Resource Estimate Kennady Lake North - Northwest Territories, Canada", submitted by KDI (Sedar, January 23, 2017).

Table 6-1. Exploration Summary on the Kennady North Property prior to 2017

Historical Exploration Completed by Kennady Diamonds prior to 2017							
SURVEY	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Totals**
Airborne gravity	3,860						**3860.00**
Ground Gravity (stations)			33,980	6,434	4,424	20,346	**65184.00**
OhmMapper (kms)			1,757.56	881	206.56	128.88	**2974.00**
Ground Mag (kms)		609.8	763.3			751	**2124.10**
HLEM (kms)			256				**256.00**
Bathymetry (lakes)		23	79	33			**135.00**
Ground Penetrating Radar (kms)			258				**258.00**
Diamond Drilling NQ (metres)		2,482.12	8,647.78	16,482	16,895.10	9,619	**54126.00**
Diamond Drilling HQ3 (metres)						380	**380.00**
Diamond Drilling HQ (metres)				10,408	16,527.38	713	**27648.38**
Bulk Sampling RC (tonnes)					443.8	641.8	**1085.60**
Till Sampling RC (samples)				899			**899.00**

The maiden Mineral Resource for the Kennady North project prior to the 2017 exploration program is documented at 8.5 Million tonnes, grading 1.6 carats per tonne for 13.62 million carats. This resource is hosted within the Kelvin kimberlite.

7 GEOLOGICAL SETTING and MINERALIZATION

This section has been modified from Johnson, D. et al., 2010; Stubley, M., 2015; Bezzola, M. and Hetman, C., 2016 with specific references herein.

7.1 SLAVE CRATON OVERVIEW

This overview of the Slave craton is an excerpt from Stubley, 2015. The Slave craton is a well-exposed small to medium-sized Archean craton that straddles the Northwest Territories – Nunavut border in northwestern Canada. Figure 7-1 is a simplified version of the geology of the Slave craton (Stubley 2015; modified from Stubley, 2005, with principal terrane boundaries outlining the surface extent of the Central Slave Superterranne (red dashed lines) from Helmstaedt and Perhsson, 2012). The craton dips below Proterozoic rocks to the east and west, and below Paleozoic cover to the north and southwest. The northwest-striking Bathurst Fault coincides with a broad zone of Proterozoic supracrustal rocks and separates the Bathurst Block in the northeast from the main Slave craton.

Recent reviews of the Slave craton by Bleeker and Hall (2007), Helmstaedt (2009), and Helmstaedt and Pehrsson (2012) address many aspects of the crustal geology and its mineral deposits. The fundamental architecture of the craton is a Mesoarchean nucleus, termed the Central Slave Basement Complex or Superterrane (CSBC or CSST, respectively), with juvenile Neoarchean crust accreted to its east and southwest margins. Timing of the principal accretion is commonly assumed to be ca. 2650 – 2630 Ma, although Bennett et al. (2005) suggest that at least some of the cratonic amalgamation occurred during the principal pan-Slave D2 tectonic event at ca. 2.6 Ga. The D2 event is associated with extensive shortening/thickening of the crust, widespread granitoid emplacement, and the peak of regional metamorphism.

7.2 REGIONAL GEOLOGY

The crust of the Slave is believed to have amalgamated during a 2.69 Ga collision event between analogous island-arc terranes (Hackett River) to the east, and a basement complex (Central Slave Basement Complex), along a N-S suture (Bleeker *et al*., 1999). Rocks of the Acasta Gneiss in the CSBC are the oldest recorded *in situ* on Earth (Bowring *et al*., 1989).

The Slave craton has been intruded by a number of mafic dyke swarms. The earliest intrusions have been ascribed an Early Proterozoic age and typically consist of diabase dykes. These constitute the Malley (2.23 Ga), MacKay (2.21 Ga) and Lac de Gras (2.03 Ga) swarms (LeCheminant *et al*., 1996). These dyke swarms are limited in extent and are postulated to indicate evidence for continental breakup during the Early Proterozoic (Fahrig, 1987).

The Mackenzie Dyke Swarm intrudes the entire Slave craton along a NW trend and is thought to be contemporaneous with flood basalt eruptions of the Coppermine River Group and associated with the Muskox Intrusive Complex. This dyke swarm has been assigned a Proterozoic age of 1270 Ma (LeCheminant and Heaman, 1989).

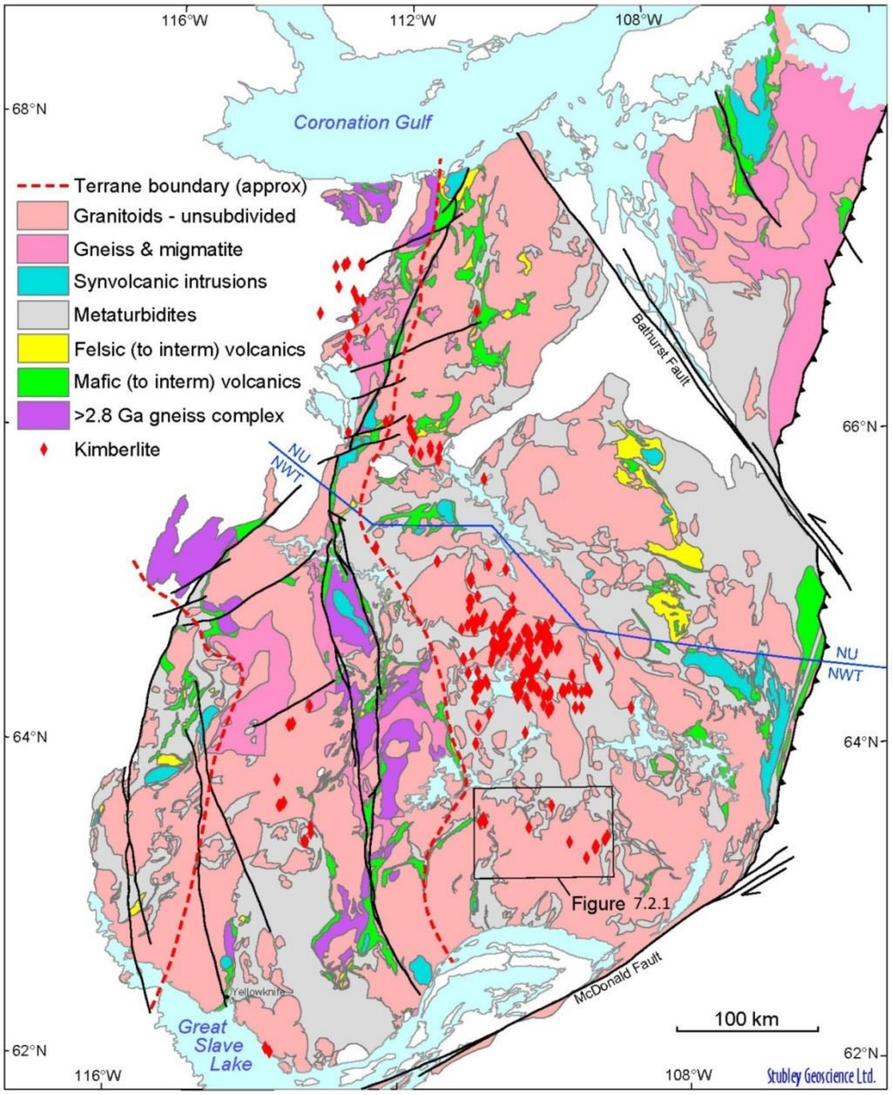

Figure 7-1. Geology Map of the Slave craton (after Stubley, 2005; Helmstaedt and Pehrsson, 2012)

Finally, the Late Proterozoic Gunbarrel and Franklin dyke swarms intrude portions of the Slave. The Gunbarrel event has analogues in the Wyoming Craton and may signal the formation of a western rift margin in North America approximately 780 Ma, as they extend from the western Slave, through the Mackenzie Mountains and into the Wyoming Craton (LeCheminant and Heaman, 1994). The gabbroic Franklin dykes and sills of 723 Ma are related to the eruption of the Natkusiak flood basalts on Victoria Island above a hot mantle plume (Rainbird, 1993).

The Kennady North property lies in the southeastern portion of the Slave craton (Figure 7-1). The property surrounds the DeBeers/MPV joint venture Gahcho Kué diamond mine currently being developed (Figure 7-2).

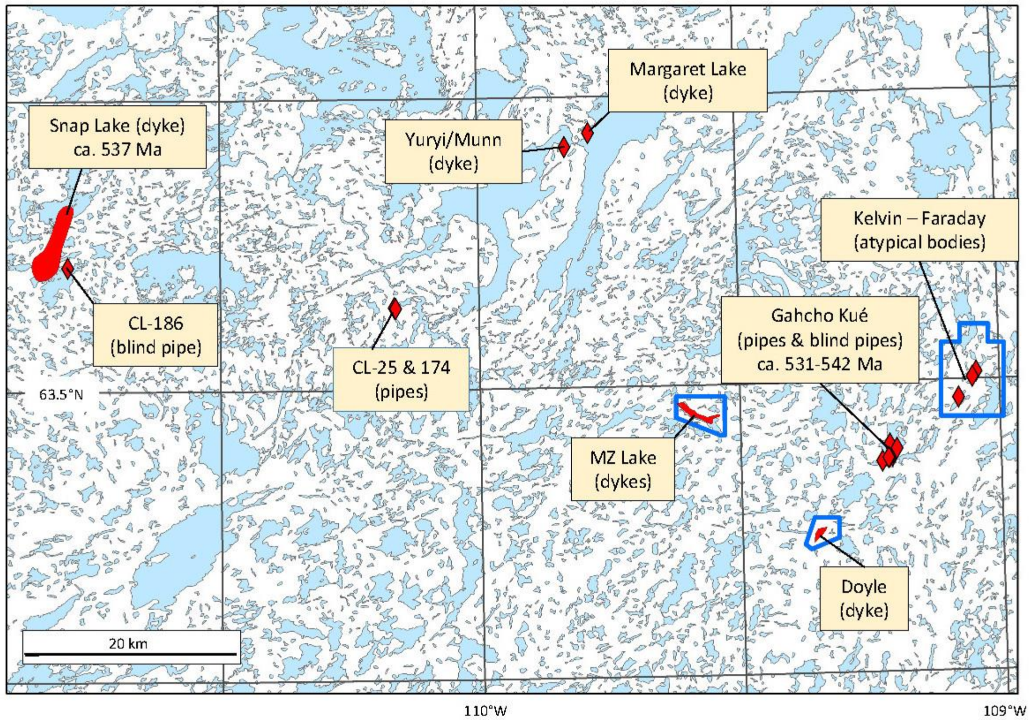

Figure 7-2. Kimberlite bodies of the southeastern Slave Craton

The only published bedrock maps in this region are from Folinsbee (1952) and Cairns et al., (2003) at a scale of 1:250,000. The multidisciplinary study completed by Cairns et al., produced a number of lithological, metamorphic, structural and geochronological publications (e.g., Maclachlan et al., 2002; Cairns, 2003; and Cairns et al., 2005).

Multiple phases of kimberlite emplacement have occurred throughout the Phanerozoic Era in the Cambrian, Siluro-Ordovician, Permian, Cretaceous, Jurassic and Eocene periods (Heaman *et al*., 2003). Many of the kimberlites in the southeastern Slave craton form broad clusters with similar characteristics from other areas of the craton (Stubley, 2004). All known "blind pipes" and most of the prominent shallow-dipping dykes ("sheets") are confined to this cluster. In classical terminology, kimberlite textures studied in the Slave craton are characterized solely by tuffisitic (TK), hypabyssal (HK), and transitional (TK-HK) components; crater and extra-crater components have not been recognized (e.g., Scott Smith, 2008). Early Cambrian emplacement ages for the Snap Lake, Gahcho Kué and the first age dates for the Kelvin kimberlites are essentially identical, and contrast with all other kimberlite ages within the craton. The nature of the lithospheric mantle underlying the southeast craton also appears to be unique; a thicker (>220 to ~300 km) and cooler lithosphere at the time of kimberlite emplacement is documented by Kopylova and Caro (2004), Pokhilenko et al. (1998), and Agashev et al. (2008).

7.3 PROPERTY GEOLOGY

Aurora Geosciences Ltd. contracted Mike Stubley, Ph.D. (Stubley Geoscience Ltd.) to complete detailed mapping and structural analysis of the Kelvin-Faraday Corridor as well as the MZ and Doyle Lake areas (blue areas outlined in Figure 7-2). Upon completion of the 10 week mapping program an internal report was produced for KDI. A summary of this report is used in this section.

7.3.1 Kelvin-Faraday (KFC) Area Rock Types

The following sections summarize the outcrop characteristics within the KFC and provide the most detailed property geology to date (Figure 7-3). Inset in this figure shows poles to bedding and the dominant foliation on a lower hemisphere equal-area stereonet; Gaussian contouring at multiples of sigma above "expected" (Stubley, 2015). Historical airborne geophysical data have been used to help define structure and lithological contacts.

7.3.1.1 Metasedimentary Rocks

The oldest rocks, and the host to all known kimberlite, comprise a turbiditic greywacke- mudstone sequence (Unit Asm), as constitutes more than 25% of the exposed Slave craton (Stubley, 2005; Figure 7-3). Upper-amphibolite metamorphic conditions have induced a mineral assemblage containing ubiquitous biotite and sillimanite (with quartz and feldspars), variable muscovite, and local garnet. Variable melting of the sedimentary sequence, particularly in the pelitic components (e.g., Fig. 7-4a), has produced common segregation fabrics and complex migmatitic textures. Anatectic melt phases ("neosome" of leucocratic granodioritic composition) are variably mobile. Planar bedding typically ranges from 10 to 150 cm thick, but locally ranges from <4 to about 300 cm. Graded bedding is locally evident, and is commonly expressed by increased aluminosilicate porphyroblasts and/or migmatitic textures in the upper pelitic (mudstone) zones (Fig. 7-4b). A spectacular zone of lichen-free well-bedded metaturbidites east of Mag Lake lacks significant in situ melt phases and preserves many primary sedimentary features.

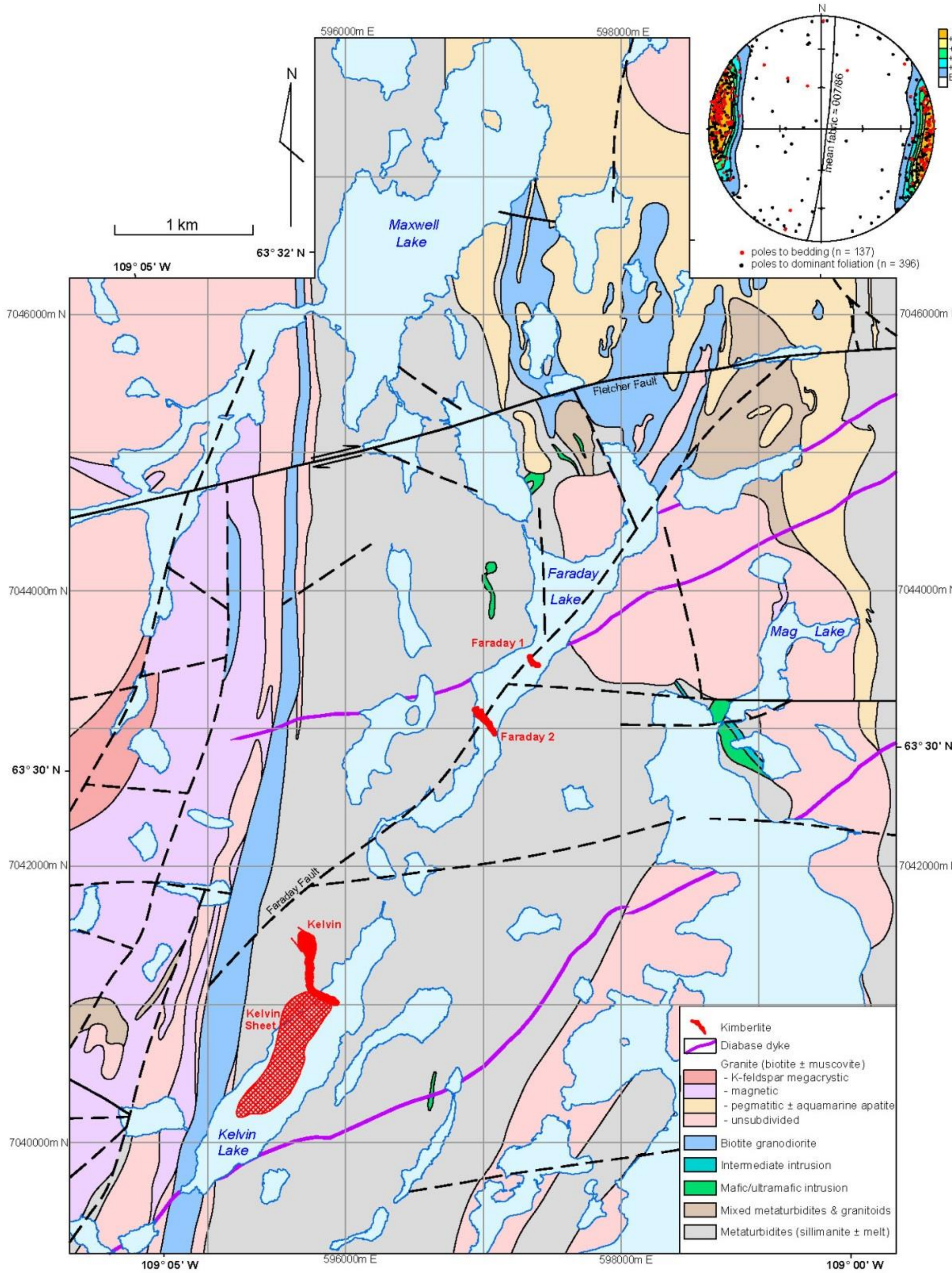

Figure 7-3. Simplified geology of the KFC (Stubley, 2015)

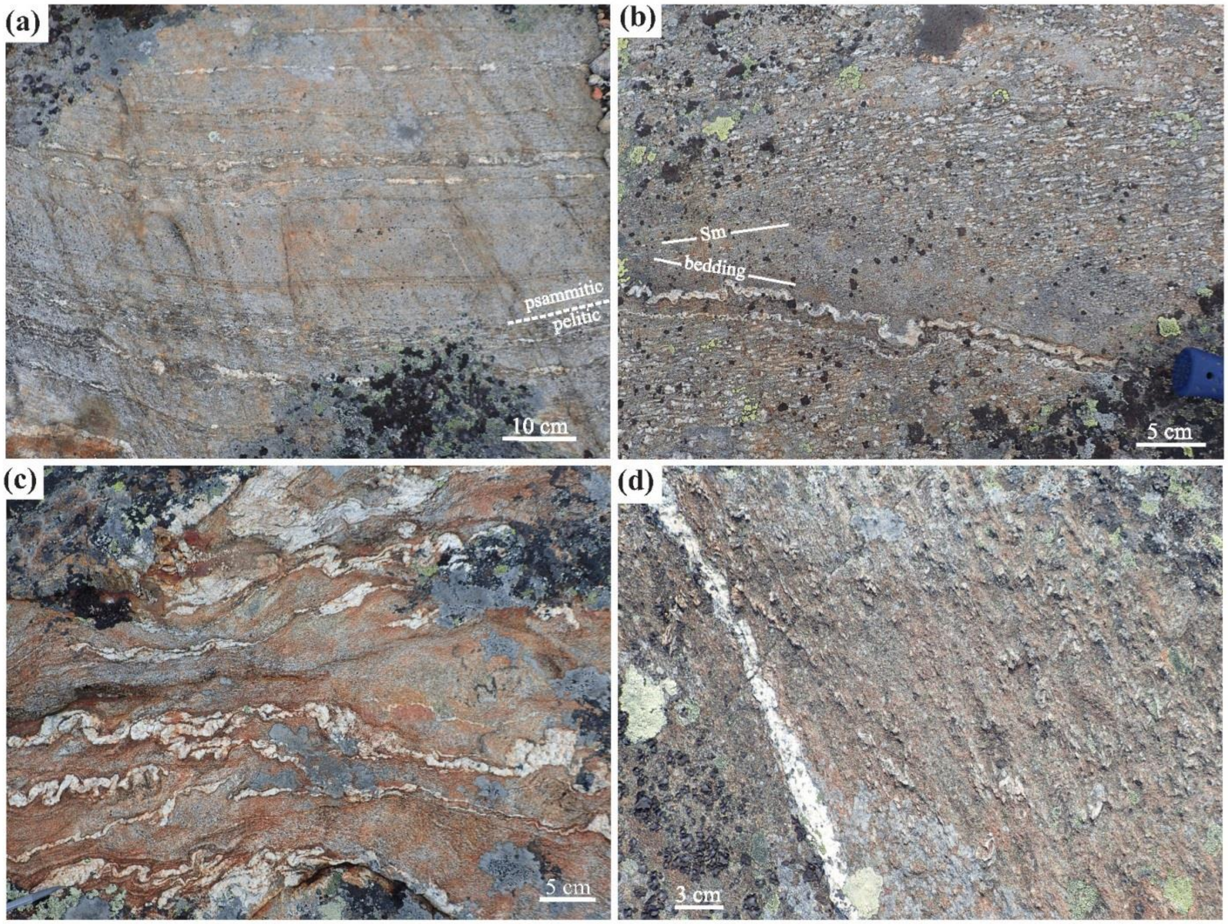

Figure 7-4. Photographs showing textural variations in metaturbidites (a-d)

(a) Typical thinly bedded metaturbidites with homogeneous schistose psammitic zones and heterogeneous recrystallized pelitic zones (Unit Asm; GR 596066E 7039405N). (b) Rare example of dominant foliation (Sm) oblique to bedding. Gradual increase in porphyroblast size and density reveals upward grading (sedimentary "fining") towards top of photo (Unit Asm; GR 597021E 7043929N). (c) Highly deformed turbiditic migmatite (Unit Amig; GR 599238E 7045782N). (d) Crenulated sillimanite ribbons with neosome and second-generation sillimanite along axial planes (Unit Asm; GR 599665E 7045814N)].

7.3.1.2 Mafic to Ultramafic Rocks

Medium- to very coarse-grained hornblende-plagioclase±biotite rocks are classified as gabbro and commonly exhibit a weak foliation and weak to no magnetism. The thickest zone of gabbro (ca. 100m wide) at the southwest tip of Mag Lake locally approaches "hornblendite" composition with less than 20% plagioclase, and incorporates sporadic zones with abundant garnet. This zone also exhibits complex zones of partial melting and diffuse plagioclase segregation.

7.3.1.3 Intermediate Intrusive Rocks

Three dyke-like exposures of fine- to very fine-grained homogeneous non-magnetic intermediate rocks are recognized; two are near the southwest part of Mag Lake and another poorly exposed example is about one kilometre west of Faraday 2. Each example appears to consist principally of quartz, feldspar and biotite. A smooth brownish-weathering surface is particularly susceptible to glacial scouring. A weak to moderate foliation is defined by aligned biotite, and local migmatitic segregation textures indicate emplacement prior to the peak of metamorphism.

7.3.1.4 Granitoids

Massive pink to whitish pegmatite dykes, with variable biotite, muscovite and tourmaline, transect all other granitoid phases; most mappable pegmatite bodies strike north-south. The 13 other granitoids are subdivided into eight somewhat-distinctive units. The oldest suite comprises whitish- to grey-weathering biotite granodiorite, with some zones containing minor muscovite (transitional to granite) and other zones with minor hornblende (transitional to tonalite). Multiple textural phases are recognized, and these are dominated by fine-grained well foliated to gneissic zones and by medium- to coarse-grained leucocratic and weakly foliated “chunky” zones (Figure 7-5a). The granodiorites have been subdivided based on the prevalence and intensity of magnetism in hand samples (biotite-muscovite-tourmaline granites, and hornblende to tonalite granites are generally non-magnetic and magnetic, respectively), rather than by macroscopic textures. The heterogeneity in both texture and magnetic response can be of sub-metre scale, but is commonly consistent across individual outcrops.

All subdivisions of granite (*sensu stricto*) contain appreciable biotite and variable, but typically sparse, muscovite. Foliation development varies from moderate to imperceptible within each main phase; deformation and folding of internal veins indicate that all subdivisions were emplaced prior to final tectonism. Perhaps the most distinctive phase is the leucocratic granite, which is characterized by dense lath-like alkali-feldspar phenocrysts to about 4 – 5 cm length (Unit AgtK). The common alignment of these “K-spar megacrysts” is attributed primarily to igneous emplacement rather than subsequent tectonism. Muscovite is generally sparse or absent in this variably magnetic unit. In places, the K-spar megacrystic suite can be observed to have an internal shallow-dipping sheet-like morphology (Figure 7-5c). At surface, the megacrystic suite is confined solely to the westernmost area of mapping, and is concentrated within a well-defined zone approximately 2 km northwest of the Kelvin kimberlite body (Figure. 7-3).

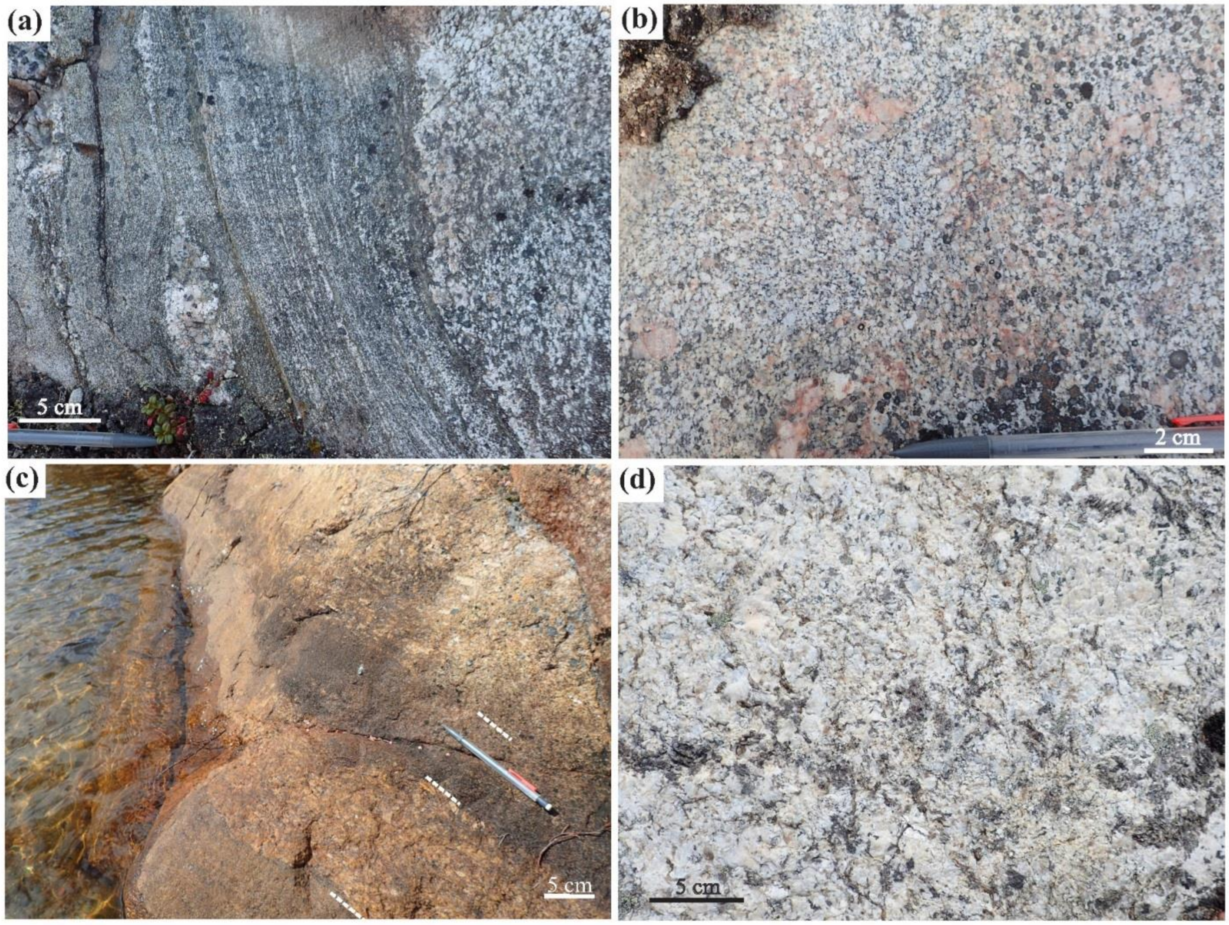

Figure 7-5. Photographs showing textural variations of the granitoid rocks (a-d)
(a) Multiphase non-magnetic biotite granodiorite; well-foliated to gneissic fine-grained phase on left and “chunky” medium- to coarse-grained leucocratic phase on right (Unit Agd; GR 594810E 7039626N). (b) Typical massive inequigranular magnetic granite (Unit Agtm; GR 594066E 7041517N). (c) Oblique view of shallow westward-dipping granitic layering; leucocratic layers dominated by aligned cm-scale feldspar laths (Unit AgtK; GR 594380E 7043134N). (d) Muscovite-rich phase of highly inequigranular to pegmatitic leucogranite (Unit Agtp; GR 599820E 7043700N).]

Strongly foliated biotite-rich granitoid with local centimetre-scale feldspar phenocrysts is exposed near the southwest extent of mapping. Its coarse segregation into quartz-feldspar- and biotite-rich seams, and its apparent transition to typical granite along its west margin, suggest a tectonic influence; the kinematics and lateral continuity of this zone are undetermined.

7.3.1.5 Proterozoic Diabase Dykes

Fine- to medium-grained massive diabase is poorly exposed in outcrop but can be traced by aeromagnetics. All dykes within the map area strike east-northeast and, where exposed, are subvertical and undeformed, with locally well-developed ophitic texture; moderate to strong magnetism is characteristic. The dykes are correlated with the undated “Fletcher” swarm (Stubley, 2005) of presumed Paleoproterozoic age (geochronology pending).

7.3.1.6 Metamorphic and Structural Aspects

The turbiditic greywacke-mudstone sequence is ideal for investigating metamorphism and its relationship to deformational events. In the Kelvin – Faraday area, the metaturbidites record sillimanite-grade metamorphism and partial melting, indicating upper amphibolite facies conditions and peak temperatures exceeding 700ºC. Cairns et al. (2005) indicate pressures of about 7 kbar were associated with the high-temperature assemblages at Walmsley Lake (about 30 km east of the current map area). Garnet is locally evident; high-temperature cordierite (gem-type iolite) was not recognized but would likely be evident petrographically. In places, two generations of sillimanite growth can be demonstrated.

7.3.1.7 Folding and Fabric Development

The tectonothermal history of the Kelvin – Faraday area is similar to many areas of the Slave craton, with one major additional complication as discussed below. In most outcrops, a single penetrative foliation is evident and this is termed "Sm" (main or dominant foliation). Elsewhere within the Slave craton, Sm can be demonstrated to be related to the second regional deformation event, D2, that is constrained to about 2.6 Ga. The pan-Slave D2 event is associated with extensive shortening and thickening of crustal rocks, the onset of peak metamorphism and S-type granitoid emplacement, and formation of the principal orogenic gold deposits, among other features. Where recognized, features that predate Sm are ascribed to a D1 event (S1, F1), and features that postdate Sm are ascribed to D3 (S3, F3) and D4 (S4, F4), etc. With minor modifications, this model works reasonably well at Kelvin – Faraday.

Within sporadic zones of the northeast area of mapping, two episodes of sillimanite growth accompany development of discrete fabrics. Early sillimanite ribbons defining the dominant foliation are crenulated with the development of new sillimanite along the axial planes as a new crenulation cleavage (e.g., Fig. 7-4d). Within metres, the intensity of the newer crenulation cleavage obliterates evidence of the earlier foliation. As such, the sole "dominant foliation" (Sm) in the region is a S2-S3 transposition fabric with final formation during D3. Similar observations and interpretations are presented by MacLachlan et al. (2002) and Cairns et al. (2005) from regional-scale mapping. The timing of D3 in turbiditic migmatites is constrained to about 2585 Ma whereas D2 in lower-grade rocks is inferred to be ≥2603 Ma (Cairns et al., 2005), and this suggests that "Sm" is a product of two or more events spanning about 20 my.

A well-exposed transect across metaturbidites of the southernmost map area reveals numerous reversals in top directions in subparallel beds; the sole foliation (Sm) is subparallel to bedding. The top reversals are inferred to reflect the presence of F1 isoclinal folds formed during pre-2620 Ma D1, as is common throughout the craton. A discrete macroscopic and penetrative foliation associated with the proposed isoclinal folds, which would be termed S1, was not recognized in this study, and this relationship is also common in most studies within the Slave.

7.3.1.8 Faults and Fractures

The most-significant fault in the area is the Paleoproterozoic Fletcher Fault (Figure 7-3.) that can be traced regionally for almost 150 km (Stubley, 2005), and which also passes through the MZ Lake map area (discussed in a later section). Along its length, the fault records about 40-50m subhorizontal dextral displacement associated with quartz veining/flooding, hematization of feldspar, and local occurrences of specular hematite and pyrite; within the current map area, the fault is represented primarily by a topographic lineament and minimal expression in outcrop. It is not clear whether Fletcher Fault also records an earlier Proterozoic component of normal displacement, as is inferred for some other similarly oriented faults of the southeastern craton. Another significant Proterozoic fault strikes east-west and contributes to the geological complexity near southwest Mag Lake; an apparent sinistral offset of 50-60m is recorded near the eastern limits of mapping, but a component of vertical displacement is also suspected.

Potential correlations between principal structures and the Kelvin and Faraday kimberlite bodies are not apparent from the current mapping. Our current knowledge of each of the kimberlite bodies indicates a shallow inclination towards the northwest towards their probable source. Although there are some northwest trending topographic lineaments, this orientation is poorly represented by significant faults or joint sets. It remains unclear how far to the northwest the bodies dip before a subvertical conduit is encountered, if at all.

7.3.2 MZ Lake Area Rock Types

The rock types and their characteristics are summarized in sections 7.3.2.1-7.3.2.4. Outcrop comprises only 1.1% of the total area while lakes comprise over 22% (Figure 7-6). An historical airborne magnetic survey was extremely helpful in the interpretation of the MZ area.

7.3.2.1 Granitoids

The bulk of the area is covered by a multiphase granitoid suite with variable magnetism. The broad architecture of the granitoid suite appears to be sheet-like; undulating and commonly shallow-dipping sheets of various composition and texture are interlayered on scales of metres (e.g., Figure. 7-7a) to tens of metres and possibly greater. Attempts to subdivide the granitoid suite into various mappable components are hindered due to the transitional nature of their relative proportions and due to their shallow disposition. The user is cautioned that all granitoid contacts should be viewed as “transitional” and that unit proportions may not be representative in the third dimension. Nevertheless, a tripartite subdivision of the granitoids appears to result in broad continuous zones in map view (e.g., Figure. 7-3).

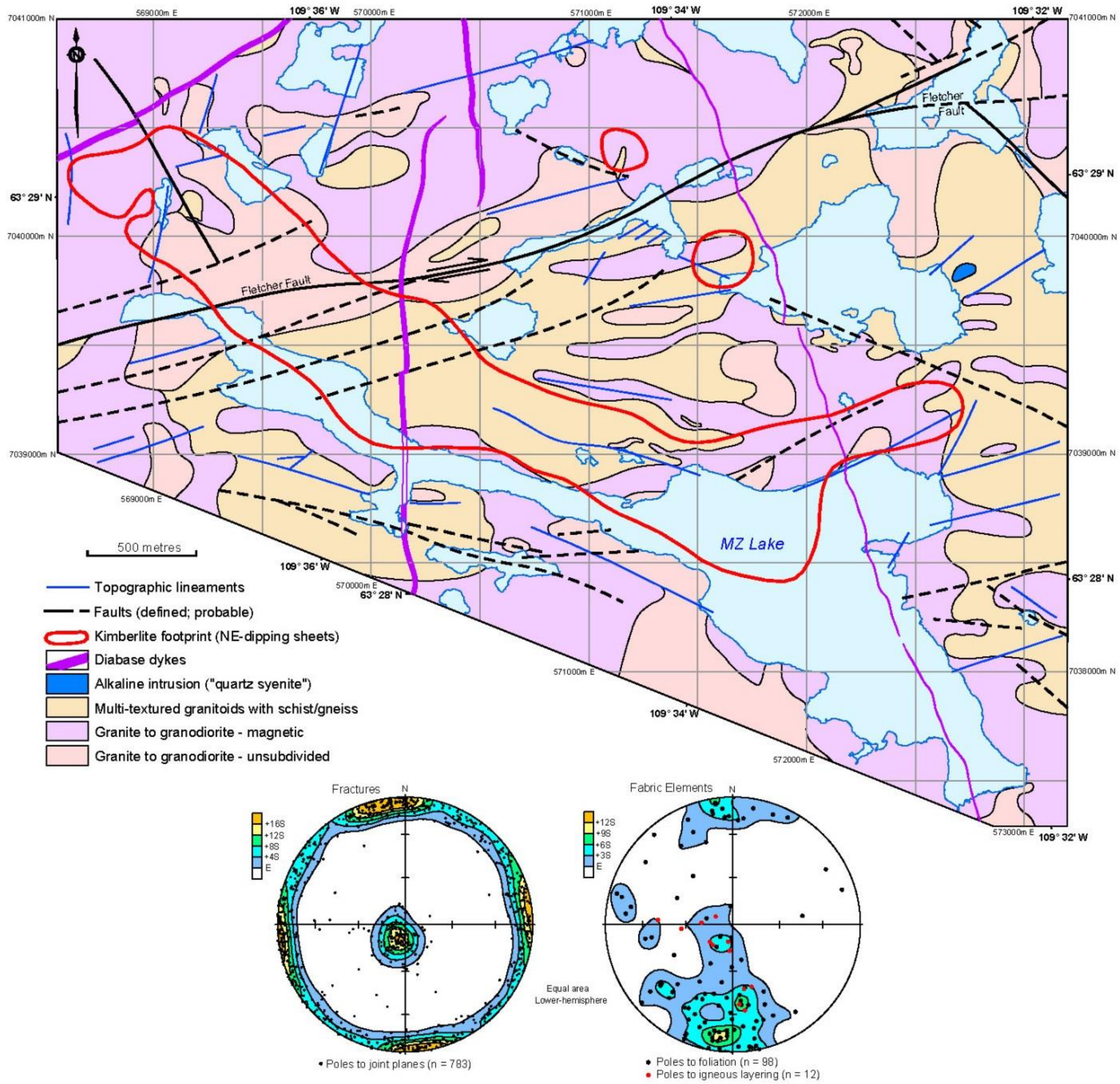

Figure 7-6. Simplified geology map of the MZ Lake area showing kimberlite sheet as known prior to 2015.

Insets show principal structural measurements on lower-hemisphere equal-area stereonets; Gaussian contouring at multiples of sigma above "expected" (Stubley, 2015)].

Figure 7-7. Photographs of granitoids in the MZ Lake area

(a) View to the north of moderately east-dipping “igneous layering”; interlayered tonalitic gneiss, quartz-biotite schist and massive granite (Unit Aggn; GR 570566E 7039731N). (b) Wayne Barnett examining fine-grained brick-red quartz-poor syenitic frost-heave (Unit APsy; GR 572723E 7039830N). (c) Subhorizontal joints in multiphase granitoids impart a step-like outcrop disposition (Unit Aggn; GR 571290E 7039073N). (d) Typical expression of Proterozoic fault activity; reddish hematitic feldspar, quartz veining/flooding, trace sulphides, and local open-cavity quartz infilling (altered part of Unit Aggn; GR 569775E 7038695N)].

The granitoid suite is composed primarily of pink to grey medium-grained to moderately inequigranular, and locally porphyritic, granite to granodiorite. This component is commonly massive, or rarely weakly foliated, and contains biotite and local muscovite that typically comprise <10% of the rock combined.

7.3.2.2 Alkaline Intrusion

An unusual zone of fine-grained brick-red frost heave is exposed in the eastern map area (Figure. 7-7b).

An internal geochemical evaluation has determined rock-type classifications ranging from alkali-feldspar quartz syenite to quartz monzonite; an average “quartz syenite” classification is deemed appropriate until petrological examination is conducted.

7.3.2.3 Diabase Dykes

Three diabase dykes are recognized within the map area (Figure 7-7), and despite their poor preservation in outcrop, can be traced by their pronounced aeromagnetic signature. A strongly magnetic north-northwest striking dyke transects eastern MZ Lake and is presumed to be representative of the 1267 Ma Mackenzie swarm. In two locations, the Mackenzie dyke can be constrained to <3 metres width. A northeast-striking dyke, about 20m wide, in the northwest zone of mapping is correlated with the "Fletcher" swarm of Stubley (2005), although most other authors (e.g., Buchan et al., 2010) have attributed this to the MacKay swarm.

7.3.2.4 Metamorphic and Structural Aspects

Three prominent sets of joints are developed within the granitoid suites (Figure. 7-6 inset), and their orientations are remarkably similar to those from the Kelvin – Faraday area. The most prevalent set is subvertical and strikes east-northeast subparallel to Fletcher Fault. Another subvertical set is nearly orthogonal, and predominantly strikes slightly west of north. Approximately 5% of measured steep joints (of variable strike) had alteration haloes, quartz infilling, or some indication of probable displacement. Subhorizontal joints, with a preferential tendency to dip slightly towards the northeast quadrant (subparallel to kimberlite sheets), commonly impart step-like appearances to outcrops (Figure 7-7c).

Abundant evidence for Proterozoic brittle faulting is preserved in the MZ Lake area. The most prominent feature is the dextral curviplanar Fletcher Fault and its associated splays; secondary faults appear to nucleate on smooth bends in Fletcher Fault as accommodation features (Figure 7-6). Another prominent set of faults of uncertain kinematics strikes to the northwest, and may underlie the long arm of MZ Lake. All of the designated faults are marked by linear zones of reduced magnetic response, reddish hematitic alteration of feldspars, and abundant quartz infiltration (Figure 7-7d); sporadic zones with moderate epidote and/or minor pyrite are also noted.

Features of the host rocks that might have influenced emplacement of the thin shallow northeast-dipping kimberlite sheets are unknown. The subparallel orientation of many shallow joints is intriguing, but questions remain regarding the timing and vertical extent of the joints (discussed in a later section). The variably oriented "igneous layering" is locally subparallel to the kimberlite sheets, but is deemed too irregular to have influenced the semi-planar kimberlite location; cursory review of some drill core did not reveal a correlation between kimberlite location and lithological layering. The only structure of the map area that potentially has vertical extent more than about 10 kilometres is Fletcher Fault, but there seems no obvious reason why kimberlite would have exploited this regional feature at MZ Lake. However, two highly anomalous features of the small map area, both of which are assumed to reflect mantle-depth activity, might warrant further consideration; these are the small alkaline intrusion and the MZ diabase dyke.

7.3.3 Doyle Lake Area Rock Types

A total of four days was spent mapping in the Doyle lake area. Outcropping accounts for 2.5% (Figure 7-8), while lakes comprise 5.4% of the map area. A majority of the outcrops are within 600 m of a major esker and as such a historical airborne magnetic survey was used for geological interpretation.

7.3.3.1 Rock Types

Little mappable variation is noted in most outcrops of the Doyle area (Figure 7-8). The bulk is massive and unfoliated multi-textured white- to pink-weathering granodiorite to granite (Unit Agt). Most is medium- to coarse-grained, but some zones are markedly inequigranular with porphyritic to pegmatitic phases. Biotite typically accounts for 5 – 12%; muscovite is absent (or rare). Magnetism is variable at sub-metre scales, but is commonly moderate to strong (except adjacent to Proterozoic fault zones).

In places, the massive granitoid suite incorporates a subordinate component of foliated material (Unit Aggn). In the eastern part of the map area, the foliated components are typically subtle or comprise narrow panels of quartz-biotite schist, and commonly account for less than 5-10% of any outcrop; a field term of "dirty granite" was employed during mapping. In the Half Moon Lake area (Figure 7-8), moderately foliated granite-granodiorite, fine-grained quartz-biotite schist, and locally gneissic granitoids, contribute to the heterogeneity of this unit.

A single small outcrop of fine-grained leucogabbro to diorite intrudes a prominent 3m-wide lineament through granitoid outcrops, and is the only occurrence. The recessive dyke weathers white to medium brown and its principal components (plagioclase > hornblende) impart a distinctive black-and-white speckling. Moderate to strong magnetism is characteristic. The dyke appears massive and unfoliated, yet it is transected by a hematitic granite vein and this may suggest an Archean age.

Proterozoic diabase is represented by at least two dykes. A north-northwest striking dyke, presumably of the 1267 Ma Mackenzie swarm, fails to crop out within the map area, but is readily traceable by strong magnetic signature; it appears to alter its trend (i.e., "jog") to follow Doyle Fault for about 250 metres. All outcrops, frost-heave, and drill intersections of diabase appear to belong to a different highly anomalous dyke exhibiting a segmented and irregular trace through the map area. The magnetic response suggests the single dyke "jogs" to follow parts of the Eagle, Doyle, and Mooseview faults (Figure 7-8), which is a geometry uncharacteristic of any named swarm of the Slave craton. This moderately to strongly magnetic diabase locally appears fractured and altered, and hosts quartz veins.

7.3.3.2 Structural Aspects

The massive nature of most outcrops hinders evaluation of the Archean structural history of the Doyle area. Foliation and "layering" within Unit Aggn exhibit inconsistent orientations (Fig. 7-8 inset); their general parallelism to contacts with adjacent Unit Agt may support an undulating sheet-like interface between the two units.

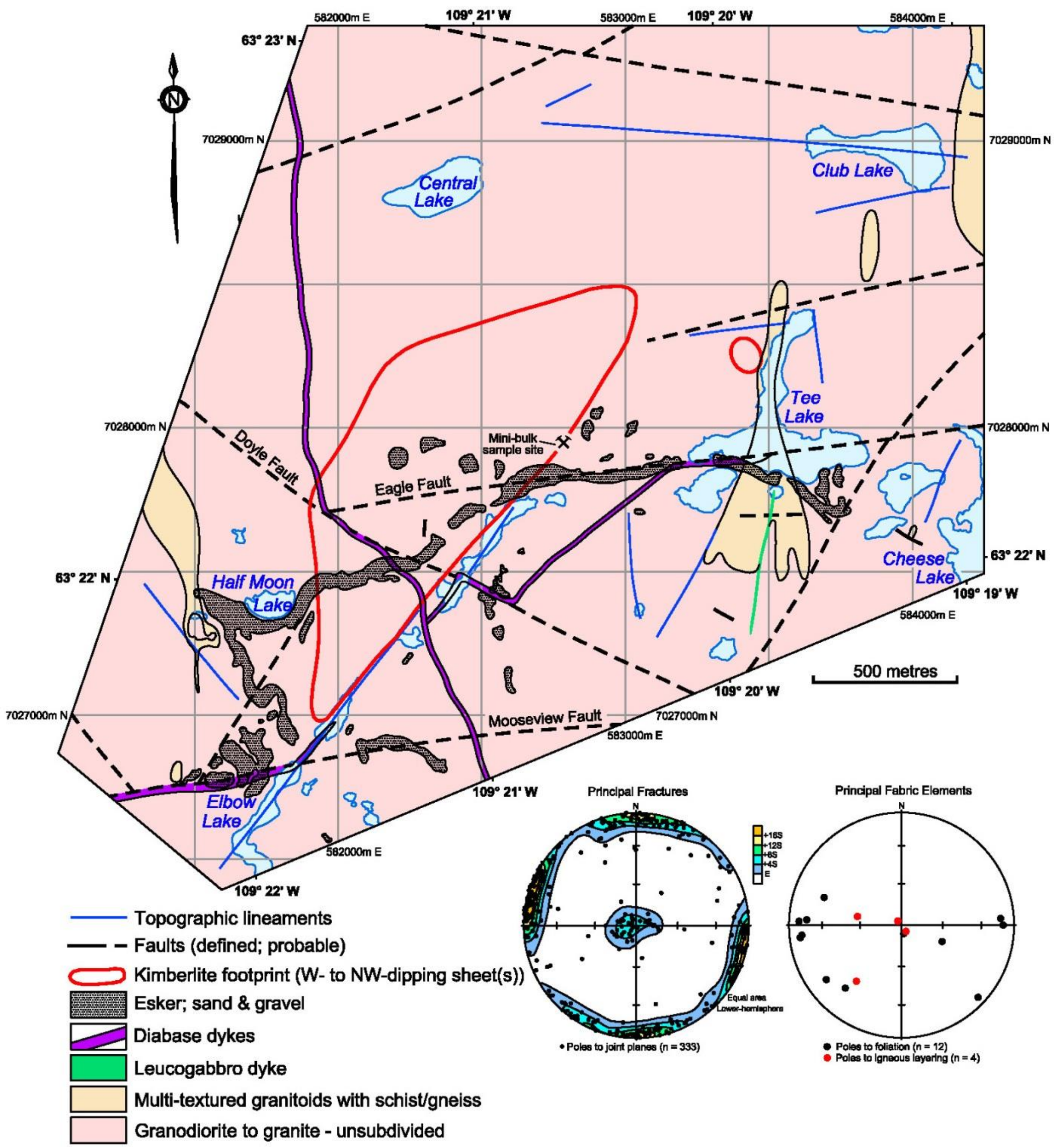

Figure 7-8. Simplified geology map of the Doyle Lake area with outline of the Doyle kimberlite as known pre-2015 Principal structural measurements are presented as insets on lower-hemisphere equal-area stereonets; Gaussian contouring multiples of sigma above expected (Stubley, 2015).]

Similar to the other map areas, three prominent sets of joints are recognized (Figure 7-8 inset). The most prominent and pervasive set is subvertical and strikes NNE, subparallel to the mafic dyke of Unit Amd. Another subvertical set strikes approximately east-west, and does not show an obvious correlation with other features of the map area. Joints of both steep sets exhibit local indicators of alteration and probable displacement. Subhorizontal joints reveal a slight tendency to dip preferentially towards the northeast quadrant; hematitic alteration is anomalously associated with shallow joints in one outcrop.

Aeromagnetic imagery reveals linear zones of reduced magnetic intensity that are interpreted to represent Proterozoic brittle faults. Boulders and frost heave overlying Eagle Fault exhibit extensive hematitic alteration and quartz infiltration, chloritization of biotite, and local specular hematite and pods of massive pyrite. At least one outcrop adjacent to Doyle Fault exhibits similar hematitic and siliceous alteration. Review of regional airborne geophysical imagery suggests Doyle Fault is through-going, with many other faults (including Eagle and Mooseview) terminating on it (see Figure. 7-8). Two subvertical metre-scale faults parallel to Doyle Fault are exposed in continuous outcrop and are characterized by extensive hematitic alteration and quartz veining; kinematics was not determined. An anomalous area of fault-related deformation and alteration is exposed near the intersection of Doyle and Eagle faults (see accompanying map); prominent north-south layering and "flakey" fragmentation (with hematite and quartz alteration) are of uncertain origin.

At present, the extent of shallow-dipping kimberlite is poorly constrained, and the source of magma and its flow direction are unknown. Nevertheless, and despite the presence of several significant Proterozoic faults, there appears to be no obvious structure that controls the kimberlite disposition. Outcrop-scale joints do not, in general, reveal parallelism with the kimberlite sheet(s).

7.3.4 Kelvin Kimberlite Detail Geology

This section is modified from industry reports SRK (2016b, c, d, g). Kimberlite descriptions and classifications follow the terminology from Scott Smith et al. (2013).

7.3.4.1 <u>Introduction</u>

All geological work at Kelvin has been completed by Aurora Geosciences Ltd (AGL) under the guidance and supervision of Casey Hetman, P.Geo. of SRK Consulting (SRK). The core logging methods have evolved over time with detailed logging, following strict standard operating procedures established by SRK and AGL, and petrographic work on representative core samples having been undertaken since late 2013. In 2015, detailed logging and petrographic analysis of 11,402.83 m of kimberlite core led to the identification and characterization of six kimberlite units infilling the Kelvin pipe as described in Section 7.3.4.2 below. Logging and petrographic analysis of an additional 26 drill cores in 2016 served to confirm continuity of the units between the South and North limbs of the body, and along strike in the North limb. The 3-D geological model for Kelvin comprises a well constrained external pipe shell model and internal geology model, both of which were constructed by Michael Diering of SRK as outlined in Section 7.3.4.3. The core logging, petrography and geological model have been subject to independent review by Kimberley Webb, P.Geo. of Mineral Services Canada (MSC15/025R, MSC16/004R, MSC16/014R, MSC16/017R).

Extensive drilling of the Kelvin kimberlite has defined it as an irregular, subhorizontal, L-shaped inclined pipe infilled primarily by volcaniclastic kimberlite classified as Kimberley-type pyroclastic kimberlite (KPK), as well as coherent kimberlite (CK) and minor kimberlite transitional in texture between KPK and CK. The combined geometry of Kelvin and 'layer cake' stratigraphy of its internal units are unconventional relative to other known kimberlite bodies (Section 8).

7.3.4.2 Kelvin kimberlite unit and sub-unit characteristics

Six internal kimberlite units have been defined at Kelvin on the basis of textural characteristics, primary mineralogy, country rock xenolith content, contact relationships and interpreted emplacement processes: KIMB1 through KIMB7 (no KIMB5). Units KIMB2 and KIMB3 have been further subdivided into sub-units based on textural variations and differing country rock xenolith content, respectively (Table 7-1). Initially interpreted to represent a discrete unit, KIMB5 has subsequently been determined to be altered KIMB3A, a subunit of KIMB3. A hypabyssal kimberlite unit (KIMB8) occurs as a sheet or irregular intrusion adjacent to the Kelvin pipe.

Table 7-1. Kelvin kimberlite units and sub-units

Unit	Sub-unit	**Sub-unit Discriminator**
KIMB1	n/a	
KIMB2	KIMB2A	Mostly KPK texture
	KIMB2B	Mostly CK texture
KIMB3	KIMB3A	Low country rock dilution <40%
	KIMB3B	Moderate country rock dilution 40-75%
	KIMB3C	High country rock dilution >75%
KIMB6	n/a	
KIMB4	n/a	
KIMB7	n/a	

The macroscopic characteristics of the kimberlite units and subunits as established by the end of 2015 are summarized in Table 7-2. Figure 7-10 shows the units in representative core photographs. More detailed petrographic descriptions of the units in stratigraphic sequence (from top to bottom of the body) are provided in Sections 7.3.4.2.1 through 7.3.4.2.7 and these are summarized in Table 7-2. The units and sub-units form the basis of the 3-D internal geology model, as described in Section 7.3.4.3.

Table 7-2. Summary of the macroscopic characteristics of the Kelvin kimberlite units and sub-units established by end of 2015

Kimberlite Unit / Sub-Unit	KIMB1	KIMB2		KIMB3			KIMB6	KIMB4	KIMB7
		KIMB2A	KIMB2B	KIMB3A	KIMB3B	KIMB3C			
Textural Classification	KPK	KPKt-CKt	CK	KPK	KPK	KPK	KPK	KPKt-CKt-CK	KPK-KPKt
CR Dilution %	15-25	10-25	10-15	15-40	40-75	>75	>50	5-15	15-30
CR Alteration Intensity	Moderate to strong; Medium to dark green	Strong; Pale milky green to dark green	Intense; Dark green - black with white clinopyroxene halos	Moderate to strong; Medium to dark green	Fresh to weak; Grey to light green	Fresh to very weak; Grey to light green	Fresh to very weak; Grey to light green	Moderate to strong; Medium to dark green	Moderate to strong; Medium to dark green
Olivine Total Abundance %	25-40	35-45	40-55	20-40	15-30	5-20	20-35	30-50	20-40
Olivine Macrocryst Abundance %	10-20	20-25	20-25	10-20	5-20	5-10	5-15	10-25	15-20
Olivine Macrocryst Size Range	f-m+c	f-m+c; f-c	f-c	f-m+c	f-m+c	f-m+c; f-m	f-m+c	f-c	f-c
Presence of Magmaclasts	Yes	Possible	No	Yes	Yes	Yes	Yes	No	Yes
Matrix	Clastic matrix	Clastic matrix > Groundmass	Groundmass > Clastic matrix	Clastic matrix	Clastic matrix	Clastic matrix	Clastic matrix	Groundmass > Clastic matrix	Clastic matrix
Packing	Matrix to loose packed clast supported	Matrix supported	-	Matrix supported	Matrix to loose packed clast supported	Tightly packed clast supported	Matrix supported	-	Matrix supported
Presence of Mantle Indicator (Garnet)	Absent to rare	Rare	Rare	Rare to occasional	Rare to occasional	Rare to occasional	Rare to occasional	Rare to occasional	Rare to occasional
Presence of Mantle Xenolith	Not observed	Rare	Not observed	Rare	Not observed	Rare	Occasional	Occasional	Occasional
Presence of Kimberlite Autoliths	Not observed	Not observed	Not observed	Rare	Rare	Rare	Abundant	Occasional	Occasional to abundant

Figure 7-9. Drill core photographs of the Kelvin kimberlite units in the South (left) and North (right) Limbs

7.3.4.2.1 *KIMB1*

KIMB1 occurs as a minor discontinuous unit at the top of the body in contact with the wall rock.

