

**JACARANDA MINERALS LTD
&
MINERALS AUSTRALIA PTY LTD**

**EPM19120 LAKELAND EXTENDED
NORTH QUEENSLAND**

FINAL REPORT

Grant Date 28th August 2012

MAY 2014

Prepared for
Jacaranda Minerals Ltd
&
Minerals Australia Pty Ltd

By

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MAP SHEETS

1: 250,000 scale

COOKTOWN SD 55-13

1: 100,000 scale

BUTCHERS HILL 7866

KEY WORDS

Airborne, chromite, chrome diopside, eclogite, geochemistry, geophysics, gravity, kimberlite, kimberlitic zircon, magnetics, pyrope garnet, picroilmenite, radiometrics, structure.

SUMMARY

EPM19120 consists of 59 sub-blocks with a size of 195 km². It was granted to Jacaranda Minerals Ltd and Minerals Australia Pty Ltd in equal shares on 28th August 2012. The tenement was surrendered in March 2014.

Jacaranda Minerals Ltd ("JML") and Minerals Australia Pty Ltd ("MAPL") are equal partners in the Jacaranda Alliance Joint Venture ("JAJV"). Hancock Exploration Management Services Pty Ltd ("HEMS") is the operator of the joint venture and is a wholly owned subsidiary of Hancock Prospecting Pty Ltd.

The JAJV exploration objective was the discovery of diamondiferous kimberlite and lamproite pipes within Devonian metasediments and/or Tertiary mafic volcanics at the northern part of the Hodgkinson Basin.

Airborne magnetic and radiometric data over the Cooktown Project and surrounding areas were extracted from the 1999 Hodgkinson-Georgetown (Block A) survey, which was flown for the Geological Survey of Queensland by Kevron Geophysics.

Diamond exploration data released by the Queensland Government Department of Mines and Energy shows that a range of diamond indicator minerals occur in the broad region around and within the Lakeland Downs area, and presenting the possibility that diamonds may also occur.

EPM19120 is located over aero-magnetic and local gravity lows, some corresponding to topographic lows and highs and some with coincident radiometric signatures. Radiometric data delineated potassium highs corresponding to circular morphological features with magnetic lows, possibly defining kimberlite pipes.

A 2009 Australian Geoscience magnetic and gravity survey across Cape York Peninsula enabled JAJV to do detailed geophysical modeling and interpretation of these features indicate that they are caused by vents associated with volcanic eruptions which the JAJV considers may be interpreted as possibly diamondiferous mantle-tapping pipes.

Analysis of local geology, aeromagnetics, radiometrics and gravity as well as morphological surface features using Google Earth helped define areas of high interest. Drainage intersecting areas of high interest, such as circular craters and circular geomorphological features, volcanic plugs and swampy depressions were targeted for stream sediment sampling.

Sub blocks relinquished from the company's adjacent tenement EPM16283 between 2009 and 2012 have been incorporated into EPM19120. A total of 29 stream sediment samples previously taken in EPM16283, with the 4 letter COOK are now in EPM19120.

In the 2012-2013 reporting total of 12 stream sediment samples, with a 3 letter code LLE, were collected in the western portion of the tenement. The designated 3 letter code is LLE for Lakeland Extended. These results were pending in the 2012-2013 report and are summarized in this report. A total of 38 stream sediment samples were taken in the 2013-2014 reporting period.

Laboratory and electron microprobe results from the previous 29 samples, designated COOK for Cooktown EPM16283, has produced geochemical indications that possibly reflect

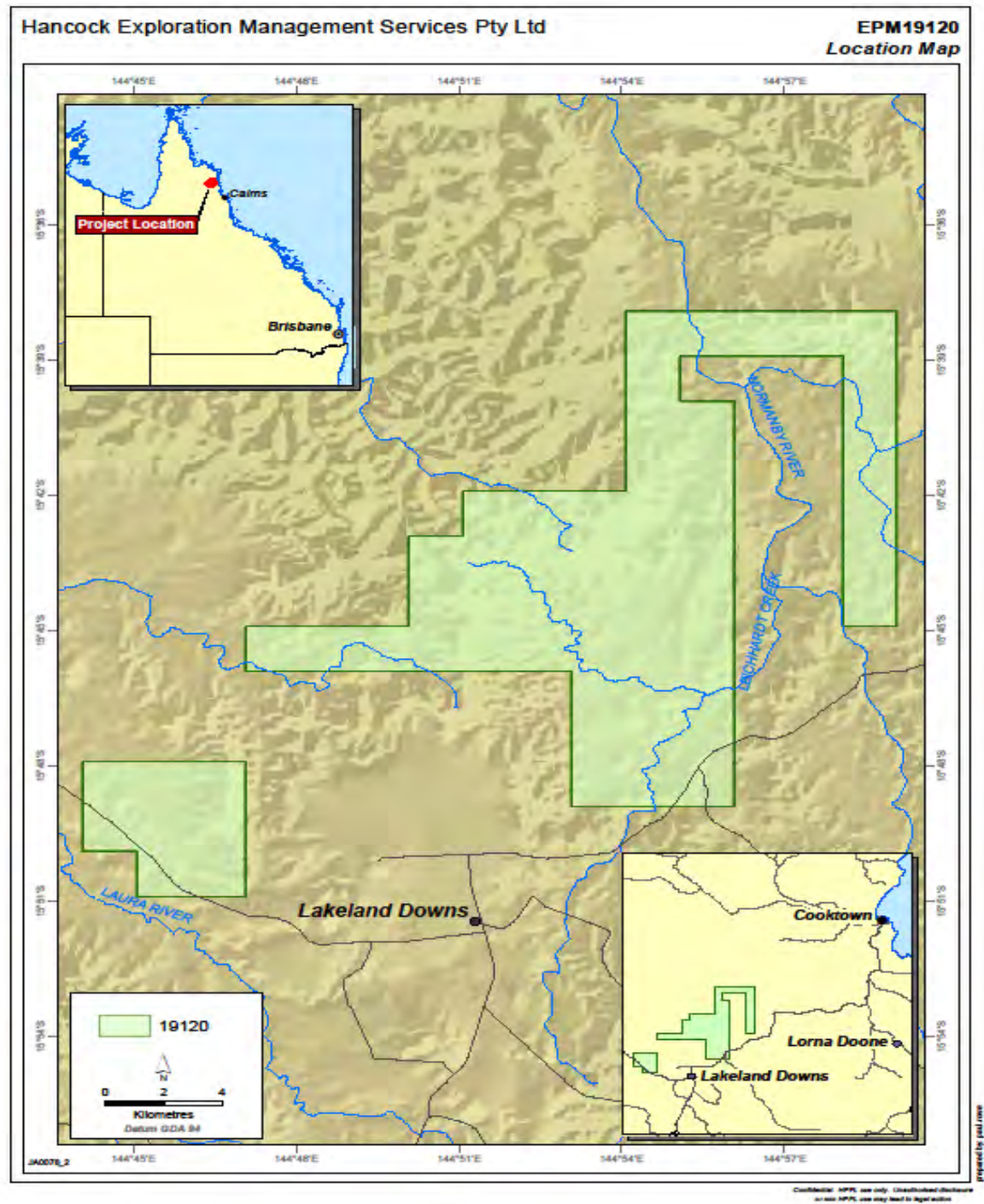
EPM19120 Lakeland Extended Final Report May 2014

