ANNUAL REPORT

FOR THE PERIOD 3 DECEMBER 2012 TO 2 DECEMBER 2013,

E04/1936 BROOKING DIAMOND JOINT VENTURE

LENNARD RIVER SE51-08

WESTERN AUSTRALIA

Tenement Holders: Worldwide Diamond Exploration Consultancy Pty Ltd

Global Diamond Exploration Services Pty Ltd

S.E. Dowling

Date: December 2013

Author: S.E. Dowling

Distribution: Department of Mines and Petroleum WA

Worldwide Diamond Exploration Consultancy Pty Ltd

Global Diamond Exploration Services Pty Ltd

S.E. Dowling

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

INTRODUCTION

The Brooking Diamond Joint Venture Project comprises Exploration Licences E04/1936 and ELA04/2317. The Project area is located approximately 55km NNW of Fitzroy Crossing in the West Kimberley region of Western Australia on the Lennard River 1:250,000 (SE51-08) and Leopold Downs 1:100,000 (3692) map-sheets. The Project area straddles the boundary between the Brooking Springs and Leopold Downs pastoral leases. The Exploration Licence E04/1936 is currently 100% owned and operated by Worldwide Diamond Exploration Consultancy Pty Ltd, Global Diamond Exploration Services Pty Ltd and S. E. Dowling. Worldwide Diamond Exploration Consultancy Pty Ltd, Global Diamond Exploration Services Pty Ltd and S. E. Dowling formed Leopold Diamond Company Pty Ltd (ACN 159 669 673) on 27 July 2012 with the intention of transferring the title of E04/1936 into this single entity. This transfer of title was assessed by the Department of State Revenue during 2013 and is currently progressing through the Department of Mines and Petroleum Mineral Titles division. The Exploration Licence Application E04/2317 was made on 22 May 2013 by Leopold Diamond Company Pty Ltd and is currently progressing through to grant.

The Brooking Project area is located approximately 50 km ESE of the Ellendale Lamproite Field and has been continuously explored for diamonds since 1976; following the discovery by the Ashton Joint Venture, of the Big Spring Cluster of sub-economic, variably diamondiferous, dykes, pipes and sills of Miocene-aged olivine lamproite and leucite-lamproite at Big Spring, 5 km NNE of the Brooking Project area. The Ashton Joint Venture also recovered diamonds and fresh to fresh-worn kimberlitic indicator minerals suggestive of derivation from at least one local provenance; from stream-sediment and soil samples collected from the tributaries of the Brooking, Homestead and Cajuput Creeks which drain the black-soil covered Devonian limestone reef complexes forming the Oscar Plateau.

These positive results provided the stimulus for persistent but unsuccessful exploration between 1976 and 2002 by Stockdale Prospecting, Metana Minerals NL, Mr Manning, Moonstone Diamond Corporation, Diamond Rose NL, Thundelarra Exploration Ltd/Resource Exploration and Diamond Exploration Consultants/Alcaston Mining. Historic exploration programmes have involved the acquisition of aerial photography and Landsat/Spot imagery, airborne magnetic, resistivity and radiometric surveys, ground magnetic traverses, regional stream-sediment, soil and loam sampling and associated geochemistry, kimberlitic indicator mineral observation and associated mineral geochemistry and shallow percussion drilling. In

2002, following a regional HEM survey, Rio Tinto Exploration Pty Ltd discovered Leopold 1; a Miocene-aged poly-phase dyke of olivine-phlogopite lamproite and olivine-leucite lamproite , approximately 1.5km east of the eastern boundary of the Brooking Project Area . This discovery, although barren of diamonds, provided impetus for continuing exploration for similar lamproites concealed under the transported Quaternary black-soils developed over the Devonian limestone karst topography forming the Oscar Plateau.

Exploration completed over E04/1936 by the Brooking Diamond Joint Venture during 2011 comprised; extensive historic exploration data compilation and review, re-processing of open-file geophysical data, collection of 30 stream-sediment samples and 33 soil samples, kimberlitic indicator mineral observation and geochemical assays.

Exploration completed over E04/1936 by the Brooking Diamond Joint Venture during 2012 comprised; collection of 22 stream-sediment samples (B035-B056), 11 soil samples (BM1, LEO1A,1B-LEO9) and 7 rock-chip samples (BS1-BS3, LEO1, LS1-LS3), processing of 10 stream-sediment samples (B035-B044), diamond indicator mineral observation (B035-B044), SEM analyses of ferro-magnesian micas observed in a stream-sediment sample (B012) and a surface rock sample (BUN1) collected in 2011, and from historic drill-hole chip samples (Moonstone KBH1, SFH1), MMI ^{TM} geochemical assays (BM1, LEO1A, LEO1B-LEO9), and geological reconnaissance utilizing ortho-rectified, high resolution, satellite imagery combined with AuScope ASTER imagery and reprocessed historic TMI and resistivity survey data.