- **Textural classification:**
  Massive, homogeneous, loose packed clast supported f-m+c grained KPK.
- **Olivine population:**
  Chaotic olivine distribution.
  Visual estimate of olivine modal abundance is average of 35% ranging between 25% and 40%.
  Broken olivine crystals may be present but are typically unbroken.
- **Magmaclasts:**
  Pelletal shaped, thin skinned with rare OLVp.
  Thicker melt selvages often associated with shard-shaped country rock fragments.

- **Groundmass (within melt selvages):**
  Phlogopite, spinel and perovskite.
- **Matrix:**
  Dominated by microlites and serpentine.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Mostly moderately altered with some fresh K-feldspar xenocrysts.
  Visual dilution estimate averages 22%, ranging between 15% and 40%.

7.3.4.2.2 *KIMB2*

KIMB2 is the second most abundant kimberlite unit at Kelvin and occurs above KIMB3, the dominant unit. Subunits KIMB2A and KIMB2B are distinguished by differences in texture, KIMB2A being mainly KPK and KIMB2B primarily CK. The textural classification of KIMB2B is complicated by the fact that despite having uniform olivine distribution (as is typical of hypabyssal kimberlite), most intervals lack well crystallized groundmass and contain conspicuous microlites surrounding olivine crystals and country rock xenoliths, features more typical of KPK or transitional-textured rocks (KPKt, CKt).

KIMB2A

- **Textural classification:**
  Massive, homogeneous, loose packed clast supported, f-m+c grained KPK.
  May be transitional – KPKt or CKt.
- **Olivine population:**
  Uniformly distributed OLVm and OLVp.
  Visual estimate of olivine modal abundance is average of 38% ranging between 35% and 45%.
- **Magmaclasts:**
  Thin skinned pelletal shaped and symmetrical with poor groundmass development.
  Rare OLVp observed within melt selvages.
- **Groundmass:**
  Typically, phlogopite, spinel and perovskite.
  Matrix:
  Microlitic and abundant serpentine – generally lacks ash size particles typical of KIMB3.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Mostly highly altered and kimberlitized.
  Visual dilution estimate averages 14.5%, ranging between 7% and 20%.

KIMB2B

- **Textural classification:**
  Massive, homogeneous f-c grained CK
  May be transitional including KPKt.
- **Olivine population:**
  Fairly uniformly distributed OLVm and OLVp.

Mostly serpentinized, with rare fresh olivine within endmember CK
Visual estimate of olivine modal abundance is average of 39% ranging between 25% and 50%.

- **Groundmass:**
  Clinopyroxene typically developed in groundmass patches.
- Phlogopite, spinel and perovskite.
- **Matrix:**
  Microlitic
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Typically, extensively digested resulting in the development of distinctive clinopyroxene in the groundmass.
  Most xenoliths are kimberlitized.
  Visual dilution estimate averages 9.4%, ranging between 3% and 20%.

7.3.4.2.3 *KIMB3*

KIMB3 is volumetrically the most significant kimberlite unit in the Kelvin pipe. It is a massive volcaniclastic rock containing variable amounts of locally derived gneissic and granitic xenoliths. The xenolith abundance increases gradationally with depth through KIMB3 leading to its subdivision into KIMB3A, KIMB3B and KIMB3C which are defined as having less than 40%, 40-75% and greater than 75% country rock dilution, respectively. A juvenile kimberlite matrix is variably fine to coarse-grained in units KIMB3A and KIMB3B while KIMB3C is characterized by a pulverized country rock matrix with little juvenile material present.

KIMB3A (low country rock dilution)

- **Textural classification:**
  Massive, homogeneous, loose packed clast supported f-m+c grained KPK.
- **Olivine population:**
  Non-uniform OLVm and OLVp distribution.
  Altered and serpentinized.
  Visual estimate of olivine modal abundance is average of 23% ranging between 15% and 30%.
- **Magmaclasts:**
  Thin skinned with poor groundmass development and thicker melt selvages associated with country rock clasts, particularly shard-shaped xenocrysts.
- **Groundmass:**
  Phlogopite, spinel and perovskite.
- **Interclast matrix:**
  Variable. Mostly microlitic with variable ash size particles and serpentine, may be clay altered.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet with kelyphite rims and spinel.
- **Country rock xenoliths:**
  Conspicuous biotite xenocrysts (brown and green varieties).
  Visual dilution estimate averages 41%, ranging between 20% and 50%.

KIMB3B (moderate country rock dilution)

- **Textural classification:**
  Massive, homogeneous, close packed clast supported f-m grained KPK.
- **Olivine population:**
  Chaotic olivine distribution.
  Common broken olivine crystals.
  Visual estimate of olivine modal abundance is average of 18% ranging between 10% and 30%.
- **Magmaclasts:**
  Thin skinned with poor groundmass development and thicker melt selvages associated with country rock clasts, particularly shard-shaped xenocrysts.
- **Groundmass:**
  Poorly defined and altered.
- **Matrix:**
  Mostly turbid with ash sized particles.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Mostly fresh locally derived unaltered xenoliths and xenocrysts (mostly K-feldspar).
  Conspicuous biotite xenocrysts (brown and green varieties).
  Visual dilution estimate averages 47%, ranging between 20% and 70%.

KIMB3C (high country rock dilution)

- **Textural classification:**
  Massive, homogeneous, close packed clast supported f-m grained KPK.
- **Olivine population:**
  Common broken olivine crystals.
  Chaotic olivine distribution.
  Visual estimate of olivine modal abundance is average of 8% ranging between 1% and 25%.
- **Magmaclasts:**
  Thin skinned with poor groundmass development and thicker melt selvages associated with country rock clasts, particularly shard-shaped xenocrysts.
- **Groundmass:**
  Highly altered and difficult to discern.
- **Matix:**
  Turbid and very ashy.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Typically fresh country rock xenoliths and xenocrysts (K-feldspar common).
  Biotite xenocrysts common (both brown and green varieties).
  Rare autoliths may also be present.
  Visual dilution estimate averages 78%, ranging between 45% and 90%.

7.3.4.2.4 *KIMB6*

KIMB6 is a minor unit that occurs discontinuously along the pipe below KIMB3. It is similar in appearance to KIMB3C and is distinguished primarily based on the presence of more conspicuous juvenile material, in particular olivine macrocrysts, and distinctive autoliths of CK.

- **Textural classification:**
  Massive, homogeneous, loose packed clast supported f-m+c grained KPK.
- **Olivine population:**
  Visual estimate of olivine modal abundance is average of 14% ranging between 2% and 10%.
- **Magmaclasts:**
  Thin skinned with poor groundmass development and thicker melt selvages associated with country rock clasts, particularly shard-shaped xenocrysts.
- **Groundmass (within melt selvages):**
  Altered and not determined with confidence.
- **Matrix:**
  Typically, turbid and ashy.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Visual dilution estimate averages 78%, ranging between 60% and 90%

7.3.4.2.5 *KIMB4*

KIMB4 is a minor discontinuous unit at the base of the pipe; it is closely associated spatially with KIMB7. The morphology and relationship of these two units is not as well constrained as the other units in Kelvin.

- **Textural classification:**
  Massive, homogeneous f-m+c grained CK, may include CKt.
- **Olivine population:**
  Two generations with OLVp fairly uniformly distributed.
  Visual estimate of olivine modal abundance is average of 35% ranging between 20% and 40%.
- **Groundmass:**
  Phlogopite, spinel and perovskite.
  Inhomogeneous in areas due to digested country rock xenoliths.
  Dominated by phlogopite which may be coarsely crystalline.
  Uniform size and distribution of groundmass spinel.
- **Mantle derived indicator minerals:**
  Occasional garnet.
- **Country rock xenoliths:**
  Mostly altered and digested country rock xenoliths.
  Visual dilution estimate averages 18%, ranging between 5% and 30%.

7.3.4.2.6 *KIMB7*

KIMB7 is a minor discontinuous unit at the base of the body; it is closely associated spatially with KIMB4. A distinctive feature of KIMB7 relative to the other volcaniclastic kimberlite units at Kelvin is the presence of more common thicker melt selvages on magmaclasts.

- **Textural classification:**
  Massive, homogeneous, loose packed clast supported f-m+c grained KPK.
- **Olivine population:**
  Visual estimate of olivine modal abundance is average of 20% ranging between 15% and 40%
- **Magmaclasts:**
  Thin to thick skinned with poor groundmass development and thicker melt selvages associated with country rock clasts.
- **Groundmass (within melt selvages):**
  Phlogopite, spinel.
- **Matrix:**
  Typically, turbid and ashy and microlitic in places.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Visual dilution estimate averages 34%, ranging between 10% and 40%.

7.3.4.2.7 *KIMB8*

KIMB8 is interpreted to represent a sheet or irregular intrusion adjacent to the Kelvin pipe.

- **Textural classification:**
  Mostly massive CK, but may have flow features.
- **Olivine population:**
  Visual estimate of olivine modal abundance is average of 44% ranging between 15% and 60%.
- **Groundmass:**
  Phlogopite, spinel, carbonate, perovskite.
- **Mantle derived indicator minerals:**
  Generally absent; may include rare garnet.
- **Country rock xenoliths:**
  Visual dilution estimate averages 3%, ranging between 0% and 10%.

Table 7-3. Summary of key petrographic features of the Kelvin kimberlite units (December 2016)

Unit	Classification	Matrix	OLV size	Average OLV%	Distinguishing feature
KIMB1	KPK	Microlitic	f-m+c	35	Kimberlite selvages on CR, thin skinned melt rims on OLV.
KIMB2A	KPK –KPKt	Microlitic	f-m+c	38	Loosely packed KPK, extensively altered CR, very thin selvages.
KIMB2B	CK-KPKt	Crystalline or Microlitic	f-c	39	More tightly packed KPKt to CK. Larger OLVm population, CPX patches associated with kimberlitized CR xenoliths.
KIMB3A	KPK	Microlitic with some ash sized particles	f-m+c	23	**Low dilution.** Incomplete, thin to thick rims on OLVm's. Thicker rims on CR xenoliths and xenocrysts (mostly K-feldspar), which are mostly unaltered.

KIMB3B	KPK	Ashy	f-m	18	**Moderate dilution**. Thicker rims on CR xenoliths and xenocrysts (mostly K-feldspar), which are mostly unaltered, BIO xenocrysts (brown and green) common.
KIMB3C	KPK	Ashy and turbid	f-m	8	**High dilution.** Broken OLV's common. Thicker rims on CR xenoliths and xenocrysts (mostly K-feldspar), which are mostly unaltered, BIO xenocrysts (brown and green) common.
KIMB6	KPK	Ashy and turbid	f-m+c	14	**High dilution.** Autoliths common. Thicker rims on CR xenoliths and xenocrysts (mostly K-feldspar), which are mostly unaltered, BIO xenocrysts (brown and green) common
KIMB4	CK-CKt	Crystalline	f-m+c	35	Well-developed groundmass dominated by PHL, abundant digested CR.
KIMB7	KPK	Ashy	f-m+c	20	**Moderate dilution**. Thick melt selvages containing OLVp. Unaltered CR xenoliths and xenocrysts (mostly K-feldspar).

7.3.4.3 Kelvin kimberlite 3-D geological model

The 3-D geological model of the Kelvin kimberlite has been developed over the past three years, with the current version incorporating all drilling and geological/petrographic information to October 28, 2016. The model was constructed by Mike Diering of SRK using Leapfrog Geo™ software (V3.1.1). It consists of an external pipe shell model that defines the morphology and extent of the body, and an internal geology model that represents the spatial distribution of the kimberlite units infilling the pipe.

7.3.4.3.1 *External pipe shell model*

The Kelvin pipe shell model incorporates all volcaniclastic and coherent kimberlite units considered to be spatially continuous and internal to the pipe. Any kimberlite considered to represent sheet or irregular intrusions adjacent to the main body have not been modelled as part of the Kelvin body. Kelvin is an irregular, sub-horizontal, shallow-inclined pipe (dipping at 15-20°) that varies in thickness between 60 m at the south end to over 200 m at the north end, and in width between 30 m at the south end to over 70 m at the north end. It is L-shaped with the two 'limbs' being referred to as the South and North Limbs, as shown in Figure 7-10.

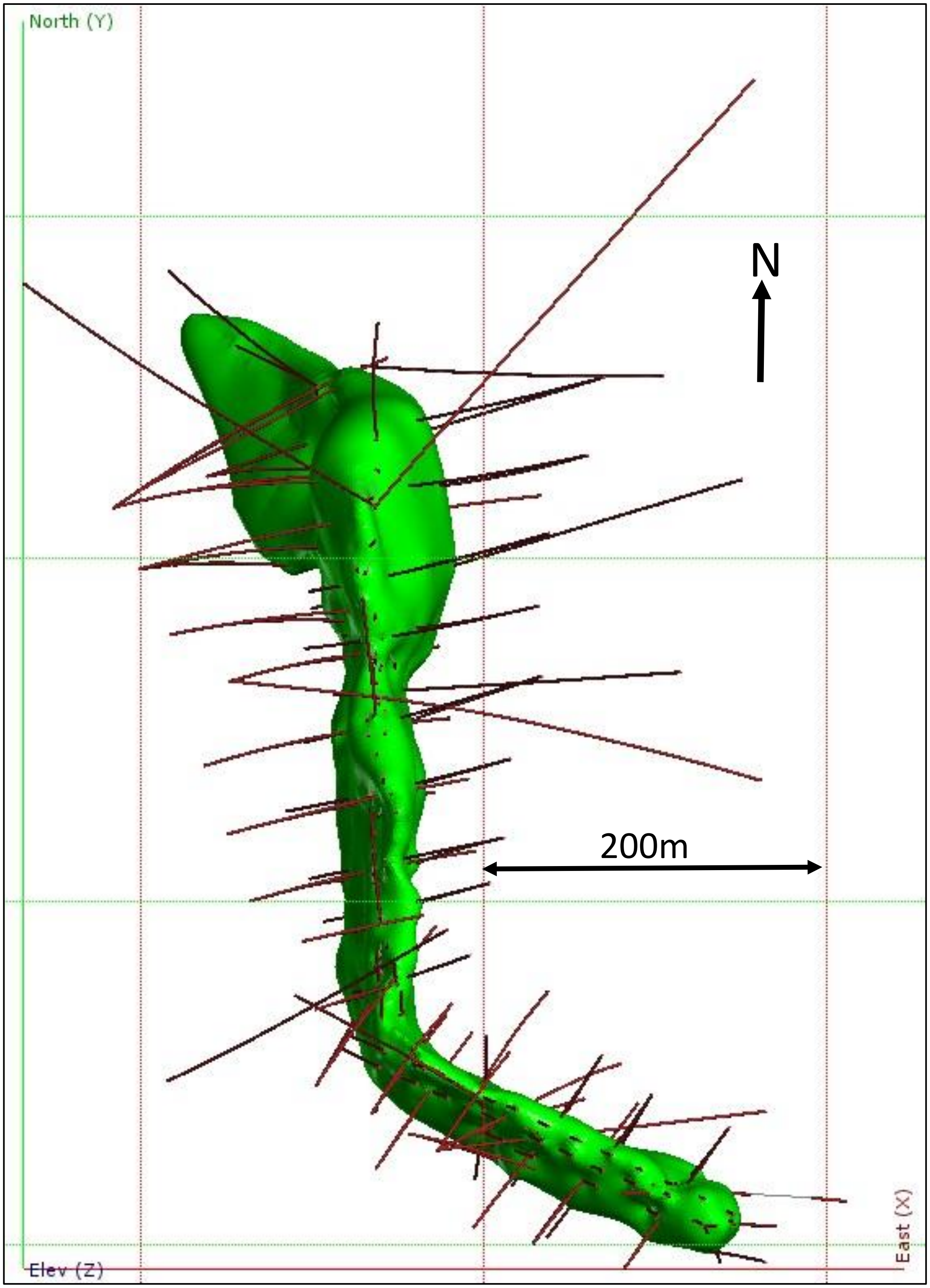

Figure 7-10. Plan view of external pipe shell model of the Kelvin kimberlite (December 2016)

7.3.4.3.2 *Internal geology model*

The kimberlite units and subunits described in Section 7.3.4.2 above form the basis of the internal geology model which comprises nine geological domains, eight of which are kimberlite domains, as shown in Table 7-4 and Figure 7-11. Some of the domains correspond to single kimberlite units whereas others comprise groups or subdivisions of kimberlite units, in order to provide a more reliable basis for resource estimation (Section 14). The subunits of KIMB2 (KIMB2A and KIMB2B) have been modelled as separate domains due to their textural differences; the subunits of KIMB3 (KIMB3A, KIMB3B, KIMB3C) have also been modelled individually due to differences in country rock dilution (and associated impact on grade). In contrast, KIMB4 and KIMB7 have been combined into a single geological domain (KIMB4/7) as these units are too small and morphologically complex to be reasonably modelled on an individual basis. The internal model reveals that the geological domains vary significantly in morphology and along strike, but broadly conform to a “layer cake” stratigraphy that is continuous along strike. The ninth domain (CRX) represents internal waste rock and includes material interpreted as very large country rock xenoliths (drill hole intercepts > 5 m) and possible wedges of *in situ* country rock within the pipe shell, where these could be delineated based on available drilling.

In an earlier version of the internal geology model, when the distribution and character of the kimberlite units were less well-constrained, the units were combined into four domains referred to as Zones A, B, Bx and C; these have now been superseded by the domains in the current model.

Table 7-4. Relationship between kimberltie untis and 3-D geological domains at Kelvin

Kimberlite unit / subunit	3-D geological domain
KIMB1	KIMB1
KIMB2A	KIMB2A
KIMB2B	KIMB2B
KIMB3A	KIMB3A
KIMB3B	KIMB3B
KIMB3C	KIMB3C
KIMB6	KIMB6
KIMB4 and KIMB7	KIMB4/7
Large country rock xenoliths / in situ wedges	CRX

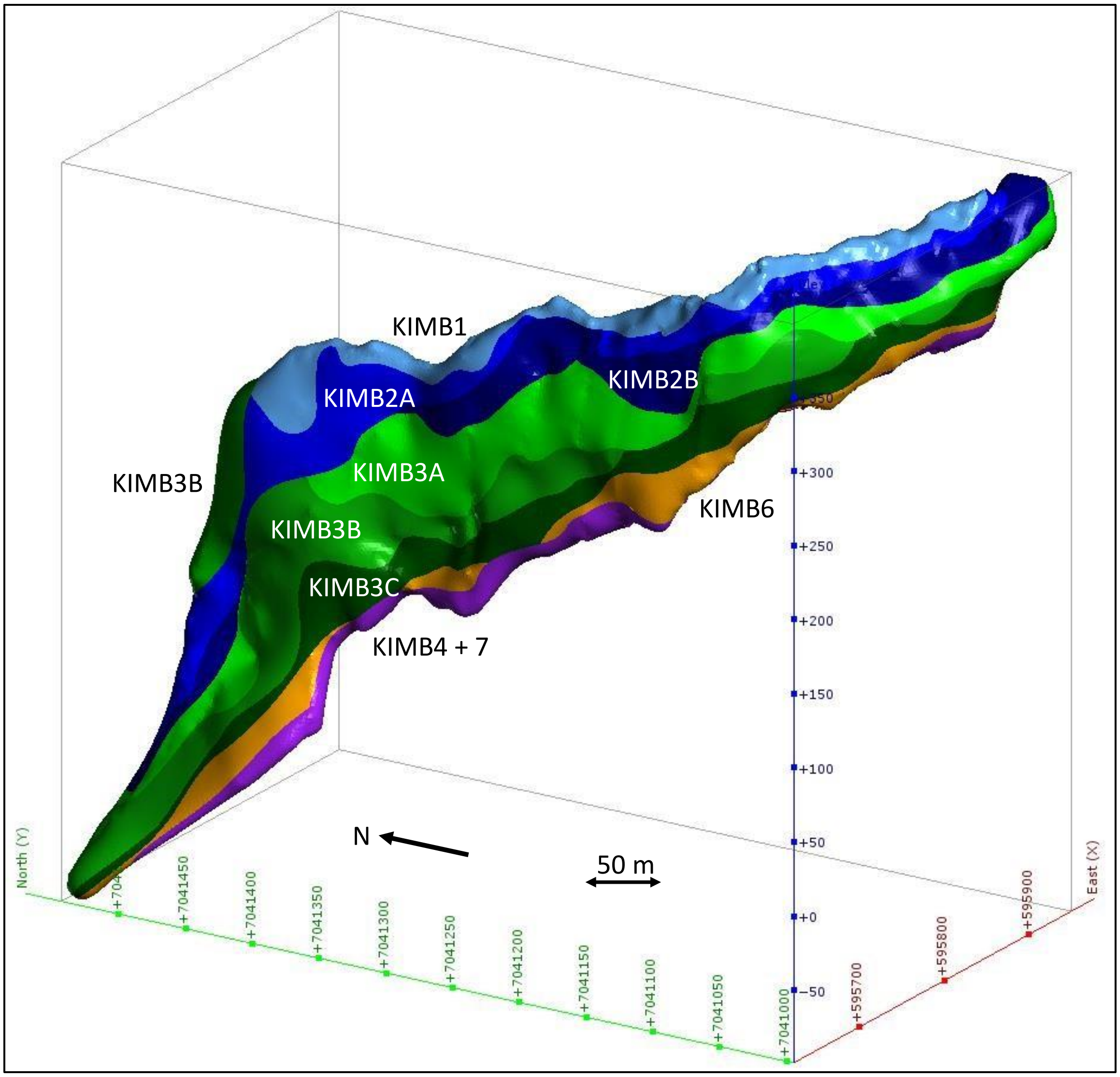

Figure 7-11. Kelvin 3-D model showing the internal geological domains (CRX domain not shown)

7.3.4.3.3 *Drill data constraining Kelvin model*

Extensive drilling, detailed core logging and petrographic work have been used to define the external pipe shell and internal geology model of the Kelvin kimberlite. A total of 195 drill holes providing 384 contact points define the pipe shell; the total number of contact points delineating the kimberlite domains ranges from 164 to 312 (Table 7-5).

Table 7-5. Summary of drill data used to construct the Kelvin pipe shell and internal geology model

	Number of drill holes	Number of drill hole contact points
External pipe shell model	195	384
Geological domains		
KIMB1	83	164
KIMB2A	109	214

KIMB2B	127	253
KIMB3A	159	312
KIMB3B	136	268
KIMB3C	138	267
KIMB6	127	254
KIMB4/7	103	206
CRX	52	132

7.3.5 Faraday 2 Kimberlite Geology

This section is modified from industry reports SRK (2016f, h). Kimberlite descriptions and classifications follow the terminology from Scott Smith et al. (2013).

7.3.5.1 Faraday 2 kimberlite units

Current understanding of the geology of the Faraday 2 kimberlite is based on detailed logging of 85 drill holes, petrographic examination of 295 representative samples from drill core and 93 representative samples from reverse-circulation chips. To date, four main kimberlite units have been identified: KIMB1 through KIMB4. KIMB1 is volumetrically dominant and comprises variably altered volcaniclastic kimberlite classified as KPK. Additional minor units, KIMB5 and KDYKE-INT, have been identified in the northern area of the pipe. A schematic cross section showing the preliminary idealized internal distribution of the kimberlite units is provided in Figure 7-12. The key petrographic features of the units are summarized in Table 7-6 and they are described in more detail in Sections 7.3.5.1.1 through 7.3.5.1.7.

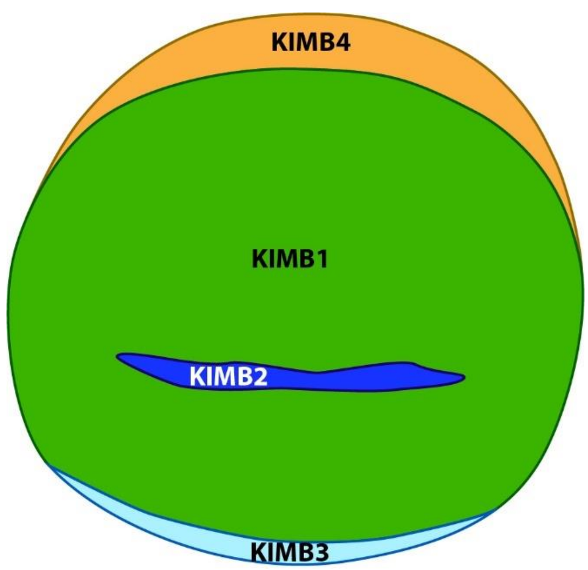

Figure 7-12. Idealized schematic cross-section of kimberlite units in Faraday 2

Table 7-6. Summary of key petrographic features of the Faraday 2 kimberlite units

Kimberlite Unit	Textural Classification	Matrix Characteristics	OLVm Size	Visual est. OLV%	Key Distinguishing Features
MB	MB	clastic dominated by country rock	f	<5	Marginal breccia dominated by country rock with minor matrix supported zones that include shard-shaped clasts with jigsaw-fit features
KIMB1A	KPK	microlitic / turbid	f-m+c	305	Magmaclastic with turbid interclast matrix; common fresh country rock xenoliths
KIMB1B	KPK	microlitic	f-m+c	33	Magmaclastic with a more serpentine and microlite dominated matrix compared to KIMB1A (more extensively altered version of KIMB1A)
KIMB2	KPK- <CK	Transitional to crystalline	f-m+c	43	Dominantly coherent kimberlite with texturally complex area. Homogeneous and less diluted compared to KIMB1
KIMB3	CK/CKt	dominantly crystalline	f-m+c	45	Dark coloured, massive undiluted CK, common thin serpentine and carbonate veins
KIMB4	VK	Pulverized country rock	f+m	13	Highly diluted and sorted VK that can be flow aligned; note that majority of constituents are fine grained
KIMB5	VKt-CKt	Transitional/serpentine with apatite	f-m+c	46	Massive, transitional-textured kimberlite with moderate country rock dilution. Stubby phlogopite laths in melt selvages.
KDYKE-INT	HK	crystalline	f-c	45	Late stage HK intruded into pipe; characterized by a crystalline groundmass and low dilution

7.3.5.1.1 *KIMB1A*

KIMB1A is classified as a f-m+c grained massive pyroclastic kimberlite interpreted to be Kimberley-type pyroclastic kimberlite (KPK). This unit is highly variable with respect to the proportion of country rock dilution. Variations in the thickness of melt-bearing pyroclast selvages and the size of enclosed phlogopite phenocrysts are observed petrographically. The interclast matrix varies from being serpentine or microlite dominated to ash-rich. The key petrographic feature used to identify this unit is the presence of distinctive acicular (straw-like) phlogopite phenocrysts in the groundmass of melt-bearing pyroclasts. Other groundmass phases include spinel and perovskite.

7.3.5.1.2 *KIMB1B*

KIMB1B is considered to represent an altered equivalent of KIMB1A. Specifically, KIMB1B is overprinted by serpentine and is characterized by a "cleaner" ash-free interclast matrix. Country rock and juvenile components are typically matrix supported in a matrix of serpentine and microlites.

7.3.5.1.3 *KIMB2*

KIMB2 is classified as a f-m+c grained coherent kimberlite (CK); the groundmass is comprised mainly of phlogopite with less common carbonate, spinel and perovskite. Very coarse-grained olivine macrocrysts may be present and the country rock dilution is low. The groundmass is characterized by well-formed phlogopite plates as well as primary carbonate commonly occurring as irregular segregationary pools. The phlogopite is often altered to dark green chlorite. Textural features that are transitional between KPK and CK including poorly developed or patchy groundmass and increased dilution are observed locally. Significantly contaminated varieties of this unit contain common patches of coarse clinopyroxene in areas of digested country rock.

7.3.5.1.4 *KIMB3*

KIMB3 is classified as a f-m+c grained CK containing scattered very coarse grained olivine macrocrysts. The groundmass in most samples is comparable to KIMB2, having similar phlogopite phenocrysts and carbonate with less common spinel and perovskite. It is possible that KIMB2 and KIMB3 are the same kimberlite unit but are separated spatially within the pipe.

7.3.5.1.5 *KIMB4*

KIMB4 is classified as a f+m grained volcaniclastic kimberlite (VK) characterized by very high country rock dilution. KIMB4 is interpreted to be an early-stage unit related to pipe excavation. Gradational contacts exist between KIMB4 and KIMB1.

7.3.5.1.6 *KIMB5*

KIMB5 is classified as a f-m+c grained transitional textured kimberlite with moderate country rock dilution. KIMB5 was distinguished petrographically, based on its transitional texture and the presence of stubby phlogopite laths in the melt selvages rather than the acicular phlogopite crystals in KIMB1. KIMB5 is currently a minor unit, occurring in the northernmost section of the pipe. Further investigation is required to better define KIMB5, but it may be related to KIMB2 as the two units are in contact and have similar olivine populations, dilution, alteration and mineralogy.

7.3.5.1.7 *Coherent/Hypabyssal Kimberlite (KDyke)*

The coherent kimberlite at Faraday 2 (interpreted as hypabyssal kimberlite, HK) is f-m+c grained and composed of two generations of olivine (replaced by serpentine and talc) in a typically uniform well crystallized groundmass. The groundmass consists mainly of distinctive phlogopite phenocrysts that poikilitically enclose other groundmass phases (spinel, perovskite ± apatite, monticellite) and appear as radiating clusters, as well as carbonate.

Where the HK occurs within the pipe shell it has been modelled as part of the pipe infill (and not extended away from the main body). Intervals identified as KDyke-INT have been modelled with KIMB2 and KIMB3 where they are spatially close. Minor KDyke-INT intervals that cannot be reasonably modeled with the other CK units are grouped with KIMB1. The KDyke-INT unit at the base of the north end of the pipe was modelled as a separate unit due to its size. The temporal relationship of the HK to the pipe has yet to be confirmed; these intrusions may have been emplaced prior or subsequent to the main volcaniclastic emplacement event. Figure 7-13 is a conceptual schematic showing a number of potential geological scenarios.

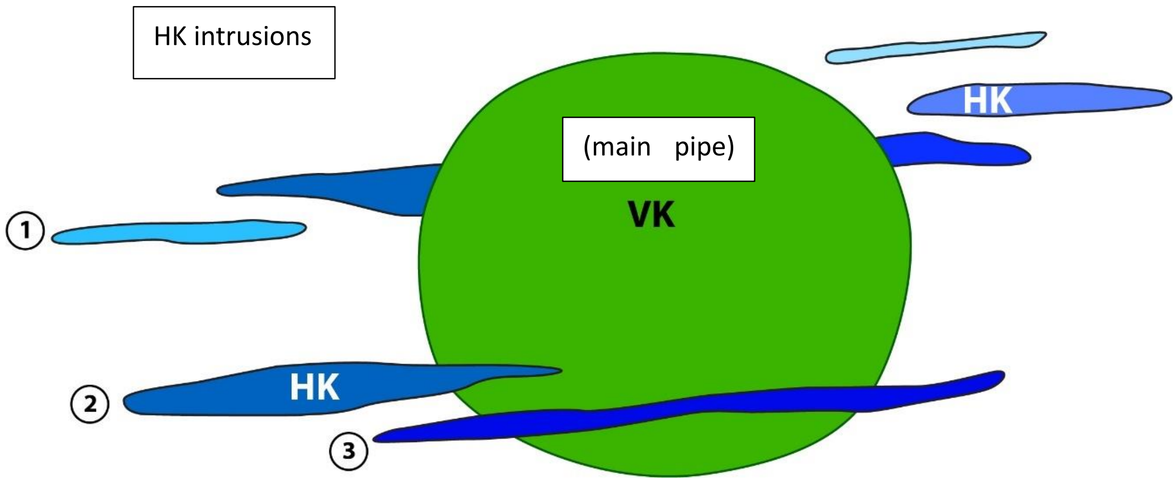

Figure 7-13. Conceptual schematic of potential spatial and temporal relationships of HK to the Faraday 2 pipe

7.3.5.2 Faraday 2 kimberlite 3-D geological model

The 3-D geological model of the Faraday 2 kimberlite incorporates all drilling and geological/petrographic information to June 2017. The model was constructed by Mike Diering of SRK using Leapfrog Geo™ software (V3.1.1). It consists of an external pipe shell model that defines the morphology and extent of the body, and an internal geology model that represents the spatial distribution of the kimberlite units infilling the pipe. The current model does not include diamond drilling completed during the summer of 2017.

7.3.5.2.1 *External pipe shell model*

The Faraday 2 pipe shell model shown in Figure 7-14. incorporates all of the volcaniclastic kimberlite units identified as well as any hypabyssal kimberlite present within the volcaniclastic pipe infill. Any hypabyssal kimberlite considered to represent sheet or irregular intrusions adjacent to or outside the main body have not been modelled. Faraday 2 is an irregular, variably trending (northwest, west) and variably inclined pipe (dips range from less than 20 to 40°). It has been delineated over 600 m, ranging in width from 20 to 90 m and in height from 20 to 60 m.

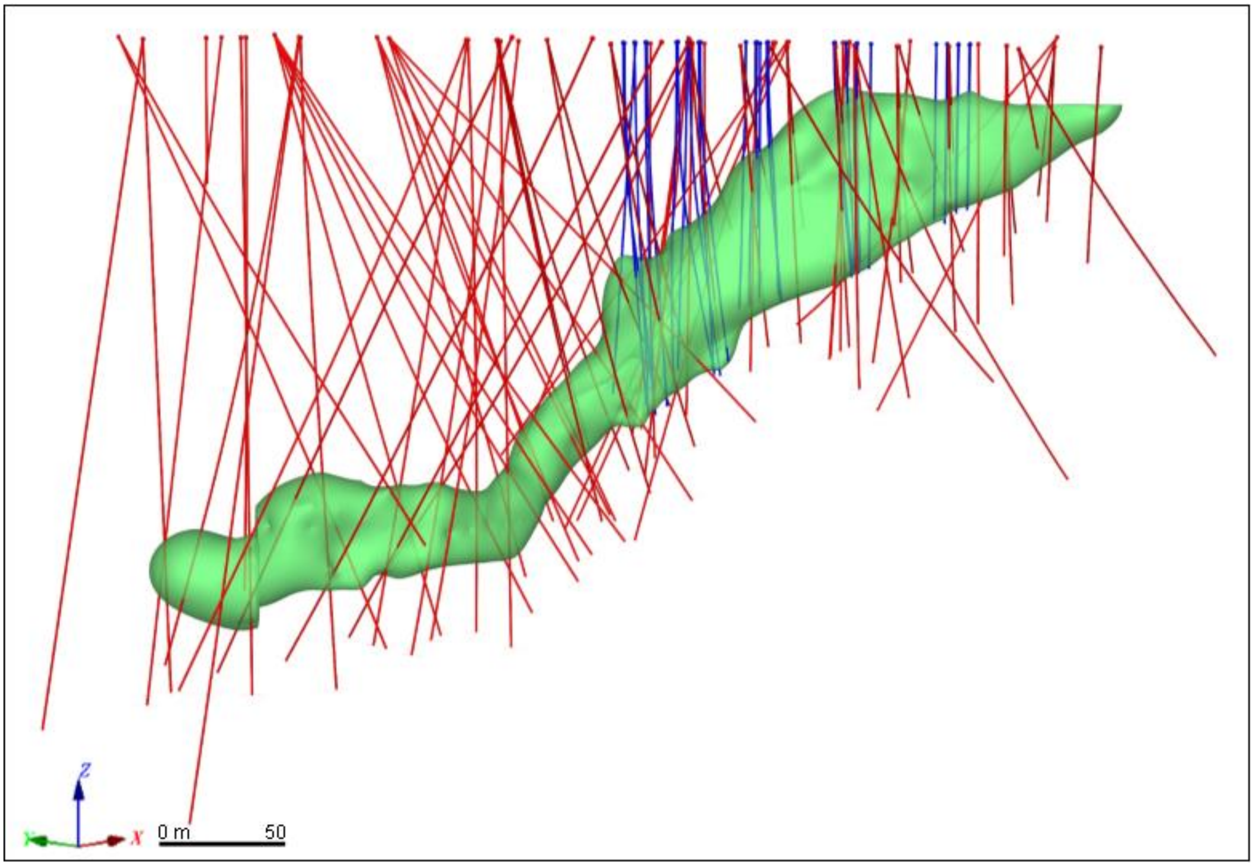

Figure 7-14. Inclined view (looking NE) of the external pipe shell model of the Faraday 2 kimberlite

Notes: Diamond drill hole traces are in red and LDRC drillholes in blue (June 2017).

7.3.5.2.2 *Internal geology model*

The kimberlite units described in Section 7.3.5.1 form the basis of the internal geology model which comprises seven geological domains, six of which are kimberlite domains, as shown in Table 7-7. Except for the KIMB1, all the domains correspond to a single kimberlite unit. Domain KIMB1 includes KIMB1A and KIMB1B, an altered variety of KIMB1A. The Xenolith domain represents internal waste rock and includes material interpreted as very large country rock xenoliths (drill intercepts > 1m) and possible rafts or wedges of *in situ* country rock within the pipe shell, where these could be delineated based on available drilling. It should be noted that SRK believes that some of the modelled country rock xenoliths may be continuous with external *in situ* country rock; the models have been created as best possible based on the available drill coverage. Figure 7-15 shows the current 3-D model of the internal geology at Faraday 2.

Table 7-7. Relationship between kimberlite units and 3-D geological domains at Faraday 2

Kimberlite unit	3-D geological domain
KIMB1A, KIMB1B	KIMB1
KIMB2	KIMB2

KIMB3	KIMB3
KIMB4	KIMB4
KIMB5	KIMB5
KDyke-INT (north end of pipe only)	KDyke Internal
Country rock xenoliths > 1m in situ wedges	CRX

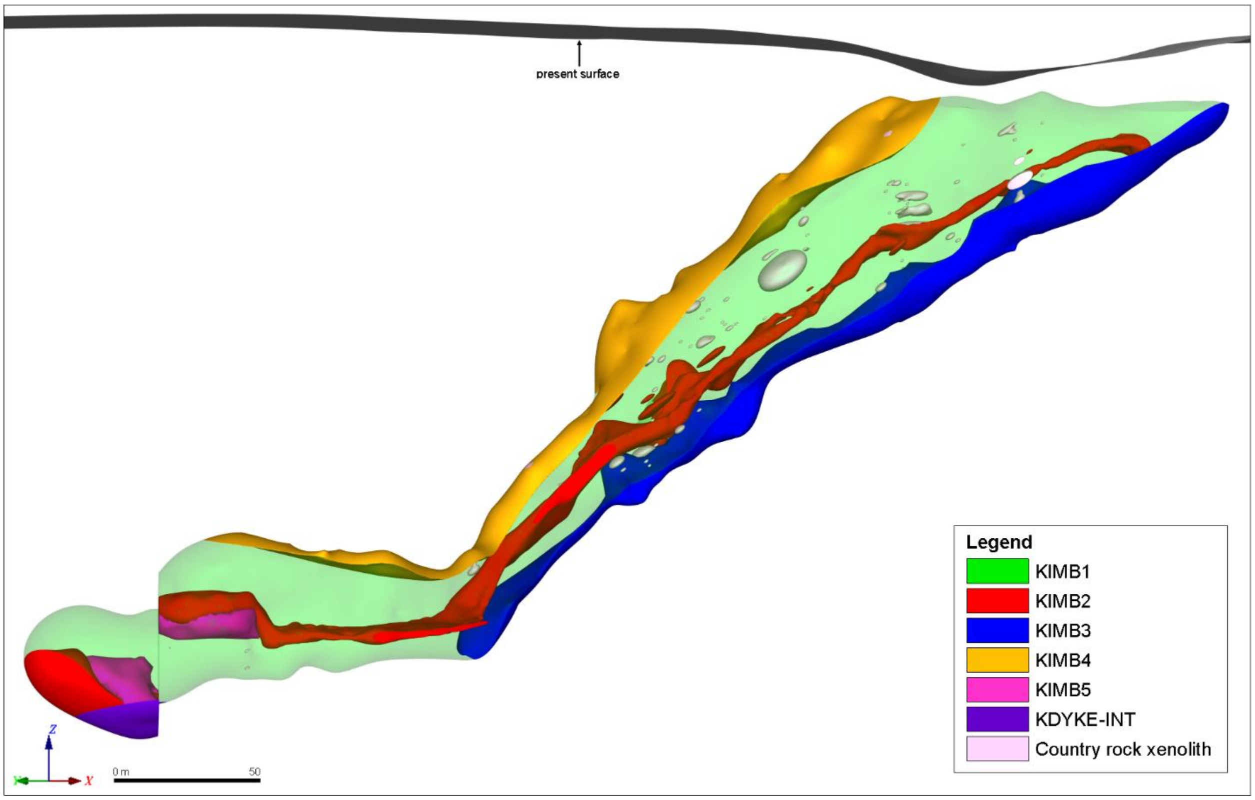

Figure 7-15. Faraday 2 3-D model (looking NE) showing internal geological domains

7.3.5.2.3 *Drill data constraining Faraday 2 model*

The drilling, detailed core logging and petrographic work conducted at Faraday 2 to date have supported construction of a pipe shell model defined by 56 drill holes providing 113 contact points, and a preliminary internal geology model, in which the number of contact points delineating individual kimberlite domains (excluding the undifferentiated RFW domain) ranges from 40 to 126 as shown in Table 7-8.

Table 7-8. Summary of drill data to construct the Faraday 2 pipe shell and internal geology models

Model Name	Number of diamond drill holes	Total Number of large diameter RC drill holes	Number of drill hole contact points
External Pipe Shell	56	29	113
Faraday 2 Internal Model			

KIMB1	40	29	126
KIMB2	27	27	54
KIMB3	20	28	40
KIMB4	23	22	46
KIMB5	4	0	8
Xenoliths	30	26	221
Kdyke Internal	2	0	4

7.3.6 Faraday 3 Kimberlite Geology

This section is modified from industry reports SRK (2016e). Kimberlite descriptions and classifications follow the terminology from Scott Smith et al. (2013).

7.3.6.1 Faraday 3 kimberlite units

Current understanding of the geology of the Faraday 3 kimberlite is based on logging of 53 drill cores and petrographic examination of 163 kimberlite thin sections from 16 of these drill cores, distributed in a representative manner through the body. A total of four main kimberlite units have been identified to date: KIMB1 through KIMB4, with KIMB4 subdivided into KIMB4B and KIMB4C based on differences in country rock xenolith content. KIMB4B is the volumetrically dominant unit and comprises variably diluted KPK. The key petrographic features of the kimberlite units infilling the Faraday 3 pipe and those either considered to be minor or to occur external to the body are summarized in Tables 7-9 and 7-10, respectively; the units are described in more detail in Sections 7.3.6.1.1 through 7.3.6.1.5.

Table 7-9. Summary of key petrographic features of the Faraday 3 kimberlite units

Kimberlite Unit	Textural Classification	Visually estimated dilution	Description
KIMB1	HK	<10%	HK composed of at least two different kimberlites: a phlogopite kimberlite and a monticellite kimberlite. Located in the uppermost part of the body. Contains conspicuous kelphytized garnets. Further work is required to divide KIMB1 into two units.
KIMB2	KPK	<25%	PK with conspicuous olivine macrocrysts and magmaclasts with thin complete rims; cored and uncored magmaclasts. Loosely packed and matrix supported.
KIMB3	VK	>50%	Often separated from KIMB2 by probable in situ country rock wedge. Highly diluted and sorted kimberlite that may display a fabric defined by the preferred orientation of elongated clasts.
KIMB4B	KPK	25-75%	Similar to KIMB2 with increased country rock dilution including conspicuous gneiss xenoliths larger than 5 cm and rare diabase. Loosely to closely packed and clast supported.
KIMB4C	KPK	>75%	Same as KIMB4B with a matrix comprised of pulverized country rock as well as large +10 cm gneiss xenoliths and minor (<20%) juvenile material. Closely packed and clast supported.

Table 7-10. Summary of minor kimberlite units within or external to the Faraday 3 pipe

Kimberlite Unit	Textural Classification	Visually estimated dilution	Description
KIMB5	VK	>50%	Isolated VK intervals peripheral to the pipe, may represent a range of kimberlite units
KIMB6	CK	<10%	Similar to KIMB1 and dominated by carbonate and serpentine melt segregations (one hole in pipe)
KIMB7	VK	30%	VK unit with irregular shaped magmaclasts and matrix of carbonate and serpentine flood (exterior to pipe)
KDYKE-EXT	CK	<10%	Similar CK to KIMB1, but identified spatially as outside of the pipe.
KDYKE-INT	CK	<10%	Rare. Typically, <10 cm units with variable composition.

7.3.6.1.1 *KIMB1*

- HK comprised of at least two kimberlites: dominated by phlogopite kimberlite with minor monticellite kimberlite identified in thin section but not discriminated in drill logs.
- Dark green colour with light to dark green olivine macrocrysts.
- Core is smooth and waxy to touch.
- Typically, massive with rare areas of weak flow alignment.
- 50-60% visual estimation of olivine abundance.
- f-m+c olivine macrocrysts, partially to completely serpentinized +/- carbonate replacement and rare hematite replacement.
- <10% country rock xenoliths include gneiss that are extensively serpentinized +/- hematite altered.
- Groundmass is poorly developed. Phlogopite>carbonate>spinel>perovskite.
- Globular white carbonate segregations common.
- Common mantle-derived garnets with thin to thick kelyphite rims or completely kelyphitized.
- Rare mantle xenoliths with kelyphitized garnets and other completely serpentinized phases.
- Widespread serpentine overprinting common, with oxide alteration rare.

7.3.6.1.2 *KIMB2*

- Texturally classified as massive, homogeneous KPK.
- Light to medium blue green colour with dark green olivine macrocrysts.
- Core is smooth to rough to touch.
- Massive, loosely packed, matrix supported.
- 30-40% visually estimated olivine abundance.
- f-m+c olivine macrocrysts, completely serpentinized. Broken crystals present.
- <25% fresh to completed altered country rock xenocrysts of feldspar, mica and quartz. Note feldspars include common orange altered examples.
- Magmaclasts are pelletal-shaped with thin complete rims (most cases) typical of KPK, cored and uncored, with well-developed groundmass of phlogopite>spinel>perovskite.
- CK autoliths are rare and up to 10mm in size and comprised of tightly packed f-m olivine in a coarse phlogopite groundmass.
- Matrix is dominated by semi-transparent brown-green serpentine with ash sized particles. Microlites are common, radiating from olivine and country rock xenoliths and sometimes extending throughout matrix.
- Rare indicator minerals include garnet with thin to thick kelyphite rims.

7.3.6.1.3 *KIMB3*

- Classified as VK that displays better sorting than the rocks classified as KPK and is characterized by finer grained olivine and country rock xenocryst populations.
- Light green-grey colour.
- Core is rough to touch and often broken or reduced to rubble.
- Juvenile material is difficult to estimate due to alteration but is estimated as less than 30%.
- A subtle fabric is defined by aligned biotite xenocrysts.

- f-m olivine crystals are completely pseudomorphed and can be difficult to distinguish from altered country rock xenocrysts.
- Note the xenoliths are small, typically < 1 cm and the rock is dominated by pulverized country rock xenocrysts and small olivine crystals less than 1 mm.
- Close packed and clast supported.
- This material is interpreted to represent a zone of flow associated with a contact against a possible in situ wedge of country rock.

7.3.6.1.4 *KIMB4*

KIMB4 has been subdivided based on contrasting country rock xenolith contents into KIMB4B (25 - 75%) and KIMB4C (> 75%). KIMB4B is the most voluminous kimberlite unit at Faraday 3.

KIMB4B

- Massive KPK with abundant fresh gneissic xenoliths.
- Total olivine abundance is visually estimated as 20-30%.
- f-m+c olivine macrocrysts are completely pseudomorphed by serpentine and may be broken.
- Magmaclasts consist of typically thin, complete selvages around olivine and some country rock xenocrysts and xenoliths (not all), typical of KPK. May be cored or uncored, and selvage thickness tends to increase with depth. Well-formed groundmass minerals of phlogpite>spinel>perovskite.
- Country rock xenolith dilution ranges 25-75% and includes abundant fresh gneiss. Feldspar xenocrysts are orange due to alteration and include common shards.
- Variable from loosely packed and clast supported to close packed and clast supported.
- This unit is not classified as “uniform” and “homogeneous” as there are fluctuations in the proportions of country rock and juvenile material.
- Rare indicator minerals include garnet with thin to thick kelyphite rims; typically, peridotitic.

KIMB4C

- Similar to KIMB4B but contains a greater proportion of fine pulverized country rock within the matrix as well as more common larger country rock xenoliths.
- Differentiated by light green core colour and lack of conspicuous olivine macrocryst population in thin section and in core.
- Classified as a highly diluted, generally massive and homogeneous KPK.
- Total olivine abundance is visually estimated as 5-15%.
- f-m+c olivine macrocrysts are completely pseudomorphed by serpentine; broken crystals are conspicuous.
- Magmaclasts may be difficult to discern and consist of thin selvages around olivine crystals and some country rock xenoliths; rare uncored magmaclasts.
- Close packed and clast supported.
- Xenoliths >10cm common and may display a bleached appearance.
- Rare indicator minerals include garnet with thin to thick kelyphite rims; typically, peridotitic.

- Note sulfide is commonly encountered within xenoliths – these are potentially fragments of pre-conditioned country rock.

7.3.6.1.5 *Minor units within or peripheral to Faraday 3*

There are five additional kimberlite units which have been identified as either insignificant volumes of pipe infill material or as units external to the Faraday 3 pipe.

KIMB5

- Volcaniclastic kimberlite present in discrete 1 cm to 1 m intervals on the periphery of the main pipe (i.e. bounded by country rock).
- Petrographically similar to but not considered part of the pipe due to spatial relationships; further work is required to determine the relationship to the main pipe.
- Country rock xenolith dilution is >50%.
- Typically, poorly preserved in core, and not examined in thin section to date.

KIMB6

- Core is smooth and waxy to touch.
- Medium blue-green colour with conspicuous black olivine macrocrysts.
- Massive, matrix supported.
- 40-50% visually estimated olivine abundance.
- f-m+c olivine macrocrysts, completely serpentinized +/- hematite replacement.
- <10% country rock xenoliths include gneiss that are extensively serpentine and hematite altered as well as rare diabase fragments.
- Groundmass is well developed and consists of phlogopite>carbonate>spinel>perovskite.
- Textually complex and dominated by melt segregations giving appearance of possible magmaclasts in core.
- Widespread serpentine overprinting with minor hematite alteration.
- Phlogopite HK.

KIMB7

- Dark brown-green colour.
- Massive, loosely packed, clast supported.
- 30% visually estimated olivine abundance.
- f-c olivine macrocrysts, completely serpentinized with 'blady' phlogopite rims.
- 30% country rock xenoliths include angular, weakly serpentinized gneiss and rare diabase.
- Thick and irregular shaped magmaclasts of phlogopite-carbonate>spinel>perovskite separated by a matrix of serpentine and carbonate.
- Rare peridotitic garnet with thin kelyphite rims.
- CK autoliths common; comprised of tightly packed fine to medium olivine in well-formed phlogopite groundmass.
- Phlogopite-carbonate PK.

KDYKE-EXT

- Phlogopite HK.
- Same kimberlite as KIMB1 but spatially resolved as outside the pipe shell.
- May be continuous with KIMB1.
- All CK intervals (typically less than 1.5 m thick) exterior to pipe are classified as KDYKE-EXT.

KDYKE-INT

- Rare, typically <10cm units of CK with variable composition.
- Dark green grey colour.
- 50% visually estimated olivine abundance.
- f-c+vc olivine macrocrysts.
- Moderately well-formed groundmass of carbonate>phlogopite>spinel>perovskite.
- 5% country rock dilution.
- Strong carbonate overprinting with moderate to poor mineral preservation. Grain boundaries are masked.

7.3.6.2 Faraday 3 kimberlite 3-D geological model

The 3-D geological model of the Faraday 3 kimberlite incorporates all drilling and geological/petrographic information to October 28, 2016. The model was constructed by Mike Diering of SRK using Leapfrog Geo™ software (V3.1.1). It consists of an external pipe shell model that defines the morphology and extent of the body, and an internal geology model that represents the spatial distribution of the kimberlite units infilling the pipe. The model is considered preliminary as further drilling, detailed logging and petrographic work are required to increase confidence in the pipe morphology and the character and distribution of internal units. The current model will be used to guide ongoing evaluation at Faraday 3 during 2017.

7.3.6.2.1 *External pipe shell model*

The Faraday 3 pipe shell model shown in Figure 7-16. incorporates all of the hypabyssal, pyroclastic and volcaniclastic kimberlite units interpreted as pipe infills. Any kimberlite considered to occur external to the pipe has not been modelled. Faraday 3 is an irregular inclined pipe that dips at 30° to the northwest. It is flatter and wider than Faraday 2 and Kelvin, ranging in width from 40 to 150 m and in height from 20 to 50 m. It extends over approximately 350 m and is open at depth.

Figure 7-16 shows the diamond drillhole traces in red and the LDRC drillholes in blue. Internal geology and external morphology of the Faraday 3 pipe has been determined from the intersection points from all drillholes.