ultramafic source rock for the diamond indicator minerals, with the possibility that diamondiferous diatremes and/or dykes may be found within the tenement.

Stream sediment samples with the code LLE were processed at IDL Laboratories in Perth, Western Australia. To date, a total of 14 stream sediment samples have been processed with results not reflecting the abundance of diamond indicator minerals necessary to define an area most likely to contain mantle tapping vents. Abundances of diamond indicator grains reflect the average background of eroded alkali basalts and volcanic ash deposits that outcrop throughout the tenement.

Electron microprobe analyses have confirmed low chromium levels in most indicator minerals with consistent graphical clustering of results, indicating re-melting of high temperature and pressure magmas, with strong resorption of mineral grains, thus placing the minerals within the Eclogite Field. A few indicator minerals have higher chromium values with some Picroilmenites and Chrome Diopsides overlapping the Eclogite Field into the Diamond Inclusion Field and Diamond Eclogite Field. The tiny volume of these high interest grains suggests incorporation within occasional mantle xenoliths found widespread within the Tertiary McLean Basalt.

Figure 1: Location Map EPM19120



2. INTRODUCTION

2.1 LOCATION AND ACCESS

The JAJV Cooktown Project is centered on the town of Lakeland in North Queensland, approximately 80 km west-south-west of Cooktown, and 80km southeast of Laura (Latitude 15° 50' South, Longitude 144° 50' East). Reliable access to the prospects is gained via Peninsula Development Road and Cooktown Development Road.

2.2 GEOLOGY

Within EPM19120 essentially three major rock types exist, the meta sedimentary assemblage of the Late Silurian to Late Devonian Hodgkinson Formation (D-Ch) and the Tertiary McLean olivine basalt and associated pyroclastics (Cze), with a few patches of Lower Cretaceous Battle Camp (Klc) and Jurassic Dalrymple (Jl) sandstones, shales and conglomerates with minor Cainozoic alluvials (Czx) in patchy deposits along major drainage (Figure 2)

Uplift and erosion has stripped the majority of Cretaceous and Jurassic sediments from the Hodgkinson Formation, with only the Tertiary McLean Basalt unconformably overlying the Hodgkinson Formation within the tenement.

The Hodgkinson Formation (D-Ch) is a NNW trending belt of Mid Devonian to Lower Carboniferous deep water turbidites, with a range of major rock types of mudstone, siltstone, slate, hyalite, schist; and minor rock types of arenite, quartzite, limestone, marble, conglomerate, chert, mafic schist, amphibolite and calc-silicate gneiss.

Deep water turbidity current deposits from the Late Silurian to the Late Devonian extend from Tully north up to Cape Melville. The metamorphic grade is generally lower greenschist facies where fine grained rock types predominate. They consist mainly of meta mudstone, meta siltstone, slate, phyllite and schist, consisting of mainly quartz, K-feldspar, muscovite, sericite with minor plagioclase feldspar and ilmenite

Thickness of the Hodgkinson Formation is unknown, it is also unfossiliferous and metamorphosed to lower greenschist facies and upper greenschist facies in areas to the south.

Unconformably overlying the Hodgkinson Formation is the McLean Basalt (Cze) which covers slightly more than 20% of the tenement and is a Tertiary Olivine Basalt with associated pyroclastics. Successive flows show a range of textures and inclusions. Vesicular basalts with ilmenite nodules are common as is a fine grained non-vesicular basalt with polygonal cooling features and chilled margins of black volcanic glass.

Pyroclastic rocks have been noted in a few scattered outcrops. These are moderately weathered and metasomatised, with angular to well-rounded country fragments and mantle xenoliths. Many fragments exhibit strong fracturing, most likely due to decompression and interaction with groundwater during eruption. Many fragments also have reaction rinds, typical of diatreme and hyperbyssal facies.

Epilastic rocks formed from weathering and erosion of pyroclastics are generally mixtures of re-sedimented syn-eruptive volcanoclastic and metasedimentary erosion material termed volcanogenic sedimentary rocks which are widespread but not common.

Stream Alluvials (Czx) are all derived from the two rock types within the tenement.

Metasediments such as slates, phyllites, greywackes, cherts and white vein quartz material derived from the Hodgkinson Formation.

Basalts, both vesicular and non vesicular, scoria, volcanic glass, lherzolite nodules from the McLean basalts with pyroclastic and volcanogenic sedimentary rocks.

Fine grained sands are chiefly quartz from the meta sediments and iron oxides from the basalts with calcite and chalcedony as secondary infill in vesicular lavas.

There is one known occurrence of a basaltic pipe within EPM19120 and another on the tenement boundary in the west.

2.3 PREVIOUS EXPLORATION

Diamond exploration data released by the Queensland Government Department of Mines and Energy shows that a range of diamond indicator minerals occur in the broad region around and within the Lakeland Downs area, and presenting the possibility that diamonds may also occur.

Various indicator minerals were found in the samples, such as pyrope, chrome diopside, chromite, picroilmenite. The morphology of some indicator minerals indicated a likely kimberlitic affinity, with their chemistry similar to those for the alkali basalts with which macrodiamonds are associated elsewhere in eastern Australia. No indicators of undoubted kimberlitic/lamproitic affinity were found.

Oilmin NL, Transoil NL and Petromin NL were granted EPM3238 in May 1982.

These companies explored for diamonds in kimberlites and alluvial deposits in the McLean Volcanic Province, 80km west-south-west of Cooktown.

Air photo interpretation was used to identify any possible kimberlitic intrusions, but none were found. No diamonds had been previously found in this area and no gravel samples were collected. Existing aeromagnetic and radiometric data were analysed to delineate any anomalies, but none were found. The Permit was relinquished in July 1982.

The Lakeland area has historically produced very minor quantities of Sapphire and Ruby with variously coloured Zircons, Almandine and Pyrope Garnets and Peridot (magnesium olivine), by prospectors, from streams draining the McLean Tertiary alkali basaltic vents, with occasional very fine alluvial gold from narrow auriferous quartz veins within the Hodgkinson Formation metasediments.

2.4 EXPLORATION RATIONALE

The exploration objective was the discovery of diamondiferous Kimberlite and Lamproite pipes within Devonian metasediments and/or Tertiary mafic volcanics at the northern part of the Hodgkinson Basin.

The hypothesis is that diamonds can occur in alkaline basaltic rocks as well as in the "traditional" kimberlite and lamprophyre rock associations. This hypothesis has not previously been tested in Australia, where the source rocks of numerous alluvial diamond occurrences along the eastern hinterland have identified interpreted volcanic vents in the areas of JAJV exploration tenements. These vents may never have been previously identified or investigated.

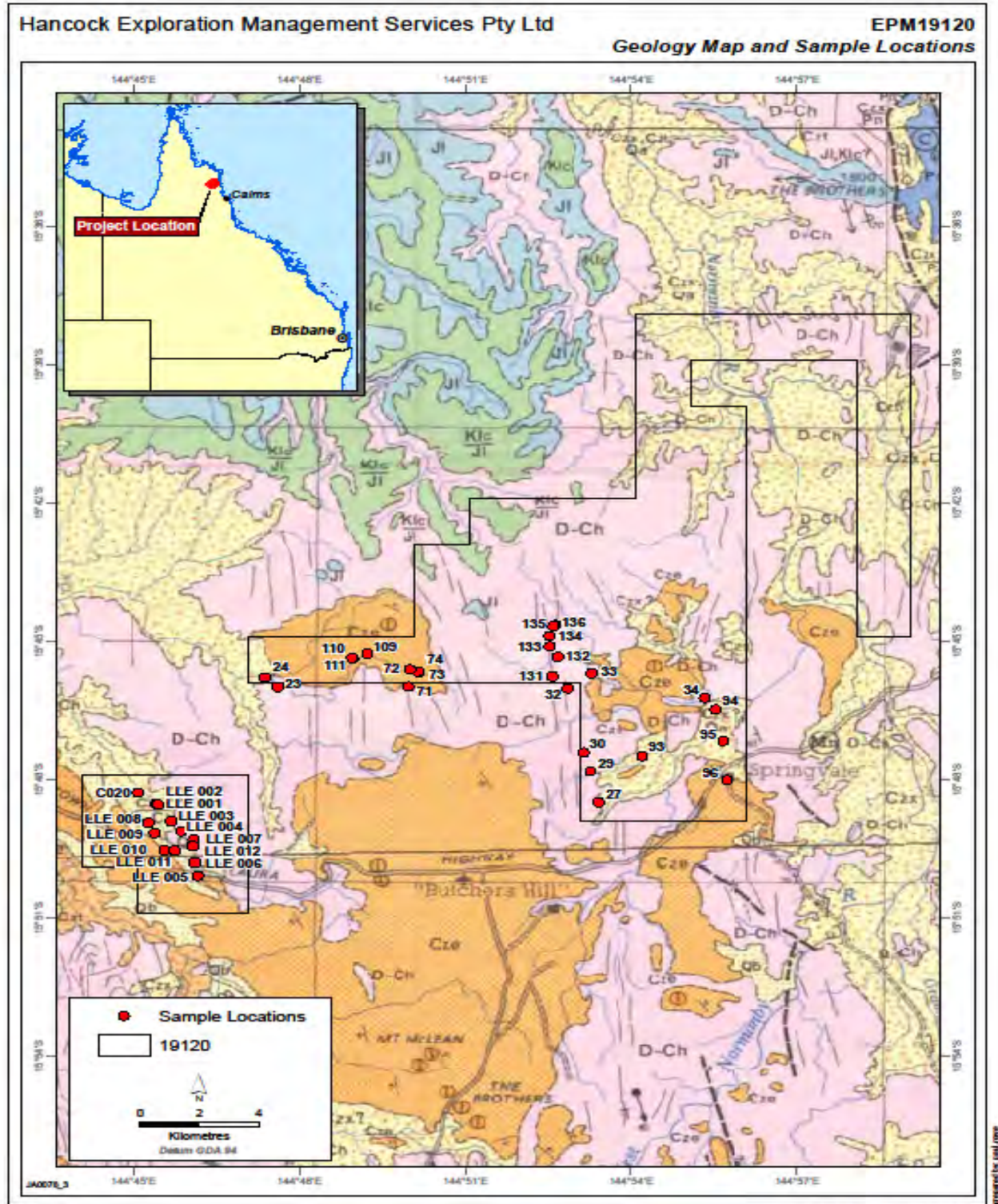
Most of the known areas with alluvial diamonds have adjacent occurrences of alkaline basalts. The joint venture hypothesis is that the vent structures may be potential hosts for diamonds