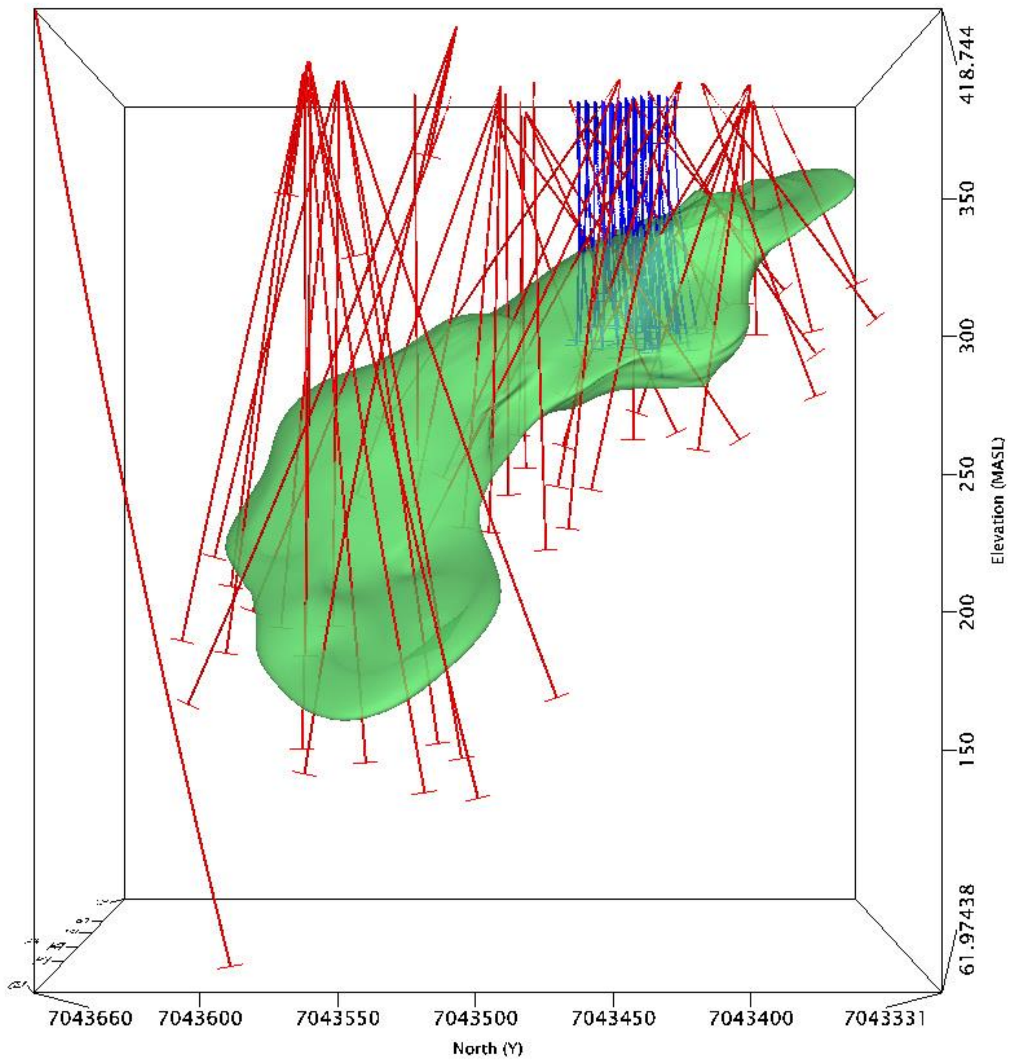

Figure 7-16. Inclined view (looking SE) of the external pipe shell model of the Faraday 3 kimberlite (Nov 2016)

Notes: Diamond drill hole traces are in red and LDRC drillholes in blue (June 2017).

7.3.6.2.2 *Internal geology model*

The main kimberlite units described in Section 7.3.6.1 above form the basis of a preliminary internal geology model comprised of six geological domains, five of which are kimberlite domains, as shown in Table 7-11. Three of the domains correspond to single kimberlite units: KIMB1, KIMB2 and KIMB3. The two KIMB4 subunits have been modelled as individual domains (KIMB4B and KIMB4C). The CRX domain represents internal waste rock and includes material interpreted as very large country rock xenoliths (drill intercepts > 1m) and possible rafts or wedges of *in situ* country rock within the pipe shell, where these could be delineated based on available drilling. It should be noted that SRK believes that some of the modelled country rock xenoliths may be continuous with external *in situ* country rock; these have been modelled as more continuous and flatter solids sharing an equivalent orientation to the pipe shell. Figure 7-17 shows the current 3-D model of the internal geology at Faraday 3.

Table 7-11. Relationship between kimberlite units and 3-D geological domains at Faraday 3

Kimberlite unit/subunit	3-D geological domain
KIMB1	KIMB1
KIMB2	KIMB2
KIMB3	KIMB3
KIMB4B	KIMB4B
KIMB4C	KIMB4C
Large country rock xenoliths / in situ wedges	CRX

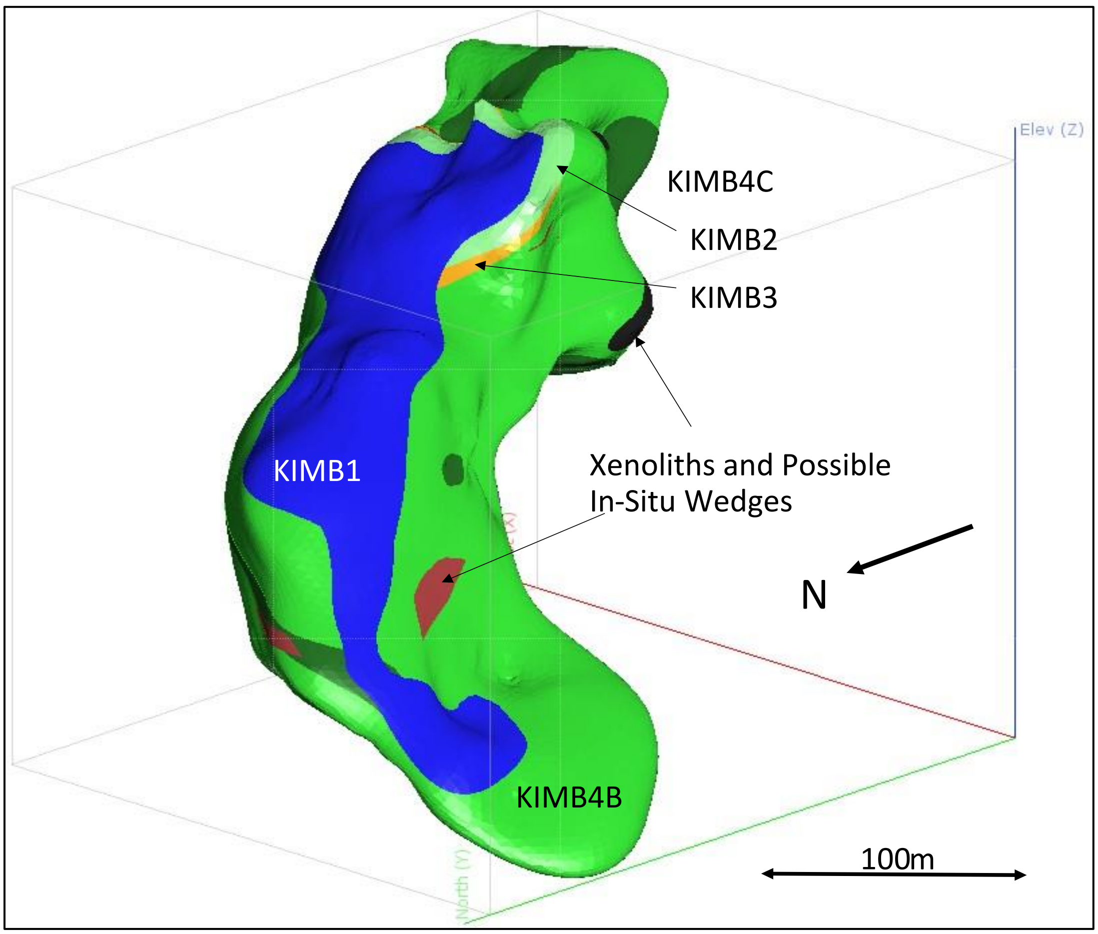

Figure 7-17. Faraday 3, 3-D model (looking SE) showing the internal geological domains (June 2017)

7.3.6.2.3 *Drill data constraining Faraday 3 model*

The drilling, core logging and petrographic work conducted at Faraday 3 to date have supported the construction of a pipe shell model defined by 44 drill holes providing 90 contact points, and a preliminary internal geology model, in which the number of contact points delineating individual kimberlite domains ranges from 14 to 84 as shown in Table 7.3.6.2.2.

Table 7-12. Summary of drill data to construct Faraday 3 pipe shell and internal geological model

	Number of drill holes	Number of drill hole contact points
External Pipe Shell	44	90
Geological domains		
KIMB1	16	32
KIMB2	10	20
KIMB3	7	14
KIMB4B	42	84
KIMB4C	24	48
CRX	27	82

7.3.7 Faraday 1 Kimberlite Geology

This section is summarized from industry report SRK (2016j). Kimberlite descriptions and classifications follow the terminology from Scott Smith et al. (2013).

Faraday 1 is associated with a series of en-echelon kimberlite sheets of variable thicknesses. The general geometry of Faraday 1 is similar to the Faraday 2, 3 and Kelvin kimberlites. It is an irregular, tube-shaped body that dips 25-30° to the northwest and is currently defined as being much smaller than the other kimberlites along the KFC trend, ranging 30 to 60 m in width and 10 to 20 m in height over approximately 200 m. Faraday 1 is infilled with volcaniclastic kimberlite (KPK) but is associated with significant amounts of hypabyssal kimberlite. The proportion of marginal breccia versus other kimberlite material is also higher than that documented in the other kimberlites. The small size of the volcaniclastic body, complex spatial relationship between units and nature of the units suggest that Faraday 1 is a less mature volcanic system than Faraday 2, 3 or Kelvin.

7.3.7.1 Faraday 1 kimberlite units

A preliminary geology model of Faraday 1 was produced in 2015 and updated in early 2017. The Faraday 1 geology and petrographic work completed to-date consists of the logging of 42 drill holes and investigation of 137 kimberlite thin sections and 54 country rock and marginal breccia thin sections collected from 20 drillholes across the length of the body. A summary of the kimberlite units is provided in Table 7-13, followed by more detailed description of the units.

Table 7-13. Summary of kimberlite units at Faraday 1

Kimberlite Unit	Textural Classification	Visually Estimated Dilution	Description
KIMB1	KPK	20-50%	Moderately diluted, f-m+c olivine-rich KPK. Magmaclasts have distinctive concentric phlogopite needles in selvedges. Variable alteration intensity.
KIMB1x	KPK	> 50%	High-dilution variation of KIMB1. Inhomogeneous mixture of KIMB1 and marginal breccia in places where these units are in contact.
KIMB2	CK-CKt	<5-10%	f-c coherent kimberlite with rare occurrences of transitional textures. Olivine-rich. Characterized by presence of pale-coloured strongly-altered small to mid-size country rock xenoliths, strong overall alteration, and CK autoliths.
KIMB3	HK	< 10%	f-c+vc olivine-rich phlogopite-monticellite HK. Distinct variation of KIMB3 exists with radiating phlogopite crystals that have been altered to chlorite, and clusters of spinel with perovskite overgrowths.
KIMB4	CKt-PK	25-60%	Low to highly diluted f-m olivine-rich KPK. Strongly altered. Most magmaclasts have very thin rims.
KIMB5	CK-PK	20-30%	f-c texturally variable rock with chaotic appearance and moderate to strong alteration. Moderately diluted by country rock. Magmaclasts have irregular outer margins and fine, randomly-oriented groundmass minerals including phlogopite and spinel.
KDYKE	HK	< 10%	f-c+vc HK composed of at least two different kimberlites: a phlogopite kimberlite and a monticellite-phlogopite kimberlite similar to KIMB3. In general, samples contain abundant carbonate and occasional red kelyphytized garnets. Located in the lowermost part of the complex and part of the hypabyssal kimberlite sheet system.
KDYKE-EXT	HK	<10%	Similar to other HK in the Faraday 1 and Faraday 3 complex, but external to the main bodies, and small intervals < 50 cm in length.

Marginal Breccia - MB

- Marginal breccia characterized by total country rock dilution >75%; sorted rock flour matrix and large, fresh gneiss xenoliths.
- Breccia is typically clast supported, and dominated by large blocks of locally derived country rock that can be >1m in size.
- The rock flour matrix is composed of sand to clay sized, subrounded to angular fragments of country rock with rare juvenile material.

- Trace amounts of kimberlitic material including olivine, magmaclasts, and very rare pink-red garnet may occur within the matrix.
- Country rock xenoliths >1cm occasionally have irregular rims of fine material – clay to fine sand sized particles of country rock.
- The proportion of juvenile material present in the marginal breccia is highly variable. Zones containing 20-30 cm intervals of kimberlite similar to KIMB1 separated by blocks of country rock >1m occur in some holes.

KIMB1

- KIMB1 is an olive green to grey-green coloured f-m+c phlogopite KPK with grey, white and pink fresh to weakly-altered xenoliths. More intensely serpentine-altered versions are pale blue-green with moderately altered green and red xenoliths.
- Slightly rough to smooth surface texture, core is moderately competent.
- Massive rock with a large range in clast size, homogeneous on a large scale, rock is matrix-supported to clast-supported.
- Olivine-rich, with 15-35% total olivine.
- Fine to medium and coarse (2-6 mm) conspicuous olivine macrocrysts, completely serpentinized.
- Moderate to high dilution (30-60%), many sub-angular shards, large xenoliths are fresh to moderately altered.
- Magmaclasts are abundant, morphology is diverse, both cored and uncored are present. Melt selvedges contain needle-like phlogopite laths with a concentric orientation, olivine phenocrysts, and rare country rock shards, particularly in more diluted examples.
- CK autoliths are present.
- Indicator-poor, rare red and pink garnets are the only mantle-derived indicator minerals identified.
- Mantle xenoliths are absent.
- Serpentine-dominated matrix with microlites. Matrix is commonly turbid and ashy, the matrix in more strongly altered examples is less-so due to serpentinization.
- Microlites in matrix and groundmass minerals in melt selvedges are relatively coarse.

KIMB4

- f-m+c olivine-rich volcaniclastic phlogopite kimberlite.
- Moderately to highly diluted by small and mid-sized country rock xenoliths. Xenoliths are moderately to strongly altered by serpentine, clay, and carbonate. Country rock dilution decreases with depth.
- Magmaclastic. Melt selvedges are generally thin with a uniform width and very fine groundmass minerals. Magmaclasts with larger selvedges contain phlogopite laths with random orientations and somewhat jagged-looking crystal shapes.
- Loosely-packed with a serpentine matrix. In some instances, the matrix appears to be flooded by serpentine and carbonate, obscuring the primary texture of the rock.
- Mantle-derived indicator minerals are present in most intervals, but are not abundant, and primarily consist of red garnets.

- Only one mantle xenolith has been observed.
- Possible small CK autoliths have been observed.
- KIMB4 has a more HK-like appearance with increasing depth within the unit. This is due to the decrease in CR xenoliths and uniform olivine distribution.
- Minor unit at Faraday 1, occurring above KIMB3. The relationship between KIMB4 and KIMB3 has not been defined. A sharp contact does not exist between the two units.

KIMB5

- Medium grey-green to brown-green f-m+c olivine-rich phlogopite kimberlite with CK autoliths.
- Texturally variable, full spectrum of textures from CK-PK. Can have chaotic appearance.
- Pervasive serpentine alteration and white carbonate veining through core. Alteration is commonly strong.
- The rock is massive and unsorted.
- f-c olivine macrocrysts, completely replaced by serpentine with minor carbonate and oxides. Pale green colour.
- Olivine-rich – total olivine abundance ranges from 30-50%
- Country rock dilution is variable, ranging from 5-40%. More pyroclastic examples of KIMB2 tend to have a higher proportion of xenoliths. Xenoliths are moderately to strongly altered by serpentine.
- The matrix contains serpentine segregations and can be microlitic. Groundmass minerals are commonly altered, but they include fine phlogopite and spinel.
- Where present, magmaclasts have irregular margins and abundant small olivine phenocrysts in melt selvedges.
- Rare red and pink garnets are the only mantle-derived indicator mineral identified.
- No mantle xenoliths have been identified in this unit.

KDYKE

- Medium-dark green hypabyssal kimberlite with pale-dark green olivine.
- Alteration type and intensity is variable. White-pale green carbonate ± serpentine veining occurs in all samples.
- Smooth, waxy texture to core surface, core is fairly competent.
- Structure varies from massive to flow-aligned, rock is homogeneous.
- Very olivine-rich: total olivine ranges from ~50-60%
- f-c+vc olivine macrocrysts. Olivine is completely altered. Serpentine is the dominant alteration mineral, with minor carbonate and oxides.
- Country rock dilution is low, generally <10%. Xenoliths are strongly altered.
- Carbonate, phlogopite and spinel in groundmass, some serpentine.
- Rare CK autoliths.
- Indicator mineral-poor, red garnet with thin/thick kelyphite rims are the most common indicator mineral; one chrome diopside observed.
- Mantle xenoliths are rare.

7.3.7.2 Faraday 1 3-D Geological Model

The current Faraday 1 3-D geological model was produced in June of 2017 and incorporates all diamond drilling up to the end of 2016, the four large-diameter RC holes completed in 2017, and all petrographic information. The model was constructed using Leapfrog Geo software by Mike Diering of SRK. Faraday 1 comprises a central pipe containing multiple kimberlite units and external kimberlite bodies that were modeled as discrete solids (Figure 7-18).

7.3.7.2.1 *Faraday 1 Model Kimberlite Domains*

Various kimberlite units both internal and external to the pipe shell have been identified and subsequently modelled within the Faraday 1 Kimberlite geology model. Each modeled domain represents a single kimberlite unit. The quantity of drilling data used to constrain the Faraday 1 geology model is listed in Table 7-14.

Table 7-14. Summary of drill data used to define the Faraday 1 pipe shell and internal domains

Model Name	# of Diamond Drillholes Used	# of Large Diameter RC Drillholes Used	# of Drillhole Contact Points
External Pipe Shell	32	4	72
KIMB3 (Sheet)	19	4	46
KDyke (Sheet)	37	4	82
KIMB4 (VK above KIMB3)	5	4	18
Faraday 1 Internal Model			
KIMB1	31	4	70
KIMB1x	10	0	20
KIMB2	8	2	20
KIMB5	6	0	12
Country Rock Xenoliths	12	1	38

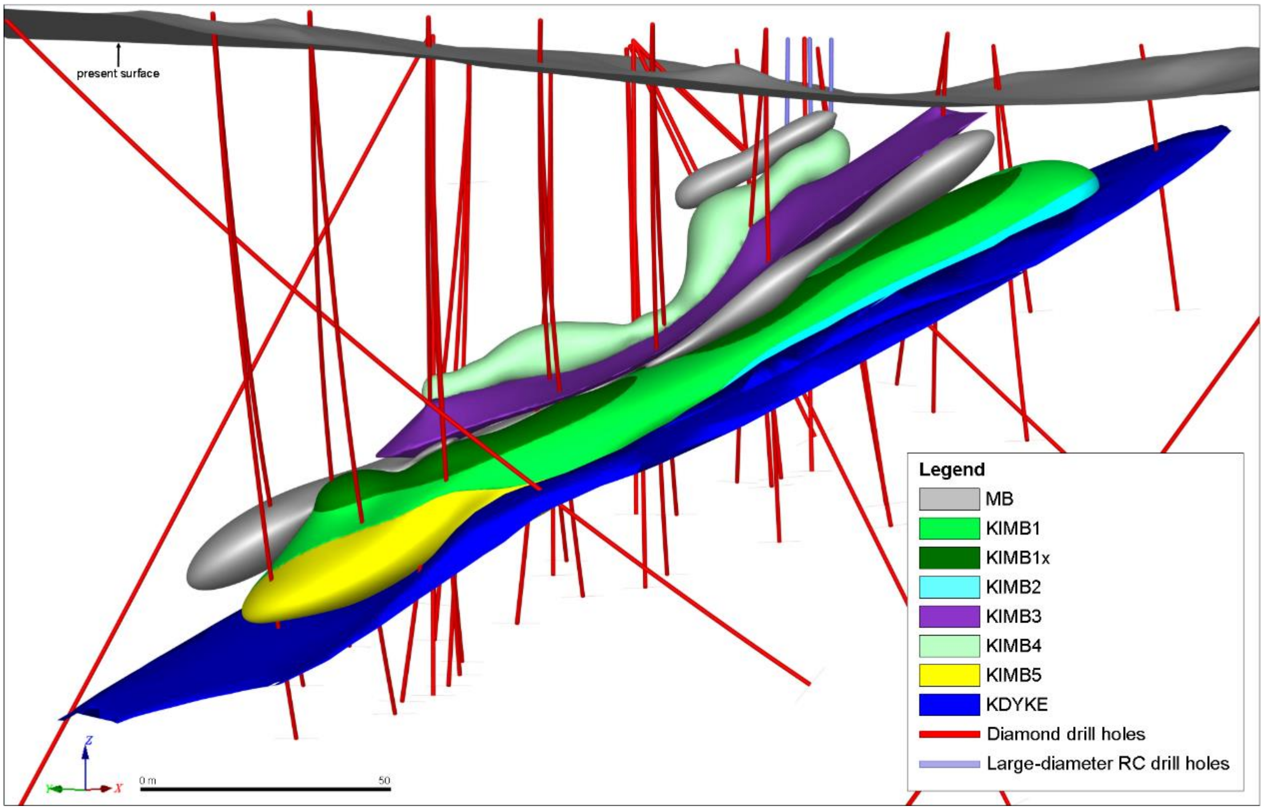

Figure 7-18. 3-D Geological Model of the Faraday 1 Kimberlite
Notes: Diamond drill hole traces in red and RC drill hole traces in light purple.

7.3.8 Quaternary

The area has been glaciated repeatedly during the Pleistocene Epoch. Most recently, the Laurentide ice sheet covered the area and began to recede about 18,000 years before present (B.P.) The Kennady Lake area was ice-free between 9,000-9,500 years B.P. (Dyke and Prest, 1987). Investigations of glacial stratigraphy have not resulted in evidence of any earlier glacial advances. Glacial drift forms a thin veneer in the area and consists of unstratified till blankets with glaciofluvial outwash deposits.

Till veneers have few bedrock outcrops but abundant frost boils where cryoturbation has brought materials to surface for sampling of Kimberlite Indicator Minerals (KIM). The glacial till is predominantly basal or lodgement till associated with the base of the ice sheets, therefore KIM dispersal distances are minimal. Sand and reworked glacial till deposits are classified as outwash. There are some eskers in the area. There are also proglacial sediments consisting of glaciofluvial and glaciolacustrine deposits.

7.3.9 Metamorphic and Structural Geology

All areas have been subjected to upper-amphibolite metamorphic conditions, with anatectic melts contributing to a migmatitic texture throughout much of the metaturbidite sequence. Two sillimanite-grade metamorphic pulses are recognized; one corresponds to the typical pan-Slave event at ca. 2.6 Ga and the other is atypical and probably occurred about 15 – 20 my later. A single foliation related to the younger metamorphic peak is evident in most outcrops and can be demonstrated to transpose all earlier fabrics. Recognition of Archean faults is hindered due to the late metamorphic recrystallization.

Proterozoic dykes of the Fletcher and Mackenzie swarms and of two other anomalous events are recognized. A small-volume alkaline intrusion of uncertain age was discovered in the MZ area.

Brittle Paleoproterozoic faulting is particularly evident in the granitoid terrains due to introduction of hematite and quartz and destruction of magnetite. The regional-scale east-northeast striking Fletcher Fault transects two of the mapped areas and is interpreted to be a ca. 2.2 Ga extensional feature reactivated at ca. 1.8 Ga as a dextral fault. Three regional sets of joints are recognized; subvertical joints are interpreted to primarily reflect the ca. 2.2 Ga event whereas a subhorizontal set is ascribed to recent glacial retreat and unloading. Potential correlations between principal structures and kimberlite occurrences were not identified.

The granite-gneiss terrane of the area has been intruded by diabase dykes. Granite intrusions tend to be bordered by gneisses that have been metamorphosed by the intrusions. In the eastern portion of the area granitoid-gneiss terrane gives way to metasediments typical of the turbidite sequences observed elsewhere in the Slave (Yellowknife Supergroup). Complex, tight folding and shearing has affected these mudstones and greywackes. Minor volcaniclastic lithologies are also present (Thurston, 2003).

There are several groups of “demagnetized” lineaments with weak to negative magnetic responses. They could be either dykes or country rock that has been demagnetized along fault or shear zones. They are classified as: i) regular, pervasive northeast-trending set, ii) regular, pervasive northwest-trending set, and iii) east-west trending set.

The northeast-trending structures lie parallel to the orientation of the ca. 2.0-1.8 Ga Great Slave Lake Shear Zone (Hoffman, 1987) to the south. Younger, second-order structures trend primarily northwest and may be related to the rifting event that emplaced the Mackenzie dyke swarm (1270 Ma) (LeCheminant and Heaman, 1989).

7.4 MINERALIZATION

Substantial work has been undertaken on the Kennady North property since 2012. Prior to 2012, five (5) diamond-bearing kimberlites had been identified. These five kimberlites in chronological order of identification are: Doyle in 1996, Faraday in 1999, Kelvin and Hobbes in 2000 and the MZ in 2001. Although the primary mode of emplacement was considered to be sheets (dykes), volcaniclastic (pyroclastic) kimberlite had been identified (Hetman, 2000) which resulted in the interpretation of potential blows or small kimberlite pipes occurring along the kimberlite sheets. This identification of pyroclastic kimberlite material without a full explanation of the airborne and ground geophysical survey results enticed KDI to engage in more detailed exploration along the Kelvin-Faraday Corridor (KFC).

The kimberlites in the KFC area are portions of the deep roots of an intrusive kimberlitic complex, consisting of volcaniclastic kimberlite and less common hypabyssal kimberlite as well as transitional kimberlite (Bezzola, M. and Hetman, C., 2015). There are numerous interconnecting dykes. The geometry of the intrusive bodies is complex.

The complex structure and geometry is a reflection of a combination of their Cambrian age (Heaman *et al*., 2003) and the extent of the erosional processes on the Slave craton over the past 500 Ma since emplacement, thereby exposing the deeper subsurface roots of these volcanic systems. This has produced a deep cross-section of the original kimberlite intrusions, which are now further masked by lake basins and glacial sediments.

Over the past 5 years, much diamond drilling has been undertaken for caustic fusion analyses for microdiamonds to delineate the Kelvin, Faraday 2, Faraday 3, Faraday 1 and Hobbes kimberlites within the KFC. Over 2,100 tonnes of kimberlite has been removed via bulk sampling using large diameter reverse circulation drilling. This extensive exploration has delineated the kimberlite bodies that host diamond mineralization, and has provided sufficient constraints on their volumes and bulk density, as well as the grade and value of diamonds present, to support the declaration of Mineral Resources (see Section 14) for the Kelvin, Faraday 2 and Faraday 3 bodies.

8 DEPOSIT TYPES

The Kelvin, Faraday 2 and 1-3 kimberlites are unconventional, irregular shaped, subhorizontal kimberlites. This model type has yet to be recognized anywhere else in the world. These kimberlites are similar with respect to textures, primary mineralogy, grade and age, but not in external morphology, to the Gahcho Kué kimberlite cluster at Kennady Lake. These kimberlites in the southeast Slave craton differ from many other Canadian kimberlites (Field and Scott-Smith, 1999).

The Fort à la Corne kimberlites preserve the volcanic craters with associated pyroclastic aprons that erupted in an intertidal environment, which subsequently modified the aprons. These kimberlite crater facies have relatively large surface areas.

The Lac de Gras pipes are preserved as diatreme zones which lie below the craters and above the hypabyssal root-zone.

The Gahcho Kué kimberlite cluster contains significant volcaniclastic kimberlite as well as hypabyssal kimberlite and textures transitional between these end members (Hetman *et al.*, 2004).

The Kelvin and Faraday 2 and 3 kimberlites are dominated by volcaniclastic kimberlite and lesser amounts of hypabyssal kimberlite. There are variable transitional kimberlite units between these two end members which infill the Kelvin and Faraday 2 and 3 pipe-like bodies. Faraday 1 is dominated by hypabyssal kimberlite.

The emplacement model for the Kelvin and Faraday kimberlites is analogous to well documented models of formation and emplacement in KPK systems. The same emplacement processes are at work but now form an inclined pipe. This conceptual model is proposed in Figures 8-1a and 8-1b. Figure 8-1a shows the schematic geology of what is considered the Class I kimberlite type (KPK system) in Canada. Tilting a Class 1 Type kimberlite at 20-30°dip can represent the current Kelvin and Faraday kimberlites (Figure 8-1b).

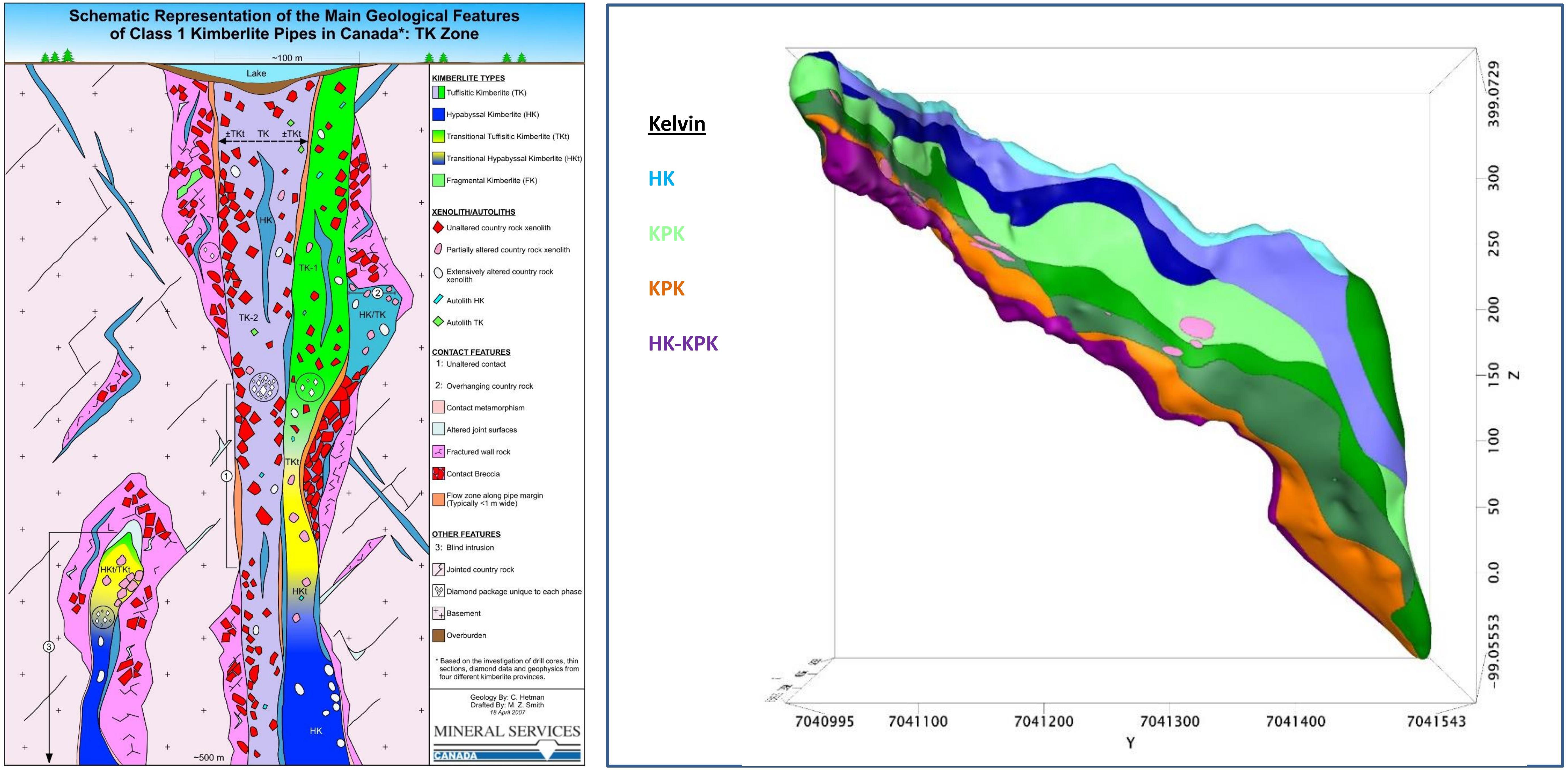

Figure 8.1a Schematic representation of Class 1 kimberlite pipe (infilled with TK or now KPK) versus Kelvin (Hetman, 2008)

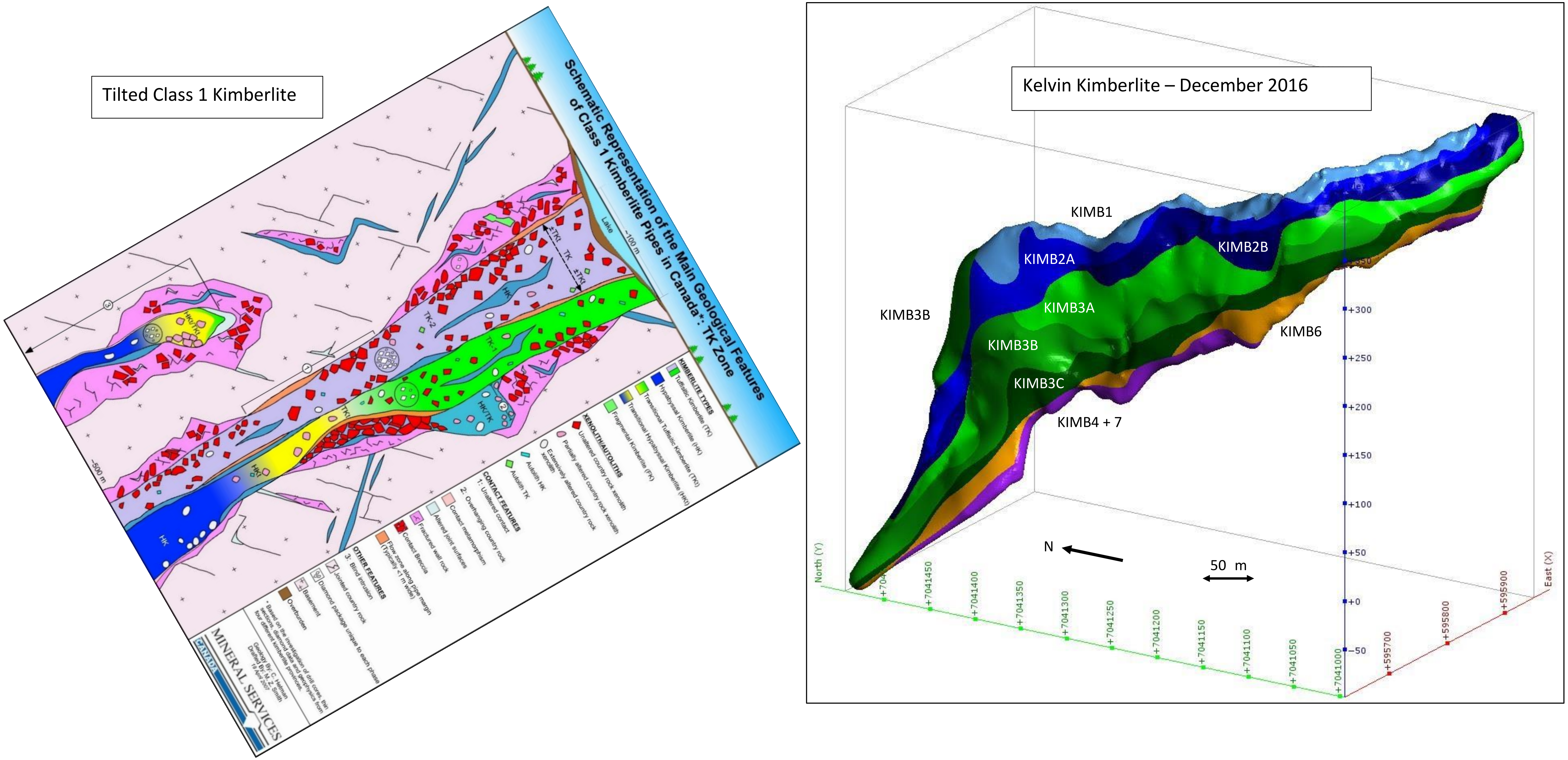

Figure 8.1b Conceptual Formation of the Kelvin kimberlite

There is not a clear understanding yet of how these kimberlites force their way to surface. One suggestion from Wayne Barnett (Ph.D., SRK) is that the primary structural system of the kimberlite dykes is oriented at 20° dip and trending 320° Az. The dyke segments may or may not connect, but may step up or down, and do have a coincidental correlation in dip with shallower segments and irregularities of the Kelvin kimberlite. Mike Stubley (Ph.D., Stubley Geoscience) has suggested that these types of kimberlite formations could occur through changing pressures from compressional to extensional environments which allow the kimberlite to carve its way to the surface without pre-existing structures. Neither emplacement model has been proven and further work is required.

9 EXPLORATION

9.1 EXPLORATION 2017

9.1.1 Introduction

Significant exploration has been completed by KDI on the Kennady North project since 2011. This information is documented within the NI 43-101 document titled "2016 Technical Report – Project Exploration Update and Maiden Mineral Resource Estimate, Kennady North Project, Northwest Territories, Canada, and filed on Sedar (January 23, 2017).

In mid-2016, KDI acquired four mineral leases from GGL which lie just south of the Gahcho Kué mine site. The exploration ground work completed during the 2017 field season was focused at Blob Lake (Figure 9-1), underlying the western leases (light pink in colour). All four leases will become part of the important exploration ground package moving forward.

Between January 26th and August 24th, 2017, geophysical surveying at Blob Lake comprised ground gravity (12,160 stations), OhmMapper© (401.78 kms), total field magnetic (451.38 line kms) and boat-borne bathymetric (186.53 kms) surveying.

9.2 Gravity Survey

9.2.1 Introduction

Ground gravity was completed over Blob Lake and surrounding area in an attempt to outline trends in density contrast that might lead to the identification of conventional kimberlite bodies (like the GK mine site or Doyle and MZ sills) or unconventional kimberlite sources, like the Kelvin and Faraday kimberlites.

A total of 12,160 gravity stations were read between the dates of March 4th and May 3rd, and July 13th to August 14th, 2017. Measurements were commonly at 40 m spaced stations but are 20 m spaced stations within the northeast quadrant of Blob Lake.

9.2.2 Gravity Results

There are commonly significant regional effects from gravity surveying and to lessen these regional effects, a 1st order trend removal filter has been applied to the full dataset (Figure 9-2). A narrow, high

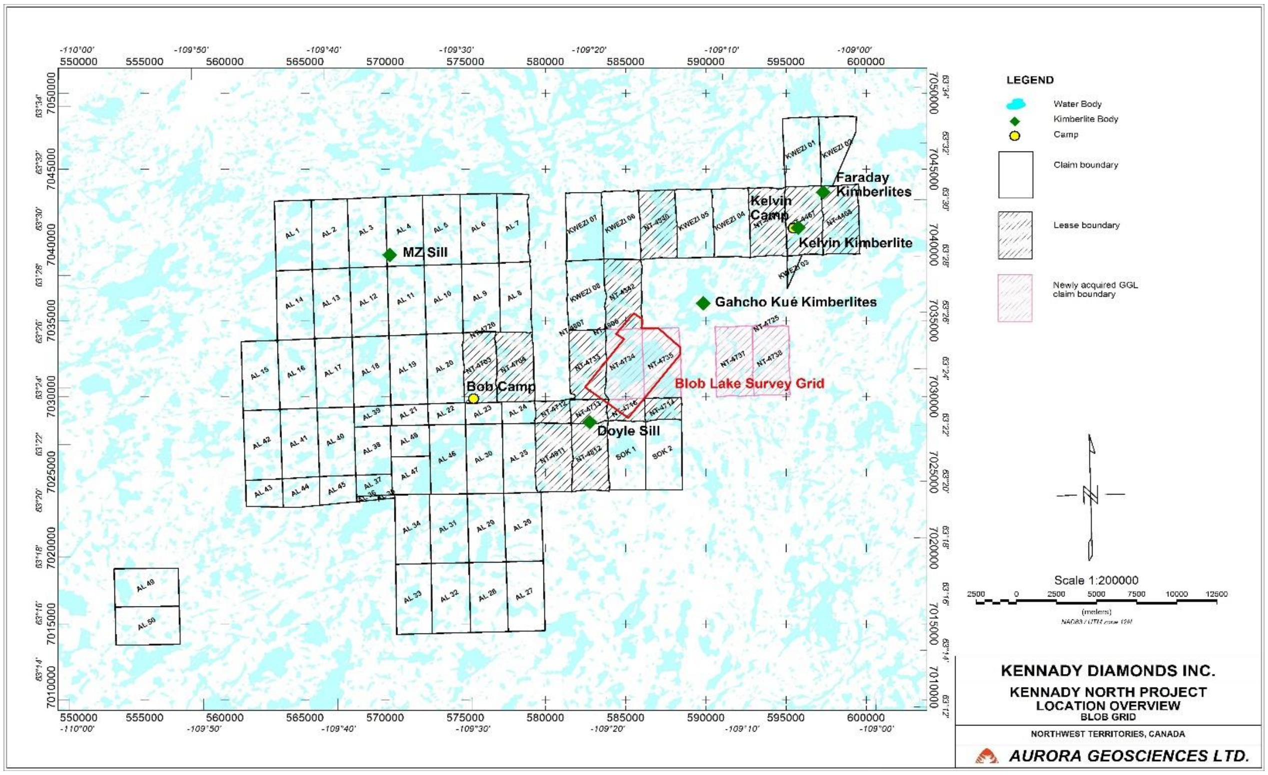

Figure 9-1. Location of 2017 Exploration Program

density feature strikes at 55° NE trending across the grid and is coincident with a magnetic high feature attributable to a Proterozoic dyke. A second prominent gravity high feature is located to the southeast of the linear feature and is a massive gravity high. The feature likely continues to the southeast but is truncated by the grid extent.

Historical GGL Resoruces Corp holes are also shown on this map to show that none of the historical drilling has tested any of the new target areas.

Area 1 hosts a number of gravity low targets ranging in strength from 150 to 300 milligals (Figure 9-3). These gravity features trend across land and lake at approximately N55° E (dashed line) and has a crude orientation to that of the Doyle sill and the KFC (Kelvin-Faraday Corridor). There are a series of larger circular shaped gravity lows entrenched othogonally to this main lineament. The crude orientation of these lows is similar to the Kelvin and Faraday kimberlite bodies; see the dashed lineament lines trending northwesterly (Figure 9-4). The higher intensity gravity features reflect the removal of regional trends.

9.2.2.1 Blob Lake – Target 1

Target 1 (Figure 9-5) is located underneath Blob Lake and comprises a negative density contrast of approximately 0.2 milligals. The general orientation of the gravity response at 320°Az trends much like the unconventional kimberlites along the KFC, north of Gahcho Kué. This represents an intriguing drill target.

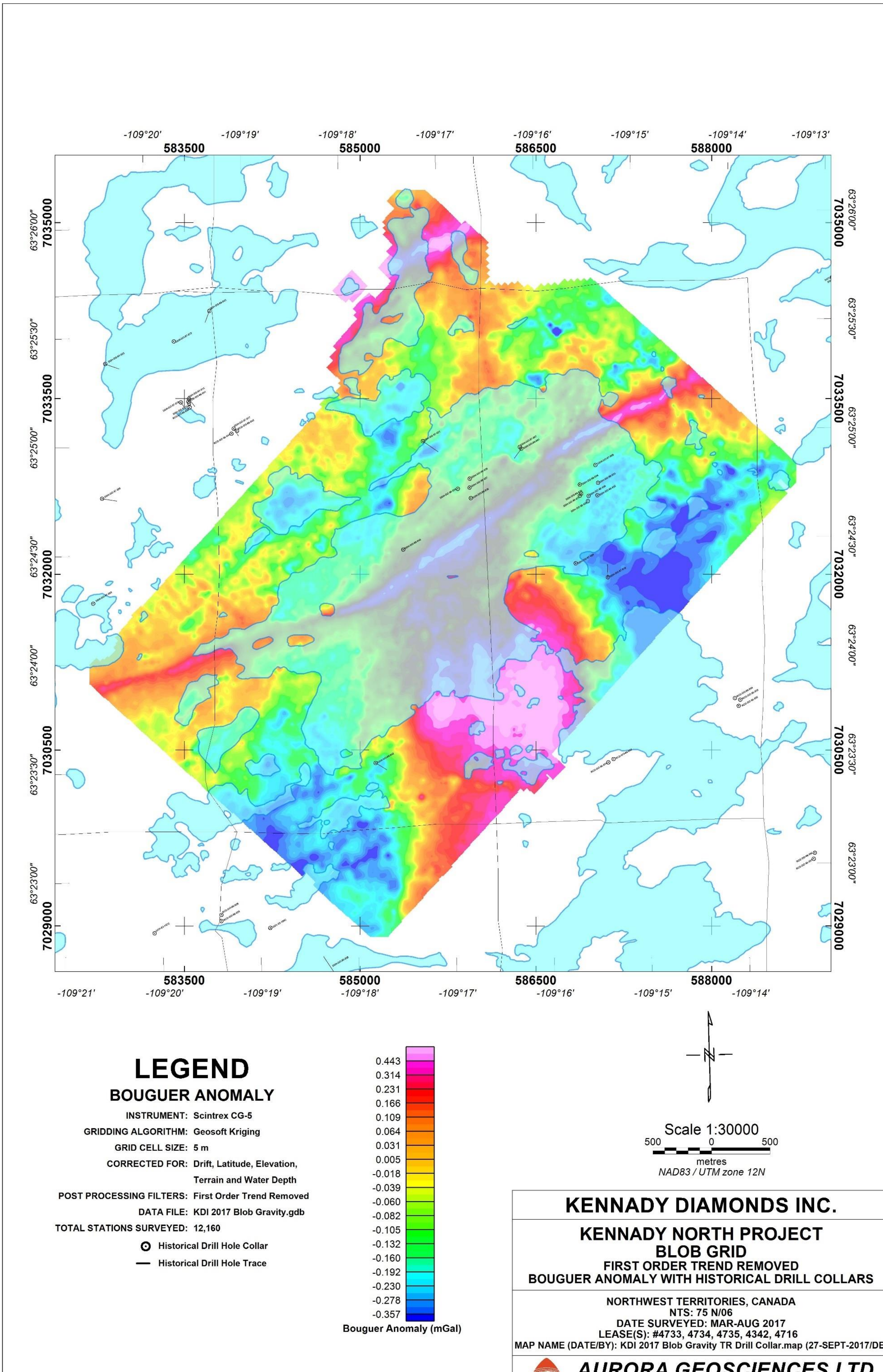

Figure 9-2. Blob Lake Gravity - trend removed with historical GGL drillholes

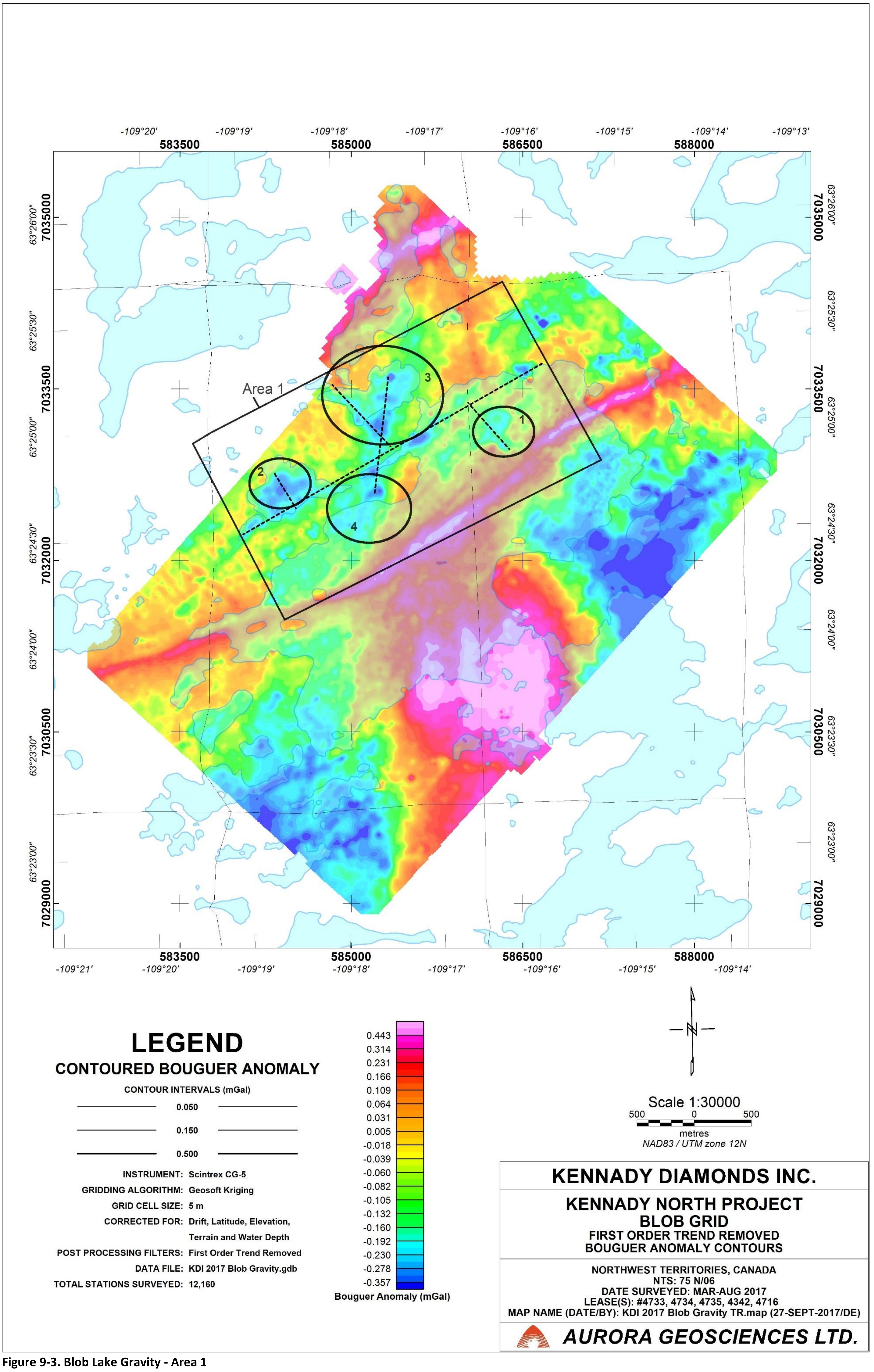

Figure 9-3. Blob Lake Gravity - Area 1

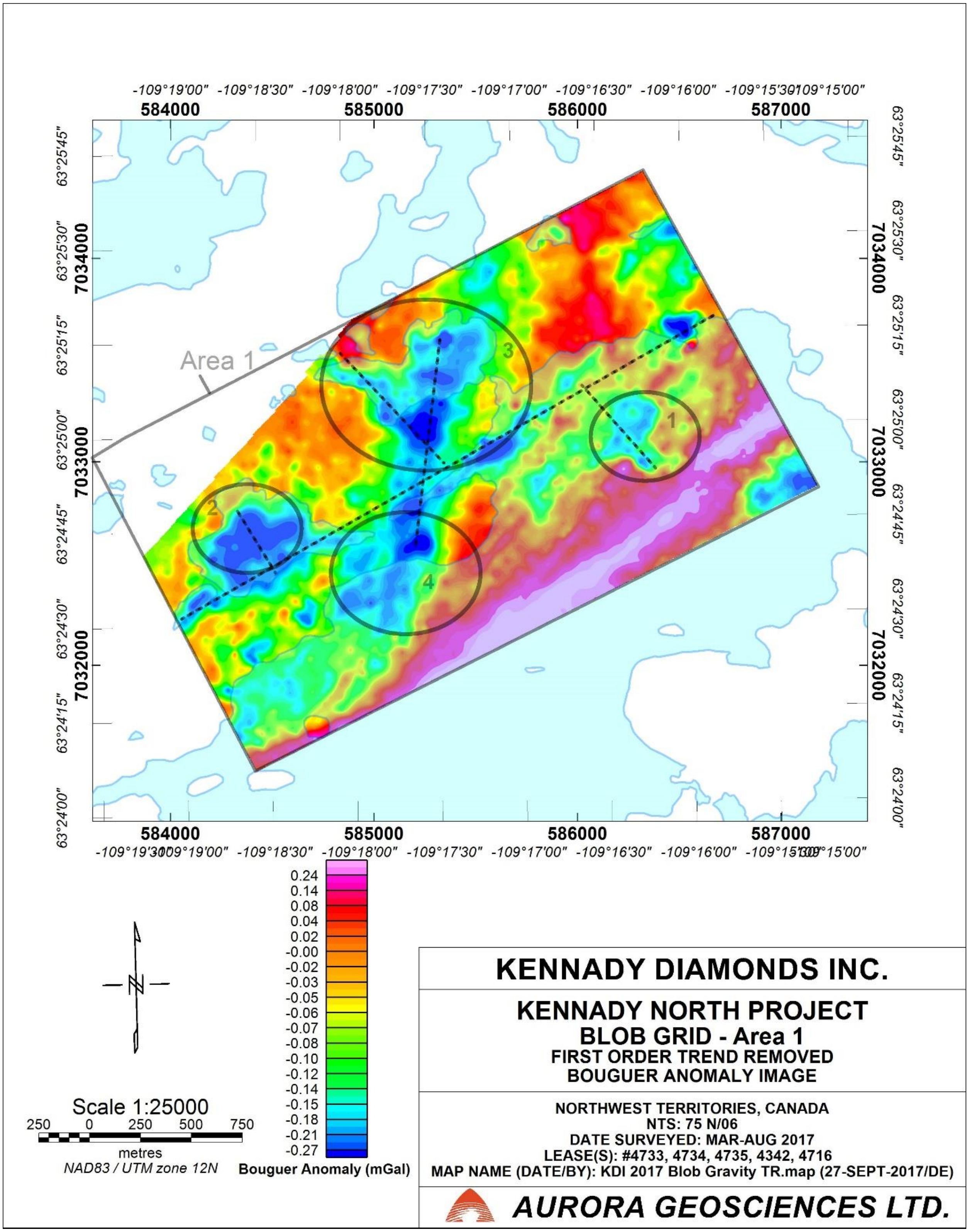

Figure 9-4. Area 1 - Blob Lake Gravity

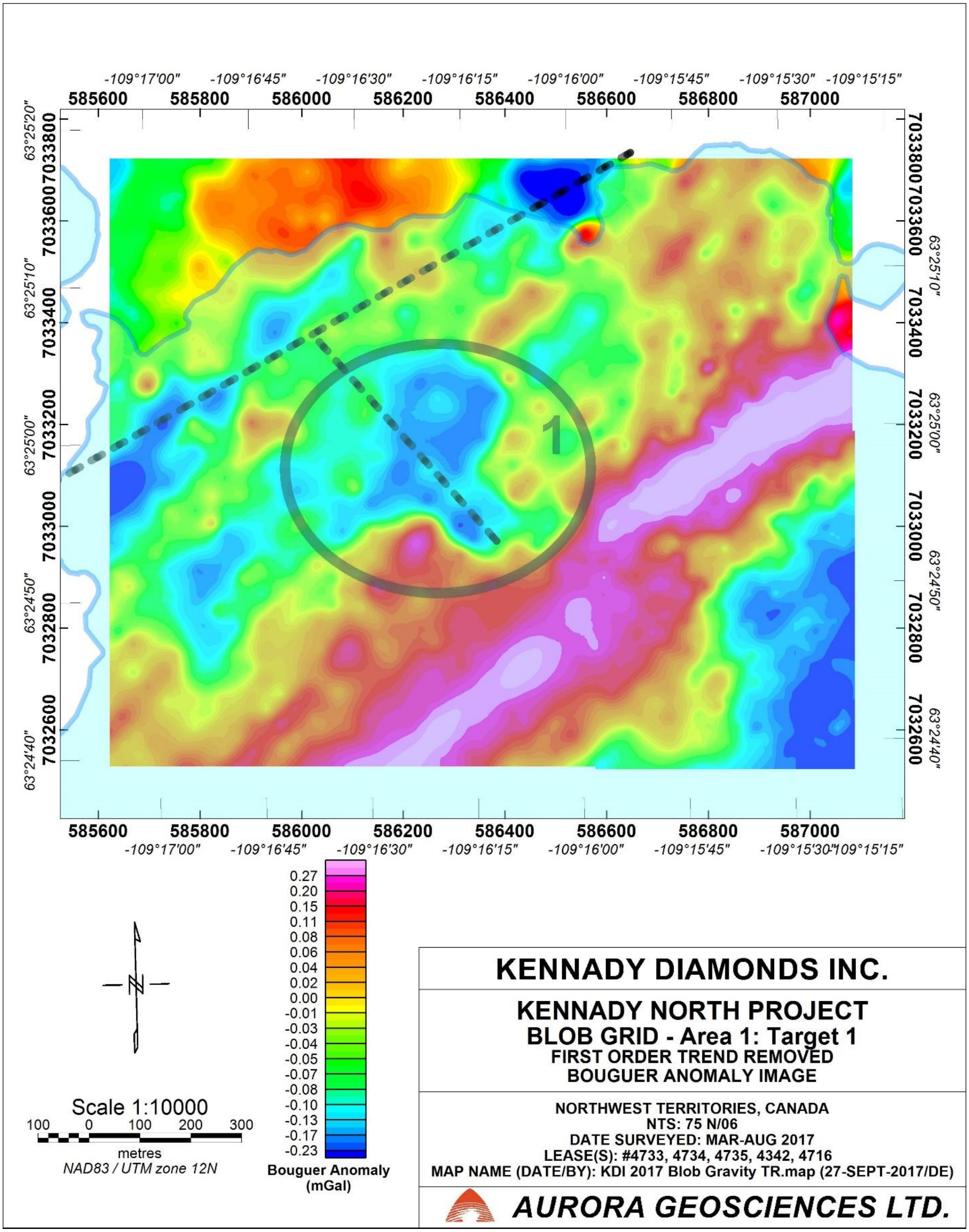

Figure 9-5. Target Area 1 - Blob Lake Gravity

9.2.2.2 Blob Lake Gravity – Target 2

Target 2 is located under Little Puff Lake, about half way along and just west of Blob Lake (Figure 9-6). The gravity low feature has a prominent 250 milligal anomaly which trends in a northwesterly direction, similar to the Kelvin and Faraday kimberlite bodies.