A 2009 Australian Geoscience magnetic and gravity survey across Cape York Peninsula enabled the JAJV to do a detailed gravity survey across key target areas within the tenement. Geophysical modeling and interpretation of these features indicate that they are caused by vents associated with volcanic eruptions which JAJV geologists consider may be interpreted as possibly diamondiferous mantle-tapping pipes.

All drainages were to be stream sediment sampled and areas of clay alteration being loam sampled with rock outcrops with unusual lithologies to be digested by caustic fusion. Diamond indicator mineral grains recovered from tabling, dense media and magnetic separation, were to be electron microprobed to assess mantle chemistry. All geological, geophysical and geochemical data to be assessed for the possibility of diamondiferous breccias, kimberlite and/or Lamproite pipes.

Delineation of possible pipes would require RC and diamond drilling to determine areal extent and depth.

Figure 2: Geological Map and Sample Locations of EPM19120
(from COOKTOWN 1: 250,000 (SD 55-13))



3. EXPLORATION COMPLETED BY THE JAJV

3.1 Exploration completed in the 2013-2014 Reporting Period

- A total of 38 stream sediments were taken in the 2013-2014 reporting period but only 14 of these were submitted for mineralogical investigation.
- A total of 12 stream sediment samples were taken in the 2012-2013 reporting period, when results were pending. Samples have been processed and results discussed in this report.
- Relinquished sub blocks from EPM16283 were incorporated into EPM19120 with 29 previous COOK samples. These were previously laboratory tested and a selection of kimberlitic diamond indicator mineral grains were electron microprobed.
- Re-analysis and interpretation of mineral chemistry providing new sampling and mapping targets.
- Laboratory processing of geochemical samples and selection of grains for electron microprobing.
- Review of geological and geophysical data in relation to previous laboratory and electron microprobe results.
- Reinterpretation of recently acquired gravity and magnetic data and reinterpretation of the northern structural corridor.

3.2 Geochemical Results and Discussion

Samples taken across the western portion of the tenement were to follow up an original sample, COOK 020 taken in relinquished EPM16283 sub blocks (Figure 2). Diamond indicator minerals from COOK 020 were abundant with all drainages upstream requiring sampling. The headwaters of the main drainage are sourced from the two Goldtyne volcanic craters and extensive areas of basaltic flows.

West flowing drainages previously taken in relinquished sub blocks of EPM16283 were COOK 023 and 024, 071-074 and 109 to 111. The dominant geology is Hodgkinson meta sediments, with very minor amounts of diamond indicator minerals recovered. The source of the indicators appears to be minor layered deposits of extensively weathered volcanic ash scattered across the western drainage divide.

East flowing drainages were also previously sampled by COOK 027, 029-033, 126, 131-136. The sample locations are in EPM19120 but the source areas in the headwater regions are in EPM16283. Very minor diamond indicators were recovered. Stream sediment sample COOK 031 directly sources a diamondiferous breccia pipe within EPM16283 and returned abundant diamond indicator minerals with mantle chemistry.

North flowing drainages COOK 093-096, with COOK 094 sampling Boggy Creek that sources most of the eastern ranges within adjacent EPM16283. Samples 095 and 095 were short drainages returning very few indicators. Sample COOK 093 returned abundant indicator minerals as the upper drainages within EPM19120 source a cluster of small volcanic vents. This area is very prospective with 183 Chromites, 3 Picroilmenites, 226 G9 Pyrope Garnets and 2 Chrome Pyrope Garnets all deemed possible to probably kimberlitic.

Lakeland Extended LLE sampling targeted the McLean alkali basalts that outcrop along the Laura Development Road and drainages that erode the Hodgkinson metasediments in ranges north of the Cooktown Development Road, Figure 2. The priority samples were the drainages sourced from the basalts. These were LLE001 to LLE 014, of which 4 were negative and 5 contained background indicator volumes.

The remaining samples LLE005, 006, 008, 009, 010 contained slightly elevated abundances of diamond indicator minerals, such as Pyrope Garnet, Picroilmenite, Chromite and Chrome Diopside.

Electron microprobe results of Pyrope Garnets from the COOK series had chrome values below 2wt%, well outside the Diamond Inclusion Field and were deemed Eclogitic in origin. Chrome Diopsides were more Kimberlitic with a few containing over 2wt% Chrome and another population well below 2wt%. Plots over 2wt% within the DIF and well outside. Origin is Eclogitic to Lamprophyric.

Chromites have chrome values well below the 60wt% cutoff for inclusion in the DIF. Averaging between 45 to 55wt % Chrome, they are deemed more Lamprophyric and belong to a possible reworked kimberlite that has undergone partial melting with graphical clustering of chemistry.

Picroilmenite. If the grains have enhanced chromium oxide (Cr_2O_3) and high Titanium (TiO_2) and Magnesium (MgO) oxide, they fall within the Diamond Inclusion Field.
DIF = >1wt% Cr_2O_3 , >7wt% MgO

Microprobe plots of magnesium (MgO) versus titanium (TiO_2) indicate that the grains fall outside of the kimberlite field, also the chromium content is too low and the iron content is too high for picroilmenite from EPM19120 to plot within the Diamond Inclusion Field, however they do plot within the Eclogite Field, with possible origins in deep seated reworked kimberlite.

4. CONCLUSIONS AND RECOMMENDATIONS

Stream sediment and loam sampling has identified a complete suite of diamond indicator minerals indicating possible mantle tapping pipes within the tenement boundary.

The recovery of microdiamonds in adjacent tenements has confirmed that there are local sources of ultra high temperature and pressure rock types capable of sourcing diamondiferous deep crustal to mantle material.

Recent discoveries of kimberlitic clays and loams in Hancock's adjacent tenements suggests multiple pipes, consistent with the pipe clustering model.

The surface morphology of the LLE grains were the same as the COOK series grains, with pale pink and orange Pyrope Garnets with generally low chrome values. The Picroilmenites were generally boarderline ilmenites, with the Chrome Diopsides a very pale green colour indicating again the low chrome concentrations. The Chromites were generally hard on the streak and shards did not show any red reflectance, typical of the chromites and picotites recovered from the alkali basalts and basanites.

The remaining samples were collected within the Hodgkinson Formation and panned concentrates recovered few to nil indicator minerals.

Microprobe chemistry of selected grains has shown a depletion in chrome content consistent with an Eclogitic ultramafic rock type and a possibly reworked/partially remelted Kimberlite.

A second population of high chrome indicator minerals, indicates through graphical plotting of microprobe chemistry, that two or more populations of diamond indicator minerals exist, although NO microprobe chemistry has elevated chrome values high enough to plot within the Diamond Inclusion Field, suggesting a paragenesis that reflects an alkali basalt heritage and a reworked/remelted ultramafic. This is consistent with multiple eruption episodes with different rock types sourced from high temperature and pressure regions.

The lack of a significant amount of Chrome Diopsides and Pyrope Garnets suggest that all diamond indicator minerals came from mantle xenoliths caught up in the deep crustal Basanites, Alkali Olivine Basalts and rocks of Lamprophyric composition.

Microprobe chemistries of indicator grains do not compare with Diamond Inclusion Field chemistry and are more likely crustal in origin.

The JAJV considers the area within EPM19120 offer little, if any prospectivity for the discovery of diamondiferous kimberlite and or lamproite pipes.

BIBLIOGRAPHY

Cranfield L C, Diprose G. Diamonds, diamond indicator minerals and a review of exploration for diamonds in Queensland, Queensland Geological Record 2008/4. Queensland Government Department of Mines and Energy.

Middlemost Eric A K, 1985. Magmas and Magmatic Rocks. Longman Group Limited.

McPhie J, Doyle M, Allen R 1993. Volcanic Textures. A guide to the interpretation of texture in volcanic rocks. CODES, University of Tasmania.

AGSO Journal of Australian geology and geophysics. Volume 17, Number 2, 1997

APPENDIX

Laboratory mineralogical investigation results

LLE014

Job No: 723

Date Started: 12-3-14

Processing Weights

Initial:	31.0 kg
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+2mm:	N/A kg
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After Tabling:	2.52 kg
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After TBE: 48 g

Positive

Negative

Positive (Other)

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x). Observed only(v). Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm		>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond											
Chrome Diopside											
Chromite											
Phlogopite											
Picroilmenite											
Pyrope											
Pyrope Cr											
Pyrope Ti											
Kimberlitic Zircon											
Mineral	Size/mm	Description									

Other Minerals (Volume% after Heavy Liquid-HL)

Other Minerals	Volume % after 120h, 120°C, 120 bar	Equil. 120h, 120°C, 120 bar	Volume % after 120h, 120°C, 120 bar	Equil. 120h, 120°C, 120 bar	Volume % after 120h, 120°C, 120 bar	Equil. 120h, 120°C, 120 bar
Almandine	T	Orthopyroxene		Spinel		Apatite
Andradite		Clinopyroxene		Magnetite		Monazite
Grossular		Amphibole	S	Leucoxene	O	Phosphate
Spessartine		Biotite		Maghemite	A	Olivine
Diopside		Prehnite		Limonite	A	Rock Fragments
Andalusite		Corundum		Pyrite(psuedo)	O	
Kyanite		Hematite		Pyrite		Zircon
Sillimanite		Ilmenite	O	Barite		Titanite
Staurolite		Rutile	F	Anhydrite		Picotite
Epidote		Anatase		Diaspore	O	Pleonaste
Tourmaline	S	Brookite		Magnesite		

P >50%	A 20-50%	C 10-20%	S 1-10%	O 20grains-1%	F 5-20grains	T 1-5grains
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Mineralogist/Observer: NJT-EH

Date Completed: 11-4-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40279

LLE013

Job No: 723

Positive

Processing Weights

Negative

Initial:	39.5 kg
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+2mm:	N/A kg
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After Tabling: 4.10 kg

After TBE: 62 g

Positive (Other)

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x). Observed only(v). Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm		>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond											
Chrome Diopside											
Chromite											
Phlogopite											
Picroilmenite											
Pyrope											
Pyrope Cr											
Pyrope Ti											
Kimberlitic Zircon											
Mineral	Size/mm	Description									

Other Minerals (Volume% after Heavy Liquid-HL)