9.2.2.3 Blob Lake Gravity – Target 3

Target 3 is located on land between Blob Lake and Minnow Lake and bifurcates into two separate lineaments trending northwest and north under Minnow Lake (Figure 9-7). Target 3 has a density low of 180 milligals and appears to trend away from the prominent northeast trending regional feature which corresponds to the orientation of the surface expression of the Kelvin and Faraday sill complex.

9.2.2.4 Blob Lake Gravity – Target 4

Target 4 is located on land and extends south under Blob Lake (Figure 9-8). The gravity low feature has an average density of 190 milligals. The gravity response is coincident with a significant magnetic low. In the context of the known gravity responses associated with the kimberlites identified at Kelvin and Faraday Lake, this is a priority drill target.

9.3 Bathymetric Survey

9.3.1 Introduction

During the summer of 2017, a total of 12 ponds and lakes were boat surveyed in the Blob Lake area to allow for proper bathymetric corrections for the gravity survey data. A total of 183.53 line kilometres of bathymetric surveying was completed between August 16th and August 23rd, 2017.

9.3.1.1 Bathymetric Results

Gridding was established at 50 m line spacings and sonar measurements were taken using an Airmar SS510 smart sonar transducer. All depth data was recorded in ASCII text format while global positioning system (GPS) data was recorded using a Trimble GeoXH. The collected GPS data was corrected for minor positional variations using post processing software and Canadian Active Control System GPS base station in Yellowknife, this obtained sub meter accuracy. The location of the bathymetry survey is shown in Figure 9-9.

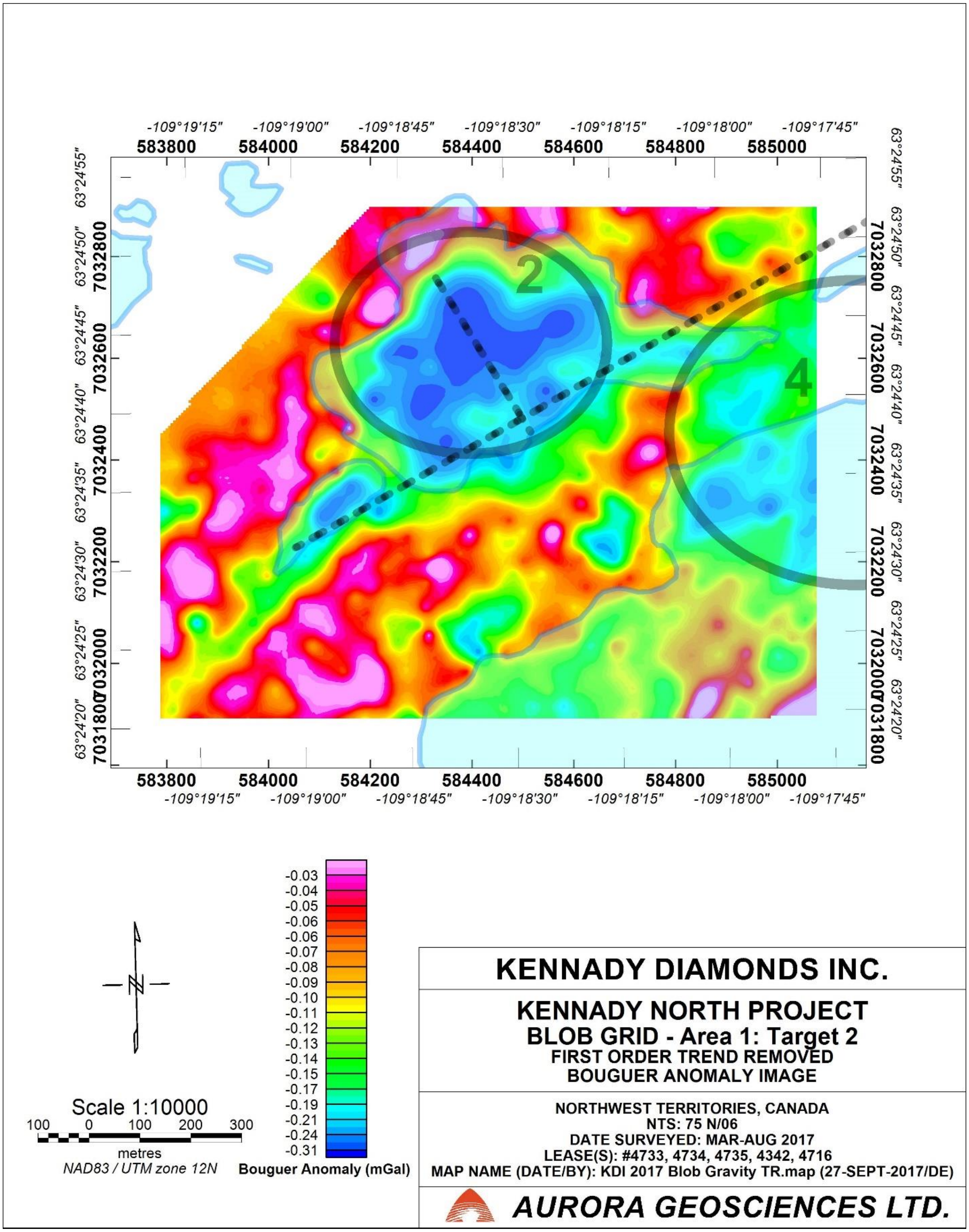

Figure 9-6. Target Area 2 - Blob Lake Gravity

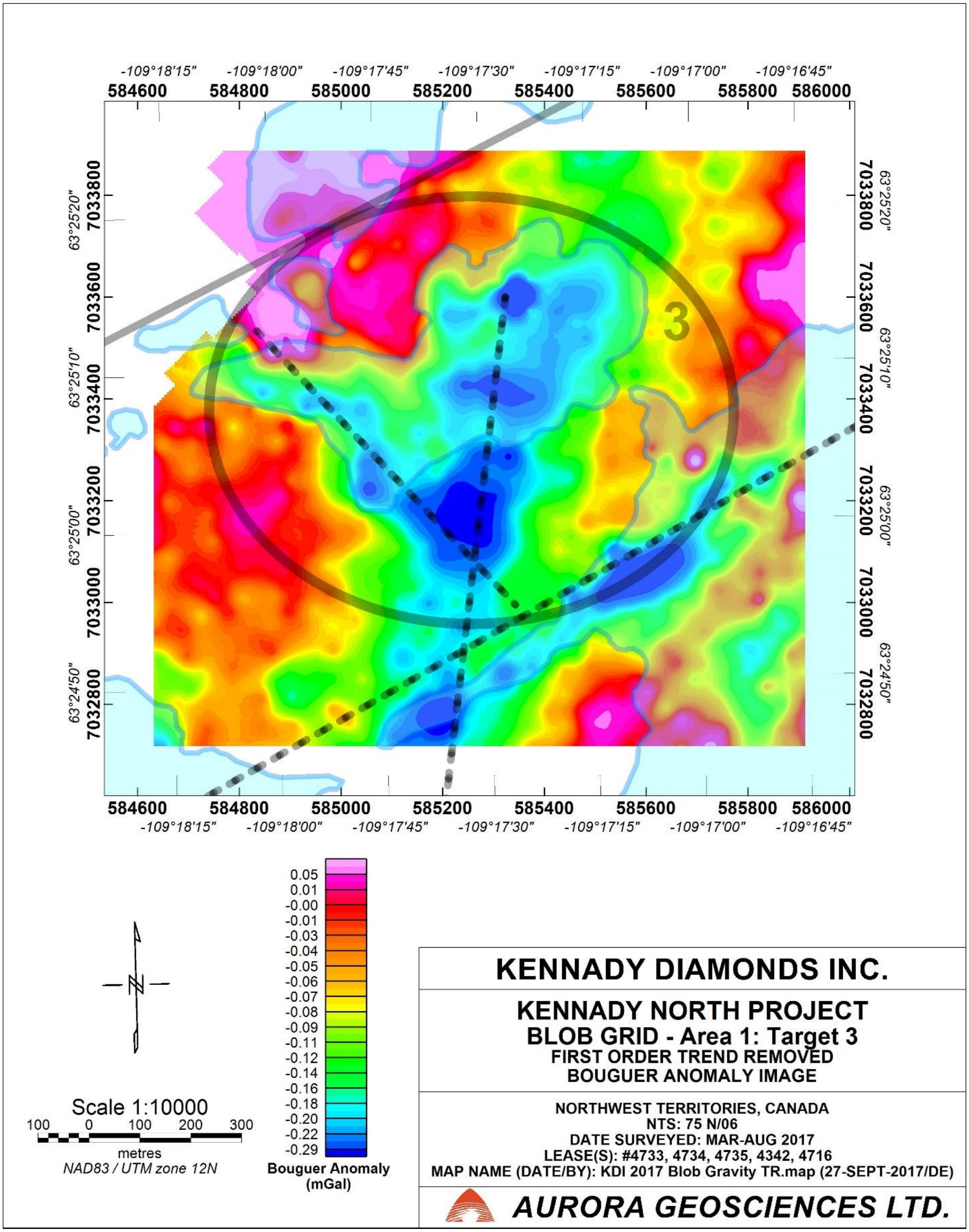

Figure 9-7. Target Area 3 - Blob Lake Gravity

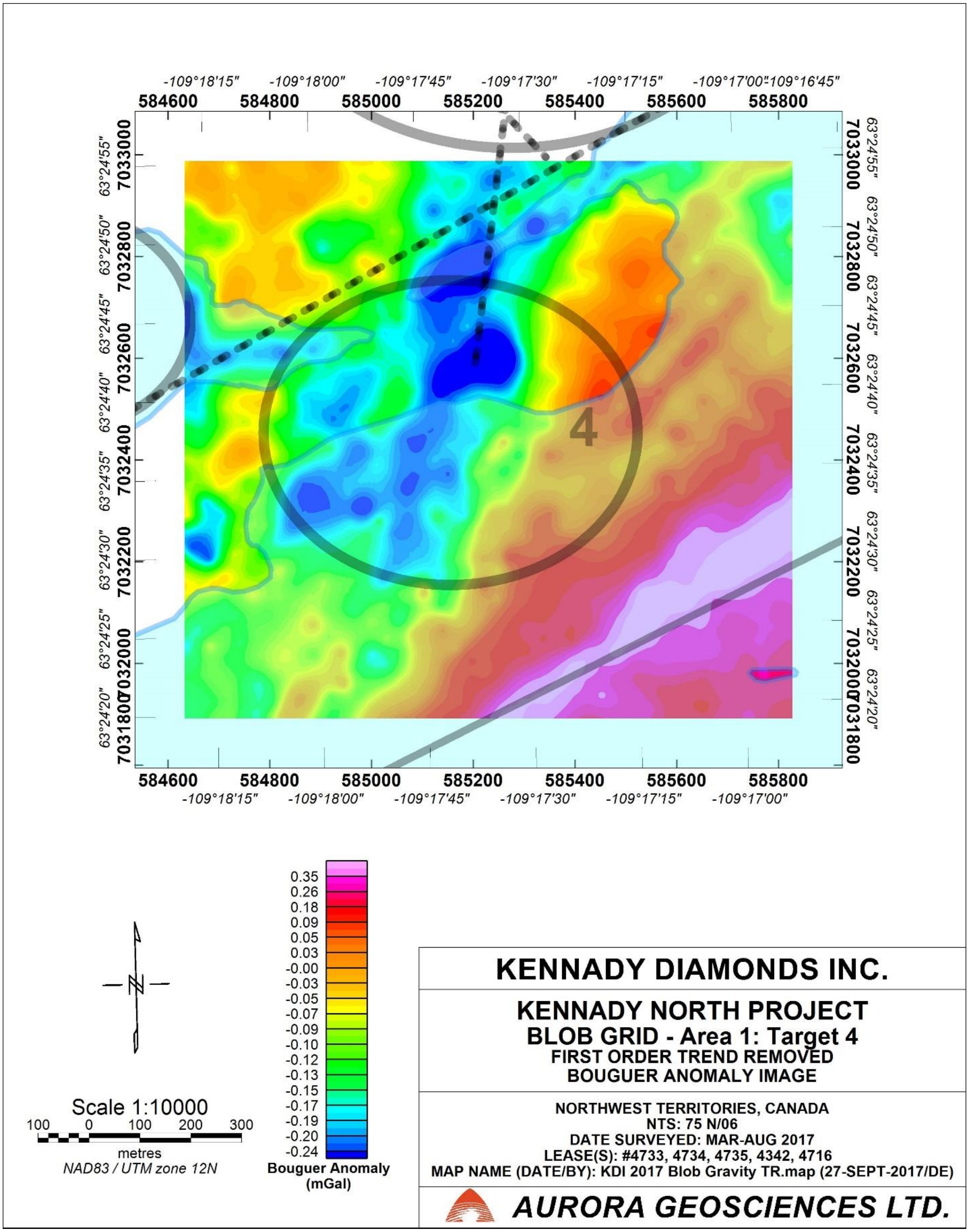

Figure 9-8. Target Area 4 - Blob Lake Gravity

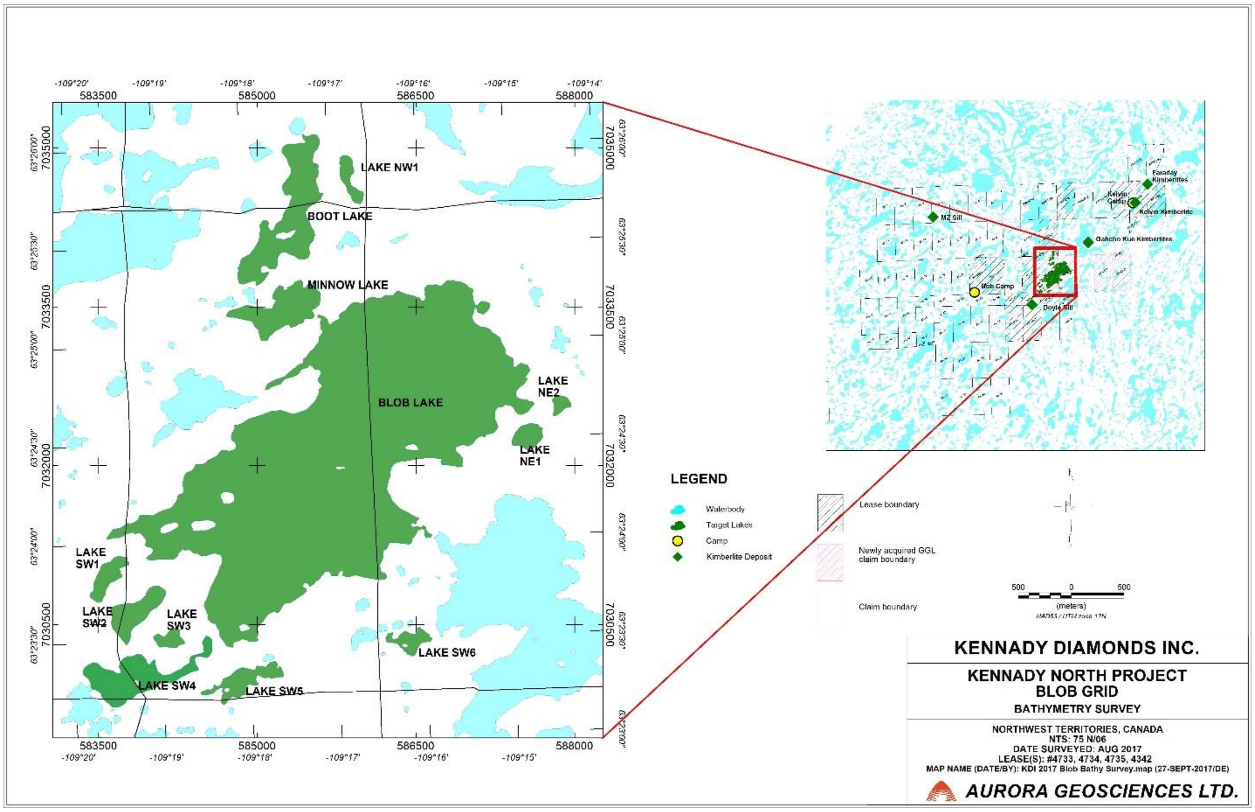

Figure 9-9. Bathymetric Survey Location

9.4 OhmMapper© Survey

9.4.1 Introduction

During the 2017 winter season, a capacitively coupled resistivity (OhmMapper©) survey was completed on and around Blob Lake. This resistivity survey has become an integral part of the geophysical tool box on the Kennady North project. The evaluation of resistivity contrasts, using the models developed at the Kelvin and Faraday kimberlite bodies, is essential in delineating priority drill targets.

A total of 401.78 line kilometres of resistivity surveying was completed between the dates of February 28th and April 27th, 2017.

9.4.2 OhmMapper© Results

The OhmMapper© data is used to create 2-D inversion models which allows the data to be presented in constant elevation slices. The presentation of the OhmMapper© data is shown in Figures 9-10 and 9-11. Figure 9-10 is the presentation of resistivity data at surface or 410 masl (metres above sea level). The data reflects a strong central arcuate pattern of low resistance, or good conductivity in Blob Lake. The low resistance areas need to be reviewed in relation to deeper depth slices. If low resistance features continue to increased depths, it is likely these features are bedrock responses and warrant further investigation. Upon review of Figure 9-11, the resistivity responses are more discrete, smaller and

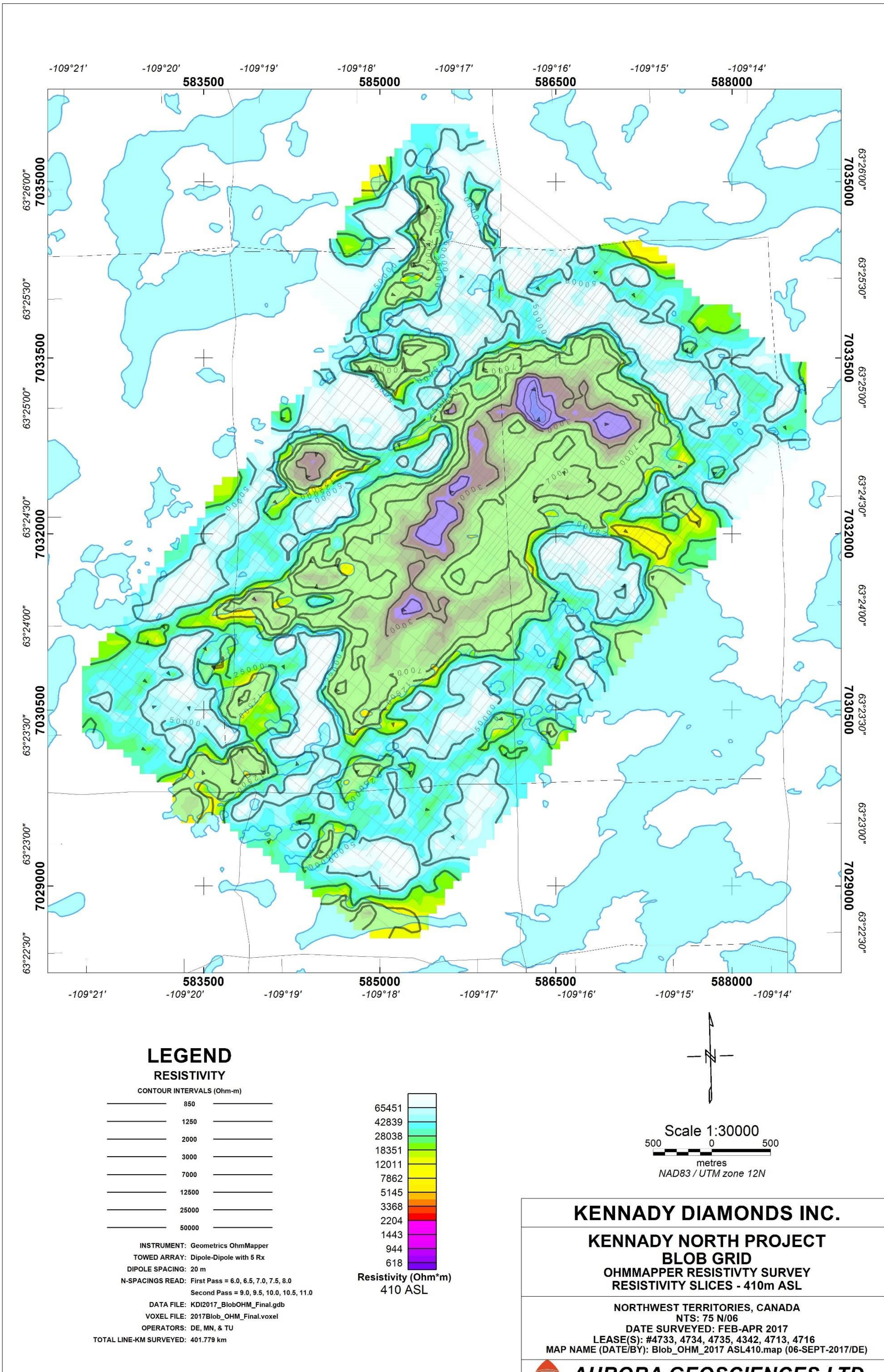

Figure 9-10. Resistivity Contoured Data at 410 masl.

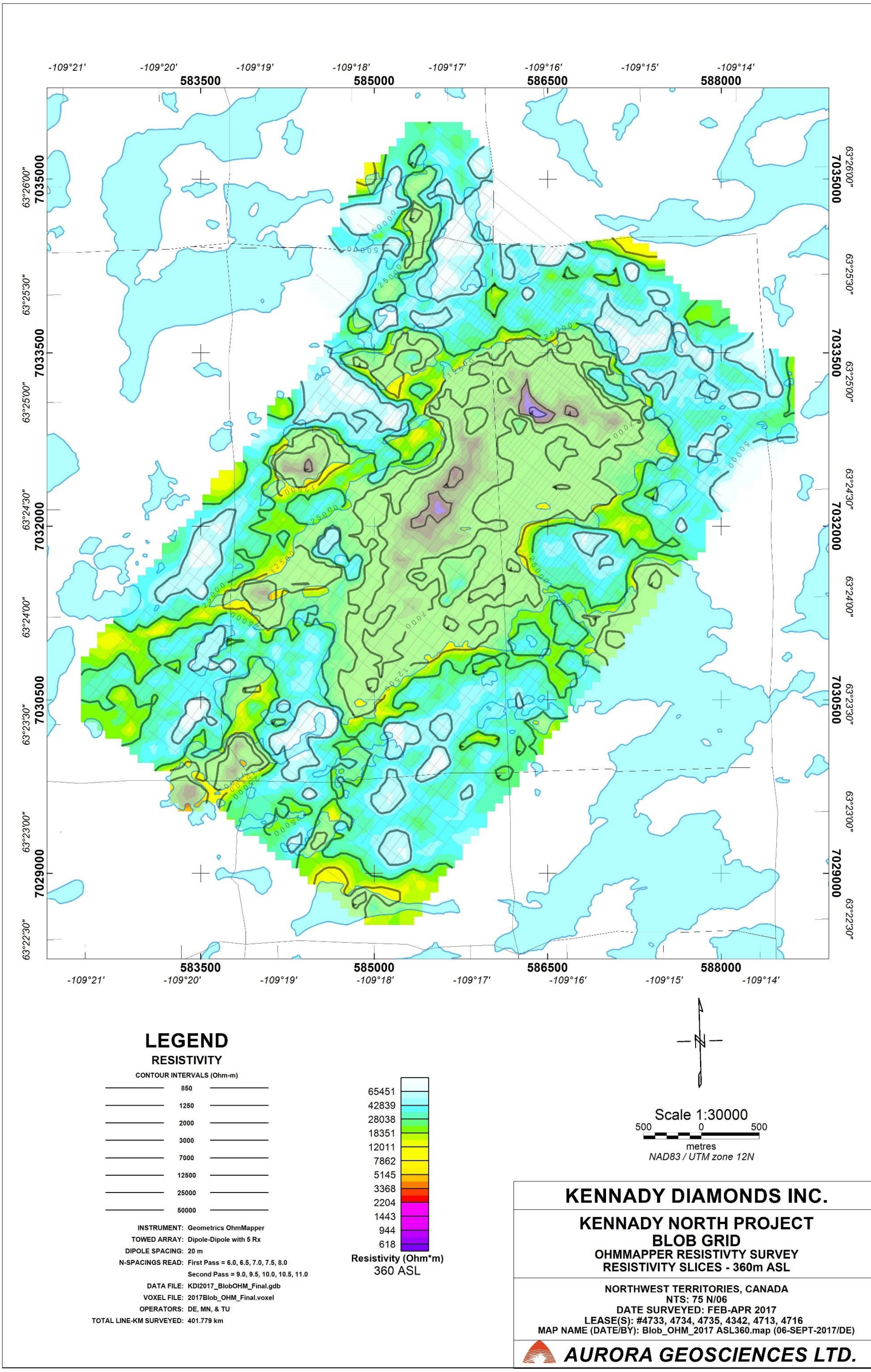

Figure 9-11. Resistivity Data Contoured - 360 masl

would appear less continuous but coincident with the large resistivity feature in Figure 9-10. The continuance of the large resistivity feature into discrete smaller responses at depth would suggest target areas for drilling. Most of the discrete resistivity responses noted in Figure 9-11 can be linked to coincident gravity responses.

9.5 Total Field Magnetic Survey

9.5.1 Introduction

A total field magnetic survey was conducted using a GEM GSMP-35 Potassium Magnetometer towed in a plastic toboggan behind a snow-machine. Towing speeds were 10-15 km per hour to ensure sensor stability.

The total field magnetic survey was completed between April 22nd and May 5th, 2017. A total of 451.38 line kilometres were surveyed.

9.5.2 Ground Magnetic Survey Results

The ground magnetic survey is dominated by prominent northerly trending Mackenzie dykes and northeast trending “Fletcher” (Stubley, 2005) or “Mackay” (Buchan et al., 2010) swarm dykes (Figure 9-12). All dykes are diabase in composition and provide a significant amount of ground preparation for hosting possible kimberlite bodies.

Prominent lineaments are also noted and delineated with dashed black lines. These features represent faults or shears and reflect the significant crustal disturbance in the area of Blob Lake. The recognition of significant structural crustal disturbance is a key component for the emplacement of kimberlite bodies.

9.6 Geophysical Compilation

Figure 9-13 is a gravity compilation along the KFC. Faraday Lake, Kelvin Lake and Blob Lake make up the three larger target areas. These three target areas encompass gravity responses which are similar to those coincident with the Kelvin and Faraday kimberlites. Each larger target area hosts a number of smaller target areas (up to seven), to help focus drilling.

In particular, Faraday Lake hosts 7 smaller target areas, Kelvin Lake hosts 5 smaller target areas and Blob Lake hosts 4 smaller target areas. The gravity features inside the smaller target areas have either coincident OhmMapper© and or magnetics associated with each target. The anomalies lie along a structure trending north-northeast but a northwest axis, orthogonal to this northeast trend, is common to see coincident with the unconventional kimberlite traces.

The prominent oblong to circular gravity low features, which occur along the primary structural trend, may well represent blows (volcaniclastic features) which can be used to target the unconventional kimberlite.

The Blob Lake area is similar to the GK mine site geology and as such there is opportunity to see more conventional carrot-type kimberlites.

This map is demonstrating the potential for delineating more resource at the Kennady North project.

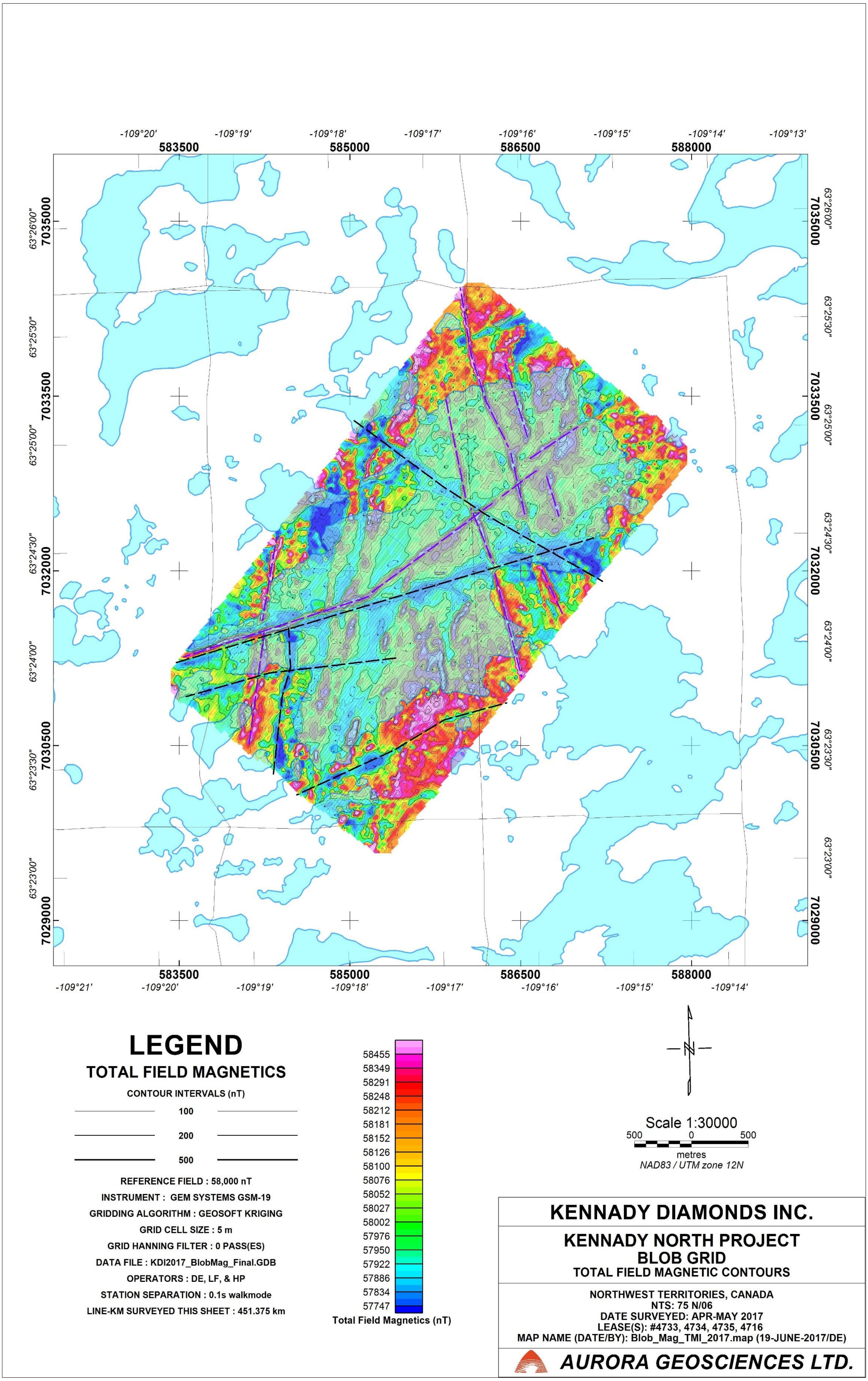

Figure 9-12. Blob Lake Total Field Magnetic Survey with lineaments - 2017

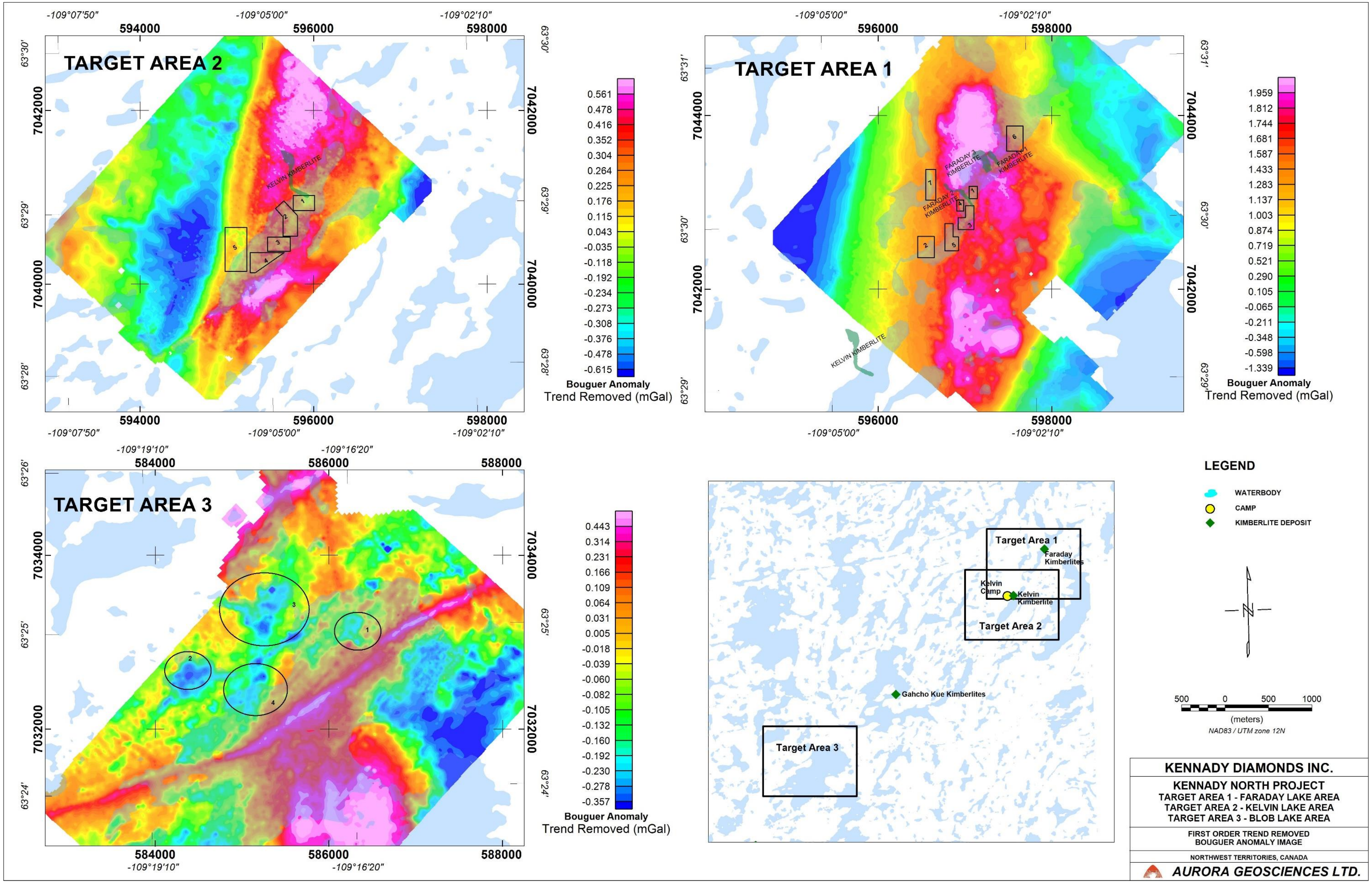

Figure 9-13. Gravity Compilation Outlining Significant Target Areas

10 DRILLING

This section provides information relating to drilling (core and large diameter RC) recently carried out during 2017. Details of all drilling carried out prior to this were included in the previous Kennady North Technical Report (Vivian and Nowicki, 2017)

10.1 INTRODUCTION

Kennady Diamonds Inc. continued exploration drilling at the Faraday pipes during 2017. One drillhole was completed at the Kelvin kimberlite as the final geotechnical hole needed to complete the pre-feasibility study (PFS). Significant drilling was completed and filed at the end of 2016 in a technical report on the Kennady North project (Sedar filing, January 23, 2017). Diamond and LDDH (large diameter drill hole) reverse circulation drilling during 2017 is summarized herein with detailed drill summary statistics, strip logs, plans and sections in the appendices.

A total of 2,766 m of HQ drilling was completed with kimberlite intersections totaling 334.29 m of the total drilling, or 12.1% (Table 10-1).

Table 10-1. Diamond Drilling Summary for 2017

Drill Summary for 2017		
Kimberlite	**Metres Drilled**	**Metres of kimberlite**
Kelvin	295	23.45
Faraday 2	1917	287.7
Faraday 1-3	554	23.14
	2766	**334.29**

A total of 76 LDRC holes were completed into Faraday 2, 3 and 1. The LDRC drilling comprises 8,008 m of drilling, 579.22 tonnes of kimberlite material and is summarized in Table 10-2. Tonnage estimates are based on caliper survey measurement of drill hole diameters and estimates of kimberlite bulk density.

Table 10-2. Large Diameter Reverse Circulation Drill Summary - 2017

Large Diameter RC Drill Summary for 2017		
Kimberlite	**Metres**	**Tonnes**
Faraday 2	3,471	275.38
Faraday 3	4,234	279.42
Faraday 1	303	24.42
	8008	**579.22**

10.2 Diamond drilling at the Kelvin kimberlite

The 2017 drill program at Kelvin comprised one geotechnical hole which was completed across the knuckle area of the Kelvin kimberlite where the kimberlite turns from trending westerly to trending northerly. This drillhole, KDI -17-001, was completed with HQ coring and drilled to a depth of 295 m. KDI 17-001 is shown in plan on Figure 10-1 and in section on Figure 10-2.

KDI 17-001 intersected the upper portion of the Kelvin body, cutting 23.45 m of kimberlite, and then proceeding to 295 m depth. This hole was targeted to obtain geotechnical information, on the country rock surrounding the Kelvin kimberlite, for a pre-feasibility study. None of the kimberlite was used for caustic fusion or any other evaluation purposes aside from geotechnical logging.

10.3 Diamond drilling at the Faraday 2 kimberlite

Diamond drilling of the Faraday 2 kimberlite during 2017 totaled 1,917 metres of HQ drill core. The intent of this program was to continue delineating the Faraday 2 body to the west-northwest. Figure 10-3 is the plan map of the drilling completed in 2017 (collars in purple). A total of 8 diamond drillholes were completed (KDI 17-002a and b to KDI 17-008) during this program.

Diamond drillhole 002a was targeted to intersect the most northern extent of Faraday 2 at the beginning of the summer 2017. DDH 002a intersected 48.7 m of kimberlite. This intersection provided us the confidence to target a hole at -80°dip along the approximate strike of the body, considered to be 295°Az. This style of drilling is how we delineated the Kelvin body. At these depths, approximately 200 m below surface, there isn't any way of identifying the body aside from drilling.

The long section of Faraday 2 is shown in Figure 10-4. This section documents the extension of the Faraday 2 kimberlite body to the west-northwest. A total of 8 diamond drillholes were targeted to delineate the extension of the Faraday 2 body. The drilling was successful in extending the body 150 metres (KDI 17-002a to KDI 17-008) to the west-northwest. The Faraday 2 kimberlite body currently is over 600 metres in length, comes to surface at the southeast end and remains open to the west-northwest. Note that this 150 m extension is currently not sufficiently well constrained to be included in the geological model and is not included in the Mineral Resource estimate for Faraday 2. This extension is the focus of ongoing exploration and evaluation work.

10.4 Diamond drilling at the Faraday 3 and 1 kimberlite

Only two drillholes were completed at the Faraday 3 and 1 kimberlite bodies but a significant conclusion can be derived from this drilling. KDI 17-005 and 006 are shown on the plan map for Faraday 1-3 (Figure 10-5, purple collars). KDI 17-005 intersected approximately 15 m of VK (volcaniclastic kimberlite) which allowed us to conclude the Faraday 1 and 3 bodies coalesce at this point. KDI now refers to these two bodies as one, and are identified as Faraday 1-3. Note that Mineral Resources have been declared for Faraday 3 on the basis of the geological model constrained prior to this drilling (as documented in Section 14.2.2) and is therefore referred to as an independent body in Section 14. A thermistor was also placed into KDI 17-005 to monitor ground temperatures in and around the talik zone of Faraday Lake. KDI 17-006 only intersected coherent kimberlite units and as such the thought that Faraday 1 might continue to the northwest was disproven. The Faraday 1-3 kimberlite complex has been traced approximately 300 metres along strike to the northwest, comes to surface in the southeast under Faraday Lake and remains open to the northwest.

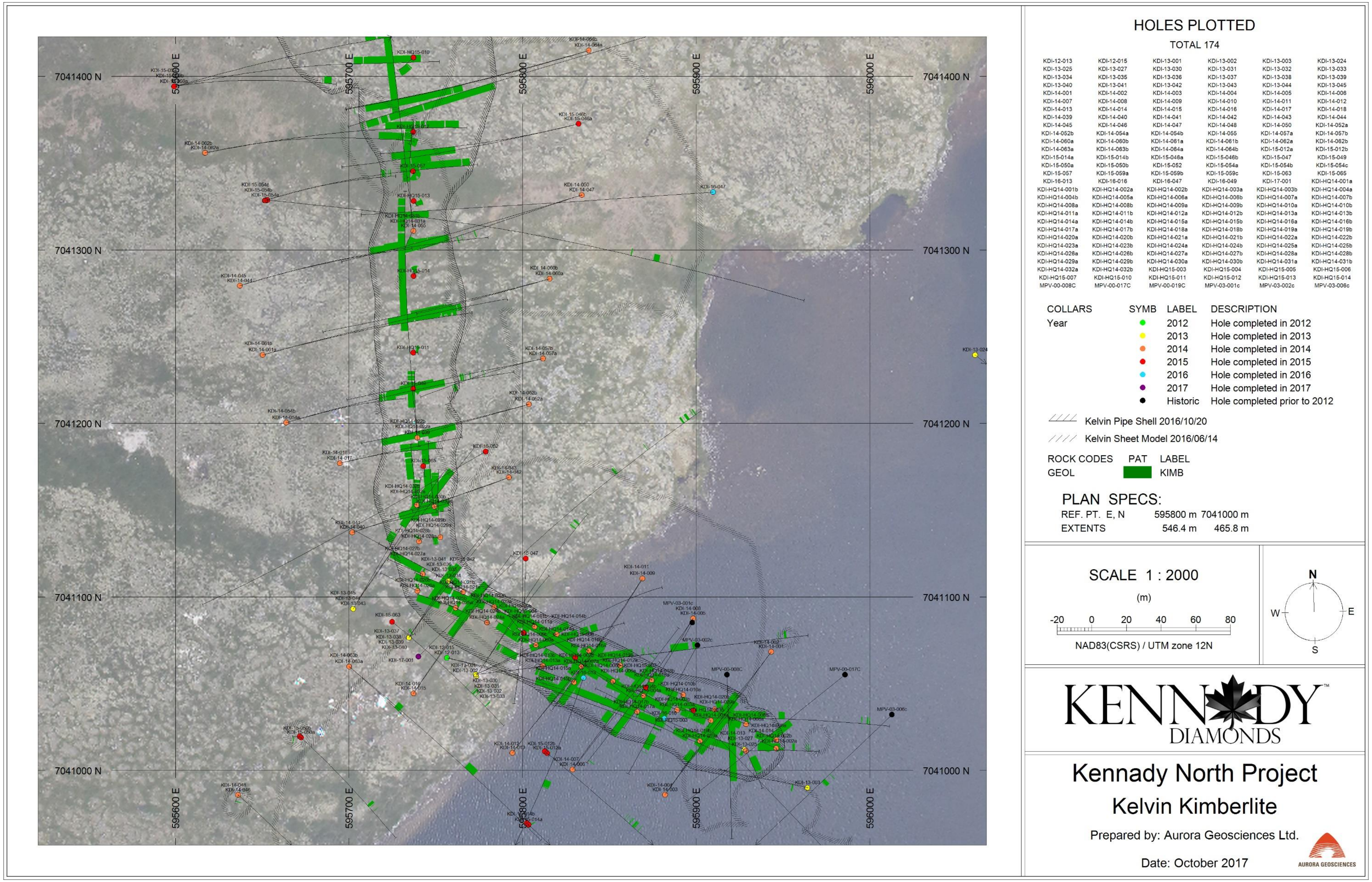

Figure 10-1. Plan Map of Kelvin Drilling - 2017

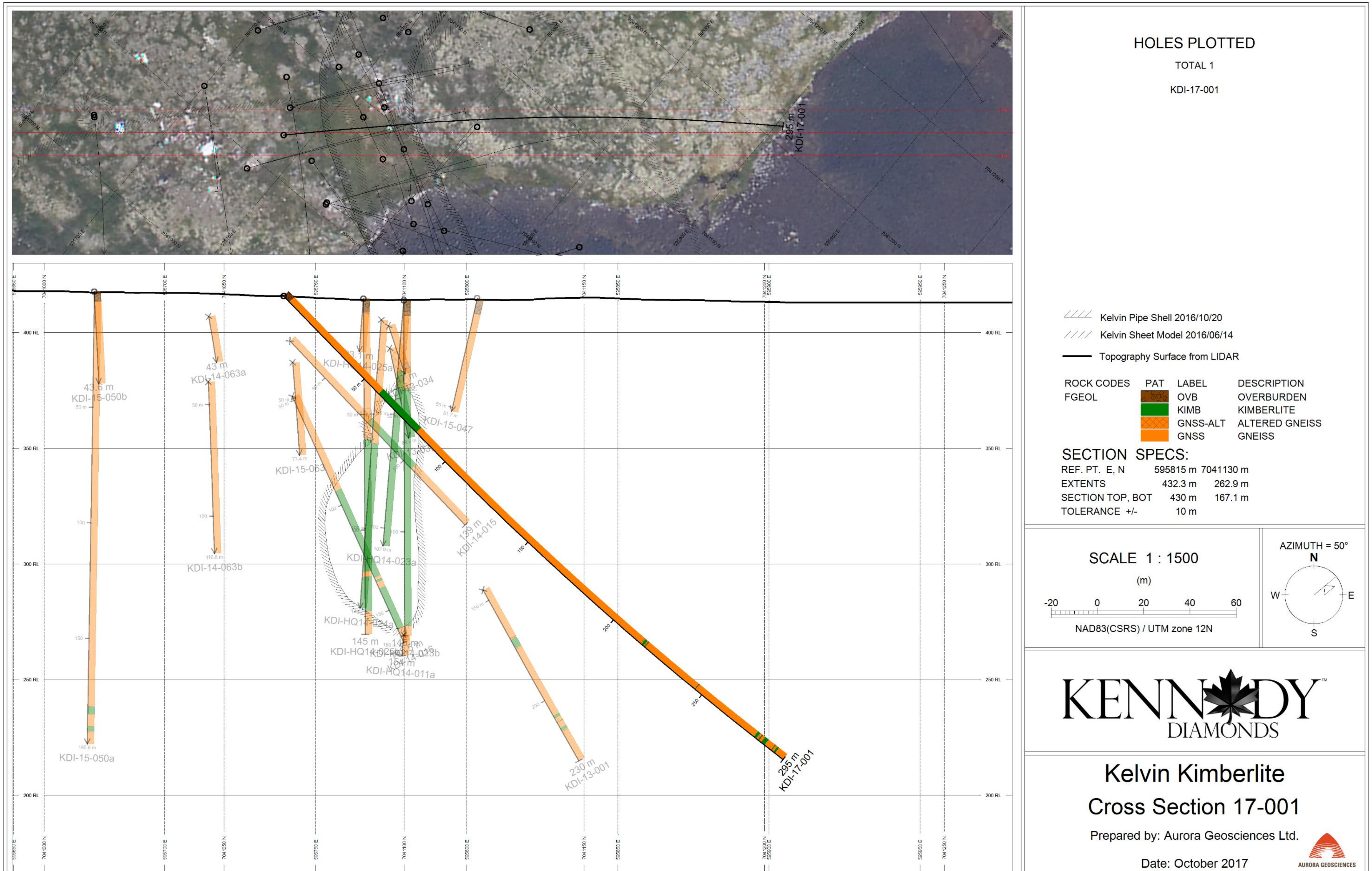

Figure 10-2. Cross-section of KDI 17-001

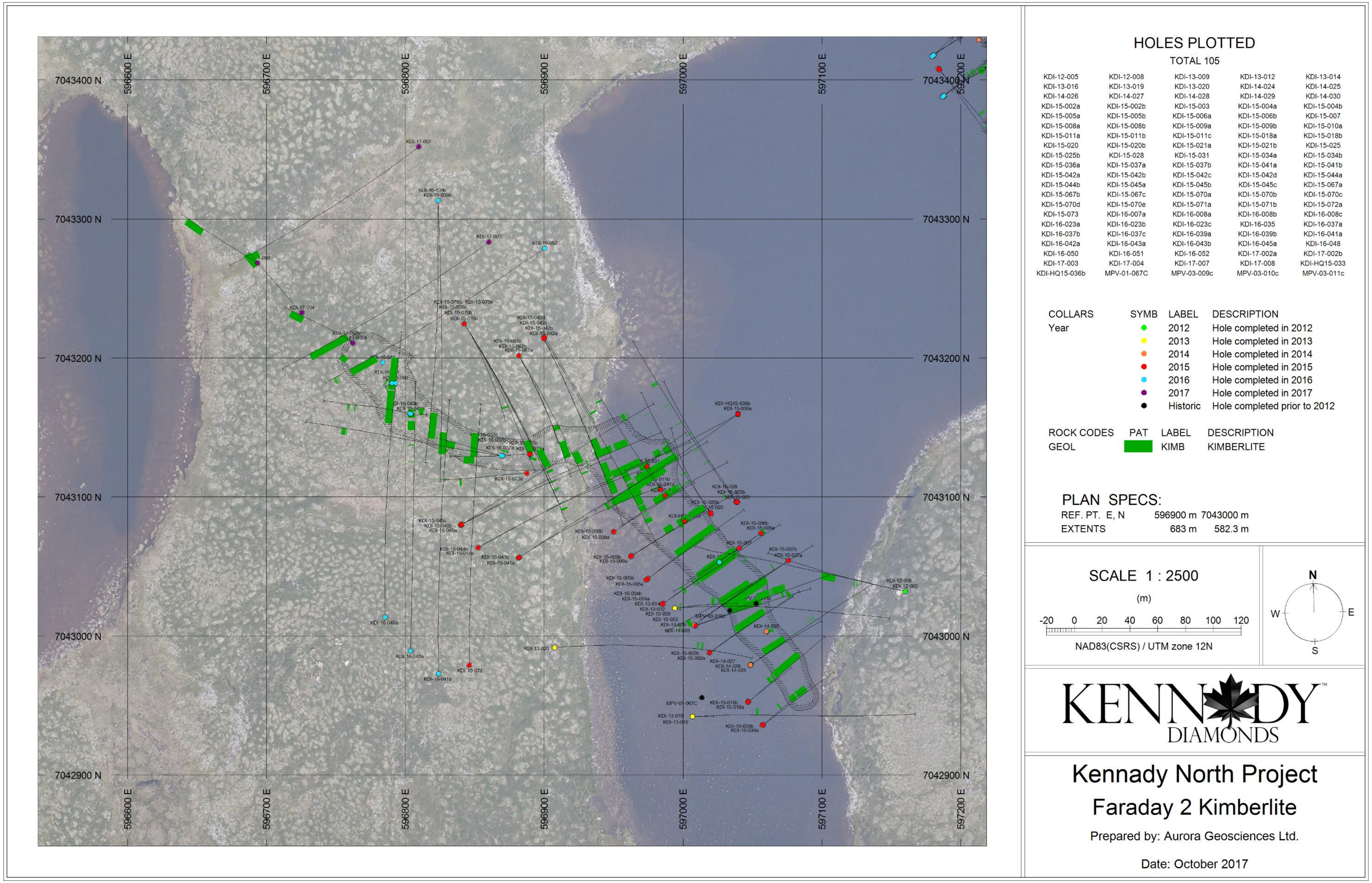

Figure 10-3. Plan Map of the Faraday 2 Drilling - 2017

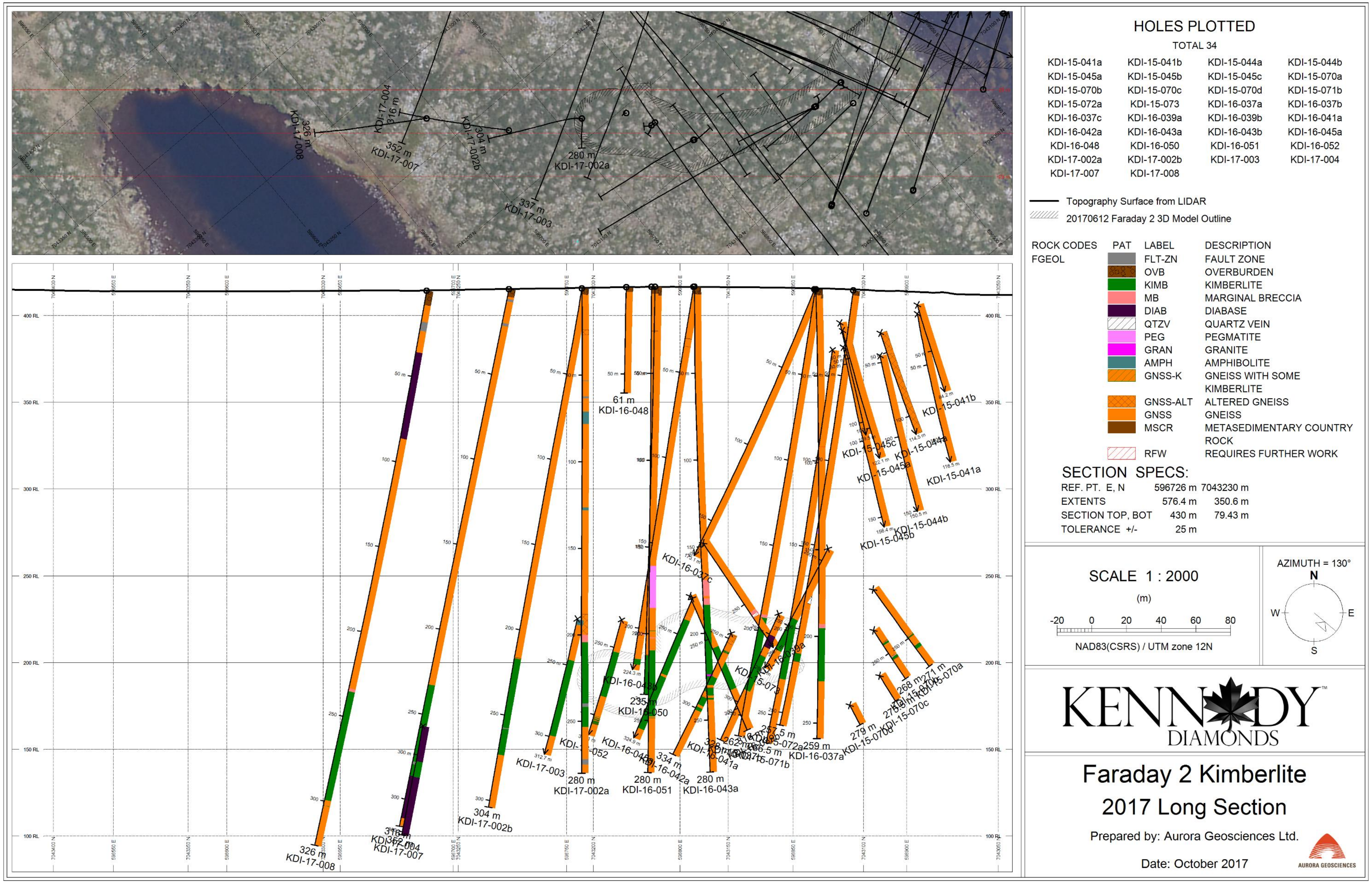

Figure 10-4. Long Section of Faraday 2 Drilling – 2017

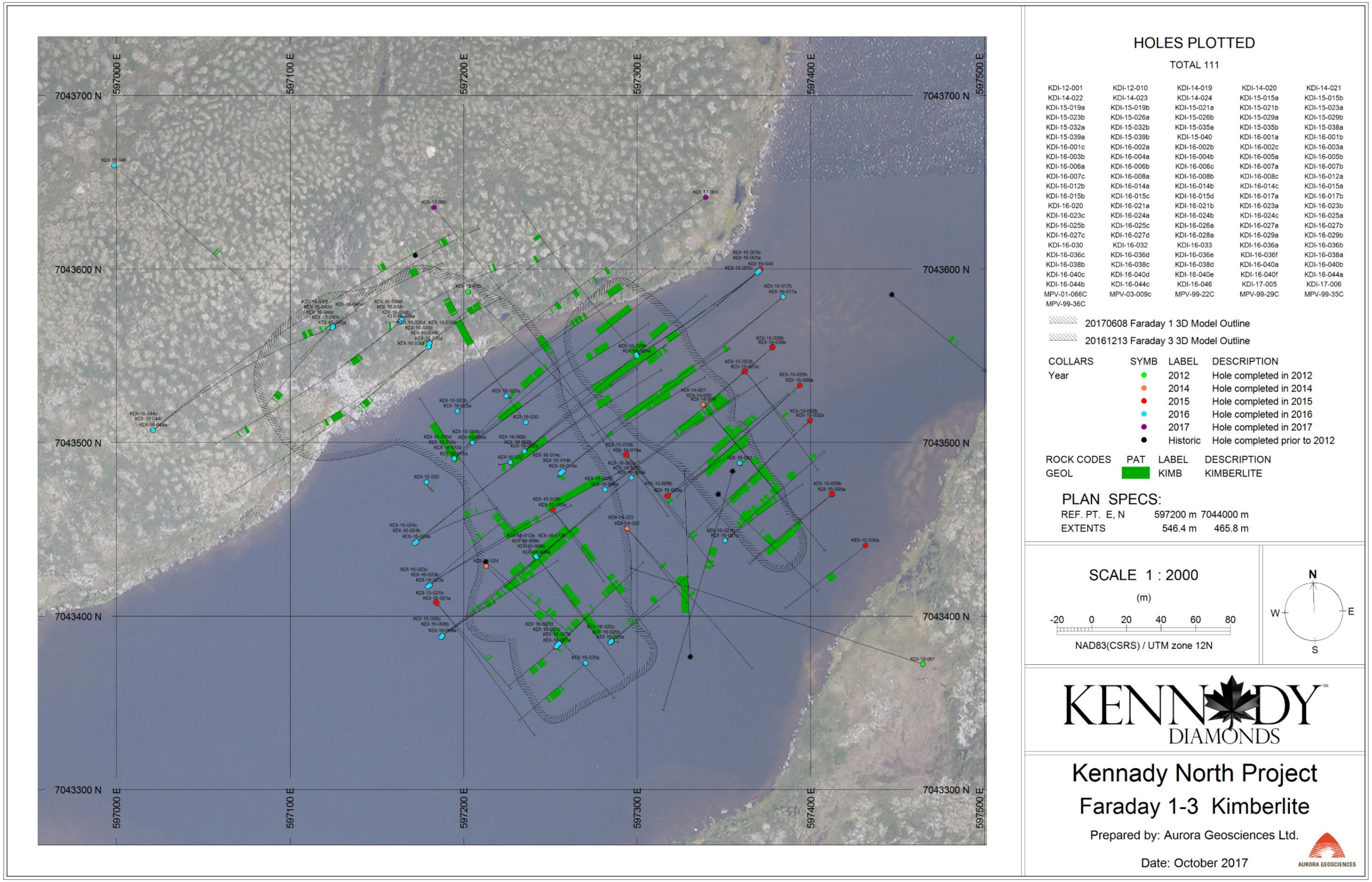

Figure 10-5 . Plan View of Faraday 1-3 Drilling - 2017

10.5 Large Diameter Reverse Circulation (RC) Bulk Sample 2017

10.5.1 Introduction

The large diameter reverse circulation (LDRC) program was initiated on January 19th, 2017 and culminated April 10th, 2017. The bulk of the drilling was completed with one RC drill although a second unit was deployed between the dates of February 13th and April 1st, 2017 to guarantee all goals were met. The goals of the 2017 were as follows:

i) Bulk sample the Faraday 2 kimberlite using sample divisions established from the detailed petrographic descriptions and domain model created (November 2016) to determine macrodiamond grade and carat value within each domain to establish an inferred resource.

ii) Bulk sample the Faraday 3 kimberlite using sample divisions established from the detailed petrographic descriptions and domain model created (November 2016) to determine macrodiamond grade and carat value within each domain to establish an inferred resource.

iii) Obtain a small bulk sample from the Faraday 1 kimberlite using sample divisions established from the detailed petrographic descriptions and domain model created (March 2017) to obtain a basic assessment of macrodiamond grade and carat value within each domain to establish a Target For Further Exploration (TFFE) and to inform planning work for forward evaluation.