Other Minerals	Volume % after 120h, 120°C, 120 MPa	Volume % after 120h, 120°C, 120 MPa	Volume % after 120h, 120°C, 120 MPa	Volume % after 120h, 120°C, 120 MPa	Volume % after 120h, 120°C, 120 MPa	Volume % after 120h, 120°C, 120 MPa
Almandine	T	Orthopyroxene		Spinel		Apatite
Andradite		Clinopyroxene		Magnetite		Monazite
Grossular		Amphibole	S	Leucosene		Phosphate
Spessartine		Biotite		Maghemite	A	Olivine
Diopside		Prehnite		Limonite	A	Rock Fragments
Andalusite		Corundum		Pyrite(psuedo)		
Kyanite		Hematite		Pyrite		Zircon
Sillimanite		Ilmenite	O	Barite		Titanite
Staurolite		Rutile		Anhydrite		Picotite
Epidote		Anatase	T	Diaspore	S	Pleonaste
Tourmaline	C	Brookite		Magnesite		

P >50%	A 20-50%	C 10-20%	S 1-10%	O 20grains-1%	F 5-20grains	T 1-5grains
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Mineralogist/Observer: NJT-EH

Date Completed: 11-4-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40279

DIAMOND INDICATOR DATA

Sample No:

LLE012**Job No: 723**

Date Started: 12-3-14

Positive ☐**Processing Weights**

Initial: 32.1 kg

Negative ☒

+2mm: N/A kg

After Tabling: 1.83 kg

Positive (Other) ☐

After TBE: 19 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite										
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	F	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular	T	Amphibole		Leucosene	S	Phosphate	
Spessartine		Biotite		Maghemite	A	Olivine	
Diopside	T	Prehnite		Limonite	S	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	S		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile		Anhydrite		Picotite	O
Epidote		Anatase				Pleonaste	O
Tourmaline	O	Brookite	T	Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH

Date Completed: 8-4-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40279

DIAMOND INDICATOR DATA

Sample No:

LLE011Job No: **723**

Date Started: 11-3-14

Positive ☒**Processing Weights**

Initial: 33.7 kg

Negative ☐

+2mm: N/A kg

After Tabling: 1.81 kg

Positive (Other) ☐

After TBE: 16 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite										
Phlogopite										
Picroilmenite										
Pyrope					1	3			<5	Poss Kimb
Pyrope Cr										
Pyrope Ti					1	1			<5	Poss Kimb
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Pyrope		Angular fragments, Pale pink with slight green tinge.								
Pyrope Ti		Angular fragments, Pale orange.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	O	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene	F	Magnetite		Monazite	
Grossular		Amphibole		Leucosene	S	Phosphate	
Spessartine		Biotite		Maghemite	A	Olivine	O
Diopside	F	Prehnite		Limonite	C	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	T		
Kyanite		Hematite		Pyrite		Zircon	F
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile	T	Anhydrite		Picotite	O
Epidote		Anatase	T	Diaspore	T	Pleonaste	S
Tourmaline	O	Brookite	F	Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH

Date Completed: 3-4-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40272

DIAMOND INDICATOR DATA

Sample No:

LLE010Job No: **723**

Date Started: 11-3-14

Positive ☒**Processing Weights**

Initial: 31.8 kg

Negative ☐

+2mm: N/A kg

After Tabling: 5.13 kg

Positive (Other) ☐

After TBE: 254 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside						2			<3	Poss Kimb
Chromite										
Phlogopite										
Picroilmenite					1	1			<3	Kimberlitic
Pyrope				2	3	3			<5	Poss Kimb
Pyrope Cr										
Pyrope Ti			1	1	1	4			<5	Prob Kimb
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Cr Diopside		Stubby, Prismatic, CrO~1%, Cr bearing Diopside in background.								
Picroilmenite		0.4mm grain is fragment with knobbly surface/leucoxene coating/conchoidal fracture, 0.3mm grain is whole with granular surface, Both weakly paramagnetic (Mag 4).								
Pyrope		Angular fragments, Pink.								
Pyrope Ti		Angular fragments, Orange - fleshy orange, Etched surface on one.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	F	Orthopyroxene		Spinel		Apatite	F
Andradite		Clinopyroxene	S	Magnetite		Monazite	
Grossular	F	Amphibole	S	Leucoxene	O	Phosphate	
Spessartine		Biotite		Maghemite	A	Olivine	O
Diopside	S	Prehnite		Limonite	A	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	O		
Kyanite		Hematite		Pyrite	T	Zircon	T
Sillimanite	T	Ilmenite		Barite		Titanite	
Staurolite		Rutile	F	Anhydrite		Picotite	O
Epidote	T	Anatase		Diaspore	T	Pleonaste	S
Tourmaline		Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH-LG

Date Completed: 11-4-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40279

DIAMOND INDICATOR DATA

Sample No:

LLE009Job No: **723**

Date Started: 11-3-14

Positive ☒**Processing Weights**

Initial: 32.4 kg

Negative ☐

+2mm: N/A kg

After Tabling: 3.41 kg

Positive (Other) ☐

After TBE: 115 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite										
Phlogopite										
Picroilmenite						1			<2	Kimberlitic
Pyrope					3	4			<3	Prob Kimb
Pyrope Cr										
Pyrope Ti				1	3	5			<3	Kimberlitic
Kimberlitic Zircon										

Mineral	Size/mm	Description
Picroilmenite		Angular whole grain, Metallic/conchoidal fracture, Fine knobbly surfaces, Leucoxene coatings, Mag 4 (weakly paramagnetic).
Pyrope		2 whole etched grains, Remainder angular fragments, Pink to fleshy pink with slight red fire.
Pyrope Ti		Angular fragments, Minor orange peel texture, Orange with slight red fire.