The two reverse circulation drills cut primarily with 11” diameter pipe. There was a total of 29 holes drilled into Faraday 2, 43 holes drilled into Faraday 3 and 4 holes drilled into Faraday 1.

This program was under the supervision of Gary Vivian, M.Sc., P.Geol., Chris Hrkac, B.Sc. and Duncan McBean, P.Geo all of Aurora Geosciences Ltd., and Casey Hetman, M.Sc., P.Geo. of SRK Consulting. The program was managed by Mike Waldegger, B.Sc., P.Geo.

Howard Coopersmith was an external QP for the drill program, and monitored the full processing of the 2017 bulk samples at the SRC in Saskatoon.

10.5.2 Geology of the Faraday 2 Kimberlite

A detailed description of the Faraday 2 kimberlite can be found in Section 7.3.5. The geology of the Faraday 2 kimberlite has been established using macroscopic and microscopic investigations by Casey Hetman. Hetman then provided instruction and guidance on identifying and sampling the known lithological units to the RC geology team.

The Faraday 2 kimberlite is an irregular shaped and inclined pipe-like body that has been delineated over 600 m and remains open to the northwest. The body varies in width between 30-50 m and the vertical thickness ranges between 10-100 m, outcropping (at lake bottom) at the southeast end and is about 50 m thick at the furthest delineated northwest end. The kimberlite dips at almost 40° to the northwest.

Bulk sampling of the Faraday 2 kimberlite during 2017 used the geological model outlined in Table 10-3. The reader is reminded that detailed descriptions of each unit occur in Section 7.3.5.

Table 10-3. Faraday 2 Domain Model for Bulk Sample Retrieval during 2017

Kimberlite unit	3-D geological domain
KIMB1A, KIMB1B	KIMB1
KIMB2	KIMB2
KIMB3	KIMB3
KIMB4	KIMB4
KIMB5	KIMB5
KDyke-INT (north end of pipe only)	KDyke Internal
Country rock xenoliths ≥ 1m in situ wedges	Xenolith

10.5.3 Geology of the Faraday 3 Kimberlite

A detailed description of the Faraday 3 kimberlite can be found in Section 7.3.6. The geology of the Faraday 3 kimberlite has been established using macroscopic and microscopic investigations by Casey Hetman (SRK) along with Martina Bezzola and Lindsay Nelson (AGL). Bezzola and Nelson then provided instruction and guidance on identifying and sampling the known lithological units to the RC geology team.

Faraday 3 is an irregular inclined pipe that dips at 30° to the northwest. It is flatter and wider than Faraday 2 and Kelvin, ranging in width from 40 to 150 m and in height from 20 to 50 m. It extends over approximately 350 m and is open at depth. The domains established for bulk sampling are documented in Table 10-4.

Table 10-4. Faraday 3 Domain Model for Bulk Sample Retrieval in 2017

Kimberlite unit/subunit	3-D geological domain
KIMB1	KIMB1
KIMB2	KIMB2
KIMB3	KIMB3
KIMB4B	KIMB4B
KIMB4C	KIMB4C
Large country rock xenoliths / in situ wedges	CRX

10.5.4 Geology of the Faraday 1 Kimberlite

A detailed description of the Faraday 1 kimberlite can be found in Section 7.3.7. The geology of the Faraday 1 kimberlite has been established using macroscopic and microscopic investigations by Casey Hetman (SRK) along with Dan Gainer (AGL). Gainer then provided instruction and guidance on identifying and sampling the known lithological units to the RC geology team. The geological domains established for bulk sampling Faraday 1 are summarized in Table 10-5.

Faraday 1 is an irregular tube-shaped pipe dipping 25-30° to the northwest. It is smaller than the other Faraday pipes ranging from 30-60 m in width and 10-20 m in height. Faraday 1 has been traced approximately 200 m in strike and coalesces into Faraday 3 at the very northwest end. Faraday 1 and 3 are now considered to be the same kimberlite body and hereinafter will be referred to Faraday 1-3.

Table 10-5. Faraday 1 Domain Model for Bulk Sample Retrieval in 2017

Kimberlite Unit/Subunit	3-D Geological Domain
KIMB1/KIMB1X	KIMB1
KIMB2	not distinguished this program
KIMB3	KIMB3
KIMB4	KIMB4
KIMB5	not distinguished this program
K-Dyke	KDyke
Marginal Breccia (MB)	MB
CRX	not distinguished this program

There is a difference between the domains sampled and those identified kimberlite units which make up the internal domain of Faraday 1. The discrepancy occurs due to the placement of the RC drill holes and the units that were projected to be intersected.

10.5.5 Bulk Sample Drilling

Two reverse circulation drills were supplied by Midnight Sun Drilling (MSD) of Whitehorse, Yukon. MSD used a 2007 Sandvik Marlin M5 truck mounted rig and a 2015 Schramm T450EX track mounted rig. Both rigs had an air supply of 1,050 cubic feet per minute at 350 pounds per square inch (psi) and 8,000 foot/pounds (ft/lb) of torque. The truck mounted drill has 40,000 pounds of pullback while the track mounted drill had 30,000 pounds of pullback. Both drills used 20 foot rods with a diameter of 11" (27.9 cm). A few holes were drilled using 11 5/8" (36.51 cm) or 11 7/8" (37.15 cm) bits while the casing advancer was being used. The casing was not threaded and therefore had to be welded at each connection.

10.5.5.1 Drilling Method

Conventional reverse circulation drilling was completed using large rotary drills, dual wall pipe and an air compressor to lift the cuttings. Casing was required to prevent lake water and unconsolidated overburden material from entering the drillhole. Typically, the casing was set into country rock using a downhole hammer with a diameter of 28.3 cm. A 24.1 cm diameter downhole hammer was then used to drill through the country rock after casing was set, and a 24.1 cm diameter tungsten carbide insert (TCI) tri-cone bit was used to drill through the kimberlite. The cuttings travel up the inner tube which has an inner diameter of 7.6 cm and the air travels down the space between the inner and outer rods (annulus). At the bit face, the cuttings travel upwards outside of the bit and are forced into the inner tube through slots referred to as the interchange. The cuttings pass through the rotation head which tapers to an inner diameter of 6.6 cm and into a wider flexible rubber pipe (RC hose) with an inner diameter of 10.2 cm. A metal angled nipple was installed before the RC hose to minimize wearing by abrasion thereby increasing the life of the hose. The slurry of rock chips and water entered a cyclone lined partially with rubber, and then dropped onto a vibrating shaker deck. The shaker deck accommodated two reinforced screens with a bottom cut of 0.85 mm. Material less than 0.85 mm in size reported to the slimes tank under the shaker deck. A vacuum truck was required to remove the cuttings in the slimes tank many times per shift and the material was deposited into a land-based sump.

10.5.5.2 Drillhole Planning and Preparation

On January 4th, 2017, a drill hole planning session included Rory Moore and Tom McCandless from KDI, Gary Vivian and Chris Hrkac from AGL, Mike Diering and Casey Hetman from SRK and Mike Waldegger form MFW. A total of 76 holes were targeted for the Spring drilling program with 29 holes to be completed on Faraday 2 and 43 holes on Faraday 3. The plan was to retrieve a total of approximately 250 tonnes each from Faraday 2 and Faraday 3 planning for a NI 43-101 compliant Inferred Resource. A total of 4 holes were targeted for Faraday 1 to provide diamond evaluation data and determine a TFFE (Target for Further Exploration).

All drill collars were located with a Leica Viva GS15/CS15 RTK Global Positioning System (GPS). The coordinates with an accuracy of 8 mm in the horizontal plane and 15 mm in the vertical plane were downloaded into the database During the drill program, the collars were marked with flagging and the hole number was written on the flagging. The flagging was held in place on the ice with a screw drilled into the ice at the collar. All collars were covered with a bright orange traffic cone to eliminate driving over the marked collar locations.

10.5.5.3 Caliper Survey

The caliper survey had two purposes: i) to determine the volume of material sampled in each hole, and ii) to determine the volume of cement required to cement each hole.

Each hole was surveyed by DGI Geoscience Inc. (DGI) of Toronto, ON, using a three-arm caliper instrument. A secondary unit was on site for back-up. A second survey was run on holes KDI LD15-003 and 006 to ensure both units were functioning properly.

The caliper information was reported in 5 m intervals down the hole and compared to a theoretical volume based on a cylinder with a diameter of 24.1 cm, in 2015 drill holes, and 27.9 cm, in 2016. Final manipulations included depth corrections and the incorporation of the inner diameter of the casing as a calibration point. Theoretical volumes were always about 3% less than calculated volumes, due to the inhomogeneities within the rocks. Some holes, like KDI-LD17-096, 107 and 130, had the volumes estimated due to hole collapse and there was no interest in losing the tool.

10.5.5.4 Gamma Survey

Gamma surveys were run to aid in the interpretation of geology and as density checks. The gamma probe is effective in detecting radiation from elements such as potassium which can be a common element in granitoid or gneissic host rocks. The survey was an add-on to the caliper survey as they could be run in sequence. The gamma probe was effective in delineating cap rock and host rock dilution within the kimberlite bodies. Commonly the radiation increased down hole in the kimberlite due to the increase in host rock dilution of the kimberlite. The gamma survey was not completed on every hole.

10.5.5.5 Drill Monitoring System

Digital monitoring systems were provided by Pason Systems of Calgary, AB. Sensors were installed on the both drill rigs to monitor and record depth in imperial and metric, rate of penetration (ROP), air pressure, RPM, down-feed pressure and torque. The information was transmitted to Pason via on-site satellite and made available graphically through a web based application almost in real time, to those persons assigned access. The information was exported at the end of the program and presented in strip logs for each hole and in long sections. The downhole trends of some parameters provided support to the geological logs. For example, typically changes in ROP down feed pressure and torque were indicators of change in geology, and compared well to observations in the chip logs.

10.5.5.6 Drillhole Closure

During 2017, the cementing of all holes was completed by CR Enterprises out of Yellowknife, NT. All holes were back-filled with cement to the casing. A sample of the cement was gathered by the rig geologist for strength testing at camp using a point load tester. Some samples were also sent for testing to Queen's University.

Casing was removed from all holes. If the casing could not be freed easily by pulling back on it, a casing cutter was used to cut casing at lake bottom and the remainder of the casing was removed.

Minor amounts of cuttings were deposited on the ice pads during drilling and these cuttings were removed either by machine scraping or hand scraping. The cuttings were placed in either an approved land-based sump or environmental containment drums to be removed from site.

10.5.5.7 SUMMARY OF REVERSE CIRCULATION DRILLING RESULTS - 2017

10.5.5.7.1 *Faraday 2 Kimberlite*

The 2017 LDRC program at Faraday 2 comprised 29 holes totaling 3,471 m of drilling. There was a total of 1,794 m of kimberlite and 1,311 m of country rock intersected during this drill program. Drill holes were spaced 5-10 m apart in clusters of 5-7 holes. The clusters were 25-50 m apart along the trace of Faraday 2. The drill plan is shown in Figure 10-6.

The total volume of kimberlite removed by drilling was measured using a three-arm caliper to be 116.2 m^3 which is estimated (based on average estimates of bulk density by domain, see Section 14.2.3) to be 275.38 tonnes. Approximately 40% of this material reported to the undersize tank and the final collected sample sent to the laboratory was 169.9 tonnes. Final bag masses will be less than field calculated masses for the bags due to thawing and water loss through the bags.

10.5.5.7.2 *Faraday 3 Kimberlite*

The 2017 LDRC program at Faraday 3 comprised 43 holes totaling 4,234 m of drilling. A total of 1,747 m of kimberlite and 1,963 m of country rock was intersected during this program. The drill holes were spaced 5 m apart along 4 grid lines and in four clusters. A fifth grid line had two holes completed. The drill plan is shown in Figure 10-7.

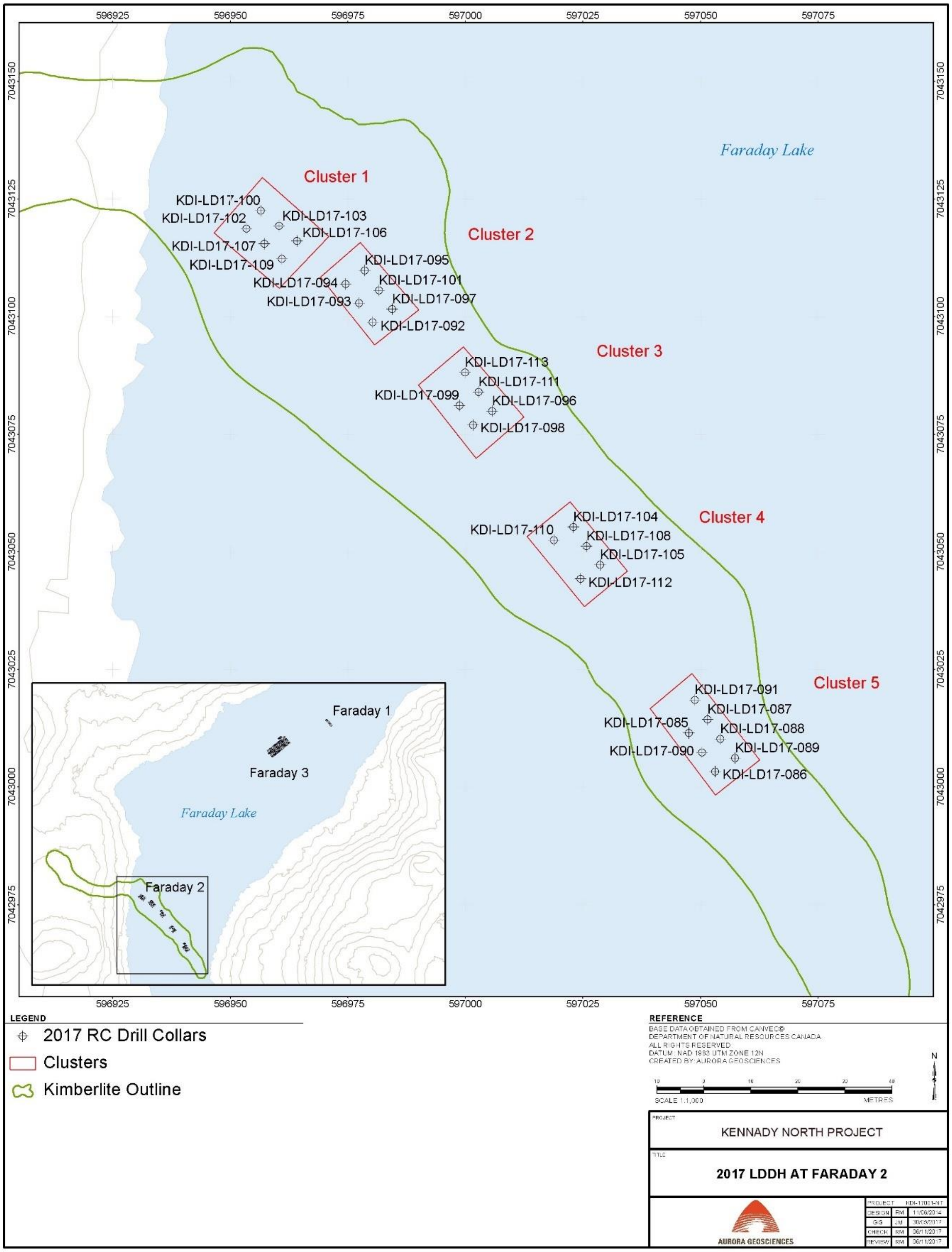

Figure 10-6. RC Drillhole Location Map - Faraday 2

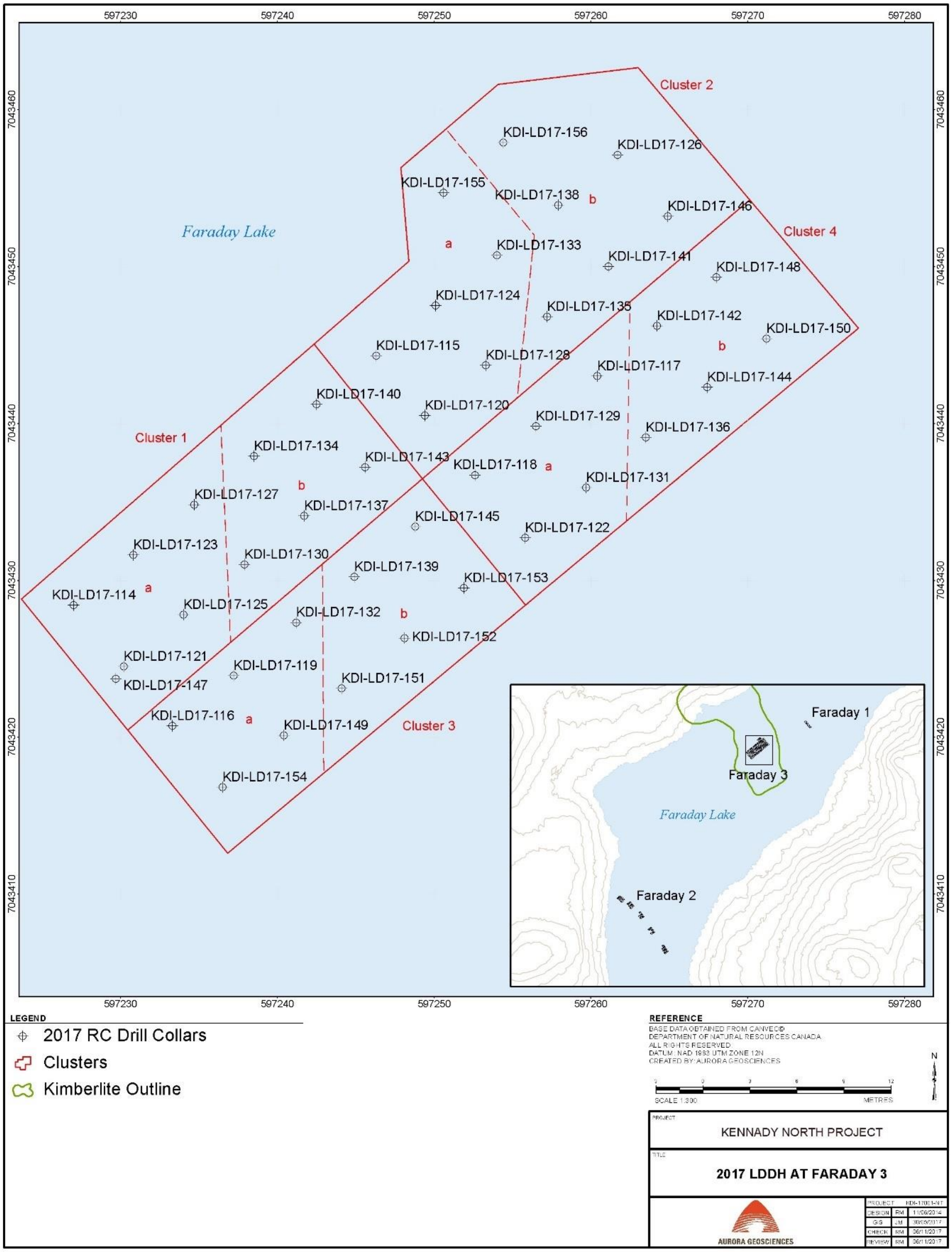

Figure 10-7. RC Drill Hole Location Map - Faraday 3

The total volume of kimberlite removed was estimated by a three-arm caliper survey to be 114.4 m^3 and is estimated (based on average estimates of bulk density by domain, see Section 14.2.3) to be 279.42 tonnes. Approximately 40% of this material reported to the undersize tank and the final collected sample was 175.3 tonnes. The final mass of the sample by the time it gets to the lab will be less than the field mass due to thawing and water loss through the bags.

SRK provided the block model densities based upon density measurements from drill core samples.

10.5.5.7.3 *Faraday 1 Kimberlite*

The 2017 large diameter reverse circulation program completed at Faraday 3 comprised a total of 4 drill holes comprising 303 m of drilling. This drilling intersected 162 m of kimberlite and 78.6m of country rock. The drill plan is shown in Figure 10-8.

The total volume of kimberlite removed was measured by a three-arm caliper and determined to be 10.1 m^3 and is estimated (based on average estimates of bulk density by domain, see Section 14.2.3) to be 24.42 tonnes. Approximately 40% of this material reported to the undersize tank, with the final collected sample weighing 20.8 tonnes. It is assumed the final mass will be less once the sample reaches the laboratory due to thaw and water loss through the bags.

SRK provided the block model densities based upon density measurements from drill core samples.

10.5.5.8 Bulk Sample Results from the 2017 RC Program on the Faraday Kimberlites

The 2017 RC drill program completed a total of 76 drill holes from which a calculated mass (based on caliper volume measurements and average estimates of bulk density) of 579.22 tonnes of kimberlite were recovered. Sampled material was trucked in secured ore bags to the SRC in Saskatoon, SK. Sample preparation and analyses are detailed in Section 11.2. The sample processing was supervised by Howard Coopersmith, under contract to KDI. The results from the 2017 bulk sampling program are summarized below in Table 10.2.5.8.1.1. All kimberlite was processed with a bottom cut-off of 0.85 mm.

Table 10.5.5.7.3.1. Bulk sample results from large diameter drilling of the Faraday kimberlites in 2017

Body	Holes	Metres	Kimberlite intersection (m)	Sample mass (t)	Diamonds (+0.85 mm)	Carats (+0.85 mm)
Faraday 1	4	303	162	24.42	1,184	76.84
Faraday 2	29	3,471	1,794	275.38	14,310	737.58
Faraday 3	43	4,234	1,747	279.42	7,519	460.54
Total 2017	**76**	**8,008**	**3,703**	**579.22**	**23,013**	**1,274.96**

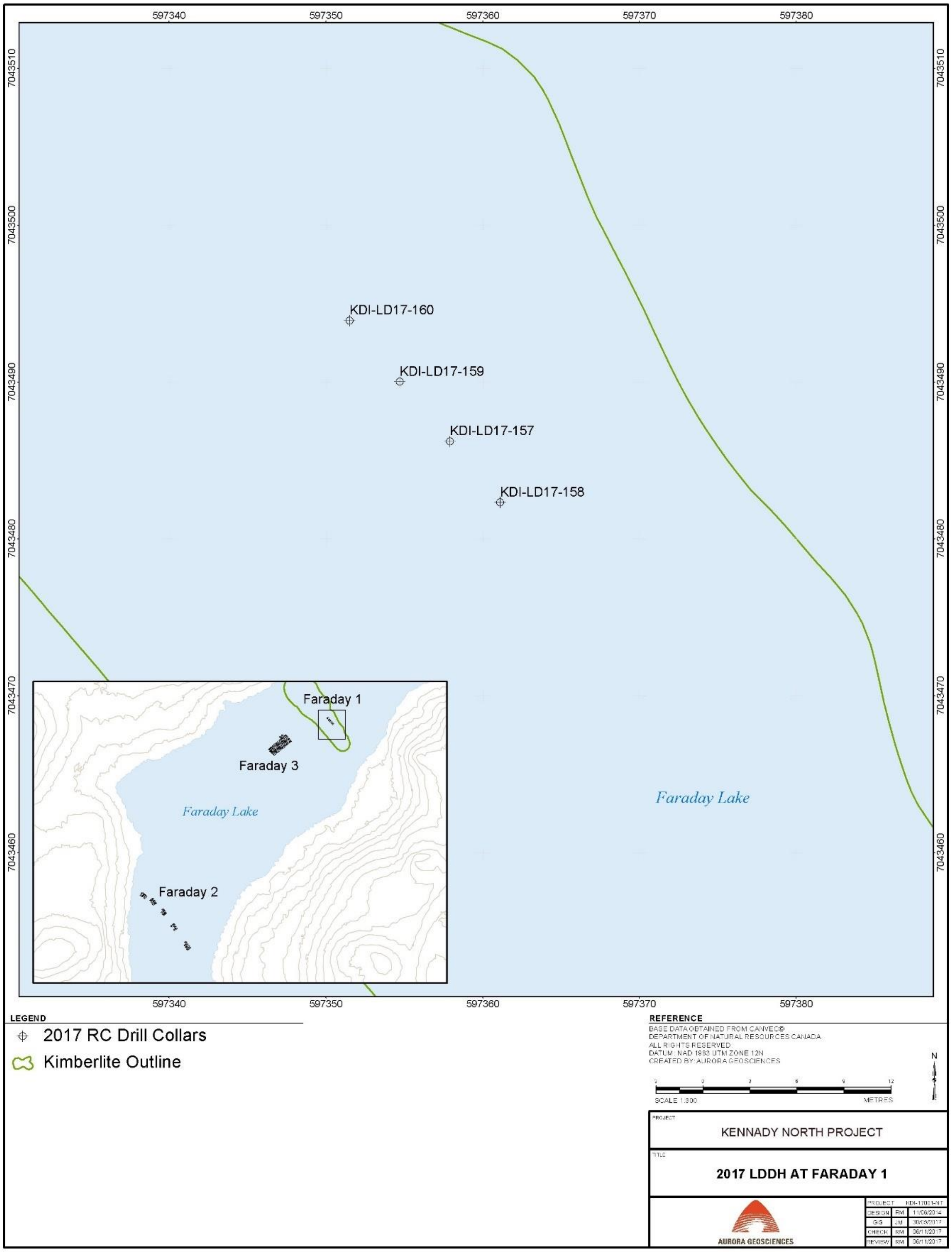

Figure 10-8. RC Drill Hole Location Plan for Faraday 1 in 2017

11 SAMPLE PREPRATION, ANALYSES AND SECURITY

11.1 DIAMOND DRILL CORE SAMPLING and SECURITY

Logging of diamond drill core was completed using a standard operating procedure (SOP) for each program.

All core was moved from drill shack to camp via helicopter or snowmachine. The core was arranged in the core shack. A geotech would then ensure core was in order, broken pieces reassembled, core boxes were marked properly with meterage markers and labels, Total Core Recovery (TCR) in metres, Rock Quality Designation (RQD) in metres, magnetic susceptibility readings were collected, and the information was stored in the core database for each drillhole. The core was then quick logged by the geologist using simple designations such as overburden, country rock and kimberlite. This information was passed on nightly to the Project Manager in Yellowknife.

The logging geologist would then log the core; recording lithology (accurate to 0.01 m), structure, alteration; and within kimberlite intersections estimated macrocrysts and xenoliths and marked sample designations for representative samples.

Photos of dry core are taken before and after logging. The core is not wet for the photos to prevent kimberlite from deteriorating. Close-up photos may also be taken to record notable features in greater detail.

Downhole surveys were run upon completion of the drilling and prior to pulling rods. During 2012-2013, an Icefields Gyro tool was used; replaced by a Reflex gyro tool for 2014 - 2016 and then this past season, a Champ Navigator Tool from Axis Mining Technology was used.

The field geologist would send the full kimberlite intersection into town with at least two core boxes of country rock core above and below the kimberlite intersection. Core was transported via aircraft from camp to a secure warehouse at the Yellowknife Airport. The airport warehouse facilities are owned by Great Slave Helicopters.

At the Yellowknife warehouse, detailed logging was initiated using hand written descriptions of rock type code, core colour, mineralogy, grain size, foliation or texture with variability noted by percentage over core length, alteration plus any other observations. A graphic log was produced by hand with rock codes.

All data was then entered into a digital entry form.

11.1.1 Diamond Drill Core Sampling for Microdiamond Analyses or Dense Media Separation

The geologist ensured lithological breaks were clearly marked with red flagging tape and samples are collected consecutively from top to bottom respecting lithological breaks. Country rock (CR) fragments less than 1 m are included in the kimberlite sampling, whereas CR intersections between 1-3 m are considered separate units and CR samples greater than 3 m are left in the box and stored.

Each sample is generally between 8-8.5 kg but smaller samples occur in order to respect lithological boundaries. Samples are identified with sequential sample numbers and contain depth interval, texture, 3D model code designation, comments and sample weight, with all data recorded on a sample sheet. Hole number and sample interval are recorded in sample booklet.

Samples are placed in plastic sample bags and closed with zip ties and placed into a 20 litre bucket with 1 or 2 other samples. Sample buckets are marked with hole number, sample numbers and bucket # and secured with three metal security tags. All pail weights and security tag numbers are recorded, and pails are stacked on pallets two high. All sample data is entered into a Microsoft Access digital database.

The difference in sampling for dense media separation (DMS) is that any sample designated as a specific domain (domain KIMB1, KIMB2 or KIMB3) gets placed into large Mega bags capable of holding approximately 1 tonne of sample. Holes can be inter-mixed but the critical concern is that the samples are separated on the basis of domain type. As such the following steps differentiate the sampling for DMS:

Mega bags are labeled with Domain name (Domain KIMB1, KIMB2 or KIMB3) and bag # and placed on pallets. The geologist reviews geology contacts to ensure samples will be placed into the proper mega bag. All xenoliths are included in their respective sample domains. Marginal breccia is not included, nor is country rock that is considered to be *in-situ*.

The geologist removes all marking blocks and flagging from core boxes and samples one domain at a time down hole ensuring that all core material, even fine sand, makes it into the mega bag. Once mega bag is full, a heavy-duty metal security tag is placed around the top to close the bag and security tag number is recorded in the detailed logging table.

Once all kimberlite intercepts have been dumped into mega bags, a summary table is compiled with number of bags in each zone with corresponding security tag numbers.

11.1.2 Drill Core Sample Shipments and Security

Chain of custody paperwork is filled out which is submitted with sample shipment, in a closed and locked trucking van. More detailed standard operating procedures (SOPs) for lithological and geotechnical logging, sampling for microdiamond and macrodiamond analyses (using caustic fusion and dense media separation) have been designed by SRK Consulting.

Samples are shipped to Saskatchewan Research Council's Geoanalytical Lab in Saskatoon, SK.

11.1.3 Caustic Fusion Analysis of Diamond Drill Core

Processing information in this section was provided by the Saskatchewan Research Council (SRC) Geoanalytical Laboratory and is documented in Figure 11-1. The caustic fusion process begins with 75 kg of virgin caustic ($NaOH$) in a 40 litre furnace pot. An 8 kg sample is then loaded on top of the caustic, followed by bright yellow synthetic diamonds, 150 to 212 µm (micrometres) which are used as a spike.

The furnace pot is heated in a kiln to 550°C for 40 hours then removed and allowed to cool. The molten sample is poured through a 106 µm screen, which is then discarded after use. Micro-diamonds and other

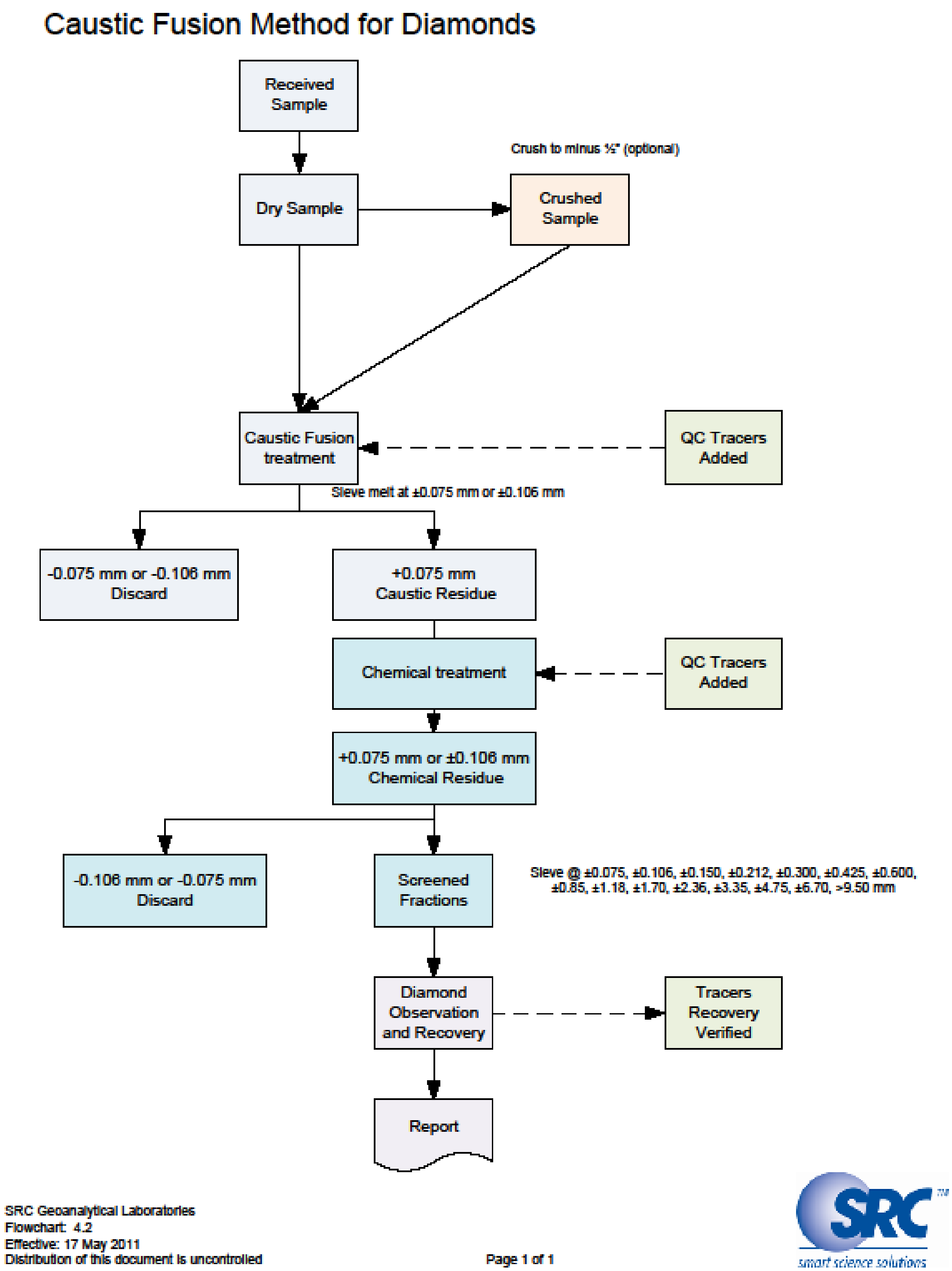

Figure 11-1. Caustic Fusion Analysis Flow Sheet

insoluble minerals (typically ilmenite and chromite) remain on the screen. The furnace pot is then soaked with water to remove any remaining caustic and micro-diamonds. The water is poured through the same screen.

Additional steps are required to remove ilmenite, chromite and other materials from the concentrate. The samples are sent to the "wet" lab where acid is used to neutralize the caustic solution. The residue is then rinsed and treated with acid to dissolve readily soluble materials.

Samples are then transferred to a zirconium crucible along with bright yellow synthetic diamonds as a spike and fused with sodium peroxide to remove any remaining minerals other than diamond from the sample. The sample is allowed to cool and then decanted through wet screens to divide and classify the recovered diamonds. Stones are stored in plastic vials filled with methanol.

11.2 LARGE DIAMETER REVERSE CIRCULATION DRILLING, SAMPLING and SECURITY

The purpose of the security measures established for the bulk sampling program was to ensure that macrodiamonds were not removed or added to the kimberlite sampled.

11.2.1 Data Records

Observations at the rig were recorded onto paper forms and all depths were measured in imperial units to match the drilling procedures. The hand-written records were transcribed to multiple spreadsheets in a single digital workbook. At the end of each shift, the workbooks were date stamped and transferred to the server in camp using a USB memory stick. Each shift's date stamped file was retained on the server, and a final completed file was saved and appended to a master file. The original hand-written logs were organized into 3-ring binders.

All data records were checked line by line by several personnel directly involved in the sampling, and the entire database was checked by Mr. Waldegger, P.Geo., "QP", through a detailed review, and presented in strip logs and in long sections. All observed errors were corrected in the final data tables and the original data sheets were scanned to PDF files and stored in Yellowknife.

11.2.2 Representative Chip Samples

Representative samples were collected into 235 ml clear plastic containers supplied by Uline Canada Corp. and logged at the drill rig by the rig sampler. The representative sample was collected every 3.1 m in the country rock and every 0.9 m close to the contact with, and within, the kimberlite. The depth and time that the sample was collected was recorded on the lid of the sample container and on the hard copy log. Representative samples were stored in the rig sampler's shack and transported to the core shack in camp at the end of each shift. Samples were transported to Yellowknife after being logged in detail in the camp, and stored in the warehouse. All samples were organized by hole, opened for drying and photographed and are available for re-examination if required.

11.2.3 Rig Logs

The purpose of logging the representative chip samples at the rig was to aid in the subdivision of bulk sample bags by domain.

The following observations were recorded by the rig sampler: percent kimberlite, percent country rock, percent clay, time of collection and sample colour. Comments on drilling conditions and minerals observed were also recorded when relevant. Predicted domain subdivisions that were based on the current 3D geological model were available to the rig sampler as a guide to help classify the chips by domain. Overall the rig logs were very similar to the predicted model.

Rig logs were plotted in the GEMS program to confirm consistency with the 3D geological model being monitored in Leapfrog.

11.2.4 Chip Logs

The purpose of logging the representative chip samples in detail was to confirm the geology of the bulk bag intervals.

The representative chip samples collected by the rig samplers were logged in camp with the aid of two Nikon SZM1000 binocular microscopes with a halogen lighting system. Logging was performed by Martina Bezzola and Dan Gainer (AGL) who were trained on kimberlite rock types by Casey Hetman (SRK). The following observations were recorded for each representative sample: depth, percent chips above 5, 10, 20, and 30 mm, hardness, percent clay, country rock and kimberlite, colour, percent olivine, garnet, magmaclasts and texture. Based on these observations the samples were classified by domain where possible. In most cases the boundaries logged were similar to the rig based logs and the 3D model. Exceptions were mostly due to difficulties in accurately estimating in-situ country rock dilution, likely because a higher proportion of the kimberlite reported to the undersize preferentially over the country rock, resulting in an apparent increase in country rock dilution. Distinguishing KIMB4B from KIMB4C at Faraday 3 was extremely challenging using the chip samples.

Chip log domain codes were reviewed in Leapfrog to confirm consistency with the 3-D geological model. Differences in chip log geology and core hole geology do exist and need to be investigated further. A selection of chips from Faraday 2 were submitted for further petrographic study.

11.2.5 Bulk Samples

The purpose of collecting the bulk sample was to determine the grade of the various internal geological domains identified, as well as to estimate the dollar per carat value of the macrodiamonds recovered.

Due to the inclined nature of the kimberlite and the orientation of the internal domains, sampling based on elevation, which is standard procedure in many kimberlite bulk sampling programs, was not implemented. Bags were changed at domain contacts established in the current 3D geological model, based on core logs, and supplemented by observations in the chips. In most cases the bag changes were within a few metres of the predicted contacts.

Bulk samples were collected into 1 m^3 poly woven “rice” bags immediately after the material passed over the shaker table. Bags were changed based on a maximum target weight of 800 kg and domain contacts. Typically, bags were changed at the first sign of kimberlite on the screen and the bag just before the contact was included in the shipment to the laboratory. These bags contained mostly country rock with trace kimberlite; however, in a few cases the bags were not changed at the upper contact and therefore these contain a mix of country rock and kimberlite. In other cases, the rig geologist was able to switch the bag before any kimberlite went into the overburden bag, and that bag was removed to the sump with the other bags containing only overburden and country rock. Bags were labelled with a unique alphabetic sequential sample ID, incorporating the hole number as a prefix; e.g., hole KDI-LD17-085 had four country rock bags labelled 085OVBA to 085OVBD and eight kimberlite bags labelled 085A to 085F. No sample labels or tags were inserted into the bags.

To facilitate bag changes, the drilling was temporarily stopped and bags were removed from the drill enclosure using a loader. A new bag was positioned and drilling continued. The bag was weighed using a digital scale and sealed using a metal cable lock with a unique number engraved on the coupler. Bags were set onto covered pallets and transported to the bulk sample laydown area and organized by hole.

All bags were checked prior to shipping for errors in documentation, adequate sealing and damage. Compromised bags were documented and double bagged.

The following information was recorded for each bulk sample bag: sample ID, depth interval in feet, mass in kilograms, unique security seal number, sampler's name, date sampled and comments. The data was checked line by line in the spreadsheet for typos in seal numbers, and errors in depth intervals. Bag weights and security seals recorded in the field were cross-checked with those recorded by the laboratory.

A total of 582 bulk bags containing kimberlite were collected and shipped to the Saskatchewan Research Council in Saskatoon, SK. Six bags were set aside not to be processed as they were logged as not containing any kimberlite.

11.2.6 Underflow Samples

The purpose of collecting underflow samples was to determine diamond breakage and ensure that no diamonds larger than the shaker table screen size were reporting to the undersize.

Samples of the material <0.85 mm falling through the screen were collected by kimberlite domain. Two troughs made from 3 inch angle iron were installed under the shaker table and were oriented perpendicular to the material flow. Material falling into the troughs flowed into buckets suspended by a hook at the end of each trough. Buckets were switched at domain contacts coincident with other sample change overs. Water was drained from the buckets before sealing with lids and the buckets were transported to the core shack at the end of each shift. Part way through the program the procedure changed, to collecting material into only one five litre pail from the trough closest to the back of the shaker table where most of the de-sliming occurred. If a drilled domain was particularly thick, it was therefore possible that only the top portion of the domain was sampled for underflow material. Buckets were labelled using permanent marker on the lid and the side of the bucket with "Underflow", the hole ID and the domain name (e.g. UF 085KIMB1). The following data were recorded for each underflow sample: depth interval in metres, domain, mass in kilograms, comments, sampler's name, date sampled.

The underflow samples were shipped to Yellowknife for storage. An analysis of these samples will be undertaken should there be indication there is significant diamond breakage.

11.2.7 Granulometry Samples

The purpose of collecting granulometry samples was to determine the particle size distribution (PSD) of the drilled material making up the bulk samples.

A half-filled 135 ml sample jar was collected every metre, approximately at the same time as the representative sample was collected, and was placed into a small poly woven rice bag set inside a 20 litre PVC pail. Samples were prevented from freezing and were transported at the end of each shift to the core shack in camp for drying. Multiple samples were placed into 20 litre PVC buckets and labelled using permanent marker on the lid and the side of the bucket with “Granulometry”, the hole ID and the domain names (e.g., Granulometry, KDI-LD17-085, KIMB1). The following data were recorded for each granulometry sample: depth interval in feet, domain, mass in kilograms, comments, sampler’s name, date sampled.

While drilling at Faraday 2, samples were collected into intervals corresponding to the bulk sample megabag intervals and assigned a sample-ID which included the bulk sample-ID (eg. Gran085B). This is different from last year and provided a PSD which includes the same input sample material of the bulk sample domains.

While drilling at Faraday 3 and 1, samples were collected over each entire kimberlite domain per drill hole as identified at the rig. In some cases, the detailed logging identified a contact Above or below where the rig sampler identified the same contact. In these cases, the PSD reflects the bulk sample domain with a minor amount of cross contamination from material from a contacting domain.

Samples were shipped to SRC for processing. Individual samples were grouped into their corresponding bulk sample domain, combined, and a split of approximately 2 kg was analyzed. Upon completion of analysis, the material was processed through the DMS plant along with their respective process groups. This is different from the previous year when all the granulometry material was processed as one sample and the diamonds could not be allocated to their specific domains.

11.2.8 Onsite Security

Security measures included the setup and off-site monitoring of digital video surveillance, access control, and cable seals for samples. One camera which broadly covered the drilling vicinity and one camera at each drill rig, providing coverage of the shaker table, were setup at the beginning of the program. The video was archived onto disks. Access to the sample recovery area (shaker table to sample bag) was limited to rig geologists working on shift as well as relevant drilling staff, and the area had posted restricted access signs. Bulk sample bags were sealed using a metal cable lock with a unique number engraved on the coupler. Bags were temporarily stored at the bulk sample laydown area organized by hole and all bags were checked prior to shipping for adequate sealing by the senior site geologist. Howard Coopersmith, P.Geo., “QP”, made a site visit, February 20-25th, 2015, to inspect security measures in place.

No diamond pick-ups were reported during the collection of the bulk samples and no diamonds were observed while working on the rigs or handling the samples. All video footage was reviewed by an independent third-party contract through AGL.

11.2.9 Sample Shipment and Security

The purpose of establishing chain of custody procedures for the bulk samples was to ensure that bags arrived at the SRC without incident and to provide documentation supporting this.

Chain of custody began with the collection of the sample and recording the sample bag number, seal number, and bag weight. These data were compared by the senior site geologist to the records documented by receipt at the SRC in Saskatoon. Minor discrepancies occurred with typos and these were resolved.

Sean Marshall of Marshall Solutions, Yellowknife, NT managed the transfers of the samples from Kelvin camp to the SRC. A spreadsheet of details on sample bags ready for shipment was sent to Mr. Marshall from site and he organized the bags into shipments by truck. Supervision of on-site truck loading was completed by an available senior site geologist. Variances to the manifests were documented by Mr. Marshall as part of the sample chain of custody. Chain of custody documents and a spreadsheet of transfer details were saved to the server.

Bulk samples were shipped to Yellowknife on open flat decks. The trucking company was Aurora Telecom Systems Ltd. (ATS). In total, 24 truck shipments transported the samples from Kelvin camp to Yellowknife. There were also 5 airborne shipments using Air Tindi's Dash 7 aircraft. On arrival in Yellowknife, a bag was either added directly to a highway transfer to Saskatoon or to a storage transfer area, monitored 24 hours by a security camera, in Yellowknife awaiting the arrival of additional bags to complete a load. The truck drivers or pilot was responsible for the samples until they were handed over to Mr. Marshall. One load was transferred at ATS and the rest at Grimshaw Trucking L.P. Each bag was transferred between two and four times and at each transfer the bag seals were checked.

The transportation of samples to the SRC was in closed vans and the final step in the chain of custody for this portion of the program was the receipt of samples by the SRC laboratory in Saskatoon, SK.

All samples were transported in locked and secured panel trucks to SRC in Saskatchewan. SRC confirmed the secured samples upon arrival and stored them in locked and secured storage areas at their facilities.

12 DATA VERIFICATION

12.1 MICRODIAMOND SAMPLES – DRILL CORE

All drill core sent for caustic fusion diamond analysis to the SRC is subjected to the process outlined in Figure 11-3. The fusion residues are held at SRC while the recovered diamonds are sent to KDI for storage and reference. The SRC spikes the samples for quality control and has a recovery rate of these spikes of over 99%, for the KDI samples. This efficiency is extremely high and as such the microdiamond recoveries are considered reliable. The SRC Diamond Services Lab is ISO 17025 accredited for caustic fusion.

Every sample is picked by a trained technician and the residue is re-picked by a senior technician to ensure that all diamonds have been recovered. The senior technician then signs off on the sample. All technicians are required to take annual retraining. New technicians are trained by picking spikes, first under supervision, for up to four months.

There are seven container transfers and two screenings during the caustic fusion procedure. This increases the risk of losing diamonds. The QC procedures are in place to minimize any potential loss of stones. A designated QC Manager is in charge of all QC documentation at SRC.

12.2 MACRODIAMOND SAMPLES – DRILL CORE and RC CHIPS

All macrodiamond samples received at the SRC lab are placed in secured storage to ensure the integrity of the samples.

Prior to sample processing, all equipment functions are checked. A quality control test is performed daily or upon startup (prior to sample processing) to ensure that the density of the separation media meets the operational and customer requirements. A check sample from the sample introduction mix box is taken and the density (specific gravity) is checked using a Marcy scale. The Marcy scale is checked for accuracy prior to each media test. The automated dense media controller is calibrated against the Marcy scale when the density reaches the operating density.

A selection of dense media separation (DMS) synthetic tracers were added to the mix box. The recovery on the concentrate side is plotted on a graph to determine the d50, or cut point, of the separation media. This is the cut point at which the plant will separate the sample into concentrate and tailings material based on the sample density.

The diamond recovery circuit is in a restricted area and all samples, concentrates, diamonds and data are locked in safes, cabinets, drying ovens or secure rooms when not being handled. Bulk samples were entirely consumed during treatment, and therefore check samples processed at the same or different facility are not possible. The coarse tails DMS product consists of 1 mm to 6 mm DMS floats, and the remaining sample represents approximately one-half of the original head weight. This material could be audited or reprocessed to check for additional diamonds. The recovery tails of DMS concentrate minus concentrate removed by x-ray and grease recovery is stored. This could also be audited or re-processed to check for additional diamonds. The hand sorted recovery concentrates are also available. Audits or re-processing of these concentrates would not seek to duplicate original sample results, but to check diamond recovery efficiency.

Assessment of QA/QC data during processing of Faraday 2 bulk sample material in 2017 highlighted an issue with recovery efficiency - it was noted that fine diamonds were being lost due to compromised screen panels on process plant de-grit circuit. All discarded (undersize) de-grit material is collected, and the relevant material was reprocessed subsequent to replacement of the compromised panels such that lost diamonds could be recovered. This issue was identified and remedied, and has not compromised the validity of these samples for use in grade estimation (see Section 14.2.4 for details on how this was resolved).

12.3 DRILL DATA

Drill collars were located in 2012 and 2013 using a Trimble GeoXT DGPS with sub-metre accuracy, and using a Trimble GeoHT DGPS with sub-30 cm accuracy in 2014. In 2015 and 2016, a Leica GS15 RTK GPS was used with horizontal accuracy of +/- 2 cm and a vertical accuracy of < 5 cm. Drill collars were located in 2017 with a Leica GS15 RTK GPS with a horizontal accuracy of +/- 2 cm and a vertical accuracy of < 5 cm.

Downhole surveying during 2012 was a problem as the Icefields gyro tool arrived late and the first four holes were completed using just acid tests. The dip of these holes would be considered to be low confidence estimates. Once the Icefields tool arrived onsite, the final drilling of 2012 and all of 2013 was completed using this tool. The Icefields tool was not equipped to handle vertical surveys so the confidence level for vertical holes is not high. We had significant technical issues with the Icefield tool during 2013 and as such we switched to the Reflex Gyro tool in 2014.

All drilling in 2014, 2015 and 2016 was surveyed using the Reflex gyro tool with essentially no issues and a high confidence in accuracy. Drill holes in 2017 have been surveyed using the Champ Navigator Tool from Axis Mining Technology.

The drill survey data, both collar and down-hole, are considered to be of high confidence.

Drill hole data which was used for volume and tonnage estimates was verified by both Aurora Geosciences Ltd. and SRK Consulting in the following manner:

i) Verification of collar data was confirmed against the printed data from the DGPS survey tool and the original data and reports from our survey technician.

ii) Downhole data was checked against original data and print-outs from the downhole survey tools and bad data points were removed.

iii) The end of hole points were checked with original drill log data, driller's time sheets, printed detailed core logs and core photos showing the end of every hole.

iv) Downhole meterage was confirmed with photos, detailed drill logs and geotechnical logs. There were no discrepancies identified.

All drill hole data is compiled in a Microsoft Access database which is stored on server at site, in Yellowknife and a copy with KDI in Toronto.

12.4 DENSITY DATA

The majority of the bulk density data for Kelvin and the Faraday kimberlites were collected on-rig and tested immediately after being recovered (with lag-times of less than 12 hours). These samples were measured in-field using a water displacement balance-method and are considered to be near *in situ* measurements. Additional independent testing of bulk density has included:

1. Field sampling for strength testing of rock (uniaxial and triaxial) was completed at Queens University Laboratory and resulted in precision measurement of cylinders of rock (n = 10) which included the sample densities.

2. To determine the density of air-dried kimberlite, a mass/volume method was implemented for Kelvin using large pieces of typically 0.6 m length, with more than 4 months of air-drying using right-angle sawn kimberlite (n = 70, approximately 200 kg).

These different approaches have produced data that are extremely similar for equivalent material, suggesting that bulk density is well constrained. Two approaches were used to verify that moisture content is not an issue in bulk density for samples measured using approach (1) above. This included oven-drying (105°C for 24 hours) 20 samples from Kelvin and measuring bulk density on an additional 90 samples from Kelvin that had been dry stored for 2 years. Results of this testing confirm that the bulk density results generated by method (1) above can be adopted as dry bulk density as moisture is not a significant component. In conjunction with the very large and spatially representative datasets available, the QA/QC measures adopted have verified that the bulk density data are reliable.

13 MINERAL PROCESSING AND METALLUGICAL DATA COLLECTION

13.1 INTRODUCTION

Dense media separation (DMS) has been used to extract commercial sized (+1.00 mm) diamonds from the samples of the Faraday kimberlites. During processing of Faraday 2 samples during 2017 there was a feed preparation screen failure (identified by red arrow on DMS flow chart) allowing +0.85mm diamonds to pass to the grit audit which should only have seen diamonds of -0.85mm. This may cause minor issues with a loss of diamonds for SFD which could under-estimate recoverable grade. Lost diamonds have essentially been accounted for during grade estimation. Section 14.2.4.1 describes how this accounting was achieved. Sample processing and diamond recovery methods employed for the 2017 RC chip samples are outlined in the sections below. They are consistent with the methods used in processing of sample material from the 2015 and 2016 RC drill programs (Kelvin evaluation), as detailed in Vivian and Nowicki (2017).

13.2 DENSE MEDIA SEPARATION for MACRODIAMOND SAMPLES

Howard Coopersmith (Coopersmith, 2017) was contracted to oversee the sample processing of RC chips using DMS in 2017. Kennady Diamonds and SRC completed agreements for sample processing, which included standard terms and describe the scope of work in some detail for sample processing and deliverables. The agreements called for a crushing and DMS treatment, with secondary crushing and a re-crush circuit utilizing the SRC 5 tonne per hour ("tph") DMS plant, and peripherals including a High Pressure Grinding Roll (HPGR) re-crush. DMS concentration would be of a +0.85 mm -12 mm feed material. Heavy mineral concentrate from the DMS would be treated in the SRC two stage Flow Sort X-ray sorter and vibrating grease table recovery circuit. Recovery concentrates would be hand sorted in the secure SRC Macro Room utilizing glove boxes. The final recovered diamonds would be sieved, weighed and described as warranted. SRC has standard operating procedures in place for the operation of the above circuits and includes a comprehensive security regime.

The SRC 5 tph DMS Plant is routinely used for the treatment of bulk exploration samples for the recovery of diamonds. Each stage of treatment of the Faraday bulk samples is described below as outlined in the SOPs, and modifications and special circumstances are noted. The equipment was operated by, and the process performed by trained SRC staff. Actual sample treatment and sorting occurred during April to

June of 2017. A process flow chart is presented as Figure 13-1 and the location of the screen failure is shown by the red arrow.

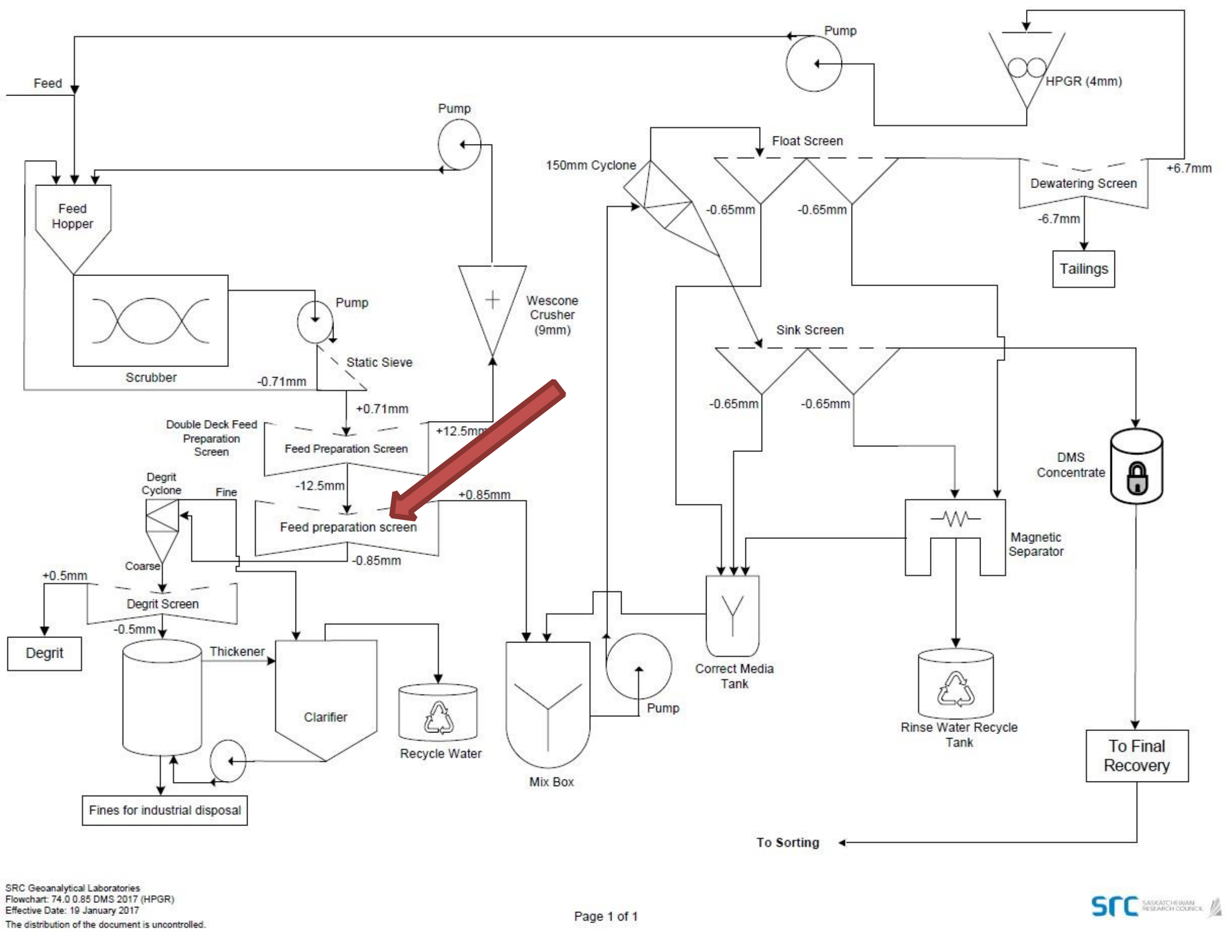

Figure 13-1. SRC - DMS Process Flow Chart - 2017

The sample bags were opened and emptied into the small feed hopper of the jaw crusher and crushed material fell through to a new bulk bag. Water was used to flush clean the jaw and wash out the bags. The bulk bags with crushed material were closed and sealed with a uniquely numbered security cable. The bulk bags were numbered and colour coded by Process Unit, and stored securely for DMS processing.

The bags of crushed sample material were stored in the DMS building. Here they were unsealed and opened under security. One Process Unit at a time was treated, and the plant was flushed between units. The material was fed by bag to the scrubber feed hopper and introduced to the scrubber. Upon exit from the scrubber the material was split on a 12.5 mm punch plate trommel screen, with the undersize dropping to sump for pumping directly to the feed prep screen. The +12.5 mm material dropped through a 450 mm cone crusher, closed size setting of 10 mm and the crushed product reported to a sump for pumping back into the scrubber feed. The crusher gaps were checked by introducing lead shot.

Sized (+0.85 mm -12 mm) and scrubbed material presented to the prep screen was washed clean of -0.85mm fines and vibratory fed to the mixing box, where it was mixed with ferrosilicon (270F FeSi) and water. This mixed product is pump fed to a 150mm cyclone producing a float (light) product and a sink (heavy) product. Cyclone settings are determined by daily density bead testing and are generally held around 60-70 Kpa and density of 2.2 g/cm^3, producing an average d50 cut point of 3.1 g/cc (see QA/QC below). These products are discharged over separate 0.6 mm wedgewire screens to recover the FeSi and wash the respective products. The sinks product gravity feeds through a sealed and closed tube to a can inside a sealed and double locked concentrate cage.

The float product drops to a tails screen where -6 mm material (6.7 mm slotted screen) drops into a bulk bag of coarse plant tails, sealed and numbered and weighed for storage. Plus 6 mm floats drop into a feed bin for re-crush via a HPGR with a setting of 4 mm at 65 bars. This setting was determined through kimberlite crushing tests using cylindrical breakage simulants in 4mm, 6mm, and 8mm sizes. This testing concluded little or no simulant breakage of 6 mm beads at 85 bars. The gap was checked by use of lead shot. The 65 bars setting was selected to effect good kimberlite disaggregation and avoid particle breakage. The re-crushed HPGR product was pumped back to the scrubber mouth for re-processing.

At the end of Process Unit feed the bags were washed clean into the scrubber to recover all sample material. The plant then continued to treat and was flushed through, including scrubber emptying and screen de-pegging until no more feed was exiting each stage.

All undersized (-0.85 mm) material is pumped to a settling tank with agitation where reagent and flocculent are introduced to produce a pump-able slimes waste. All spills and loose material are fed back into the sample, with any remnants collected as a clean-up sample and treated by caustic fusion, and any diamonds are reported.

When the concentrate can is full, the carousel cage is spun to fill another can. When the cans are full or at the end of the day the cans are closed with can rings and security sealed within the cage through gloved openings. There is no contact with the concentrate can until it is secured and sealed. Concentrate cans are then moved by operators and security personnel to the Secure Recovery section at SRC.

The 2017 bulk samples retrieved from the Faraday 2, 3 and 1 kimberlites were taken by large diameter RC drills. These drills produced a drill screened (+0.85 mm) cuttings product. Primary jaw crushing was not necessary, and the material was fed directly to the scrubber. Approximately 28 to 47% of the head feed (including HPGR product) reported to slimes, leaving over one-half of the material for DMS treatment. Much of the sample treated well, but weathered or clay zones were encountered. This produced feeding issues and clay (saponite, identified by XRD) balls were formed in the scrubber. In addition, process water was not being sufficiently clarified by the thickener and flocculent reagents, resulting in frequent clean outs to provide cleaner process water. The clay balls were continuously re-fed to the scrubber and cone crusher until they broke down. Only small (2-3 mm) clay balls were occasionally seen in the cyclone feed and coarse tails. It is not believed that these issues materially affected diamond recovery.

Concentrate production for all samples was quite small at 0.1 to 0.2% of head feed. At times the concentrate was dominated by mica and flat schist fragments as these act as heavy minerals in the cyclone. This affected the X-ray recovery (see below) but not diamond recovery.

13.3 X-RAY and GREASE TABLE RECOVERY

Diamond recovery from the DMS concentrates is accomplished through a standard two-stage X-ray sorter and vibrating grease table circuit. Figure 13-2 shows the recovery process flow sheet. The equipment was operated by and the process performed by trained SRC staff. Sealed cans of concentrate were opened and hoisted to a receiving feed bin. This bin is opened to allow feed to a sizing screen producing four products - extra fines +0.85 to -2mm, fines +2 to 4 mm, mids +4 to -6 mm and coarse +6mm. In addition, dewater screens removed undersized grains. The four feed sizes drop into separate hoppers. Each size is batch fed to the X-ray feed bin. From here the material is fed, with appropriate settings for the size fraction, to the first stage Flow Electronics Flow Sort Diamond Recovery Machine. Material is fed by water and vibration as a single particle layer over a window allowing X-ray excitation of the grains, and optical photomultiplier detection of luminescing grains, for capture through mechanical means. Grains that luminesce, including diamond and select other minerals, and the physically surrounding grains, are ejected and drop over a 0.65mm wedgewire de-water screen and through an infrared drying feeder into a secure concentrate can in a locked gloved cage. Tails from the first stage X-ray sorter feed directly to a second stage identical Flow Sort machine for a second pass at capturing any remaining diamonds.

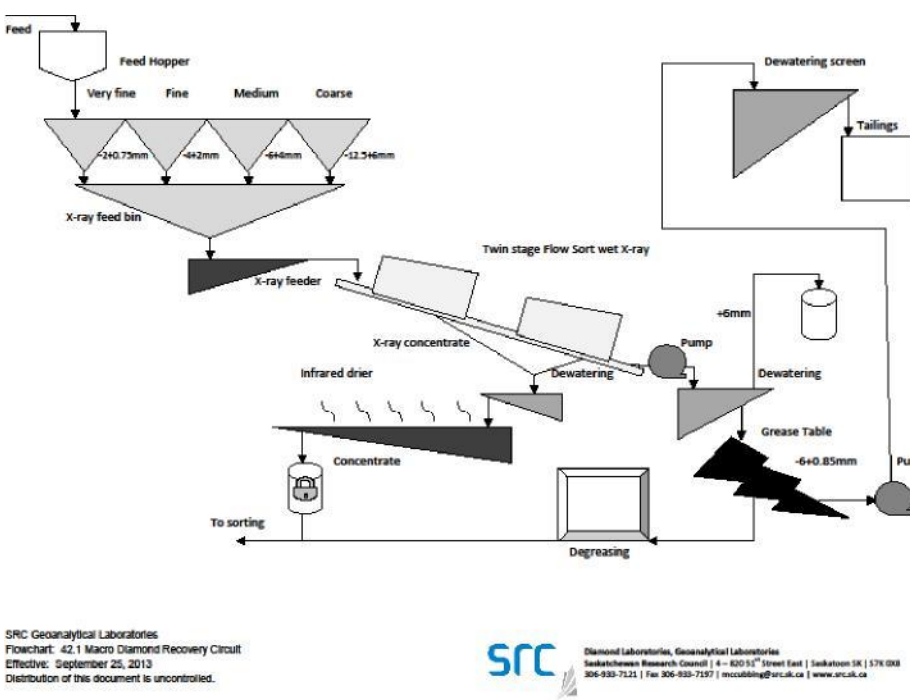

Figure 13-2. X-ray and Grease Table Sorter - SRC Recovery Process Flow Sheet

Tails from the two stage X-ray sorting are screened. Plus 6mm X-ray tails drop into a can for collection and later hand sort for any remaining diamond. Minus 6mm tails are fed with temperature controlled water (26°C) over a stepped vibrating table coated with diamond collector grease (Engen DB Collector). Diamonds, being hydrophobic, adhere to the grease surface. The grease is scraped off at the end of the sample or as required during the run, including the adhering grains, which are later cleaned of grease for hand sort. De-greasing is accomplished by melting off of the majority of the grease, a hot water bath for removal of the remainder of the grease, and a hot water detergent wash to clean the grains. This product is then dried and weighed and sealed and taken to the secure Macro Room. Grease table tails are de-watered and drop into a can for sealing, weighing and storage.

X-ray concentrate cans are clamped and sealed within the locked concentrate cage. They are then removed by operators and security to the secure Macro Room. All spills and loose material are collected as a clean-up sample and treated by caustic fusion, and any diamonds are reported.

13.3.1 Diamond Sorting

Diamond sorting of X-ray and grease concentrates was accomplished by hand by trained SRC staff in the secure Macro Room. Concentrate and diamond handling was performed inside locked and sealed glove boxes. The concentrate pail was placed in the glove box, which was re-locked and sealed. All concentrate is weighed into the glove box and weighed out of the glove box upon completion. All fractions are accounted for and a detailed weight reconciliation is kept. Reconciliation weights must match within 0.2% before a sample is re-sealed and removed. Hand sorting of the +6mm X-ray tails is accomplished on a table outside of the glove box, as is sorting of the grease table concentrate.

The concentrate is sieved into convenient size fractions for sorting, for feed to the Polus-M as required and for granulometry data. Each size fraction is sorted at least twice by two different sorters. A microscope is used for all but the coarsest fractions. All diamonds and QC materials such as diamond spikes and density tracers are removed and recorded.

13.3.2 Reporting

SRC provided final result reports on May 23 and June 19, 2017 (KDI public releases on these dates for Faraday 2 and Faraday 3 and 1, respectively) corresponding to the bulk samples retrieved during the winter of 2017. A process data compilation from DMS processing and recovery processing, sorting results, quality control and security were also received.

Diamond results are reported by number of stones and carat weight per square mesh sieve class. All reported diamonds were reviewed to confirm that they originated from the Faraday samples, and had no contamination from natural diamond tracers used for quality control. Individual stones greater than 3.35mm sieve class are described and weighed.

Howard Coopersmith, P.Geo., QP, reviewed security at SRC for the Faraday samples and noted no concern with security issues, incidents or discrepancies.

14 MINERAL RESOURCE ESTIMATES

A Mineral Resource estimate for the Kelvin kimberlite was documented in the previous independent technical report for the Kennady North Project dated 24 January 2017 (Vivian and Nowicki, 2017). This estimate is summarised here in Section 14.1. The Kelvin Mineral Resource estimate is restated with no modification. Ongoing evaluation work on the Kennady North Project now supports declaration of additional Mineral Resources in the Faraday 2 and Faraday 3 kimberlites, as described in Section 14.2. An additional kimberlite (Faraday 1) as well as kimberlite dyke sheet complexes surrounding the Faraday kimberlites, are present. The available data do not permit declaration of Mineral Resources for these bodies. Volume, tonnes and grade range estimates under the classification of Targets for Further Exploration (TFFE) are provided for these where possible in Section 14.4.

14.1 Kelvin Mineral Resource estimate

The Mineral Resource estimate for Kelvin is restated from the independent technical report for the Kennady North Project dated 24 January 2017 (Vivian and Nowicki, 2017). Each component of the resource estimate (volume, tonnage, grade and value) is summarized in the sections below; for more comprehensive explanations of the methodologies and details of supporting datasets the reader is referred to Vivian and Nowicki (2017). The Mineral Resource estimate for Kelvin is based on:

1. A geological model that defines the boundaries of the deposit (external pipe shell) as well as the geologically distinct domains of which it is comprised.
2. A spatial (block) model representing the variation in bulk density within the deposit and, in combination with volumes derived from the geological model, providing estimates of the tonnes of kimberlite present.
3. Estimates of average grade (carats per tonne) for each domain derived based on distributed microdiamond[3] stone frequency (st/kg) data calibrated to recoverable macrodiamond[4] grade using LDD macrodiamond results.
4. Estimates of the average value of diamonds within each domain, based on a single estimated diamond value distribution (dollar per carat per sieve size class) combined with diamond size frequency distributions (SFDs) defined for each of the domains.

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[3] The term microdiamond is used throughout this report to refer to diamonds recovered through caustic fusion of kimberlite at a bottom screen size cut off of 106 µm (~0.00002 ct). Rare larger diamonds that would be recovered by a commercial production plant are also recovered through this process and are evaluated as part of the microdiamond population.

[4] The term macrodiamond is used throughout this report to refer to diamonds recovered by commercial diamond production plants, which typically only recover diamonds in and larger than the Diamond Trading Company sieve category 1 (~0.01 ct).

14.1.1 Resource domains and volumes

The Kelvin kimberlite comprises a number of kimberlite units that are each considered to be internally consistent but present differing bulk density, grade and SFD characteristics. These kimberlite units form the basis for a geological model of the Kelvin body that comprises 9 geological domains. The geological domains have been created to represent portions of the body that correspond with the kimberlite units, but that are also relevant from a resource estimation perspective. More information on the nature of the kimberlite units and their subdivision or grouping into geological domains is provided in Section 7.3.4. The geological domains have been adopted as the basis for the resource estimate (Table 14-1).

Table 14-1. Volumes of the Kelvin geological domains that form the basis of the Mineral Resource estimate

Kimberlite unit	Domain	Volume (Million m^3)
KIMB1	KIMB1	0.09
KIMB2	KIMB2A	0.57
KIMB2	KIMB2B	0.26
KIMB3	KIMB3A	0.77
KIMB3	KIMB3B	0.74
KIMB3	KIMB3C	0.57
KIMB6	KIMB6	0.30
KIMB4 / KIMB7	KIMB4/7	0.17
N/a	CRX	0.01
	Total	**3.49**

14.1.2 Bulk density and tonnages

Bulk density estimates for all kimberlite material is based on local interpolation within each domain of sample bulk density data (3,652 measurements) into a block model using the inverse distance squared method. For the country rock xenolith (CRX) and external country rock (CR) domains, estimates were based on the sample averages. Resulting average densities and corresponding tonnage by domain, extracted through volumetric reporting in Dassault Systemes Geovia GEMS™ (GEMS), are provided in Table 14-2. No reliable measurements are available for overburden material, which was assigned an assumed value of 2.00 g/cm^3.

Table 14-2. Interpolated bulk densities and total tonnage for Kelvin by domain

Domain	Bulk density (g/cm^3)	Tonnes (Million t)
KIMB1	2.31	0.21
KIMB2A	2.40	1.36
KIMB2B	2.55	0.65
KIMB3A	2.37	1.83
KIMB3B	2.41	1.78
KIMB3C	2.55	1.46
KIMB6	2.51	0.76
KIMB4/7	2.39	0.41
CRX	2.73	0.04
Total		**8.50**

Notes: The above table presents the average interpolated block bulk densities and total tonnage for Kelvin by domain, as extracted through volumetric reporting in GEMs. Tonnages are included for all domains within the kimberlite pipe, including waste country rock xenoliths (CRX).

14.1.3 Grade

Kelvin has been extensively sampled for microdiamonds from drill core and for macrodiamonds through LDD drilling. The microdiamond database is comprehensive (53,499 stones recovered from 19.94 tonnes) and spatially representative of the entire ~700 m strike length of the Kelvin kimberlite. The macrodiamond dataset (2,198 ct recovered from 1,067 tonnes) derives from 79 LDD holes that provide coverage of approximately 520 m of the strike length of Kelvin. These large datasets provide robust constraints on the nature and degree of variability in grade and diamond size frequency distribution (SFD).

Grade estimation was based on microdiamond data from drill core samples calibrated against the results of LDD bulk sampling, as follows:

1. Micro- and macrodiamond data from corresponding volumes of kimberlite were used to define total content diamond SFD models. In conjunction with appropriate +1 mm recovery correction factors these SFD models define the ratio between microdiamond stone frequency (+0.212 mm stones per kg) and commercially recoverable diamond grade (+1 mm carats per tonne).
2. Spatial analysis of micro- and macrodiamond data indicates constant SFD and no evidence for large scale variation in grade within each kimberlite domain, thereby supporting a microdiamond-based estimation approach and the definition of grades on a global (average) basis per domain.
3. Stone frequency data for large spatially representative microdiamond sample sets were used in conjunction with the micro/macrodiamond ratios for each kimberlite unit, as established by SFD modelling, to estimate average grades per resource domain.

The resulting estimates of +1 mm recoverable grade are shown in Table 14-3. Note that these grades reflect reasonable assumptions of process plant recovery efficiency (based on Brisebois et al, 2009).

Modifications to process plant efficiency (and hence degree of liberation and recovery of diamonds in the smaller size ranges) relative to that assumed for this estimate will require an adjustment to these values.

Table 14-3. Estimates of recoverable (+1mm) grade for each Kelvin domain

Domain	Recoverable grade (+1 mm cpt)
KIMB1	2.66
KIMB2A	2.66
KIMB2B	1.82
KIMB3A	2.10
KIMB3B	1.42
KIMB3C	0.46
KIMB6	0.75
KIMB4/7	1.56

14.1.4 Diamond value

A parcel of 2,262.43 ct of diamonds from Kelvin underwent valuation by WWW International Diamond Consultants Ltd (WWW) in Antwerp in October 2016. The parcel was sieved prior to valuation to remove all diamonds smaller than the Diamond Trading Company (DTC) 1 size category. Estimates of +1 mm recoverable average diamond value (US Dollars per carat) per domain are based on a value distribution model, representing the value of diamonds per carat in each sieve size class, combined with the +1 mm recoverable SFD models for each domain. Modifications to process plant efficiency (and hence degree of liberation and recovery of diamonds in the smaller size ranges) relative to that assumed for this estimate will require an adjustment to these values.

Table 14-4. Kelvin average diamond value estimates (US$/carat)

Domain	Average $/ct
KIMB1	49
KIMB2A	49
KIMB2B	40
KIMB3A	74
KIMB3B	74
KIMB3C	74
KIMB6	74
KIMB4/7	76

Notes: The values provided reflect diamond valuation carried out in October 2016. These reflect “recoverable” average values assuming the chosen recovery efficiencies for a commercial diamond plant operating with a 1 mm bottom size cut off (see text for details).

The use of the above-described size and value distribution models in the estimation of grade and average diamond value assumes that the degree of breakage to which the diamonds have been subjected during LDD drilling / sampling is comparable to breakage that would be incurred during mining and processing of kimberlite material. While induced diamond breakage has occurred (SRC 2015, 2016) it is not possible to accurately quantify the degree to which this may have affected the grade or average value estimates, or to assess the extent to which such breakage might be mitigated during production. Consequently, no adjustments have been made to either the grade or the average diamond value estimates to account for potential diamond breakage.

14.1.5 Confidence and resource classification

Mineral Services has reviewed the Kelvin pipe shell and internal geology model in detail (MSC16/017R and MSC15/025R) and considers the geological model to be of high quality and well constrained by close-spaced core drilling. Bulk density is well constrained by a comprehensive dataset. Hence estimates of resource tonnes are considered to be accurate to within ± 10 %.

The grade estimates for Kelvin are subject to uncertainty relating to the confidence with which the micro-macrodiamond ratios are constrained, the accuracy with which the microdiamond dataset represents the overall grade characteristics of each domain, possible changing SFD within domains and dilution characteristics not being adequately constrained by the available data. Assessments of related uncertainty ranges imply that domain grades will not vary by more than ± 15 % from the reported global averages on scales pertinent to monthly and quarterly mining production and grade reconciliation.

The average diamond value estimates for Kelvin are subject to uncertainty related to the accuracy of the value distribution model and the SFD models used as a basis for the estimate, and to uncertainty in the market value of the diamonds and how this fluctuates with time. The range of uncertainty associated with model accuracies is estimated to be on the order of -20 to +25 %. The valuation of diamonds is highly specialized and subjective; all valuation is subject to a degree of uncertainty which reflects personal opinions as to the quality and market demand for the diamonds in question. Independent valuations of single diamond parcels made at the same time can differ significantly. Uncertainty associated with market value cannot be quantified and has not been accounted for in the classification of the Mineral Resource estimate for Kelvin.

The tonnage, grade and value parameters of the Kelvin Mineral Resource estimate are considered to be constrained to a level of accuracy appropriate for the classification of Indicated Mineral Resources.

14.1.6 Kelvin Mineral Resource statement

The CIM Definition Standards for Mineral Resources and Mineral Reserves states that in order to be classified as a Mineral Resource there should be a reasonable prospect for the eventual economic extraction of the specified ore. This has been assessed and confirmed to be the case by JDS Energy and Mining Inc. (JDS, 2016).

The estimation work summarised in the sections above defines a total Indicated Mineral Resource for the Kelvin kimberlite of 8.5 million tonnes at an average grade of 1.6 carats per tonne and an overall average diamond value of US$63 per carat (Table 14-5). The estimate encompasses the entire body as defined by the current Kelvin geological model, extending from base of overburden (~400 masl) in the south-east to a depth of -100 masl in the north. The grade and average diamond value estimates reflect diamonds recoverable by a commercial process plant operating with a 1 mm bottom cut-off. The corrections applied to derive these recoverable estimates are based on assumed recovery parameters and will need to be adjusted for the actual recovery efficiency of the planned production processing plant.

Table 14-5. Kelvin Mineral Resource

Resource classification	Domain	Volume (Mm^3)	Density (g/cm^3)	Tonnes (Mt)	Grade (cpt)	Carats (Mct)	Value (US $/ct)
Indicated	KIMB1	0.09	2.31	0.21	2.66	0.57	49
	KIMB2A	0.57	2.40	1.36	2.66	3.61	49
	KIMB2B	0.26	2.55	0.65	1.82	1.19	40
	KIMB3A	0.77	2.37	1.83	2.10	3.84	74
	KIMB3B	0.74	2.41	1.78	1.42	2.53	74
	KIMB3C	0.57	2.55	1.46	0.46	0.67	74
	KIMB6	0.30	2.51	0.76	0.75	0.57	74
	KIMB4-7	0.17	2.39	0.41	1.56	0.63	76
	CRX	0.01	2.73	0.04	-	-	-
	Total	**3.49**	**2.44**	**8.50**	**1.60**	**13.62**	**63**

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Notes: Mm^3 = million cubic metres, Mt = million tonnes, cpt = recoverable (+1 mm) carats per tonne, Mct = million carats, US$/ct = recoverable (+1 mm) US dollars per carat.

14.2 Faraday Mineral Resource estimate

Three additional kimberlite pipes, Faraday 1, 2 and 3 (Figure 14-1), are located approximately 2.5 km to the north-east of Kelvin. Additional kimberlite sheets, some with significant thicknesses, are also present but are poorly delineated due to their complex morphology. Evaluation of these bodies has progressed to the point where Mineral Resources can be declared in Faraday 2 and 3. The available data do not permit declaration of Mineral Resources for Faraday 1 or for the additional sheets. These bodies are classified as Target for Further Exploration (TFFE) and volume, tonnage and grade range estimates are provided.

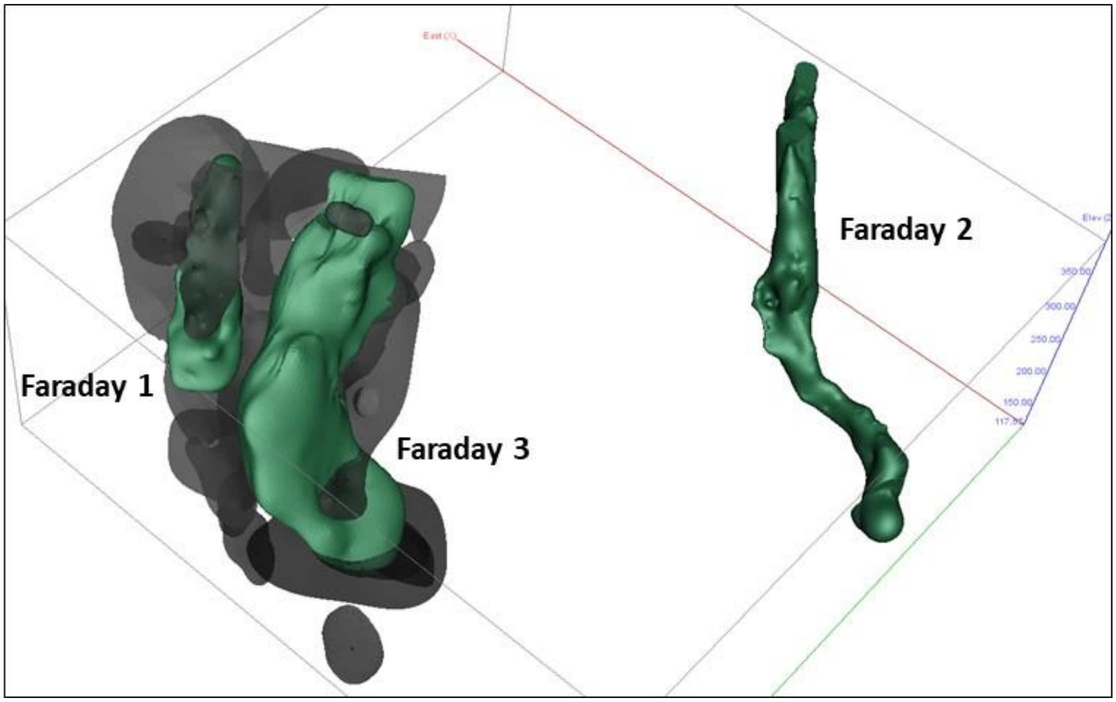

Figure 14-1. Inclined view of the Faraday 1, 2 and 3 pipe shells

Notes: Inclined view (looking towards the south-east) of the Faraday 1, 2 and 3 pipe shells (green) and surrounding kimberlite dyke sheets (grey). Kelvin is located approximately 2.5 km to the south-west.

14.2.1 Resource estimation approach

The Mineral Resource estimate for Faraday 2 and 3 is based on four main components:

1. A geological model that defines the boundaries of the deposit (external pipe shell) as well as the geologically distinct domains of which it is comprised;
2. Estimates of average bulk density for each domain which, in combination with volumes derived from the geological model, provide estimates of the tonnes of kimberlite present;
3. Estimates of average grade (carats per tonne) for each domain based on LDD grades corrected for recovery efficiency in a commercial-style process plant; and
4. Estimates of the average value of diamonds within each domain.

The geological domains, adopted as the domains for resource estimation, are represented as a series of triangulation model solids defined in Dassault Systemes Geovia GEMS^{TM} (GEMS)(Section 7.3.5.2, 7.3.6.2 and 7.3.7.2).

Microdiamond[5] and macrodiamond[6] grade and SFD characteristics provide reasonable support for an assumption of SFD and grade constancy within the volumetrically significant domains of Faraday 2 and 3. Average grade estimates by domain have therefore been generated. Total content diamond size frequency distributions (SFDs) were modelled to define the total in-situ (not necessarily recoverable) diamond content across the full diamond size range. The same +1 mm recovery correction factors used for Kelvin (Section 14.1.3) were applied to these models, thereby converting +0.85 mm LDD grade into recoverable +1 mm grade.

The estimates of average diamond value per domain are derived by combining a single estimated diamond value distribution (dollar per carat per sieve size class) with recoverable diamond size frequency distributions (SFDs) defined for each of the domains.

Details of the data and methods used to generate each component of the Faraday 2 and 3 Mineral Resource estimate are provided in the sections below. Estimates were populated into a GEMS percent block model with the following parameters:

- Block model origin (X, Y, Z): 597046, 7042794, 450 (coordinates defined in the Universal Transverse Mercator (UTM) coordinate system in the NAD83 datum for Zone 12N).
- Block model rotation of 45° counter-clockwise.
- Block model comprised of 170 columns, 134 rows, 67 levels.
- Block size 5 m by 5 m by 5 m, total of 1,526,260 blocks.

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[5] The term microdiamond is used throughout this report to refer to diamonds recovered through caustic fusion of kimberlite at a bottom screen size cut off of 105 µm (~0.00002 ct). Rare larger diamonds that would be recovered by a commercial production plant are also recovered through this process and are evaluated as part of the microdiamond population.

[6] The term macrodiamond is used throughout this report to refer to diamonds recovered by commercial diamond production plants, which typically only recover diamonds in and larger than the Diamond Trading Company sieve category 1 (~0.01 ct).

14.2.2 Resource domains and volumes

The Faraday 2 and 3 kimberlites each comprise single volumetrically dominant kimberlite units with smaller volumes of different subsidiary kimberlite units. The volumetrically dominant units in Faraday 2 (KIMB1, 73 % by volume) and in Faraday 3 (KIMB4, 85 % by volume) have been demonstrated through core logging and petrographic study (Section 7.3.5 and 7.3.6) to be present, and to not change materially in character, along the entire strike length of the respective bodies.

The kimberlite units form the basis for internal geological models of the Faraday 2 and 3 kimberlites comprising 5 and 6 modelled kimberlite domains, respectively (Table 14-6). The geological domains typically correspond with kimberlite units but, in the case of KIMB4 in Faraday 3, this unit has been subdivided based on country rock dilution (Section 7.3.6) into geological domains KIMB4B and KIMB4C. Unit KIMB1 in Faraday 2 was previously separated into two sub-units KIMB1A and KIMB1B based on differing colours and texture. These sub-units have more recently been re-interpreted as visually-differing alteration products of the same kimberlite unit, and have been combined into a single domain KIMB1. The geological domains have been adopted as the basis for the resource estimate. Volumes for the domains are provide in Table 14-6.

Table 14-6. Volumes of the Faraday 2 and 3 domains.

Body	Kimberlite unit	Domain	Volume (Million m^3)	Volume %
Faraday 2	KIMB1A + KIMB1B	KIMB1	0.44	73
	KIMB2	KIMB2	0.04	7
	KIMB3	KIMB3	0.06	10
	KIMB4	KIMB4	0.05	8
	CRX	F2CRX	0.005	1
	Total		**0.59**	
Faraday 3	KIMB1	KIMB1	0.05	6
	KIMB2	KIMB2	0.02	2
	KIMB3	KIMB3	0.01	1
	KIMB4	KIMB4B	0.42	55
		KIMB4C	0.23	30
	CRX	F3CRX	0.03	4
	Total		**0.76**	

Notes: The domains used for resource estimation are the same as the geological domains described in Section 7.3.5.2 and 7.3.6.2, respectively. CRX = country roick xenoliths.

The geological model for Faraday 2 includes an additional two domains (KIMB5 and KDYKE) that have recently been defined in the deepest (north-west) extents of the body (Section 7.3.5.2). The volumes of these are poorly constrained and they have been excluded from the Mineral Resource estimate. These domains are classified as TFFE and volume and tonnage range estimates for these domains are provided in Section 14.4. The geological model for Faraday 3 includes three additional domains (KIMB5, KIMB6 and KIMB7) that have been modelled around short drill intercepts, each from single drill holes (Section 7.3.6). No estimates have been made for these very poorly constrained domains as no grade data are available.

They have been allocated an average bulk density based on the limited data available (Section 14.2.3) and have been included in the block model with zero grade.

14.2.3 Bulk density and tonnages

The Faraday 2 and 3 domains are well represented by a total of 937 bulk density measurements (Table 14-7). The bulk density samples were not dried prior to measurement (Section 12.4) so, strictly speaking, they do not represent dry bulk density. However, an investigation into kimberlite moisture content and wet versus dry bulk density in Kelvin was carried out and no material difference was found to be present due to the time delay and dry storage of core between drilling and logging / sampling. The measured bulk density values have therefore been adopted as dry bulk density for the purpose of tonnage estimation.

Bulk density results were assessed by domain and were found to show a trend of slightly increasing bulk density with depth in the larger domains that have a significant depth extent. The magnitude of this trend is small in relation to the degree of variation between samples (Figure 14-2) and is not considered sufficient to warrant a local model of bulk density, and average results by domain have been adopted. Internal country rock xenolith (CRX) domains in Faraday 2 and 3 (Table 14-6) were assigned average bulk densities from samples of external country rock (CR). External marginal breccia (MB) units (not considered to be part of the resource) have been assigned an average bulk density based on the measurements available.

Table 14-7. Summary statistics of the Faraday 2 and 3 bulk density datasets used to define bulk density for kimberlite domains

Body	Domain	Samples	Bulk density (g/cm^3)			
			Average	Minimum	Maximum	Standard deviation
Faraday 2	F2KIMB1	372	2.35	2.16	2.79	0.08
	F2KIMB2	56	2.43	2.10	2.66	0.10
	F2KIMB3	43	2.37	2.20	2.79	0.10
	F2KIMB4	75	2.41	2.04	3.02	0.16
Faraday 3	F3KIMB1	39	2.36	2.09	2.54	0.11
	F3KIMB2	17	2.31	2.19	2.40	0.05
	F3KIMB3	7	2.28	2.12	2.38	0.08
	F3KIMB4B	215	2.46	2.00	2.80	0.11
	F3KIMB4C	113	2.50	2.20	2.89	0.12
External	CR	7803	2.75	1.99	3.33	0.09
	MB	79	2.62	2.07	2.82	0.18

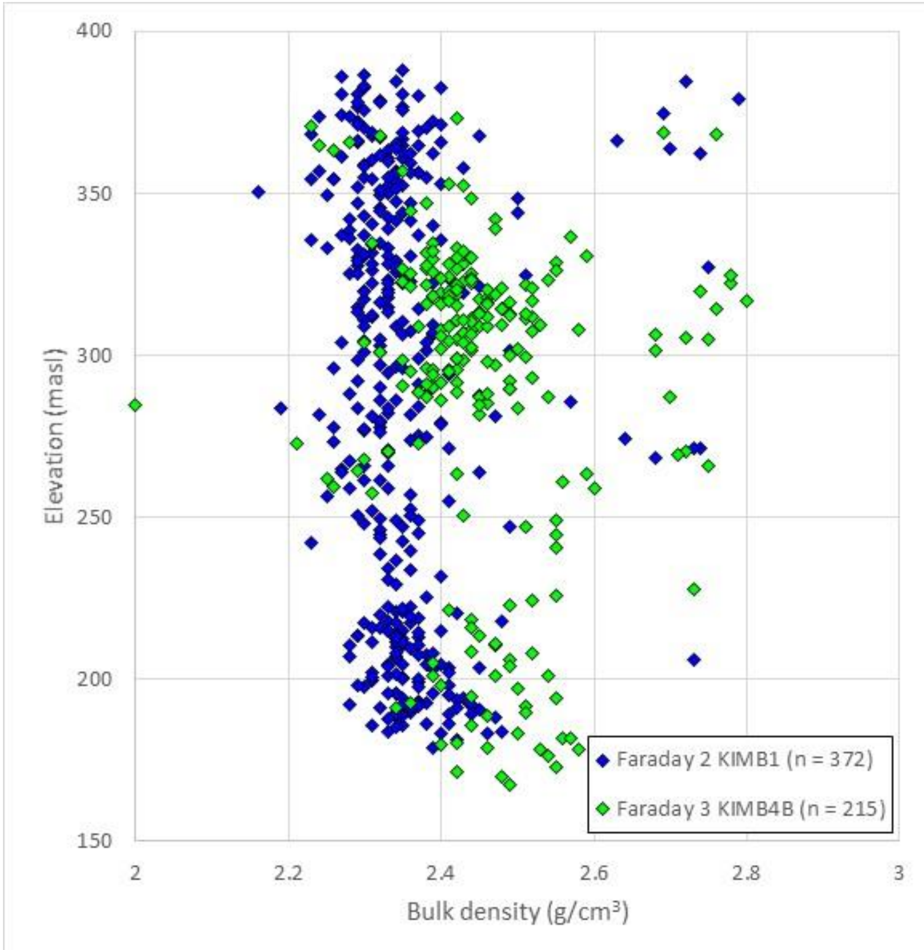

Figure 14-2. Bulk density variation with depth in the volumetrically dominant domains of Faraday 2 (KIMB1) and Faraday 3 (KIMB4B)

Tonnage estimates by domain, extracted from the block model by applying the average bulk density values provided in Table 14-7 are provided in Table 14-8. No reliable measurements are available for overburden material, which was assigned an assumed value of 2.00 g/cm^3 in the block model. Three domains in Faraday 3 with no supporting grade data (KIMB5, KIMB6 and KIMB7) have been allocated an average bulk density of 2.35 g/cm^3 based on the very limited data available and have been incorporated into the block model as waste with zero grade.

Table 14-8. Average bulk densities and total tonnage by domain of Faraday 2 and 3

Body	Domain	Bulk density (g/cm^3)	Tonnes (Million t)
Faraday 2	F2KIMB1	2.35	1.03
	F2KIMB2	2.43	0.11
	F2KIMB3	2.37	0.14
	F2KIMB4	2.41	0.11
	F2CRX	2.75	0.01
	Total		**1.39**
Faraday 3	F3KIMB1	2.36	0.11
	F3KIMB2	2.31	0.04
	F3KIMB3	2.28	0.02
	F3KIMB4B	2.46	1.03
	F3KIMB4C	2.50	0.58
	F3CRX	2.75	0.09
	Total		**1.87**

Notes: Reported tonnages were extracted through volumetric reporting in GEMs. Tonnages are included for all resource domains within the kimberlite pipe, including waste country rock xenoliths (CRX).

14.2.4 Grade

14.2.4.1 <u>Supporting data – macrodiamonds</u>

Large diameter drill (LDD) sampling programs were undertaken at Faraday 2 and 3 in 2016 and 2017. Samples were processed at the Saskatchewan Research Council (SRC) Geoanalytical Laboratories with a conventional DMS recovery plant operating at a 0.85 mm bottom cut-off size (Section 13.2). Recovery parameters are however not internally consistent. Process plant sizing panels (on de-grit screens) were replaced subsequent to processing the majority of the Faraday 2 sample, following observations that recovery efficiency of finer diamonds was compromised. All material passing through the de-grit screens was collected during processing, and audit of this material for samples processed prior to replacement of the panels confirmed the presence of a significant number of +0.85 mm diamonds. Assessment of SFD characteristics implies that the audit has however substantially over-recovered fine diamonds relative to typical process efficiency with new panels. The audit results can therefore not simply be added to the production results for Faraday 2 as they will significantly fine-skew the SFD and will overestimate recoverable grade relative to conventionally processed samples. Faraday 2 LDD results have therefore not been corrected on a sample by sample basis, but lost diamonds have been accounted for during grade estimation (Sections 14.2.4.5 to 14.2.4.7).

Sample masses (total of 571 dry tonnes of kimberlite) are derived based on sample volumes (determined from sample length and caliper measurements of hole diameter; Section 10.5.5.3) multiplied by average bulk density (Table 14-8) for the domain being sampled. More information on the sample collection and processing methods is provided in Section 11 and 12. Results are summarised by domain in Table 14-9.

Table 14-9. LDD sample tonnes and diamond recoveries (+0.85mm) by geological domain - Faraday 2 and 3

Year	Body	Domain	Dry mass (t)	St	Ct
2016	Faraday 2	KIMB4	4.53	104	9.27
		KIMB1/2/3	16.56	751	47.34
2017	Faraday 2	KIMB1	154.41	4,535	361.64
		KIMB2	22.82	822	68.37
		KIMB3	56.07	2,620	167.10
		KIMB4	39.18	745	52.63
	Faraday 3	KIMB1	32.10	2,107	144.43
		KIMB2	36.53	1,565	96.93
		KIMB3	36.32	491	26.73
		KIMB4B	137.80	2,882	162.26
		KIMB4C	34.56	404	27.42
		Total	**570.87**	**17,026**	**1,164.10**

Notes: In 2016 a very limited LDD program sampled Faraday 2 domains KIMB1, KIMB2 and KIMB3 in combination. Domains were sampled discretely in 2017. Sample tonnages are based on measured (calliper) hole volumes in combination with estimates of dry bulk density. Note that the reported tonnages may differ slightly from those previously disclosed due to the updates to bulk density estimates. Only results from kimberlite are included – additional diamonds recovered from overburden, marginal breccia and during audit of Faraday 2 results in 2017 have not been used to support grade estimates.

The sample distribution achieved by the 31 completed and sampled LDD holes in 5 clusters at Faraday 2 provides a spatially representative coverage of approximately 200 m of the total 450 m strike length of the body. A single very large cluster (43 holes) was drilled at Faraday 3; due to significant time and operational constraints it was decided to maximise productivity in a near-surface portion of the pipe characterised by the presence of higher grade units, in order to obtain as large a diamond parcel as possible for valuation. LDD hole distribution in Faraday 2 and 3 is shown in Figure 14-3. While the lateral extents (across strike) of both bodies are not well represented by this coverage, the domains are well represented at each location due to their relatively narrow width, “layer cake” stratigraphy and lack of internal variability across or along strike (Section 7.3.5.2 and 7.3.6.2, respectively).

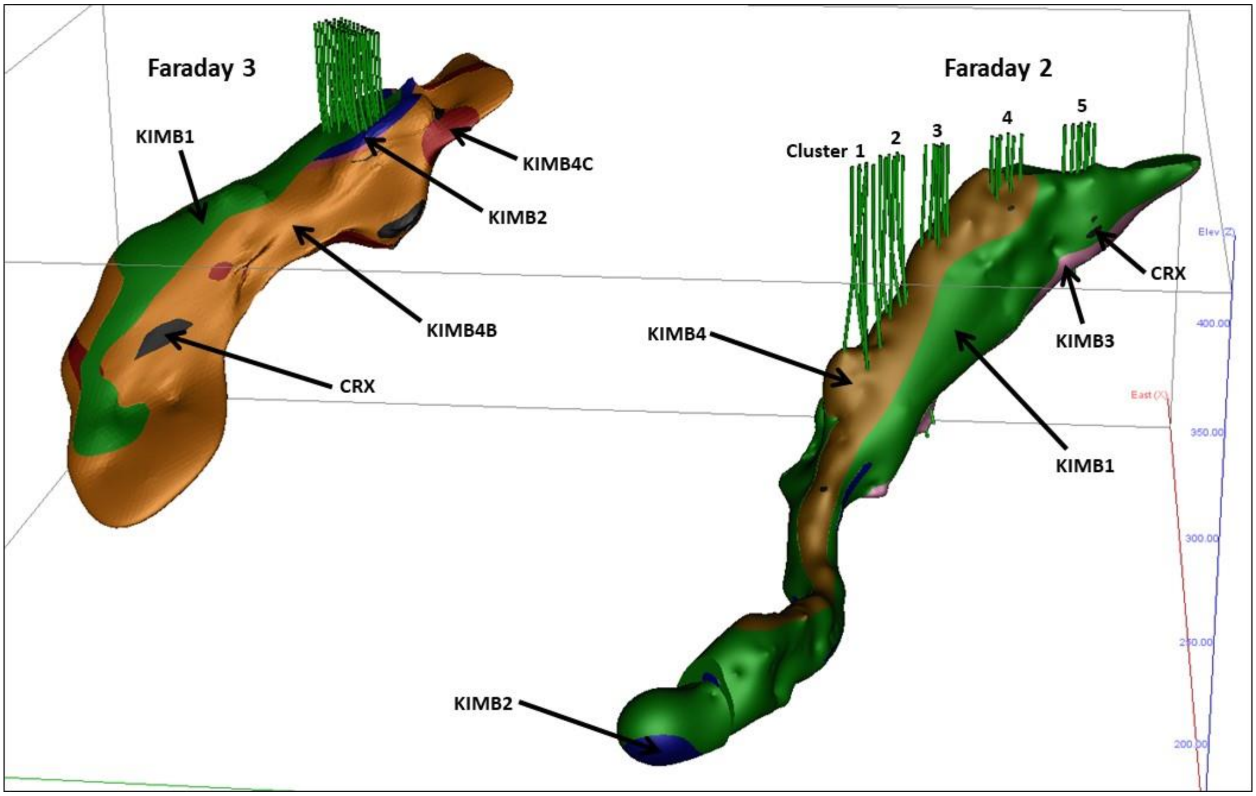

Figure 14-3. Inclined view (looking SW) of the Faraday 2 and 3 geological models showing all LDD drill hole traces in green

The allocation of LDD drill intervals to domains was carried out in the field based on visual assessment of the LDD drill cuttings at the time of drilling. Sample increments were defined to represent the targeted intervals with the minimum possible cross-contamination between domains. Discrete LDD sample intervals were grouped by domain in 2017 into process batches for diamond recovery. Process batches each contain material from several LDD holes; the grouping of material by domain into process batches was carried out to obtain the best possible along-strike resolution of sample results (by cluster in Faraday 2, by quadrant within a single large cluster in Faraday 3) while obtaining reasonable sample sizes for processing. The degree to which the process batches represent the geological domains to which they were allocated has been assessed by comparing LDD drill chip logs with intercepts of the equivalent modelled geological domains. The samples obtained were found to represent the targeted domains well; the proportion of the samples falling within their respective domains varies from a minimum of 79 % to a maximum of 96 % for Faraday 2 KIMB2 and KIMB3, respectively.

14.2.4.2 Supporting data - microdiamonds

Microdiamond results were generated by processing of drill core samples at the Saskatchewan Research Council Geoanalytical Laboratories as documented in Section 11. Results for Faraday 2 and 3 were allocated to kimberlite units based on drill logs supplied by SRK and to domains by intersecting the mid-point of microdiamond sample intervals with the current geological domain model. Outlier samples (greater than 3 standard deviations from the mean for each kimberlite unit) were excluded. Additional results were excluded where samples were derived from widely spaced increments and processed as single aliquots, where samples were processed at a 0.5 mm bottom cut-off, and where significant discrepancies were observed between recorded and expected dry sample mass (the latter based on the sample length, core diameter and bulk density). Additional "null" sample increments were inserted into the database where country rock xenoliths were not sampled during otherwise continuous down hole sampling through kimberlite intersections. The current geological models for Faraday 2 and 3 include minor domains (F2CRX and F3CRX) for internal country rock (large xenoliths and rafts), where it was possible to model these based on the drill coverage available. It is unlikely that this model accounts for all such material in the pipe, and the isolation of this material carries implications for grade estimation. Therefore, samples falling within the CRX domains (45 samples, 373 kg for Faraday 2 and 42 samples, 542 kg for Faraday 3) were allocated to the corresponding surrounding kimberlite domain to avoid a probable slight bias to higher grade that would result from the exclusion of these samples from the estimates. The microdiamond data used to support resource estimation for Faraday 2 and 3 comprise almost 8 tonnes from 1,061 sample aliquots, as summarised in Table 14-10.

Table 14-10. Summary of microdiamond data used to support grade estimation for Faraday 2 and 3

Body	Domain	Samples	CRX domain samples included	Dry mass (t)	st	ct
Faraday 2	F2KIMB1	433	38	3.21	9,142	12.77
	F2KIMB2	41	-	0.28	1,747	1.71
	F2KIMB3	64	6	0.48	2,359	2.56
	F2KIMB4	65	1	0.51	917	1.70
	F2 Total	**603**	**45**	**4.48**	**14,165**	**18.74**
Faraday 3	F3KIMB1	33	-	0.21	1,338	1.23
	F3KIMB2	26	2	0.16	567	0.56
	F3KIMB3	12	2	0.09	123	0.06
	F3KIMB4B	246	25	1.83	2,541	3.50
	F3KIMB4C	141	13	1.17	995	1.95
	F2 Total	**458**	**42**	**3.46**	**5,564**	**7.30**
Total		**1,061**	**87**	**7.94**	**19,729**	**26.04**

Notes: Microdiamond recoveries are reported as those above a 106 µm bottom screen size. st = stones, ct = carats. Samples falling within CRX domains were included with the surrounding kimberlite domain, as explained in the text.

The microdiamond sample coverage achieved in Faraday 2 is comprehensive in the south-east and is spatially representative in the more recently delineated deeper north-west extents (Figure 14-4). The microdiamond sample coverage for Faraday 3 is broad and spatially representative of the majority of the body – the very recently delineated deeper north-west areas have not yet been sampled. For both kimberlites the coverage provides representative parcels of microdiamonds for assessment of the variation in stone frequency (stones per kg) and SFD (Section 14.2.4.4), aspects that are important to support inferences of geological continuity made on the basis of visual core logging and petrographic study.