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	O	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene	F	Magnetite	S	Monazite	
Grossular	F	Amphibole		Leucoxene	S	Phosphate	
Spessartine		Biotite		Maghemite	A	Olivine	O
Diopside	F	Prehnite		Limonite	A	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	F		
Kyanite		Hematite		Pyrite		Zircon	
Sillimanite	T	Ilmenite	F	Barite		Titanite	
Staurolite		Rutile	T	Anhydrite		Picotite	O
Epidote		Anatase	T	Diaspore	T	Pleonaste	S
Tourmaline	O	Brookite	T	Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH

Date Completed: 3-4-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40272

DIAMOND INDICATOR DATA

Sample No:

LLE008Job No: **723**

Date Started: 11-3-14

Positive ☒**Processing Weights**

Initial: 35.2 kg

Negative ☐

+2mm: N/A kg

After Tabling: 4.63 kg

Positive (Other) ☐

After TBE: 92 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite						2			5-10	Poss Kimb
Phlogopite										
Picroilmenite										
Pyrope				2		1			<3	Prob Kimb
Pyrope Cr					1				<6	Kimberlitic
Pyrope Ti					1				<6	Poss Kimb
Kimberlitic Zircon										

Mineral	Size/mm	Description
Chromite		Subhedral, Distorted, Abrasion rounded, Cokey.
Pyrope		2 +0.5 whole grains with orange peel surface, 1 angular fragment, Flesh pink.
Pyrope Cr		Angular fragment, Minor wear, Lilac with Cr green tinge.
Pyrope Ti		Angular fragment, Frosted, Minor wear, Pale fleshy orange.

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	S	Orthopyroxene		Spinel	T	Apatite	F
Andradite		Clinopyroxene	O	Magnetite		Monazite	
Grossular		Amphibole	F	Leucosene	S	Phosphate	
Spessartine		Muscovite	T	Maghemite	C	Olivine	F
Diopside	T	Prehnite		Limonite	A	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)			
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile	F	Anhydrite		Picotite	
Epidote		Anatase	T			Pleonaste	C
Tourmaline	O	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-LG

Date Completed: 3-4-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40272

DIAMOND INDICATOR DATA

Sample No:

LLE007Job No: **723**

Date Started: 10-3-14

Positive ☒**Processing Weights**

Initial: 26.6 kg

Negative ☐

+2mm: N/A kg

After Tabling: 6.20 kg

Positive (Other) ☐

After TBE: 45 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite						1			5-10	Poss Kimb
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Chromite		Subhedral, Dull, Abrasion rounded, Thin cokey rim.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	T	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular		Amphibole		Leucosene		Phosphate	
Spessartine		Muscovite	T	Maghemite	C	Olivine	
Diopside		Prehnite		Limonite	C	Rock Fragments	P
Andalusite		Corundum		Pyrite(psuedo)	C		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile	T	Anhydrite		Picotite	
Epidote		Anatase		Diaspore		Pleonaste	T
Tourmaline	O	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-LG

Date Completed: 25-3-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40262

DIAMOND INDICATOR DATA

Sample No:

LLE006Job No: **723**

Date Started: 10-3-14

Positive ☒**Processing Weights**

Initial: 30.4 kg

Negative ☐

+2mm: N/A kg

After Tabling: 3.42 kg

Positive (Other) ☐

After TBE: 92 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite										
Phlogopite										
Picroilmenite										
Pyrope					2	2			<5	Prob Kimb
Pyrope Cr										
Pyrope Ti				2	3	3			<5	Poss Kimb
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Pyrope		Angular fragments, Pale lilac with slight Cr tinge.								
Pyrope Ti		Angular fragments, Orange peel textures, Minor wear, Pale orange to orange with slight red fire.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	F	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular	O	Amphibole		Leucosene		Phosphate	
Spessartine		Biotite		Maghemite	A	Olivine	O
Diopside	T	Prehnite		Limonite		Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	S		
Kyanite		Hematite		Pyrite		Zircon	F
Sillimanite		Ilmenite	O	Barite		Titanite	
Staurolite		Rutile		Anhydrite		Picotite	O
Epidote		Anatase				Pleonaste	S
Tourmaline	O	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH

Date Completed: 2-4-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40272

DIAMOND INDICATOR DATA

Sample No:

LLE005**Job No: 723**

Date Started: 10-3-14

Positive ☒**Processing Weights**

Initial: 30.8 kg

Negative ☐

+2mm: N/A kg

After Tabling: 3.60 kg

Positive (Other) ☐

After TBE: 66 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside					1				<5	Poss Kimb
Chromite										
Phlogopite										
Picroilmenite										
Pyrope					1	6			<5	Poss Kimb
Pyrope Cr				1					<5	Kimberlitic
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Cr Diopside		Prismatic, Ribbed, CrO ~ 1%.								
Pyrope		Angular fragments, 4 pink, 3 pale orange (grades into Grossular).								
Cr Pyrope		Angular fragment, Lilac, green tinge.								
N.B.		Cr Pyrope count is NOT included in Pyrope count.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	O	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene	O	Magnetite		Monazite	
Grossular	O	Amphibole	O	Leucosene		Phosphate	
Spessartine		Muscovite		Maghemite	A	Olivine	O
Diopside	O	Prehnite		Limonite	C	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	O		
Kyanite		Hematite		Pyrite		Zircon	
Sillimanite	F	Ilmenite		Barite		Titanite	
Staurolite		Rutile		Anhydrite		Picotite	O
Epidote		Anatase		Diaspore	T	Pleonaste	S
Tourmaline	S	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-EH

Date Completed: 25-3-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40262

LLE004**Job No: 723**

Date Started: 10-3-14

Positive

Processing Weights

Initial:	27.4 kg
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+2mm:	N/A kg
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After Tabling:	9.13 kg
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After TBE: 22 g

Negative

Positive (Other)

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Kimberlite, Diamond Indicators										
Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite										
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								

Other Minerals (Volume% after Heavy Liquid-HL)

Other Minerals (Volume % above 100°C, Figure 11.7)							
Almandine	F	Orthopyroxene		Spinel		Apatite	F
Andradite		Clinopyroxene	T	Magnetite		Monazite	
Grossular		Amphibole		Leucosene	O	Phosphate	
Spessartine		Muscovite		Maghemite	C	Olivine	
Diopside		Prehnite		Limonite	A	Rock Fragments	P
Andalusite		Corundum		Pyrite(psuedo)	S		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	T
Staurolite		Rutile	O	Anhydrite		Picotite	
Epidote		Anatase		Diaspore		Pleonaste	T
Tourmaline	O	Brookite		Magnesite			

P >50%	A 20-50%	C 10-20%	S 1-10%	O 20grains-1%	F 5-20grains	T 1-5grains
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Mineralogist/Observer: NJT-LG

Date Completed: 25-3-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40262

DIAMOND INDICATOR DATA

Sample No:

LLE003Job No: **723**

Date Started: 7-3-14

Positive ☒**Processing Weights**

Initial: 32.6 kg

Negative ☐

+2mm: N/A kg

After Tabling: 3.79 kg

Positive (Other) ☐

After TBE: 43 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite						1			5-10	Poss Kimb
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Chromite		Subhedral, Minor abrasion rounding, Primary rounding, Pitted, Minor grooves.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	O	Orthopyroxene	S	Spinel		Apatite	
Andradite		Clinopyroxene	T	Magnetite		Monazite	
Grossular		Amphibole		Leucosene	S	Phosphate	
Spessartine		Muscovite		Maghemite	C	Olivine	
Diopside		Prehnite		Limonite	A	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	O		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	
Staurolite		Rutile	O	Anhydrite		Picotite	T
Epidote	T	Anatase		Diaspore		Pleonaste	T
Tourmaline	O	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-LG

Date Completed: 25-3-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

40262

DIAMOND INDICATOR DATA

Sample No:

LLE002**Job No: 723**

Date Started: 7-3-14

Positive ☒**Processing Weights**

Initial: 30.8 kg

Negative ☐

+2mm: N/A kg

After Tabling: 4.58 kg

Positive (Other) ☐

After TBE: 34 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite						3			6-15	Poss Kimb
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Chromite		Subhedral, Abrasion rounded, Cokey.								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	O	Orthopyroxene		Spinel		Apatite	F
Andradite		Clinopyroxene		Magnetite		Monazite	
Grossular		Amphibole		Leucosene		Phosphate	
Spessartine		Muscovite	T	Maghemite	C	Olivine	
Diopside		Prehnite		Limonite	C	Rock Fragments	P
Andalusite		Corundum		Pyrite(psuedo)	T		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite	T	Barite		Titanite	
Staurolite		Rutile	T	Anhydrite		Picotite	
Epidote		Anatase	T	Diaspore		Pleonaste	T
Tourmaline	T	Brookite	T	Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-LG

Date Completed: 24-3-14

**Independent Diamond Laboratories Pty Ltd**

ABN 34 005 948 185

40262

DIAMOND INDICATOR DATA

Sample No:

LLE001Job No: **723**

Date Started: 7-3-14

Positive ☒**Processing Weights**

Initial: 30.2 kg

Negative ☐

+2mm: N/A kg

After Tabling: 3.12 kg

Positive (Other) ☐

After TBE: 29 g

Ø/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	<0.25	Fractions Analysed(x).Observed only(o).Scanned only(s)							
Mill								Ø/mm	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1
Table	x	x	x	x	x	x	x	NM	x	x	x	x	x		
HL		x	x	x	x	x		M4	x	x	x	x	x		
Mag		x	x	x	x	x		M3	x	x	x	x	x		

Kimberlite, Lamproite Indicators

Sieve Size/mm	>2	>1	>0.8	>0.5	>0.4	>0.3	>0.25	>0.1	Wear/km	Appearance
Diamond										
Chrome Diopside										
Chromite				1		1			6-15	Prob Kimb
Phlogopite										
Picroilmenite										
Pyrope										
Pyrope Cr										
Pyrope Ti										
Kimberlitic Zircon										
Mineral	Size/mm	Description								
Chromite		Subhedral, Abrasion rounded, Cokey, Small patch of submetallic skin .								

Other Minerals (Volume% after Heavy Liquid-HL)

Almandine	S	Orthopyroxene		Spinel		Apatite	
Andradite		Clinopyroxene	T	Magnetite		Monazite	
Grossular		Amphibole		Leucosene	O	Phosphate	
Spessartine		Biotite		Maghemite	S	Olivine	
Diopside		Prehnite		Limonite	S	Rock Fragments	A
Andalusite		Corundum		Pyrite(psuedo)	S		
Kyanite		Hematite		Pyrite		Zircon	T
Sillimanite		Ilmenite		Barite		Titanite	T
Staurolite		Rutile	O	Anhydrite		Picotite	
Epidote		Anatase	F	Diaspore	T	Pleonaste	S
Tourmaline	O	Brookite		Magnesite			

P >50% A 20-50% C 10-20% S 1-10% O 20grains-1% F 5-20grains T 1-5grains

Mineralogist/Observer: NJT-LG

Date Completed: 24-3-14



Independent Diamond Laboratories Pty Ltd

ABN 34 005 948 185

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