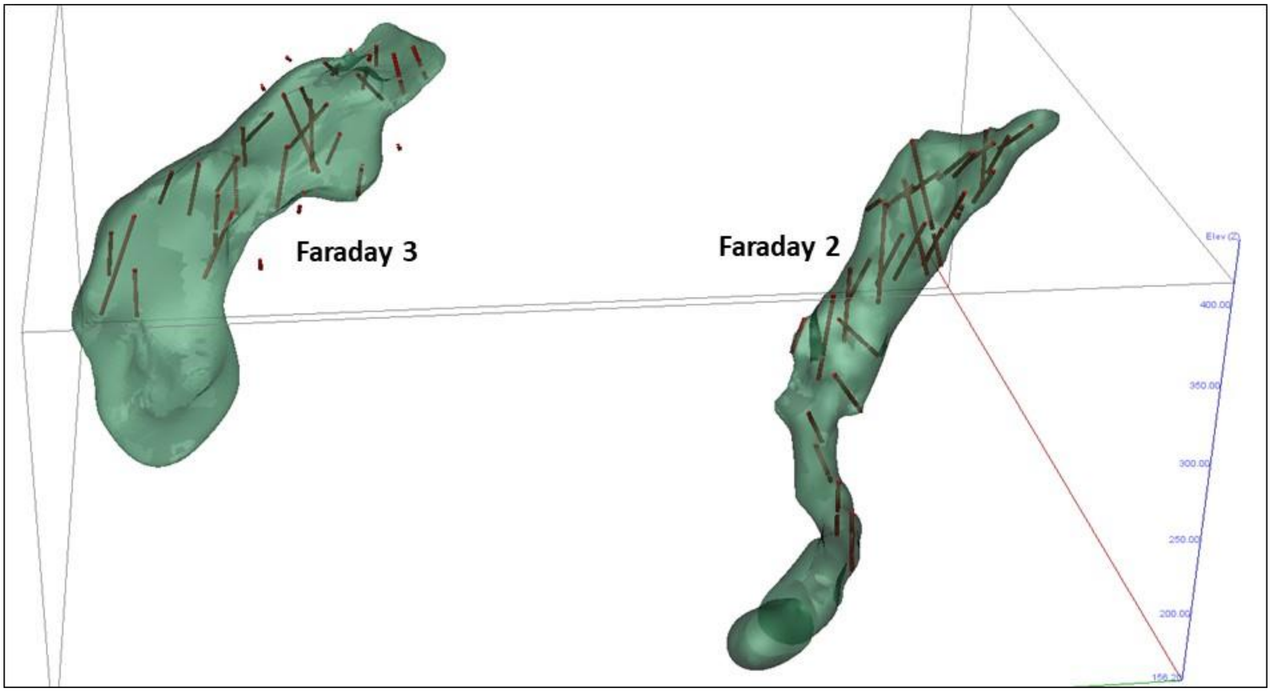

Figure 14-4. Inclined view (looking SW) of the Faraday 2 and 3 pipe shell models showing all microdiamond sample coverage.

Notes: Microdiamond sample increments are shown as thick red traces within the pipe shell.

14.2.4.3 Macrodiamond stone frequency and SFD characteristics

Diamond recoveries from LDD sample process batches are summarised per domain in Table 14-11. Diamonds smaller than 1.18 mm have been excluded in this table to minimise the effect of variable recovery of fine diamonds within the dataset (as described in Section 14.2.4.1). Masses of individual process batches ranged from 4.2 to 22.1 t, with an average of 13.3 t. Variations in stone frequency (i.e. number of +1.18 mm stones per tonne) by Faraday 2 domain with distance along strike (by cluster number, from north-west towards south-east, see Figure 14-4) are illustrated in Figure 14-5. Assuming a constant SFD within domains, stone frequency is equivalent to diamond grade but is more statistically robust in small samples than direct sample grade values, which are strongly influenced by sporadic large stone recoveries. The results imply good consistency in grade with distance along strike in Faraday 2. Faraday 3 results, derived from a single large cluster, provide no comparative spatial coverage and are not included in Figure 14-5. Multiple samples from the same cluster in Faraday 3 (see average, maximum and minimum ranges in Table 14-11) show good internal consistency at the same location despite the relatively small sample sizes.

Table 14-11. LDD diamond recoveries by domain - Faraday 2 and 3

Body	Domain	Process batches	Stones (+1.18 mm)	Carats (+1.18 mm)	Dry mass (t)	Grade (+1.18 mm cpt)	Min. grade	Max. grade	Stone frequency (+1.18 mm st/t)	Min. stone frequency	Max. stone frequency
Faraday 2	KIMB1/2/3*	1	506	44.00	16.56	2.66	2.66	2.66	31	31	31
	KIMB1	10	3,682	348.45	154.41	2.26	1.81	3.06	24	21	26
	KIMB2	1	721	66.73	22.82	2.92	2.92	2.92	32	32	32
	KIMB3	5	1,954	157.42	56.07	2.81	2.55	3.54	35	32	37
	KIMB4	5	659	58.61	43.36	1.35	0.92	2.00	15	14	18
Faraday 3	KIMB1	3	1,407	134.59	32.10	4.19	3.77	4.98	44	42	48
	KIMB2	4	1,031	89.25	36.53	2.44	2.18	2.63	28	25	33
	KIMB3	4	339	24.57	36.32	0.68	0.45	0.78	9	8	11
	KIMB4B	8	1,999	149.64	137.80	1.09	0.81	1.43	15	12	19
	KIMB4C	2	283	25.68	34.56	0.74	0.70	0.80	8	8	9

*In 2016 samples of KIMB1, KIMB2 and KIMB3 were grouped for processing due to the limited sample size.

Notes: Only diamonds larger than 1.18 mm are reported in this summary. Process batches representing predominantly country rock or overburden (external to the pipe) have been excluded. cpt = carats per tonne, st/t = stones per tonne.

Macrodiamond data provide no indication that SFD characteristics vary significantly within any of the Faraday 2 domains with distance along strike. This is illustrated by comparison of the SFD of diamond parcels for the volumetrically dominant KIMB1 in broad groups of Clusters 1/2 in comparison with Clusters 3/4/5 (Figure 14-6). The SFDs of these parcels are very similar. A single LDD cluster was drilled in Faraday 3, however the process units were grouped by quadrant within the cluster. Due to the large size of the cluster it is therefore possible to compare the SFD of two large samples from the volumetrically dominant KIMB4B that are adjacent but with mid-points 25 m apart (Figure 14-6). The SFDs of these parcels are effectively identical.

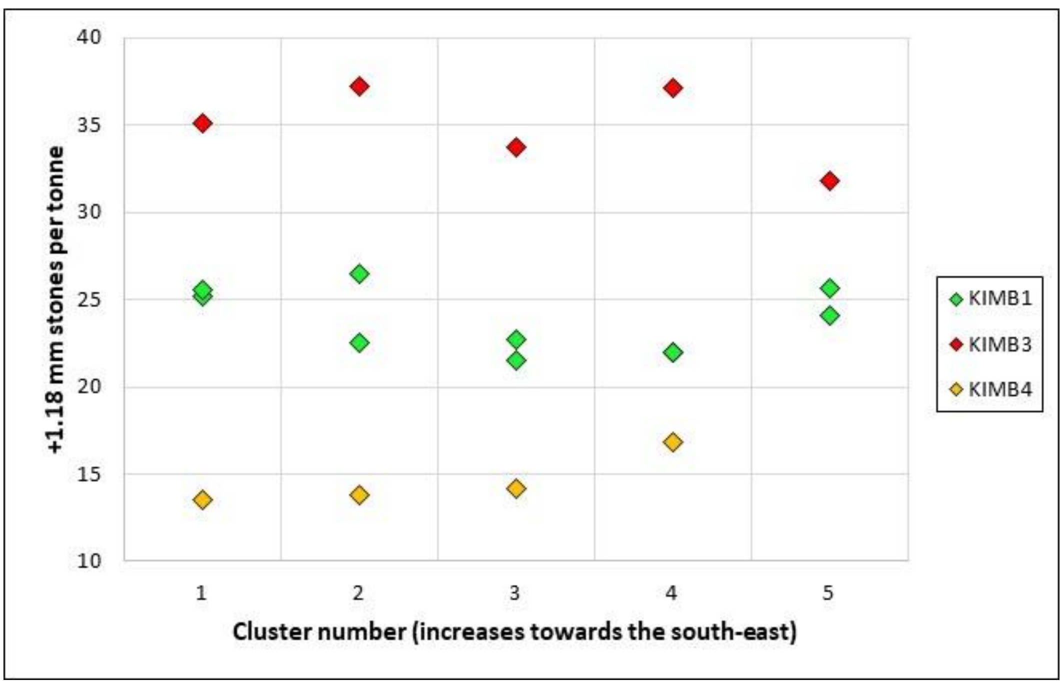

Figure 14-5. Variation in macrodiamond stone frequency (+1.18mm st/t) in Faraday 2 by domain and drill cluster.

Notes: The sampling represented in Figure 14-5 covers a strike length of approximately 200 m (see Figure 14-3). Material derived from KIMB2 was processed in a single batch and this result is not shown. Grades show good internal consistency and no significant trends are evident with distance along strike.

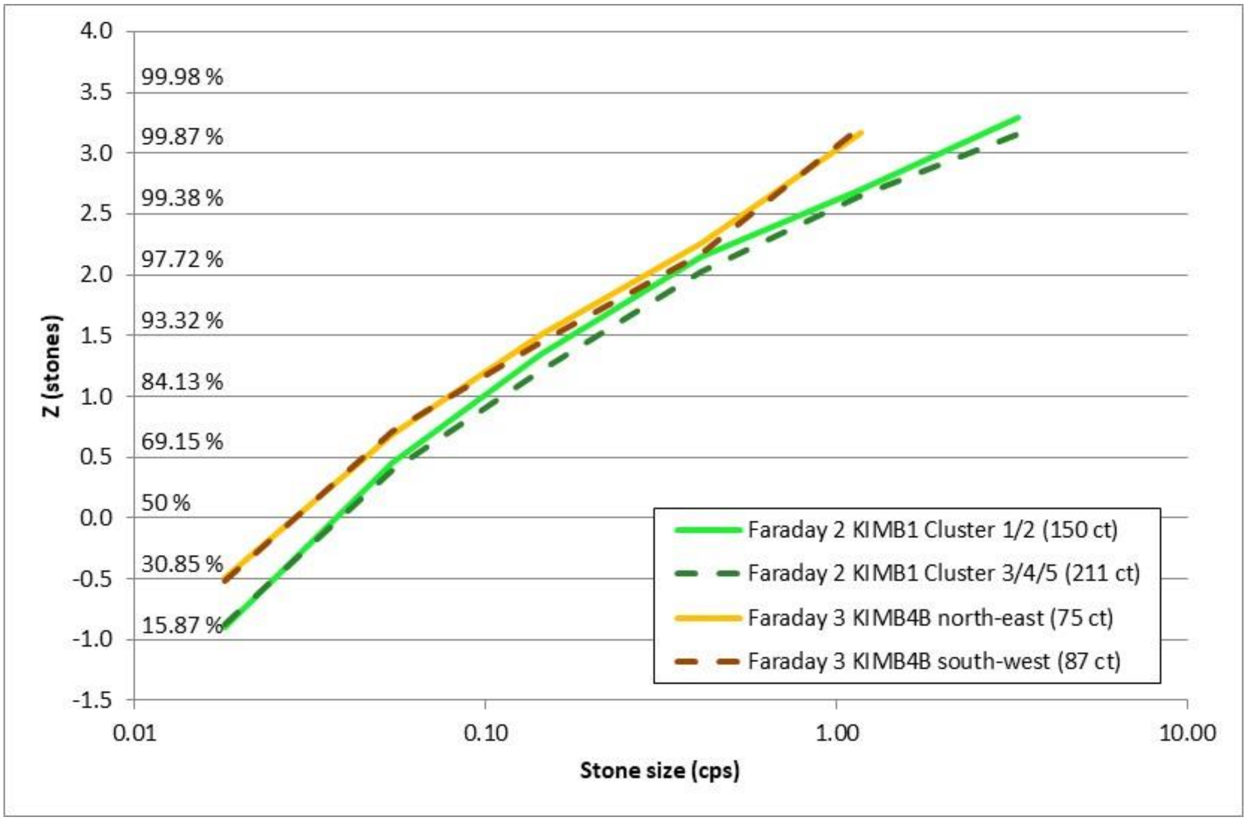

Figure 14-6. Macrodiamond SFD characteristics of the volumetrically dominant domains of Faraday 2 (KIMB1) and Faraday 3 (KIMB4B).

Notes: Groupings of KIMB1 data by cluster from Faraday 2 illustrate the broad-scale SFD characteristics of the north-west versus the south-east portions of the zone sampled. The single drill hole cluster in Faraday 3 was processed by quadrant, such that the north-east and south-west halves of the cluster can be compared (i.e. contiguous samples with mid-points approximately 25 m apart). Good internal SFD consistency is implied for both units, albeit on a local scale for KIMB4B. The figure is a cumulative log-probability plot (showing the proportion of diamonds below a given stone size). cps = carats per stone, ct = total size of the parcel plotted in carats. The significantly increased proportion of fine diamonds in Faraday 3 relative to Faraday 2 relates to a higher efficiency of fine diamond recovery during processing of Faraday 3 samples (Section 14.2.4.1).

14.2.4.4 Microdiamond stone frequency and SFD characteristics

Microdiamond stone frequency results, grouped into parcels reflecting distance along strike (from the south-east to the north-west) in Faraday 2 and 3, are illustrated in Figure 14-7. The observed degree of variability is limited in the volumetrically dominant domains of both Faraday 2 (KIMB1, less than ± ~10 %) and Faraday 3 (KIMB4B and KIMB4C, less than ± ~20 % and no significant difference, respectively). Results for Faraday 2 KIMB2 suggest the potential for increasing grade with distance along strike, however greater degrees of variation are commonly associated with smaller sample sizes, and this is not well constrained. A certain degree of local grade variation is implied in these results, however the extent of this variation is likely overstated due to the small sample sizes represented by certain groups, and no significant overall grade trends with distance along strike are evident.

The SFD of microdiamond parcels from the sample groups discussed above have been reviewed and show no evidence for significant change in SFD with distance along strike in any of the Faraday 2 or 3 domains. This is illustrated for the Faraday 2 KIMB1 and Faraday 3 KIMB4B domain samples in Figure 14-8.

A thorough assessment of available micro- and macrodiamond stone frequency and size frequency distribution characteristics suggests a robust degree of continuity in the volumetrically significant domains of Faraday 2 and 3. This supports the interpretations of geological continuity made on the basis of drill core logging and petrographic studies (Section 7.3.5 and 7.3.6).

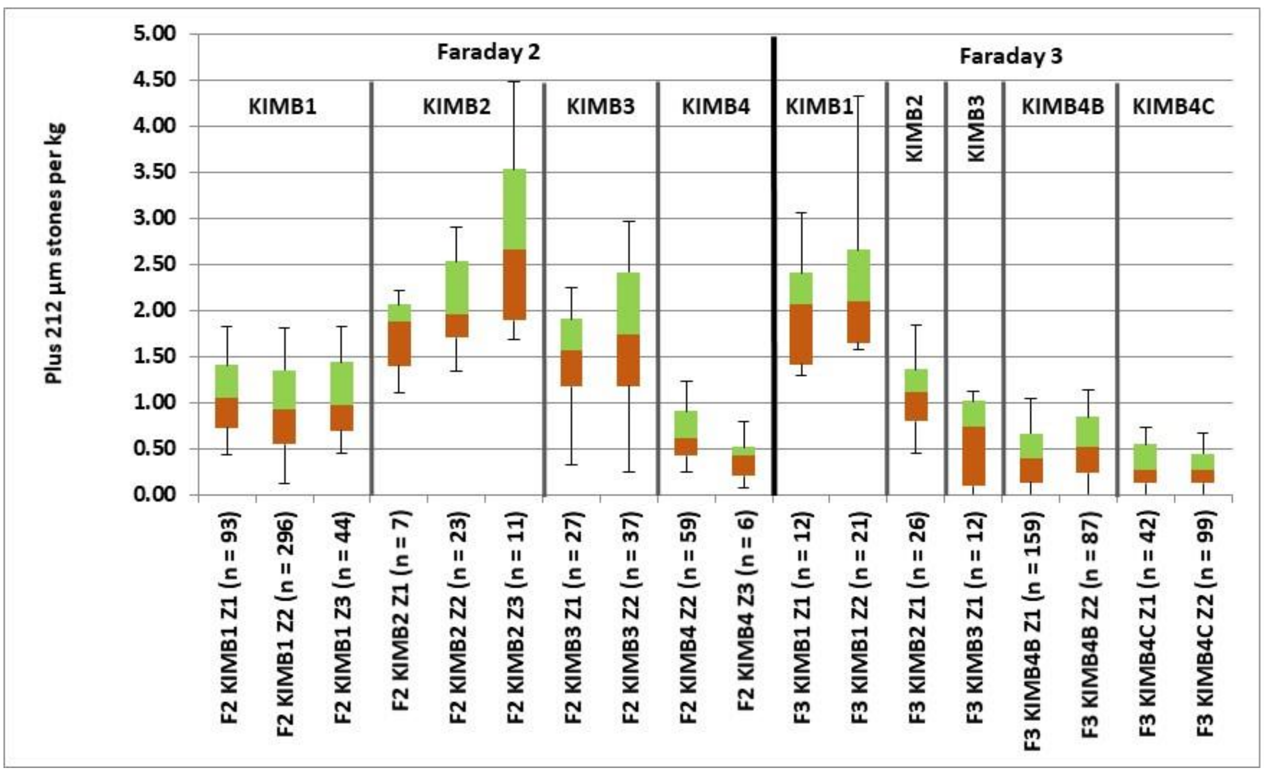

Figure 14-7. Plus 212 µm microdiamond stone frequencies from drill core samples grouped by domain into broad zones with distance along strike

Notes: Stone frequencies = stones per kilogram. Parcels are grouped into three zones for Faraday 2 and into two zones for Faraday 3 (both from south-east to north-west) to illustrate large-scale grade properties along strike in the volumetrically dominant domains. Certain domains are not present continuously along strike and are only present in one zone (e.g. Faraday 3 KIMB2 and KIMB3, and Faraday 2 KIMB4), certain domains have not been sampled for the full distance along strike (e.g. Faraday 2 KIMB3, which is very volumetrically limited in the deeper extents of the pipe, i.e. in Zone 3). The combined red and green boxes in these quartile plots indicate the 25th to 75th percentile values and the contact between them is the median. Error bars represent the 10th and 90th percentile values.

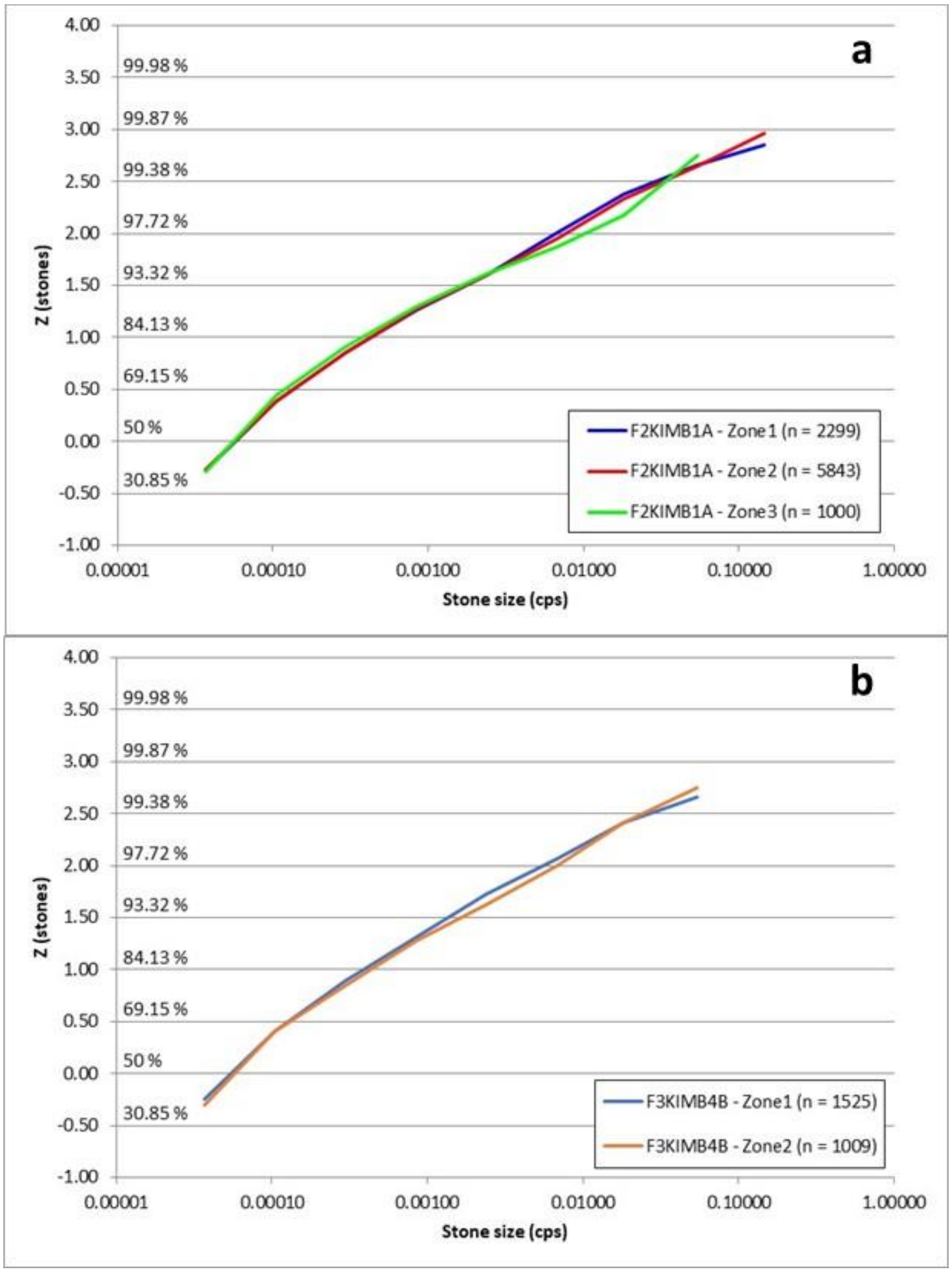

Figure 14-8. Comparison of +106 µm microdiamond SFD characteristics of (a) Faraday 2 KIMB1 and (b) Faraday 3 KIMB4B with distance along strike.

Notes: Groupings per domain are explained in the caption for Figure 14-7. SFD is shown on a cumulative log-probability plot (showing the proportion of diamonds below a given stone size); cps = carats per stone, n = number of stones represented.

14.2.4.5 Total diamond content size frequency distributions

Representative parcels of macrodiamonds and microdiamonds from the same material are required to establish properly calibrated total diamond content size frequency distribution (SFD) curves. Microdiamond samples from drill core that are broadly spatially representative of specific LDD process batches were selected and were used to evaluate the relationship between micro- and macrodiamond stone frequencies in Faraday 2 (Table 14-12). Considering the small samples sizes (in particular for the macrodiamond samples) and the fact that the location of the microdiamond samples do not correspond precisely with the LDD samples that they have been selected to represent, the results of this exercise suggest that the ratio between macro- and microdiamonds (i.e. the diamond SFD) is generally consistent within each of the Faraday 2 domains.

Table 14-12. Spatially associated micro-/macrodimaond parcels used to evaluate the degree of variation in the ratio between micro- and macrodiamond stone frequency at Faraday 2

Domain	Macrodiamonds			Microdiamonds			Ratio (macro:micro)	
	Mass (t)	Stones (+1.18 mm)	Stone frequency (+1.18 mm st/t)	Mass (kg)	Stones (+212 µm)	Stone frequency (+212 µm st/kg)	Ratio (st/t:st/kg)	Average
KIMB1	33.9	806	23.8	234	204	0.9	27	25
	12.9	277	21.4	208	145	0.7	31	
	14.5	319	22.0	142	132	0.9	24	
	17.1	416	24.4	209	261	1.2	20	
KIMB2	22.8	721	31.6	36	60	1.7	19	N/a
KIMB3	14.4	529	36.8	118	235	2.0	18	18
	19.8	635	32.0	95	166	1.7	18	
KIMB4	14.3	198	13.9	102	71	0.7	20	22
	13.3	190	14.3	153	100	0.7	22	
	11.6	195	16.8	127	92	0.7	23	

Notes: st/t= macrodiamond stones per tonne, st/kg = microdiamond stones per kilogram

Four total diamond content SFDs have been defined to enable estimation of grade in a manner consistent with those produced for Kelvin (i.e. with the same bottom recovery parameters, see Section 14.1). The basis for defining these SFD models is described in Section 12.2.4.7 below. The data on which these SFD models are based are shown in Table 14-13. Lognormal models were fitted to these data and were used as guides to model best-fit total diamond content SFDs that represent variation in the in-situ (not necessarily recoverable) diamond concentration across the full size range for each domain. An example of a total diamond content SFD model, for Domain KIMB1 of Faraday 2, is shown in Figure 14-9.

Table 14-13. Microdiamond and macrodiamond stone counts and weights by size class for parcels selected to establish total diamond content SFD curves

Dry Mass (t)	0.79		0.21		0.21		0.51	
Microdiamond size class (µm)	st	ct	st	ct	st	ct	st	ct
106	848	0.02	424	0.01	267	0.01	268	0.01
150	558	0.03	299	0.02	187	0.01	181	0.01
212	330	0.06	185	0.03	122	0.02	107	0.02
300	193	0.10	89	0.05	54	0.03	69	0.04
425	101	0.15	58	0.09	33	0.05	33	0.06
600	60	0.25	37	0.15	22	0.09	14	0.06
850	38	0.45	20	0.22	12	0.13	9	0.10
1180	13	0.31	11	0.32	6	0.18	5	0.18
1700	4	0.34	1	0.12	2	0.13	2	0.16
2360	2	0.48						
3350	1	0.46						
Totals	**2,148**	**2.64**	**1,124**	**1.01**	**705**	**0.65**	**688**	**0.64**

Dry Mass (t)	78.44		34.20		104.95		137.80	
Macrodiamond size class (mm)	st*	ct*	st	ct	st	ct	st	ct
0.85	1,030	15.86	563	7.92	1,386	19.68	883	12.62
1.18	1,400	48.79	735	24.08	1,771	58.36	1,299	42.21
1.70	530	47.43	297	25.57	674	59.46	499	43.08
2.36	194	46.92	113	25.38	255	59.34	162	36.28
3.35	36	25.38	17	12.36	66	42.40	37	22.77
4.75	6	11.66	2	3.26	8	14.28	2	5.30
6.70	2	9.00			3	14.57		
Totals	**3,198**	**205.04**	**1,727**	**98.56**	**4,163**	**268.09**	**2,882**	**162.26**

*Faraday 2 KIMB1 macrodiamonds were corrected for under-recovery of fine diamonds, as explained in Section 14.2.4.7.

Notes: Microdiamond parcels were selected to spatially represent areas sampled for macrodiamonds by LDD drilling. st = stones, ct = carats.

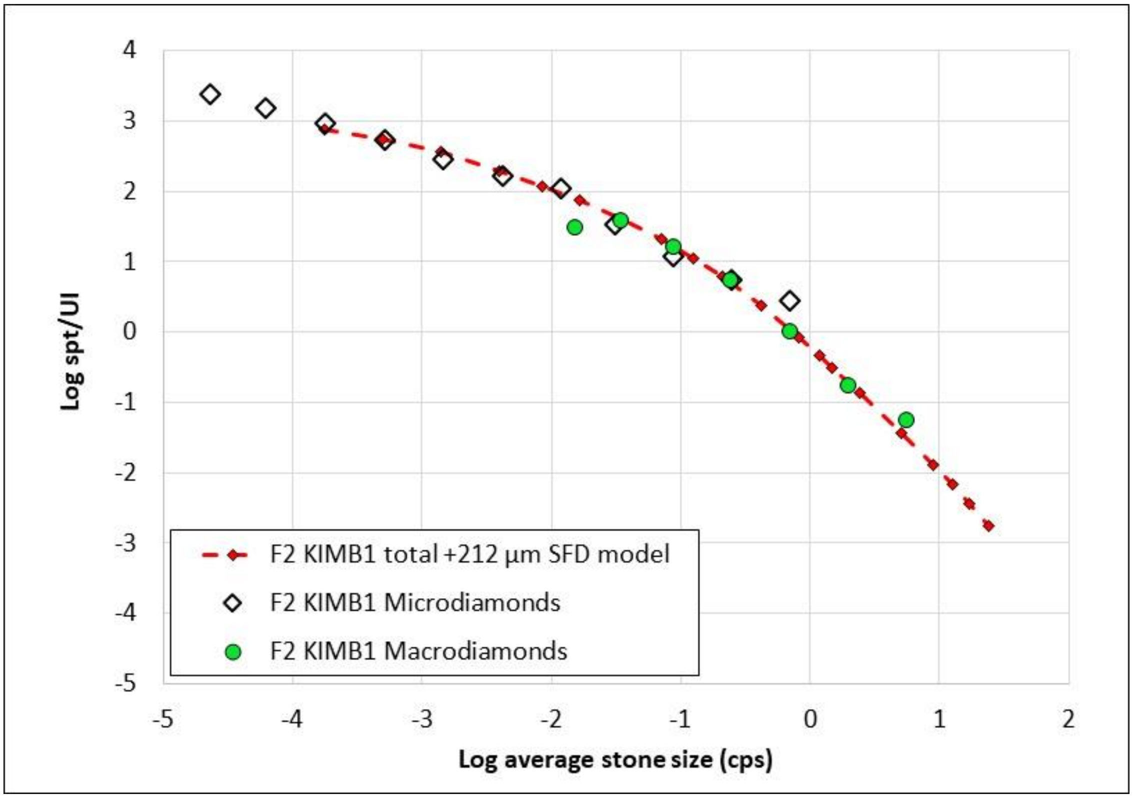

Figure 14-9. Total +212 µm diamond content SFD model for Faraday 2 KIMB1

Notes: The SFD model is shown in a grade-size plot (log of stones per tonne per unit interval against the log of average size of diamonds in each sieve class). This model was used as a basis for grade estimates in Faraday 2 KIMB1 and KIMB4. cps = carats per stone, UI= unit interval (The unit interval factors are applied to diamond size data to correct for non-systematic size divisions (Nowicki, 2016).

14.2.4.6 <u>Adjustment for recoverable grade and final SFD models</u>

The total content SFD models used for grade estimation were corrected based on assumed recovery parameters (the same as those used for the Kelvin Mineral Resource estimate, Section 14.1.3) in a commercial processing plant operating with a 1 mm bottom size cut-off. Recovery corrections were estimated based on those reported in the Brisebois et al. (2009) technical report for the Gahcho Kué Kimberlite Project. Due to general similarities in the nature of the kimberlite and size distribution of diamonds these are a reasonable benchmark for processing of Faraday 2 and 3 kimberlites. The final recovery corrected macrodiamond SFD models are included in Table 14-14. These recoverable SFD models and the grade estimates derived therefrom may need to be adjusted based on the specific bottom cut-off and plant configuration chosen for processing of Faraday ore.

Table 14-14. Final models of total and recoverable SFD

Size class	Total +212 µm content models (% ct)				Recovery %	Recovery corrected domain SFD models (% ct)			
	F2 KIMB1	F2 KIMB3	F3 KIMB1/2/3	F3 KIMB4		F2 KIMB1	F2 KIMB3	F3 KIMB1/2/3	F3 KIMB4
212 µm	1.64	2.56	2.24	1.64	0				
300 µm	3.39	5.03	4.16	3.64	0				
425 µm	6.19	8.35	7.09	6.72	0				
600 µm	9.41	12.64	11.00	11.25	0				
850 µm	5.20	6.76	5.58	6.40	0				
1180 µm	12.58	14.79	12.64	14.72	15	3.16	4.59	3.40	4.11
DTC3	10.63	10.72	9.93	11.57	65	11.57	14.42	11.59	13.98
DTC5	12.89	12.00	11.62	13.43	100	21.58	24.83	20.86	24.97
DTC7	7.23	6.15	6.49	7.02	100	12.10	12.73	11.65	13.05
DTC9	8.72	7.51	7.99	8.31	100	14.59	15.55	14.34	15.46
DTC11	9.54	6.99	9.39	8.53	100	15.96	14.46	16.86	15.86
DTC13	4.33	2.98	4.54	3.49	100	7.25	6.17	8.15	6.48
DTC15	1.15	0.71	1.23	0.77	100	1.92	1.46	2.20	1.42
DTC17	1.63	0.96	1.70	0.96	100	2.72	1.98	3.05	1.78
DTC19	2.54	1.16	2.41	1.07	100	4.26	2.41	4.33	1.98
DTC21	1.70	0.51	1.35	0.38	100	2.84	1.05	2.41	0.71
DTC23	0.48	0.09	0.31	0.06	100	0.81	0.19	0.55	0.12
+10.8 ct	0.33	0.04	0.17	0.03	100	0.55	0.09	0.31	0.05
+15 ct	0.21	0.02	0.09	0.01	100	0.35	0.04	0.17	0.02
+20 ct	0.21	0.01	0.08	0.01	100	0.34	0.02	0.14	0.01

Notes: Total and recoverable SFD is reported as % ct in each size class, DTC = Diamond Trading Company.

14.2.4.7 Grade estimates

Five LDD drill clusters along 200 m of strike length in Faraday 2 provide good spatial coverage of domains KIMB1, KIMB3 and KIMB4. Results have confirmed that no significant overall variations in grade or SFD are present. Microdiamond data support this interpretation, and indicate that no significant change in grade or SFD is likely to be present along strike in the areas not sampled by LDD. Extensive LDD drilling has now shown that no significant changes in grade or SFD are present within well constrained geological domains in both Kelvin (Vivian and Nowicki, 2017) and Faraday 2 (Section 14.2.4.3). While a spatial coverage of LDD samples is not available for the geologically similar Faraday 3, microdiamond data provide strong support for an assumption of similar grade and SFD constancy.

In diamond deposits of this nature, where the volumetrically dominant domains comprise massive volcaniclastic kimberlite, dilution is likely to be the most significant driver of grade variability. Quantitative measurement of all internal dilution larger than 0.5 cm has been carried out on ~1,800 and 1,300 m of drill core internal to the Faraday 2 and 3 pipes, respectively. These data show no evidence for systematic trends or for significant deviation from the average in the volumetrically dominant domains that are well represented by dilution data.

The dilution data therefore support evidence from direct diamond sampling in suggesting suggest limited scope for significant variation in grade on scales relevant to mining. Average grades have therefore been adopted for all domains. Grades are based on the recovered LDD grade (with corrections applied where necessary for variable efficiency in fine diamond recovery), adjusted for anticipated recovery efficiency in a commercial process plant, as described below.

Faraday 2 LDD grades were corrected for under-recovery of fine diamonds relative to Faraday 3 and Kelvin. Process plant degrit screening panels were replaced during processing of Faraday 2 KIMB3, significantly increasing the efficiency with which small diamonds were recovered. All other Faraday 2 material (KIMB1, KIMB2 and KIMB4) was processed prior to this, and all Faraday 3 material was processed subsequently. Corrections were made by adding diamonds to the fine size classes of the parcels until the bottom recovery SFD characteristics matched those of comparative reference datasets (from 2016 Faraday 2 and all Faraday 3). Original and corrected datasets are shown in Table 14-15 and an example of an original and corrected diamond SFD (Faraday 2 KIMB1) is shown in Figure 14-10.

Table 14-15. Original and corrected Faraday 2 LDD results.

Size	KIMB1 LDD		KIMB1 corr.		KIMB2 LDD		KIMB2 corr.		KIMB3 LDD		KIMB3 corr.		KIMB4 LDD		KIMB4 corr	
	St	Ct	St	Ct	St	Ct	St	Ct	St	Ct	St	Ct	St	Ct	St	Ct
850	853	13.19	2,130	32.94	101	1.64	440	7.16	666	9.68	1,003	15.44	162	2.41	300	4.45
1180	2,146	75.28	2,870	100.67	400	14.55	600	21.83	1,201	41.24	1,345	46.55	363	12.09	420	13.98
1700	1,078	98.08	1,088	98.99	222	20.39	228	20.94	530	45.85	535	46.28	149	12.53	150	12.61
2360	372	91.84	372	91.84	83	19.01	83	19.01	186	41.62	186	41.62	62	14.81	62	14.81
3350	69	47.51	69	47.51	15	10.40	15	10.40	32	21.05	32	21.05	7	6.94	7	6.94
4750	14	23.29	14	23.29	1	2.37	1	2.37	5	7.66	5	7.66	2	3.86	2	3.86
6700	3	12.45	3	12.45												
Totals	4,535	361.64	6,546	407.69	822	68.37	1,367	81.71	2,620	167.10	3,106	178.60	745	52.63	941	56.66
Mass (t)	154.4				22.8				56.1				39.2			
Grade (+0.85 mm cpt)	2.34		2.64		3.00		3.58		2.98		3.19		1.34		1.45	

Notes: Corrections noted above were partially applied to KIMB3, as de-grit panels were replaced mid-way through processing of this material, all other domains were processed prior to this.

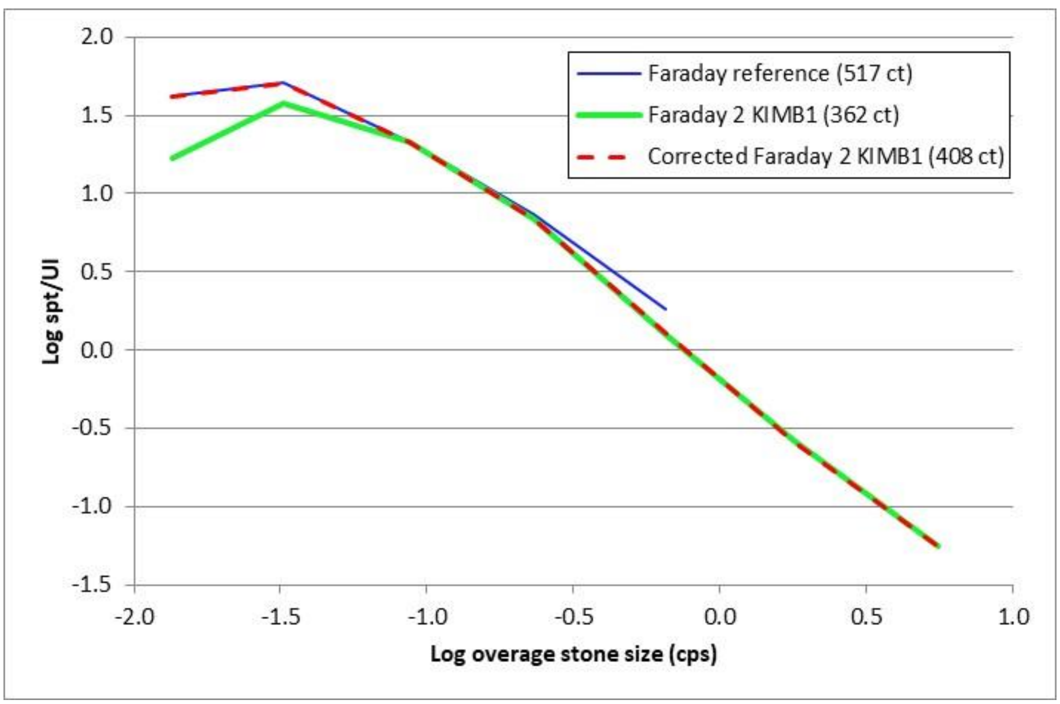

Figure 14-10. Grade-size plot illustrating corrections made to Faraday 2 KIMB1 LDD recoveries for under-recovery of small diamonds.

Notes: Figure 14-10 uses a "Faraday reference" dataset, comprising recoveries from Faraday 2 in 2016 and all 2017 Faraday 3 recoveries was used, with its grade adjusted to overlap the SFD of KIMB1, as a baseline of expected recovery efficiency. Diamonds were added to the fine size classes to make the KIMB1 SFD overlap with the fine size classes of the reference dataset. The grade size plot shows the log of stones per tonne per unit interval against the log of average size of diamonds in each sieve class. cps = carats per stone.

Grade determined by LDD drilling and sample processing at a 0.85 mm bottom cut off is overstated relative to that recoverable by a commercial processing plant. The models of total diamond content SFD (Section 14.2.4.5) and application of process plant recovery correction factors thereto (Section 14.2.4.6) effectively converts LDD-recovered grade into a commercially-recoverable grade at a 1 mm bottom cut-off reflecting standardized recovery efficiencies for all estimates (including Kelvin).

Due to the relatively small microdiamond parcels available for correlation with macrodiamond parcels in the volumetrically limited domains of both bodies it was only possible to define total diamond content SFD models at a reasonable level of confidence for Faraday 2 KIMB1 and KIMB3, and for Faraday 3 KIMB4. In Faraday 2 the macrodiamond SFD of KIMB4 is most similar to KIMB1, and KIMB2 is most similar to KIMB3 (Figure 14-11). These SFD models have been adopted for KIMB4 and KIMB2 accordingly. In Faraday 3, KIMB1, KIMB2 and KIMB3 all show very similar macrodiamond SFD characteristics (Figure 14-11) and the combined micro- and macrodiamond datasets (Table 14-13) for all of these domains were therefore used to define a single total diamond content SFD model (Table 14-14) for Faraday 3 KIMB1/2/3. The macrodiamond parcel for Faraday 3 KIMB4C is very limited due to its low grade. KIMB4C is however a more highly-diluted sub-unit of KIMB4, and the SFD model for KIMB4 (Table 14-14), based on the data for KIMB4B (Table 14-13), has been adopted for both KIMB4B and KIMB4C.

The percentage difference between LDD grade and +1 mm grade, as defined by the four SFD models (Section 14.2.4.5), has been used to correct the LDD grades from all domains, which have been adopted as the final average grade estimates in this report (Table 14-16).

Table 14-16. Estimates of recoverable (+1mm) grade for each geological domain of Faraday 2 and 3

Body	Domain	SFD model	LDD grade (+0.85 mm cpt)	Corrected LDD grade (+0.85 mm cpt)	Final grade (+1 mm cpt)
Faraday 2	KIMB1	F2 KIMB1	2.34	2.64	2.23
	KIMB2	F2 KIMB2/3	3.00	3.58	3.07
	KIMB3	F2 KIMB2/3	2.98	3.19	2.73
	KIMB4	F2 KIMB1	1.34	1.45	1.22
Faraday 3	KIMB1	F3 KIMB1/2/3	4.50	N/a	3.74
	KIMB2	F3 KIMB1/2/3	2.65	N/a	2.20
	KIMB3	F3 KIMB1/2/3	0.74	N/a	0.61
	KIMB4B	F3 KIMB4	1.18	N/a	0.97
	KIMB4C	F3 KIMB4	0.79	N/a	0.65

Notes: Grades, as recovered by LDD sampling are shown for comparison. In Faraday 2 these were adjusted upwards to correct for under-recovery of small diamonds for the majority of sample processing (this only partially affected KIMB3, de-grit panels were replaced mid-way through processing of KIMB3 material, all other domains were processed prior to this). The difference between LDD grade and +1 mm grade, as defined by SFD models, was applied to the LDD grades to derive final grade estimates.

Recovery corrections are based on a conventional commercial process plant operating at a 1 mm bottom recovery cut off (Section 14.2.4.6).

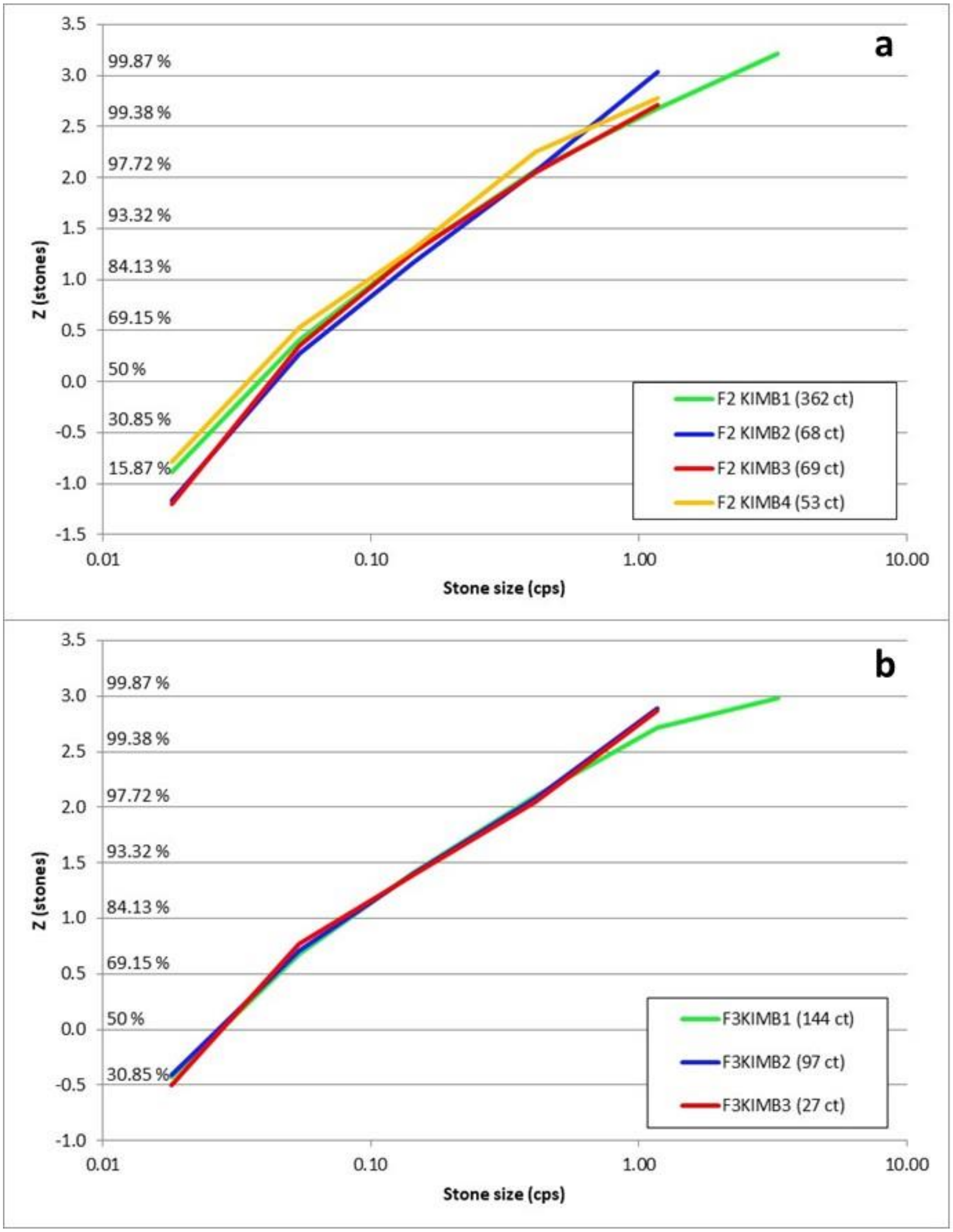

Figure 14-11. Comparison of macrodiamond SFD characteristics of (a) all Faraday 2 domains and (b) Faraday 3 KIMB1, KIMB2 and KIMB3.

Notes: Only diamonds recovered prior to replacement of degrit panels are shown for Faraday 2 KIMB3 to allow for a valid comparison. SFD is shown on a cumulative log-probability plot (showing the proportion of diamonds below a given stone size); cps = carats per stone, ct = size in carats of the parcel represented.

14.2.5 Diamond value

14.2.5.1 Diamond valuation results

A parcel of 1,183 ct of diamonds from Faraday 2 and Faraday 3 underwent valuation by WWW International Diamond Consultants Ltd (WWW) in Antwerp in July 2017. The parcel, derived from LDD drilling, was valued subsequent to cleaning and was sieved prior to valuation to remove all diamonds smaller than the Diamond Trading Company (DTC) 1 size category. Valuation results and comments on value characteristics have been extracted from the WWW diamond valuation report (WWW, 2017). Diamonds have been valued in four parcels, as follows:

- Faraday 2 KIMB1 and KIMB4 (456.76 ct) – grouped based on textural similarities, the KIMB4 parcel is too small to value separately.
- Faraday 2 KIMB2 and KIMB3 (269.71 ct) – grouped based on textural similarities, neither parcel of sufficient size for valuation.
- Faraday 3 KIMB4 (188.20 ct) - includes results from KIMB4B and KIMB4C, considered to be sub-units of the same kimberlite unit, distinguished by increased dilution in KIMB4C relative to KIMB4B.
- Faraday 3 KIMB1, KIMB2 and KIMB3 (268.45 ct) - diamonds derived from volumetrically minor domains above KIMB4B and KIMB4C in Faraday 3.

Diamond value estimates per size class for diamonds grouped on this basis are presented in Table 14-17 and shown graphically in Figure 14-12. All values are reported in US dollars and estimates are based on the WWW price book as of 31 July 2017. The five highest value diamonds on a dollar per carat basis from the Faraday bulk samples include:

- 7.78 carat sawable octahedron from Faraday 3 valued at US$2,967 per carat
- 4.02 carat sawable octahedron from Faraday 3 valued at US$2,526 per carat
- 3.08 carat sawable octahedron from Faraday 3 valued at US$1,966 per carat
- 4.72 carat sawable octahedron from Faraday 2 valued at US$1,667 per carat
- 2.37 carat sawable diamond from Faraday 2 valued at US$1,502 per carat

Images of select diamonds are available on the Company's website at www.kennadydiamonds.com.

Table 14-17. Diamond value estimates (WWW, 2017) by size class for diamond parcels representing groupings of domains.

Domain	Faraday 2 K1/K4			Faraday 2 K2/K3			Faraday 3 K1/K2/K3			Faraday 3 K4 (B and C)			Total		
Size class	ct	st	$/ct	ct	st	$/ct	ct	st	$/ct	ct	st	$/ct	ct	st	$/ct
7 ct							7.78	1	2,967				7.78	1	2,967
4 ct	8.99	2	1,442							4.02	1	2,526	13.01	3	1,777
3 ct	3.43	1	22				9.87	3	1,313	2.87	1	1,375	16.17	5	1,050
10 gr	5.23	2	380	2.37	1	1,502							7.60	3	730
8 gr	9.00	4	77	3.90	2	83	4.29	2	161				17.19	8	99
6 gr	6.09	4	287	1.46	1	117	6.15	4	98				13.70	9	184
5 gr	7.61	6	276	3.73	3	166	1.38	1	40	3.94	3	852	16.66	13	368
4 gr	17.22	16	245	11.00	11	302	10.51	10	248	4.00	4	22	42.73	41	239
3 gr	17.50	22	101	7.27	10	116	9.14	12	75	5.02	7	134	38.93	51	102
+11 DTC	74.69	196	71	36.73	101	66	46.93	125	90	33.61	90	58	191.96	512	73
+9 DTC	53.30	299	43	33.00	169	43	30.85	166	51	22.61	127	42	139.76	761	45
+7 DTC	53.66	474	27	34.03	292	39	30.00	249	36	24.93	230	33	142.62	1,245	33
+5 DTC	97.79	1,499	25	65.25	1,150	22	57.46	906	22	43.75	708	20	264.25	4,263	23
+3 DTC	55.28	1,882	11	41.48	1,694	13	32.92	1,122	12	27.24	956	16	156.92	5,654	13
+1 DTC	46.97	3,837	5	29.49	1,919	7	21.17	1,294	6	16.21	1,076	5	113.84	8,126	6
Total	**456.76**	**8,244**	**83**	**269.71**	**5,353**	**60**	**268.45**	**3,895**	**184**	**188.20**	**3,203**	**124**	**1,183.12**	**20,695**	**107**

Notes: Parcels were sieved prior to valuation to remove diamonds smaller than DTC 1. ct = carats, st = stones, gr = grainer, DTC = Diamond Trading Company. Values are reported in US dollars based on the WWW price book as of 31 July 2017. The number of diamonds valued in size classes DTC 9 and below are based on the carat weight divided by an assumed average stone size.

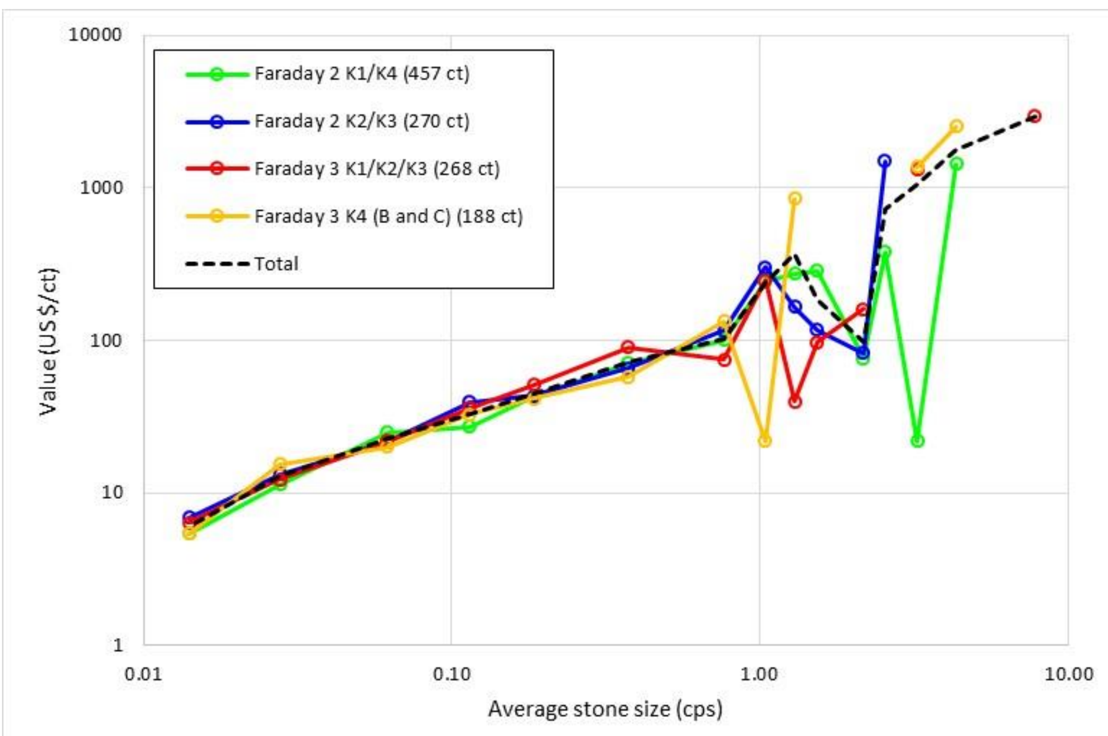

Figure 14-12. Faraday 2 and 3 diamond valuation results by geological domain.

Notes: Valuation results extracted from WWW (2017). Values per size class are presented in US dollars, based on the WWW price book as of 31 July 2017. Ct = total size of the parcel valued in carats.

14.2.5.2 Value distribution ($/ct per size class) models

Valuation results for all size classes in the four parcels are very similar (Figure 14-12). WWW (2017) carried out assessments of the proportion of different value categories present and the fluorescence properties of diamonds in each parcel. No significant differences between the value characteristics of the different diamond parcels were reported by WWW. Based on this observation a single best-fit modelled value distribution was provided by WWW along with high and low case value distribution models that illustrate the range of uncertainty in the estimates of diamond value per size class. These models represent WWW's interpretation of the potential range in average values per size class that could be resolved with a larger and more representative diamond parcel. WWW (2017) state that in the coarser size ranges the high model could be exceeded when resolved by a larger parcel. WWW (2017) state further that the values of the coarse size classes are unlikely to resolve as lower than those in the low value model, but that this is not impossible considering the small size of the parcel valued. The value distribution models are provided in Table 14-18 and are shown graphically in Figure 14-13. The WWW modelled best-fit value distribution forms the basis for all average diamond value estimates provided in this report.

Table 14-18. Best-fit, low and high value distribution models

	Value per size class ($/ct)		
Size class	Low model	Best-fit model	High model
+10.8 ct	660	1435	2700
10 ct	820	1435	2700
9 ct	820	1435	2700
8 ct	820	1435	2700
7 ct	820	1435	2700
6 ct	820	1435	2700
5 ct	600	945	1780
4 ct	550	815	1485
3 ct	470	685	1205
10 gr	370	525	855
8 gr	270	365	565
6 gr	190	250	360
5 gr	140	190	250
4 gr	110	145	160
3 gr	80	100	105
+11 DTC	58	74	75
+9 DTC	45	45	45
+7 DTC	32	32	32
+5 DTC	23	23	23
+3 DTC	13	13	13
+1 DTC	6	6	6

Notes: These models represent the value ($/ct) of diamonds in each size class, as provided by WWW (2017). Values are reported in US dollars per carat based on the WWW price book as of 31 July 2017. ct = carat, gr = grainer, DTC = Diamond Trading Company.

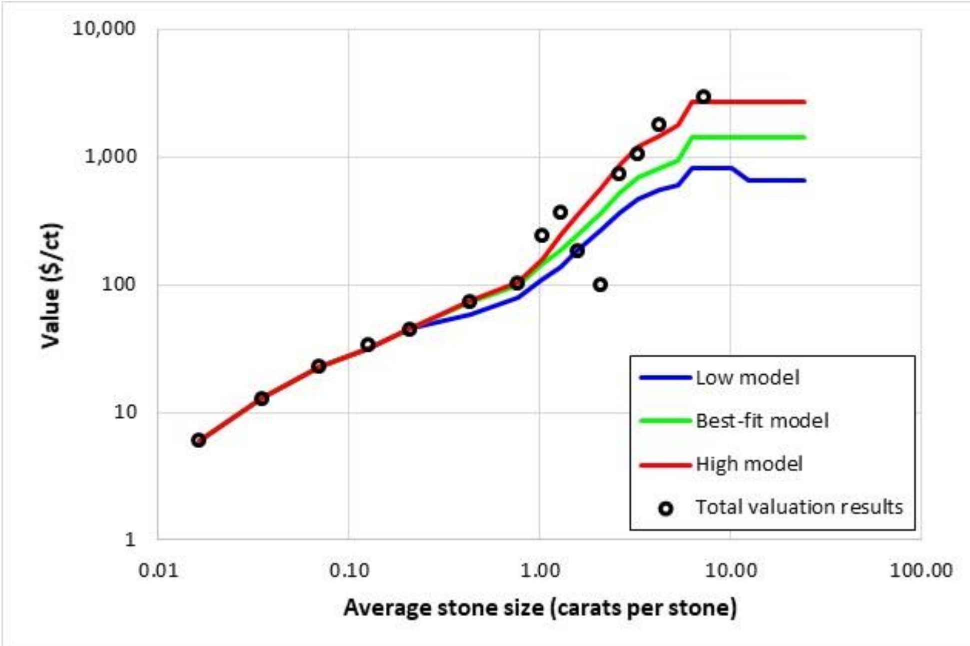

Figure 14-13. Diamond value distribution models, from WWW (2017)

14.2.5.3 <u>Average diamond value</u>

The best-fit value distribution model reported in Section 14.2.5.2 was applied to the recoverable size frequency distributions modelled for each domain (Table 14-14) to generate average value (US $/ct) estimates for each domain (Table 14-19). These represent estimated average values of +1 mm recoverable diamonds and correlate with the +1 mm recoverable grades reported above. Modifications to process plant efficiency (and hence degree of liberation and recovery of diamonds in the smaller size ranges), relative to that assumed for this estimate, will require an adjustment to these values.

Table 14-19. Average diamond value estimates (US$/carat) for each domain

Body	Domain	SFD model	Average $/ct
Faraday 2	KIMB1	F2 KIMB1	124
	KIMB2	F2 KIMB3	69
	KIMB3	F2 KIMB3	69
	KIMB4	F2 KIMB1	124
Faraday 3	KIMB1	F3 KIMB1/2/3	108
	KIMB2	F3 KIMB1/2/3	108
	KIMB3	F3 KIMB1/2/3	108
	KIMB4B	F3 KIMB4	62
	KIMB4C	F3 KIMB4	62

Notes: These reflect "recoverable" average values assuming the chosen recovery efficiencies for a commercial diamond plant operating with a 1 mm bottom size cut off (see text for details).

14.2.6 Diamond breakage

The use of the above-described size and value distribution models in the estimation of grade and average diamond value assumes that the degree of breakage to which the diamonds have been subjected during LDD drilling / sampling is comparable to breakage that would be incurred during mining and processing of kimberlite material. If the degree of breakage incurred during sampling is higher than that achievable during production, then the value and potentially the grade of an LDD-derived parcel would under-represent the production diamond grade and value; i.e. additional breakage in the LDD parcel would reduce the frequency of large diamonds and potentially increase the proportion diamonds that are smaller than the bottom cut-off, resulting in net diamond loss.

Observations by the SRC on diamond parcels for Faraday 2 and Faraday 3 provide an indication of the proportions of stones larger than 3350 µm considered to have been subjected to significant induced breakage, here classified as a loss in mass of more than 5 % resulting from breakage that is not of natural causes. Faraday 2 and Faraday 3 diamonds show 15 and 20 % such breakage, respectively. This is consistent with breakage levels in the 2015 and 2016 Kelvin diamond parcels, which were recorded as 14 to 18 % and 4 to 18 %, respectively.

While induced diamond breakage has occurred it is not possible to accurately quantify the degree to which this may have affected the grade or average value estimates, or to assess the extent to which such breakage might be mitigated during production. Consequently, no adjustments have been made to either the grade or the average diamond value estimates to account for potential diamond breakage.

14.2.7 Confidence and resource classification

The nature and degree of uncertainty relating to each component (volume, tonnage, grade and value) of the Faraday 2 and 3 Mineral Resource estimate is discussed in the sections below. The estimate is considered to be constrained to a level of confidence suitable for the declaration of Inferred Mineral Resources.

14.2.7.1 <u>Confidence in resource volumes</u>

Mineral Services has reviewed the Faraday 2 and 3 pipe shell and internal geology models (MSC17/018R) in detail and considers the geological models to be well defined. The external shells are constrained by 85 and 61 drill holes, respectively, and there is no scope for substantial (more than ~15 %) loss or addition of pipe volume within the area currently delineated (the pipe extents and volume may increase with depth with additional drilling). The volumes of individual internal domains are also well constrained, however due to the horizontally-layered nature of the deposit and the very thin extents of several smaller domains these are subject to a higher relative degree of uncertainty. However, the bulk densities of all internal kimberlite domains are very similar (Section 14.2.3) and hence uncertainty in the internal domain model volumes has very limited implication for tonnage uncertainty.

14.2.7.2 <u>Confidence in bulk density and tonnage estimates</u>

The bulk density estimates for Faraday 2 and 3 are based on large, representative datasets of 546 and 391 measurements, respectively. In view of the large number of bulk density measurements and the limited degree of variability in bulk density of the kimberlite domains comprising the resource, uncertainty in the estimates of bulk density is estimated to be lower than ±5 % and is not a significant source of uncertainty for tonnage estimates. Due to the use of average bulk densities it is possible that bulk density is slightly underestimated at depth and slightly overestimated (<5 % local variation from the average) in the shallower portions of both pipes. This variation is not considered sufficiently large to justify the use of a local bulk density model.

14.2.7.3 Confidence in grade estimates

The grade estimates for Faraday 2 are based on average LDD grades per domain. These grades have been corrected where necessary for compromised efficiency in the recovery of small diamonds (Faraday 2, Section 14.2.4.7) and have been converted to +1 mm recoverable grade through the use of total diamond content SFD models to which standardized recovery correction factors have been applied.

Potential error associated with this approach derives from four key factors: (1) possible error in the corrections to Faraday 2 results for under-recovery of small diamonds; (2) error in the modelling of the total content SFD models to which recovery correction factors have been applied; (3) error in the use of an assumed SFD for domains in which a confident SFD model could not be defined and; (4) potential variation in grade along strike, i.e. if the sample grade is not representative of the entire domain. These areas of uncertainty are discussed below.

1. The potential scope of error associated with the correction in Faraday 2 grades for under-recovery of small diamonds has been assessed by gauging the relative degree of variation in fine diamond recovery for various process parcels in Faraday 3 (used as a basis for the correction of Faraday 2 LDD grades) and assessing the impact that this degree of variation could have on sample grade. The results suggest a maximum potential error of ±10 % associated with this aspect of the estimate. This is likely overstated, as the recovery parameters for larger parcels are generally more consistent than for smaller process batches.
2. If the micro- and macrodiamond datasets used to define a total diamond content SFD model are derived from material with differing grade this would result in an inaccurate model. The implications for this are however limited; while the relationship between microdiamond and macrodiamond stone frequency would be incorrect, the +1 mm recovery corrected grades would be subject to substantially less error. This was assessed by changing the grade of the microdiamond parcel used to define the Faraday 2 KIMB1 model to quantify the impact on recoverable +1 mm grade. A modification to the microdiamond grade of 50 % translates to a change in +1 mm recoverable grade of < 5 %.
3. The use of assumed SFD models for grade corrections (Section 14.2.4.7) has limited implication for grade error. The range of % correction from LDD to +1 mm recoverable grade, as defined by the 4 different SFD models, is between 14 and 18 %. Based on the macrodiamond parcels available and the degree of similarity between the recovered and assumed SFDs, it is considered highly unlikely that a domain SFD would vary from the assumed model to the extend where a grade uncertainty in excess of 5 % would apply.

4. The potential for grade variation along strike and the amount of error potentially associated with the LDD grade not being representative of the overall domain grade can be assessed through observations of macrodiamond stone frequency variation along strike in Faraday 2 (-10 to +15 %), variation in microdiamond stone frequency along strike in both bodies (-15 to +30 %, even for grouped parcels of limited size), and in variation in dilution (likely to be a major control on grade) along strike. The average dilution of broad zones within Faraday 2 and Faraday 3 do not vary by more than 15 % from the respective domain average. The dilution characteristics of the area sampled by LDD was compared with the average dilution characteristics of each domain. No significant differences are evident.

14.2.7.4 Confidence in diamond value estimates

There are three sources of uncertainty relevant to the average diamond value estimates for Faraday 2 and 3. Two of these relate to the key components of the value estimation approach used, i.e. uncertainty in the extent to which value distribution model and the SFD models used as a basis for the estimate accurately reflect those of the underlying diamond populations in each of the domains. The third relates to uncertainty in the market value of the diamonds and how this fluctuates with time.

Confidence in value distribution models

Estimates of average values in size classes DTC 1 to DTC 11 are well constrained by the diamond parcels on which they are based (e.g. 512 stones valued in the DTC 11 size class; see Table 14-17). Average values in the coarser size ranges are represented by significantly fewer diamonds (< 100 in each size class; see Table 14-17) and are hence far less reliably constrained (as indicated by the range between low- and high-case value models, Figure 14-13). However, due to the relatively fine-grained nature of the Faraday 2 and 3 SFDs, the impact of this uncertainty on estimates of average diamond value is relatively small; the low frequency of coarse diamonds limits the overall impact of uncertainty related to their value. The high and low case value distribution models (WWW, 2017), when applied to the recoverable domain SFD curves, imply a maximum possible error range on the domain average values of -30 to +50 %.

The average value estimates by domain have been produced on the assumption that the value distributions (i.e. $/ct per sieve size class) of all domains are the same. It is possible that individual domains may resolve differing value distribution characteristics with a larger sample. However, based on the valuation data and observations available, the extent of these differences is expected to be limited and their impact on average diamond value is very unlikely to exceed the uncertainty associated with the overall value distribution model, as outlined above.

Confidence in diamond size frequency distribution

Diamond SFDs that are coarser or finer grained than the current models (i.e. that reflect uncertainty in the coarse end of the size distribution) will have limited impact on grade but will have significant implications for average diamond value. The degree of uncertainty associated with error in the models, and with the assumption of SFD models from certain domains for the estimation of value in other domains, has been modelled by fitting high-case (coarse) and low-case (fine) model SFDs for each domain and applying the best-fit value distribution model to these. The range of uncertainty in average value implied by these models is approximately -25 to +50 %.

Market fluctuation in diamond price

The value estimates for Faraday 2 and 3 are based on valuations and model estimates of diamond value per sieve size class made by WWW. These estimates are based on the WWW price book for 31 July 2017 and will be subject to market fluctuations with time. The valuation of diamonds is highly specialized and subjective; all valuation is subject to a degree of uncertainty which reflects personal opinions as to the quality and market demand for the diamonds in question. Independent valuations of single diamond parcels made at the same time can differ significantly. Quantification of the uncertainty in average value associated with market fluctuation in diamond prices is beyond the scope of this study and has not been accounted for in the classification of the Mineral Resource estimate for Faraday 2 and 3.

14.2.8 Reasonable prospects for eventual economic extraction

The CIM Definition Standards for Mineral Resources and Mineral Reserves states that in order to be classified as a Mineral Resource there should be a reasonable prospect for the eventual economic extraction of the specified ore. The Mineral Resource estimate for Kelvin has been found to satisfy this criterion independently of the Faraday kimberlites (JDS, 2016, Section 14.1.6). Considering the close proximity of the Faraday kimberlites to Kelvin a precedent for reasonable prospects of eventual economic extraction is considered to be established for near-surface deposits of similar character and with similar grade and value.

14.2.9 Faraday Mineral Resource Statement

The estimation work described in the sections above defines a total Inferred Mineral Resource for the Faraday 2 and 3 kimberlites of 1.35 million tonnes at an average grade of 1.54 carats per tonne and an overall average diamond value of US$98 per carat (Table 14-20). The estimates encompass the entire bodies as defined by the current geological models, extending from base of overburden (~390 masl) in the south-east to similar depths of approximately 160 masl. The grade and average diamond value estimates reflect diamonds recoverable by a commercial process plant operating with a 1 mm bottom cut-off. The corrections applied to derive these recoverable estimates are based on assumed recovery parameters and will need to be adjusted for the actual recovery efficiency of the planned production processing plant.

Table 14-20. Resource Statement for the Faraday 2 and Faraday 3 kimberlites

Resource classification	Body	Domain	Volume (Mm^3)	Density (g/cm^3)	Tonnes (Mt)	Grade (cpt)	Carats (Mct)	Value (US $/ct)
Inferred	Faraday 2	KIMB1	0.44	2.35	1.03	2.23	2.29	124
		KIMB2	0.04	2.43	0.11	3.07	0.33	69
		KIMB3	0.06	2.37	0.14	2.73	0.38	69
		KIMB4	0.05	2.41	0.11	1.22	0.13	124
		F2CRX	0.005	2.75	0.01	-	-	-
		Total	**0.59**	**2.37**	**1.39**	**2.24**	**3.13**	**112**
	Faraday 3	KIMB1	0.05	2.36	0.11	3.74	0.42	108
		KIMB2	0.02	2.31	0.04	2.20	0.09	108
		KIMB3	0.01	2.28	0.02	0.61	0.01	108
		KIMB4B	0.42	2.46	1.03	0.97	1.00	62
		KIMB4C	0.23	2.50	0.58	0.65	0.37	62
		F3CRX	0.03	2.75	0.09	-	-	-
		Total	**0.76**	**2.47**	**1.87**	**1.01**	**1.90**	**75**
	Total Inferred		**1.35**	**2.43**	**3.27**	**1.54**	**5.02**	**98**

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Notes: Mm^3 = million cubic metres, Mt = million tonnes, cpt = recoverable (+1 mm) carats per tonne, Mct = million carats, US$/ct = recoverable (+1 mm) US dollars per carat.

14.3 Kennady North Project Mineral Resource Statement

An Indicated Mineral Resource for the Kelvin kimberlite of 8.5 million tonnes at an average grade of 1.6 carats per tonne and an average diamond value of US$63 per carat (Section 14.1, Table 14-5) has been restated from Vivian and Nowicki, 2017. The estimate encompasses the entire body as defined by the current Kelvin geological model, extending from base of overburden (~400 masl) in the south-east to a depth of -100 masl in the north. The estimation work described in Section 14.2 has defined a combined Inferred Mineral Resource for Faraday 2 and Faraday 3 of 3.27 million tonnes at an average grade of 1.54 cpt and an average diamond value of US$98 per carat (Table 14-20). This estimate encompasses the Faraday 2 and 3 kimberlite domains as defined by their geological models, which both extend from base of overburden (~390 masl) to a similar depth of approximately 160 masl. The Kennady North Mineral Resource statement, incorporating all Indicated and Inferred estimates, is summarised in Table 14-21. The grade and average diamond value for all estimates are standardized to reflect diamonds recoverable by a commercial process plant operating with a 1 mm bottom cut-off. The corrections applied to derive these recoverable estimates are based on assumed recovery parameters and will need to be adjusted for the actual recovery efficiency of the planned production processing plant.

Table 14-21. Mineral resource statement for the Kennady North project.

Resource classification	Body	Volume (Mm^3)	Density (g/cm^3)	Tonnes (Mt)	Grade (cpt)	Carats (Mct)	Value (US $/ct)
Indicated	Kelvin	3.49	2.44	8.50	1.60	13.62	63
Inferred	Faraday 2 and Faraday 3	1.35	2.43	3.27	1.54	5.02	98

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Notes: Mm^3 = million cubic metres, Mt = million tonnes, cpt = recoverable (+1 mm) carats per tonne, Mct = million carats, US$/ct = recoverable (+1 mm) US dollars per carat.

14.4 TFFE estimates for Faraday 1 and 2

Faraday 1 is a kimberlite pipe adjacent to Faraday 3 that is similar to Kelvin, Faraday 2 and 3 both in terms its morphology and the nature of the kimberlite material of which it is comprised (Section 7.3.7). The current geological model for Faraday 1 (Section 7.3.7) extends from approximately 390 masl (base of overburden) to 210 masl. Faraday 1 includes two small inclined pipe bodies and three associated kimberlite sheets, two of which extend significantly beyond the modelled extents of the nearby Faraday 3 body. The single KDYKE domain of the geological model (Section 7.3.7) has been subdivided for TFFE range estimation into two resource domains. These include KDYKE (single sheet proximal to Faraday 1) and F1_3_KDYKE (two more extensive sheets in the Faraday 1/3 area). Volume, tonnage and grade range estimates have been made for these domains in the sections below. Volume and tonnage range estimates are also provided for two domains in the deepest (north-west) extents of Faraday 2, for which no grade data are available.

14.4.1 Supporting data

At the time of reporting the evaluation data that have been used as a basis for the TFFE range estimates are as follows:

- The geological model for Faraday 1 (Section 7.3.7) is intersected by 72 drill holes (comprising 1,165 m of internal coverage). The KIMB5 and KDYKE domains of Faraday 2 are intersected by 4 drill holes (comprising 47 m of internal coverage). Further constraints on the maximum volumes of these bodies are provided by additional drill holes that are proximal to but do not intersected the kimberlites. Delineation and extension of these bodies is ongoing.
- Bulk density measurements (281 and 15 measurements internal to the Faraday 1 pipe and the two TFFE domains of Faraday 2, respectively) have been carried out on representative drill core samples using the same methodology employed to generate the bulk density dataset for Kelvin (Section 12.4).
- Microdiamond samples collected within Faraday 1 domains comprise 358 sample aliquots weighing 2,457 kg. All samples were processed by SRC as documented in Section 11.1.3. Outlier samples (>3 standard deviations from the mean) were excluded. Microdiamond recoveries are shown by kimberlite domain for Faraday 1 in Table 14-22. Sample coverage is shown in Figure 14-14.
- Four large diameter drill holes (LDD) were completed on Faraday 1 in 2017 (Figure 14-14, Section 10.5). These yielded a calculated sample mass of 24 tonnes of kimberlite from which 75 ct of diamond were recovered at a 0.85 mm bottom cut-off (Table 14-23). The calculated sample masses are based on calliper measurement of the volume of each sample increment multiplied

by domain average bulk densities. LDD samples were processed at SRC using the same methodology used for processing of Kelvin and Faraday 2 and 3 LDD samples (Section 13).

Table 14-22. Microdiamond datasets used to evaluate grade and SFD characteristics and to support grade range estimation in the Faraday 1 kimberlite

Samples	17	34	40	141	24	8	37
Dry mass (kg)	86	190	303	1,004	168	50	211
Microdiamond size class (µm)	F1_3_KDYKE	KDYKE	KIMB3	KIMB1	KIMB2	KIMB4	KIMB5
106	230	447	874	947	358	73	240
150	120	289	516	623	241	50	159
212	68	155	277	343	134	36	80
300	45	89	175	192	81	13	69
425	20	66	94	106	35	11	38
600	10	32	67	47	25	4	23
850	7	11	33	30	13	0	11
1180	3	8	14	17	5	2	5
1700	0	1	0	8	1	1	1
2360	0	0	0	6	1	0	1
3350	0	0	0	0	0	0	0
4450	0	0	0	0	1	0	0
Stones	**503**	**1,098**	**2,050**	**2,319**	**895**	**190**	**627**
Carats	**0.29**	**0.80**	**1.25**	**3.64**	**2.55**	**0.17**	**0.86**

Notes: The single KDYKE domain of the Faraday 1 geological model (Section 7.3.7) comprises 3 separate sheets. These have been subdivided into 2 domains for TFFE range estimation, including KDYKE (single sheet proximal to Faraday 1 for which macrodiamond data are available, see Table 14-23) and F1_3_KDYKE (two more extensive sheets surrounding Faraday 1 and 3).

Table 14-23. Faraday 1 LDD sample macrodiamond recoveries by domain.

Dry Mass (t)	4.25		8.27		5.71		5.70	
Macrodiamond size class (mm)	KDYKE		KIMB3		KIMB1		KIMB4	
	st	ct	st	ct	st	ct	st	ct
0.85	96	1.34	184	2.37	56	0.81	94	1.22
1.18	116	3.84	175	5.36	75	2.38	100	3.08
1.70	45	4.04	57	4.93	26	2.29	41	3.59
2.36	15	3.08	22	5.88	9	1.91	16	3.23
3.35	6	3.56	5	3.55	3	2.01	6	3.25
4.75			5	10.97	2	2.82		
Totals	**278**	**15.86**	**448**	**33.05**	**171**	**12.21**	**257**	**14.37**

Notes: Diamonds recovered form overburden and waste material are not included in Table 14-23.

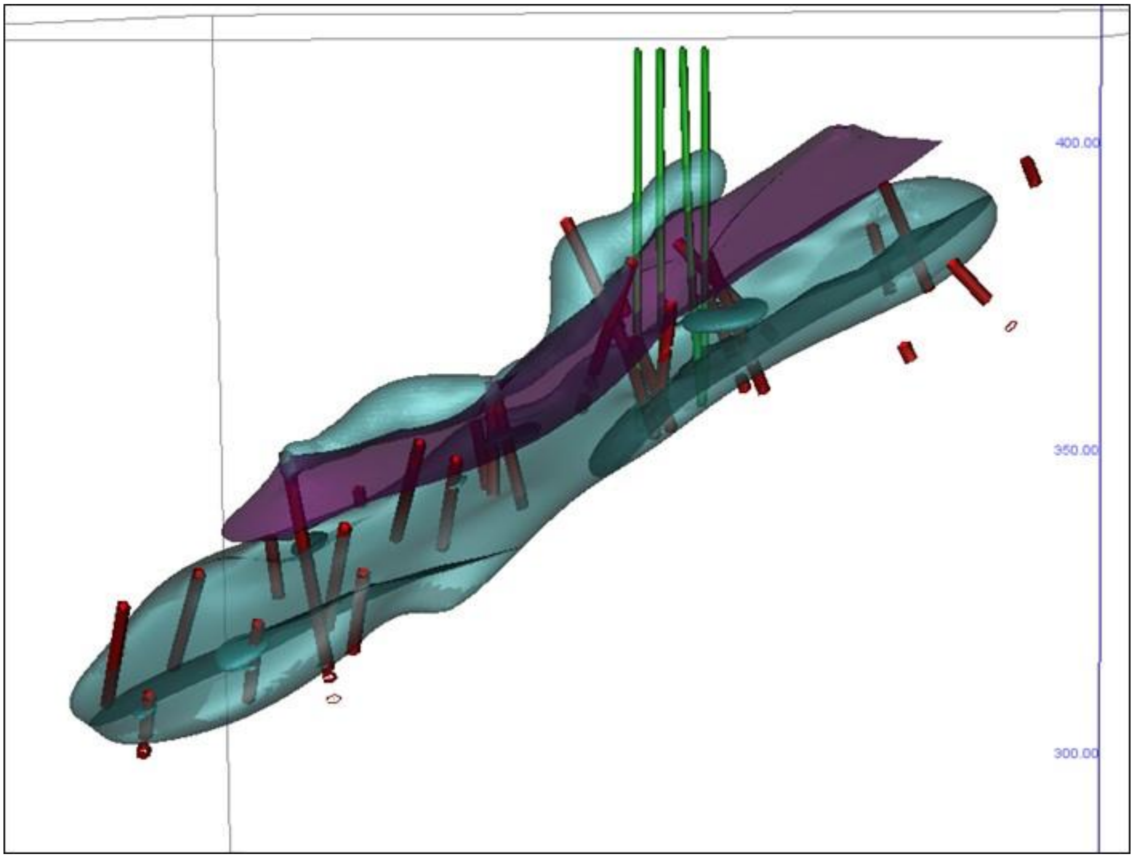

Figure 14-14. Inclined view (looking NE) of the Faraday 1 pipe and associated sheet showing microdiamond sample coverage and LDD hole traces.

Notes: Figure 14-14 shows pipe in blue, sheet in purple, microdiamond sampling with red traces and LDD traces in green. Other associated sheets (KDYKE and F1_3_KDYKE) are not shown to simplify the figure. Microdiamond sample traces outside of the domains shown are intersections of the domains that are not shown.

14.4.2 TFFE domains, volume and tonnage range estimates

The drill coverage of the Faraday 1 kimberlite supports development of reliable models of the pipe shell and internal geological domains (Section 7.3.7), including KIMB1, KIMB2, KIMB4, KIMB5 and an internal domain of large country rock xenoliths (CRX). Three large associated dyke sheets around Faraday 1 and the nearby Faraday 3 are also present and are constrained with numerous drill intersections (K1_3_DYKE, KDYKE and KIMB3). An additional domain (MB) represents marginal breccia which is considered to be waste in this estimate. In Faraday 2, two domains (KIMB5 and KDYKE) have recently been identified and modelled at the deepest (north-west) extent of the pipe.

The models of these geological domains provide the basis for the TFFE volume estimate for these kimberlites. Evaluation of both Faraday 1 and the deeper portions of Faraday 2 is ongoing and these domain models may be extended with further drilling. The uncertainty of the TFFE volume estimates for Faraday 1 and 2 was evaluated through visual assessment of drill coverage and the degree to which the overall spatial extents of the domains are constrained by drilling. Uncertainty ranges derived on this basis were applied to the total volumes of the domains and the upper and lower estimates for each domain were summed to generate volume range estimates (Table 14-24).

In Faraday 2 the averages of bulk density measurements within KIMB5 (2.43 g/cm^3) and KDYKE (2.53 g/cm^3) were adopted as domain averages. The Faraday 1 TFFE domains comprise two main textural variants of kimberlite, volcaniclastic (pipe infill, i.e. KIMB1, KIMB2, KIMB4 and KIMB5) and coherent (dyke sheets and minor pipe infill, i.e. KIMB3, KDYKE and F1_3_KDYKE). Bulk density measurements from domains were grouped accordingly, and the averages for each group were applied to the individual domains based on their textural classification (2.45 g/cm^3 for sheets and 2.36 g/cm^3 for pipe infill). The level of uncertainty associated with bulk density is substantially lower than that associated with the volume estimates; hence tonnage range estimates were generated based on the estimates of average bulk density applied to the volume ranges for each body.

14.4.3 SFD and grade characteristics

Microdiamond grade results for the Faraday 1 domains (expressed as +212 µm stone frequencies) and grouped for the body and associated sheets as a whole, are shown in comparison with results from Kelvin, Faraday 2 and Faraday 3 in Figure 14-15. The average microdiamond stone frequency for Faraday 1 is comparable to that of Faraday 2, however the results by domain suggest the potential for significant grade variation.

The overall microdiamond SFD characteristics for each body are shown in Figure 14-16. Faraday 1 presents a very similar microdiamond SFD to Faraday 2, 3 and Kelvin. The SFD of the limited LDD sample parcel from Faraday 1 is illustrated in comparison with the total macrodiamond datasets from Faraday 3 and Kelvin in Figure 14-17 (results from Faraday 2 were omitted from this comparison due to differing recovery efficiency in the process plant). The sample data for Faraday 1 suggest a coarser-grained SFD than that of Kelvin and Faraday 3 but, due to the small size of the parcel, this cannot be considered to be representative.

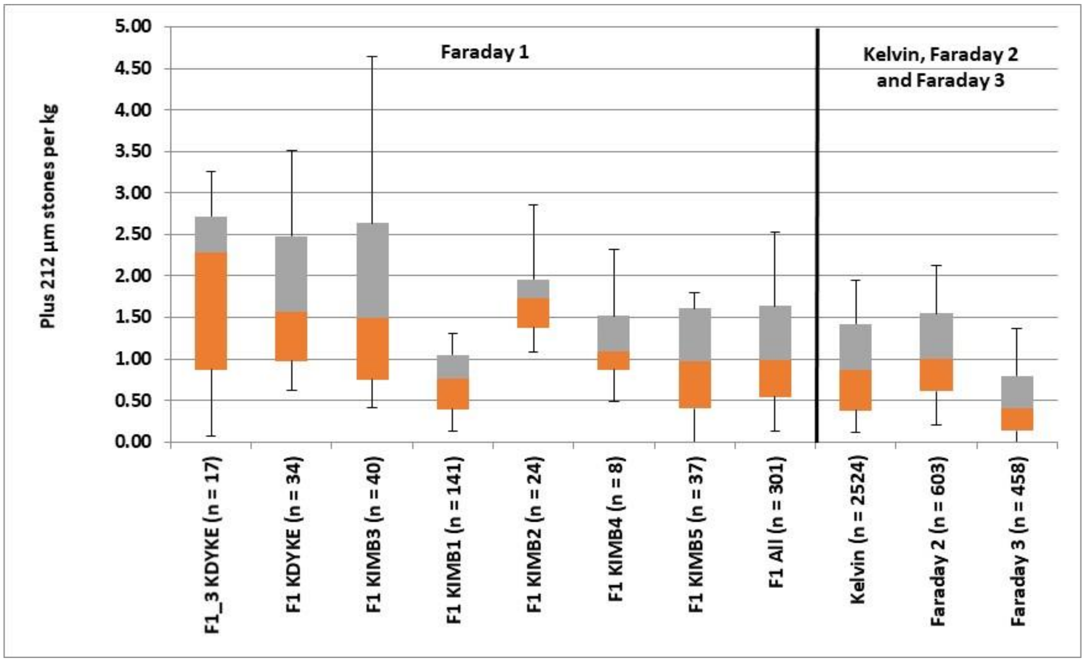

Figure 14-15. Plus 212 µm microdiamond stone frequencies by domain from drill core samples of Faraday 1.

Notes: Microdiamond stone frequencies = stones per kilogram. Grouped results for Faraday 1 (F1), Faraday 2, Faraday 3 and Kelvin are shown for comparison. The combined red and green boxes in these quartile plots indicate the 25th to 75th percentile values and the contact between them is the median. n = the number of sample aliquots represented. Error bars represent the 10th and 90th percentile values.

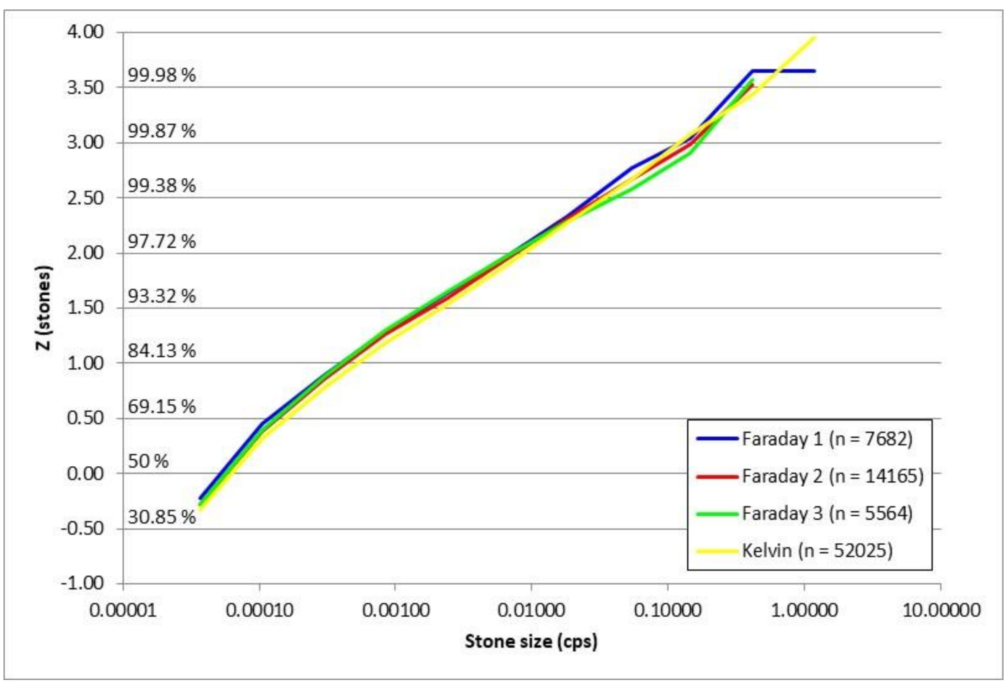

Figure 14-16. Comparison of +105 µm microdiamond SFD characteristics of grouped recoveries from Faraday 1, 2, 3 and Kelvin

Notes: SFD is shown on a cumulative log-probability plot (showing the proportion of diamonds below a given stone size); cps = carats per stone, n = number of stones represented.

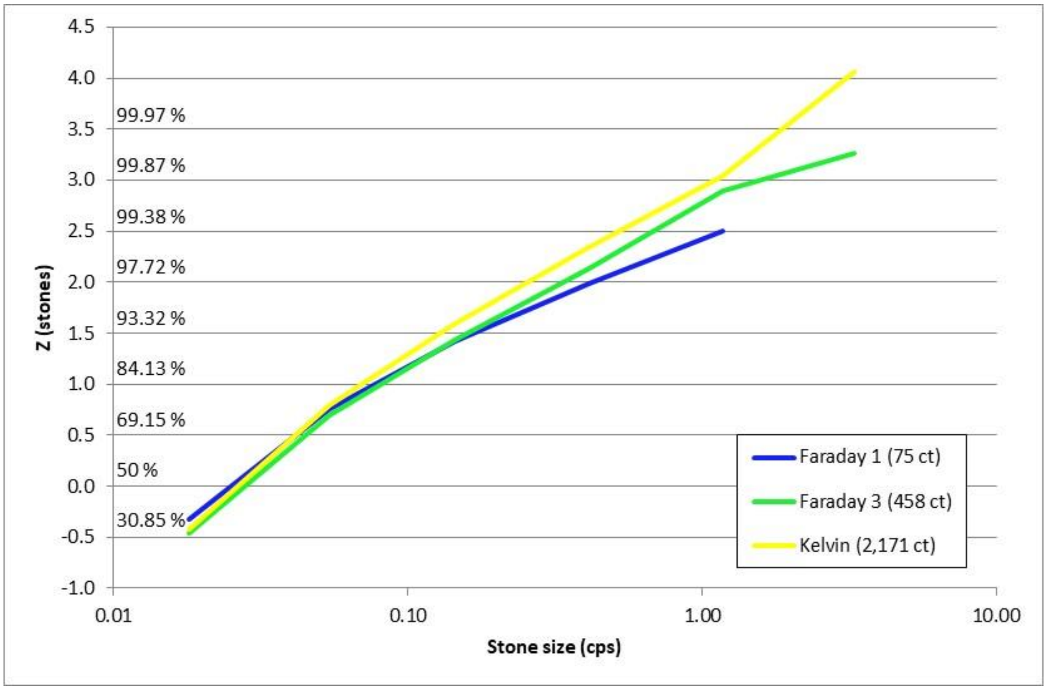

Figure 14-17. Grouped +0.85 mm macrodiamond SFD characteristics from Faraday 1 in comparison with Faraday 3 and Kelvin

Notes: SFD is shown on a cumulative log-probability plot (showing the proportion of diamonds below a given stone size); cps = carats per stone, ct = total size of the parcels represented in carats.

14.4.4 TFFE grade range estimates

The grade potential of Faraday 1 is expressed as low- and high-case estimates of overall grade (Table 14-24). This was determined by (1) defining uncertainty ranges around a best estimate of the grade of each geological domain, (2) applying these grade ranges to the mid-case estimate of the tonnes contained within each domain to define total carat ranges, (3) accumulating the minimum and maximum estimated total carats per domain to derive minimum and maximum estimates of total contained carats, and (4) dividing these by the mid-case estimate of total tonnes to estimate the minimum and maximum grade for the entire body.

Best estimates of +1 mm recoverable grade per domain were derived based on the average microdiamond stone frequencies for each domain by applying appropriate micro-grade ratios (i.e. ratio of microdiamond stone frequency to recoverable grade, as per the methodology described in Section 14.1.3). These ratios were defined for each Faraday 1 kimberlite textural grouping (volcaniclastic and coherent) based on the microdiamond and macrodiamond data available. Estimates of grade uncertainty for all of the Faraday 1 domains were based on application of the maximum range of variation in the micro-grade ratios defined to date from Faraday 2, Faraday 3 and Kelvin to the best-case estimates for each domain. The wide range in estimated grade reflects the high level of uncertainty associated with estimates made on the basis of very limited data.

14.4.5 Faraday 1 diamond values

A parcel of 76 ct of diamonds from Faraday 1 underwent valuation by WWW International Diamond Consultants Ltd (WWW) in Antwerp in July 2017 at the same time as diamonds from Faraday 2 and 3. The parcel, derived from LDD drilling, was valued subsequent to cleaning and was sieved prior to valuation to remove all diamonds smaller than the Diamond Trading Company (DTC) 1 size category. The parcel was valued, as of the WWW price book for 31 July 2017, at US$144 per carat. With a parcel of only 76 ct the value distribution and size frequency distribution are both not adequately resolved to define reliable estimates of diamond value. The coarse nature of the limited parcel and the presence of two high value diamonds (2.27 ct valued at $1,455 per carat and 1.63 ct valued at $1,987 per carat) is however encouraging, and suggests that average diamond value will be comparable to or higher than those currently estimated for the other kimberlites on the Kennady North Project.

14.4.6 Summary of TFFE estimates

A summary of the TFFE volume, tonnage and grade range estimates for Faraday 1 is provided in Table 14-24, along with volume and tonnage range estimates for Faraday 2 domains for which no grade data are available. The macrodiamond parcel obtained from Faraday 1 is too small to provide meaningful valuation results. Due to the paucity of macrodiamond data and the absence of reliable diamond value estimates, it is not possible to classify Mineral Resources for Faraday 1.

Table 14-24. Faraday 1 and 2 TFFE volume, tonnes and grade range estimates.

Body	Volume (Mm^3)		Tonnes (Mt)		Grade (+1 mm cpt)	
	Low	High	Low	High	Low	High
Faraday 1	0.2	0.5	0.6	1.2	1.5	3.7
Faraday 2	0.01	0.02	0.01	0.04	-	-

The estimate of TFFE is conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if future exploration will result in the estimate being delineated as a Mineral Resource.

Notes: Mm^3 = million cubic metres, Mt= million tonnes, cpt = carats per tonne.

15 ADJACENT PROPERTIES

15.1 GAHCHO KUÉ

The Kennady North project lies adjacent to the Gahcho Kué Joint Venture's (GKJV) Kennady Lake Project, which is owned by DeBeers Canada Exploration Inc. (operator 51%) and Mountain Province Diamonds (49%). Three of the kimberlites that form part of the cluster under Kennady Lake (5034, Hearne, and Tuzo) are currently undergoing commercial production. The most up-to-date resource and reserve statistics from Gahcho Kué were obtained from the NI43-101 Technical Report – Gahcho Kué Project 2014 Feasibility Study filed with Sedar on May 13, 2014.

The resource statement for GK is summarized in table 15-1 and the reserve statement is summarized in Table 15-2. The author has no way of verifying the resource statement. The mineralization on the Gahcho Kué property is not necessarily indicative of the mineralization on the Kennady Diamonds project at Kennady North.

Table 15-1. Indicated and Inferred Mineral Resource Summary for Gahcho Kué Mine

RESOURCE (pipe and reference)	Classification	Volume	Tonnes	Carats	Grade
		Mm^3	Mt	Mct	cpht
5034 - (AMEC 2009)	Indicated	5.1	12.7	23.9	188
	Inferred	0.3	0.8	1.2	150
Hearne - (AMEC 2009)	Indicated	2.3	5.3	11.9	223
	Inferred	0.7	1.6	2.9	180
Tuzo Upper - (AMEC 2009) (0-300 mbs)	Indicated	5.1	12.2	14.8	121
Tuzo - (Mineral Services 2013) (300-564 mbs)	Indicated	1.5	3.6	6	167
	Inferred	3.7	8.9	14.4	161
SUMMARY	**Indicated**	**14**	**33.8**	**56.6**	**167**
	Inferred	**4.7**	**11.3**	**18.5**	**163**

Note: mbs- metres below surface

Table 15-2. Geologicial Reserve Summary for Gahcho Kué Mine

Pipe	Classification	Tonnes	Carats	Grade
		(Mt)	(Mct)	(cpt)
5034	Probable	13.4	23.2	1.74
Hearne	Probable	5.6	11.7	2.07
Tuzo	Probable	16.4	20.6	1.25
SUMMARY	**Probable**	**35.4**	**55.5**	**1.57**

16 OTHER RELEVANT DATA AND INFORMATION

There is no additional information not contained in this report, which is relevant to the project.

17 INTERPRETATION AND CONCLUSIONS

An Indicated Mineral Resource was established for the Kelvin kimberlite which comprises 8.5 Mt at a grade of 1.6 cpt. This resource comprises 13.6 M carats at +1.00 mm cut off and an average value of $63/ct. These resources have also been shown to have a reasonable prospect for eventual economic extraction.

During 2017, KDI continued to build on the current diamond resource. A total of 555 tonnes were retrieved from the Faraday 2 and 3 kimberlites through large diameter RC drilling. On October 3, 2017 an Inferred Resource statement for the Faraday 2 and 3 kimberlites was released. The Inferred Resource comprises 3.27 Mt grading 1.54 cpt providing 5.02 M carats at an average value of $98/ct. The full Kennady North resource statement is provided in Table 17-1.

Table 17-1. Mineral Resources Statement for the Kennady North project

Resource classification	Body	Volume (Mm^3)	Density (g/cm^3)	Tonnes (Mt)	Grade (cpt)	Carats (Mct)	Value (US $/ct)
Indicated	Kelvin	3.49	2.44	8.50	1.60	13.62	63
Inferred	Faraday 2 and Faraday 3	1.35	2.43	3.27	1.54	5.02	98

Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.

Notes: Mm^3 = million cubic metres, Mt = million tonnes, cpt = recoverable (+1 mm) carats per tonne, Mct = million carats, US$/ct = recoverable (+1 mm) US dollars per carat.

The bulk sampling program during 2017 included 24 tonnes of kimberlite sample from the Faraday 1 pipe. Results from this material and from extensive delineation core drilling and microdiamond sampling supported range estimates of a Target for Further exploration (TFFE) in Faraday 1 as summarized in Table 17-2. TFFE range estimates include volumetrically limited domains within Faraday 2 for which very limited evaluation data are available.

Table 17-2. Faraday 1 and 2 TFFE volume, tonnes and grade range estimates.

Body	Volume (Mm^3)		Tonnes (Mt)		Grade (+1 mm cpt)	
	Low	High	Low	High	Low	High
Faraday 1	0.2	0.5	0.6	1.2	1.5	3.7
Faraday 2	0.01	0.02	0.01	0.04	-	-

The estimate of TFFE is conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if future exploration will result in the estimate being delineated as a Mineral Resource.

Notes: Mm^3 = million cubic metres, Mt = million tonnes, cpt = recoverable (+1 mm) carats per tonne.

KDI completed a small drill program during 2017 which extended the Faraday 2 kimberlite pipe an additional 150 metres to the northwest. This extension is not included in the current Mineral Resource estimate, but is the focus of ongoing evaluation. This drilling also documented that Faraday 3 and Faraday 1 coalesce into one body around the lakeshore of Faraday Lake. KDI now refers to the combined bodies of Faraday 1 and 3 as one kimberlite identified as Faraday 1-3.

The Kelvin and Faraday kimberlites are considered unconventional due to their morphologies. These intrusions in Kelvin and Faraday Lakes have an emplacement age of approximately 540 Ma and are more typical of the root systems (hypabyssal) of kimberlite magmatic complexes, preserving some transitional and diatreme phases. The upper diatreme and crater facies observed elsewhere in Canada are completely missing here (Field and Scott-Smith, 1999). The geometric relationships are complicated by numerous interconnecting feeder dykes typical of a kimberlite root zone. Exploration for these types of bodies is extremely challenging due to their very limited surface exposure and lack of a distinct associated geophysical anomaly. KDI has identified six kimberlite bodies at Kennady North to date (Kelvin, Hobbes, Faraday 2 and Faraday 1-3, the Doyle sill and the MZ sill/sheet complex). The geophysical responses from these kimberlites provide a valuable reference for ongoing exploration.

KDI has continued to build on the extensive high resolution geophysical coverage along the Kelvin-Faraday Corridor (KFC). During 2017, extensive gravity, OhmMapper and total field magnetic surveying were completed at Blob Lake, just southwest of the Gahcho Kué (GK) mine. Blob Lake occurs along the same structural trend as the Kelvin, Faraday and GK pipes. This trend is referred to as the Kelvin-Faraday Corridor (KFC). There are numerous untested geophysical responses along the corridor which warrant drill testing. KDI believes that the highest potential for adding kimberlite resource to the Kennady North project occurs along the KFC and exploration in this area will be a major focus going forward.

18 RECOMMENDATIONS

Continued resource development at the Kennady North property will focus on defining an inferred Mineral Resource estimate for the Faraday 1-3 complex. A large diameter RC drill program will be undertaken at Faraday 1 to confirm grade and to obtain a diamond parcel for valuation. Additional drilling and microdiamond sampling (and potential limited additional large diameter RC drilling) is planned to delineate and evaluate the recently defined 150 m extension to Faraday 2. This extension is relatively flat-lying and based on the intersections obtained will likely contribute significantly to the overall size of the Faraday 2 Mineral Resource.

Exploration activities in the form of diamond drilling and additional geophysics will be undertaken during the winter program. The winter diamond drill program will comprise two diamond drills for 6-8 weeks while geophysical surveying will continue to the south of the Gahcho Kué mine site targeting the two eastern leases acquired during 2016.

A summer program will combine a small reverse circulation drill program to build a more complete dataset of the kimberlite indicator mineral sampling program which was initiated in 2014. Diamond drilling will focus on exploration targets as well as extending Faraday 2 and Faraday 1-3.

The proposed budgets for the upcoming winter (Q1 and Q2) and summer (Q3 and Q4) 2017 programs are summarized in Table 18-1 and 18-2.

Table 18-1. Proposed Budget for Q1 and Q2

	Q1	Q2	Total
Aurora			
Winter Road and Ice Infrastructure, includes removal	$1,043,900.00	$600,000.00	$1,643,900.00
RC Drilling	$1,200,000.00	$400,000.00	$1,600,000.00
Geophysics	$264,405.00	$0.00	$264,405.00
Diamond Drilling	$1,000,000.00	$500,000.00	$1,500,000.00

Subtotal	$3,508,305.00	$1,500,000.00	$4,008,305.00
5% Contingency	$175,000.00	$75,000.00	$225,000.00
Total Q1 + Q2 Budget	**$3,683,305.00**	**$1,575,000.00**	**$5,258,305.00**
KDI			
Preliminary Economic Assessment	$0.00	$0.00	$0.00
Diamond Valuation	$50,000.00		$50,000.00
First Nations consultation	$6,500.00	$6,500.00	$13,000.00
Miscellaneous Consulting	$25,000.00	$25,000.00	$50,000.00
General and Administration	$287,500.00	$287,500.00	$575,000.00
Total Q1 + Q2 Budget	**$319,000.00**	**$319,000.00**	**$638,000.00**
Total – Q1 and Q2 Budget	**$8,456,196.75**	**$4,519,007.50**	**$12,975,204.25**

Table 18-2. Proposed Budget for Q3 and Q4.

	Q3	Q4	Total
Aurora			
Geophysics – summer	$150,000.00		$150,000.00
Diamond Drilling - summer/fall	$2,000,000.00		$2,000,000.00
Report Writing- Compilation		$50,000.00	$50,000.00
Subtotal	$2,150,000.00		$2,200,000.00
5% Contingency	$107,500.00	$2,500.00	$110,000.00
Total Q3 + Q4 Budget	**$2,257,500.00**	**$52,500.00**	**$2,310,000.00**
KDI			
PEA			
Diamond Valuation		$50,000.00	$50,000.00
First Nations Consultation	$20,000.00	$20,000.00	$40,000.00

Miscellaneous Consulting	$25,000.00	$25,000.00	$50,000.00
General and Administration	$287,500.00	$287,500.00	$575,000.00
Total Q3 + Q4 Budget	**$557,500.00**	**$657,500.00**	**$1,215,000.00**
Total	**$7,120,000.00**	**$4,306,250.00**	**$11,426,250.00**

19 DATE AND SIGNATURE PAGE

This report titled “2017 Technical Report - Project Exploration Update and Faraday Inferred Resource Estimate, Kennady Lake North – Northwest Territories, Canada” and dated November 16, 2017 was prepared by and signed by the following authors:

(original signed and sealed) “Gary Vivian, P.Geol.”

____

Gary Vivian, M.Sc., P.Geol.
Chairman, Aurora Geosciences Ltd.
Dated at Yellowknife, Northwest Territories on November 16, 2017

(original signed and sealed) “Tom E. Nowicki, P.Geo.”

____

Dr. Tom E. Nowicki, P.Geo.
Technical Director, Mineral Services Canada Inc.
Dated at Vancouver, British Columbia on November 16, 2017.

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CERTIFICATE OF QUALIFIED PERSON

I, Gary Vivian, of the City of Yellowknife, in the Northwest Territories, Canada,

HEREBY CERTIFY:

1. That my business address is 3506 McDonald Drive, Yellowknife, NT, X1A 2H1
2. This certificate applies to the report titled "2017 Technical Report, Project – Project Exploration Update and Faraday Inferred Mineral Resource Estimate - Kennady North Project - Northwest Territories, Canada" and dated November 16, 2017.
3. That I am a graduate of Sir Sandford Fleming College as a Geophysical Technologist, 1976.
4. That I am a graduate of the University of Alberta in Geology:
   a. B.Sc. – Specialization Geology, 1983.
   b. M.Sc. – Geology, 1987, U of A – Thesis title: The Geology of Blackdome Ag-Au Deposit, BC
5. That I have been practicing Geology since 1983:

a)	May 1983 – November 1986	Noranda Exploration Co. Ltd., Bathurst, NB
b)	December 1986 – May 1988	Noranda Exploration Co. Ltd., Timmins, ON
c)	May 1988 – Present	Covello, Bryan and Associates Ltd. and currently Aurora Geosciences Ltd., Yellowknife, NT

6. That I am a registered Professional Geologist in the Northwest Territories. I have professional designation in Manitoba, Saskatchewan, Alberta and BC. I am also registered with AIPG (American Institute of Professional Geologists). I have over 40 years of exploration experience, 29 years as a P.Geol., with 26 years in kimberlite exploration (till sampling, geophysics, geology, mapping, core logging and program management). These programs were completed for companies such as Diavik Diamond Mines, Aber Resources, SouthernEra Resources, De Beers Canada Exploration Inc., GGL Resources Corp. and many other junior mining companies. As such I am a Qualified Person for the purposes of National Instrument 43-101.

7. As a principal of Aurora, I have written this report and managed a number of the historical programs on the Kennady North project. I have visited the property on a monthly basis since April 1, 2012. I am responsible for all sections, except for Section 1.9 and 14, in this report titled – "2017 Technical Report-Project Exploration Update and Faraday Inferred Mineral Resource Estimate, Kennady Lake North - Northwest Territories, Canada".

8. That I am independent of the issuer as defined by the tests set out in Section 1.5, "Standards of Disclosure for Mineral Projects", National Instrument 43-101.

9. That I have read "Standards of Disclosure for Mineral Projects", National Instrument 43-101 and read Form 43-101F1. This report has been prepared in compliance with this Instrument and Form 43-101F1.

10. That, as of November 16, 2017, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated November 16, 2017 at Yellowknife, Northwest Territories.

(original signed and sealed) "Gary Vivian, P.Geol."

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Gary Vivian, M.Sc., P.Geol.

CERTIFICATE OF AUTHOR

I, Tom E. Nowicki, P.Geo., do hereby certify that:

1. I am currently employed as a Senior Principal Geoscientist with Mineral Services Canada Inc. with an office at 501 – 88 Lonsdale Avenue, North Vancouver, BC, V7M 2E6, Canada.

2. This certificate applies to the technical report titled "2017 Technical Report, Project Exploration Update and Faraday Inferred Mineral Resource Estimate, Kennady North Project, Northwest Territories, Canada", with an effective date of November 16, 2017, (the "Technical Report") prepared for Kennady Diamonds Inc. ("the Issuer").

3. I am a Professional Geoscientist (P.Geo. #30747) registered with the Association of Professional Engineers, Geologists of British Columbia.

   I am a graduate of the University of Cape Town having obtained the degree of Bachelor of Science (Honours) in Geology in 1986 and Ph.D. Degree in geochemistry in 1998. I am a graduate of Rhodes University (Grahamstown, South Africa) having obtained the degree of Masters of Science in Economic Geology in 1990. I have been employed as a full-time geoscientist in the mineral exploration and mining fields in 1987 and 1988, from 1990 to 1993 and from 1998 to present.

   I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.

4. I am responsible for Section 1.9 and Section 14 of the Technical Report.

5. I am independent of the Issuer and related companies as independence is described in Section 1.5 of NI 43-101;

6. My prior involvement with the property is limited to contributions to the previous Kennady North Project Technical Report (Vivian and Nowicki, 2017);

7. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.

8. As of the effective date of the Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: November 16, 2017

Signing Date: November 16, 2017

(original signed and sealed) "Tom E. Nowicki, P.Geo."

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Dr. Tom E. Nowicki, P.Geo.

CONSENT

To : The Toronto Stock Exchange, P.O. Box 450, 3rd Floor, 130 King Street West, Toronto, ON M5X 1J2
British Columbia Securities Commission – 701 West Georgia St, P.O. Box 10142, Pacific Centre, Vancouver, BC V7Y 1L2
Alberta Securities Commission – Suite 600, 250-5th Street SW, Calgary, AB T2P 0R4
Saskatchewan Securities Commission – Financial and Consumer Affairs Authority – Suite 601, 1919 Saskatchewan Drive, Regina, SK S4P 4H2
Manitoba Securities Commission – 500, 400 ST, Mary Avenue, Winnipeg, MB R3C 4K5
Ontario Securities Commission – 20 Queen St W, 20th Floor, Toronto, ON M5N 3S8
New Brunswick Securities Commission – Financial and Consumer Services Commission – 85 Charlotte Street, Suite 300, Saint John, NB E2L 2J2
Nova Scotia Securities Commission – P.O. Box 458, Halifax, NS B3J 2P8
Prince Edward Island Securities Commission – P.O. Box 2000, Charlottetown, PEI C1A 7N8
Newfoundland Securities Commission– 100 Prince Phillip Drive, P.O. Box 8700, St. John's, NL A1B 4J6

The authors consent to the public filing of the Technical Report and to extracts from, or a summary of, the Technical Report in the written disclosure being filed. The authors confirm they have read the written disclosure being filed and that it fairly and accurately represents the information in the Technical Report that supports the disclosure.

This consent is dated at Vancouver, British Columbia on November 16, 2017.

(original signed and sealed) "Gary Vivian, P.Geol."

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Gary Vivian, M.Sc., P.Geol.

Aurora Geosciences Ltd.

(original signed and sealed) "Tom E. Nowicki, P.Geo."

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Dr. Tom Nowicki, P.Geo.

Mineral Services Canada Inc.