Exploration completed over E04/1936 by the Brooking Diamond Joint Venture during 2013 has comprised; collection of 2 stream-sediment samples (B068, B069), processing of 14 stream-sediment samples (B045-B056, B068, and B069), diamond indicator mineral observation (B045-B056, B068, and B069), trial seismic transects of 3 areas, and an ADROK^{TM} signal calibration pilot study.

The Brooking Joint Venture successfully attracted external support of $30,000 from the West Australian Department of Mines and Petroleum Royalties for Regions Co-funded Government Industry Drilling Program 2012-2013 WA Exploration Incentive Scheme (DAP2012/00008848) to fund percussion drilling and associated geochemistry to be completed before the end of June 2013. Leopold Diamond Company Pty Ltd was unfortunately unable to take advantage of this government financial support as a result of their failure to attract private investment to fund proposed geophysical and geochemical surveys and drilling programmes during 2013.

.

1.0 LOCATION

The Brooking Diamond Joint Venture Project is located 190 km ESE of Derby and 55 km NNW of Fitzroy Crossing in the Derby-West Kimberley Shire of Western Australia, Figure 1. The Project area is located on the Lennard River 1:250,000 (SE51-08) and Leopold Downs 1:100,000 (3692) map-sheets.

Access to the Project area is via the Great Northern Highway and Tunnel Creek-Fairfield Road and thence by station tracks of the Brooking Springs Pastoral Lease (3114/573) and the Leopold Downs Pastoral Lease (3114/750).

The Leopold Downs Pastoral Lease is managed by Mr. Steve Hagan of the Bunuba Cattle Company. In October 2012 the Bunuba Cattle Company offered to purchase Brooking Springs Station from the estate of the late Ms Jenyns in order to enter into an agreement with AA Co, whereby AA Co was able to purchase cattle from the Bunuba Cattle Company-owned stations of Brooking Springs, Leopold Downs and Fairfield Stations. This offer was not finalized and Brooking Springs Station is currently managed by Mr. Garth Camm (the son of the late Ms Jenyns).

On 31 August 2011, the Australian Government Minister for Sustainability, Environment, Water, Population and Communities (the Minister) included the West Kimberley and its National Heritage values in the National Heritage List. The Brooking Diamond Project Area lies within the boundaries of the West Kimberley Heritage Area and is covered by the following two heritage values; the geoheritage value of the Devonian reef complexes and the indigenous heritage value of Jandamurra and the Bunuba Resistance Landscape and associated archaeological research potential.

2.0 TENEMENTS

The Brooking Diamond Joint Venture comprises one Exploration Licence E04/1936 and one Exploration Licence Application E04/2317 (Figure 2) in the West Kimberley Mineral Field (Derby-West Kimberley Shire), and the current tenement status is as follows;

Table 1 Tenement Status Brooking Diamond Joint Venture

Tenement Number	**Current Holders and Operators**	**Grant Date**	**Expiry Date**	**Number of Blocks**	**Graticules**	**Minimum Annual Expenditure**
E04/1936	Sarah E. Dowling, Worldwide Diamond Exploration Consultancy Pty Ltd, Global Diamond Exploration Services Pty Ltd	3/12/2010	2/12/2015	37	Broome Million plan 1576 fghj-z 1577 lmnoqrstvw 1648 a-e 1649 ab	$37,000
ELA04/2317	Leopold Diamond Company Pty Ltd	Application date 22/05/2013		4	Broome Million plan 1577 fghj	

3.0 NATIVE TITLE

Four graticular blocks (1577 n, o, s, t) of the Brooking Diamond Joint Venture are covered by an Agreement signed on 25/11/2010 by the current holders of E04/1936 and the Kimberley Land Council on behalf of the Bunuba Native Title Claimants (NTD WC99/19, Bunuba Area “a”), Figure 3a. The Agreement deals with all matters relating to Native Title, Heritage Protection and Mineral Exploration on the portion of E04/1936 that lies within Bunuba Lands. The first Heritage Impact Assessment notice relating to proposed exploration activities on this area was issued to the Kimberley Land Council on 26/3/2011 and discussed on 24/8/2011. The resolutions of this meeting are still pending.

The remainder of E04/1936 is covered by an additional Bunuba Native Title Claim (WAD94/12; WC12/4) which was applied for on 10/4/2012, Figure 3b. Worldwide Diamond Exploration Consultancy Pty Ltd, Global Diamond Exploration Services Pty Ltd and S. E. Dowling applied to become a party to this Native Title Claim application on 26/10/2012.

4.0 GEOLOGY AND MINERALISATION

Exploration Licence E04/1936 is located on the Oscar Plateau, a NW-trending graben on the fault-bounded margins of the Lennard Shelf within the Phanerozoic Canning Basin, Figure 4. The tenement lies between the Early Proterozoic Hooper Complex, a highly deformed package of metasediments, gabbroic sills, felsic volcanics and granodiorite to the NE and the Proterozoic sediments and dolerites of the Oscar Range Group of the Oscar Range Inlier to the SW. The Oscar Fault juxtaposes the rocks of the Oscar Range Group with the Canning Basin sediments of the Fitzroy Trough to the S of the tenement area (Griffin et al 1993).

The Canning Basin succession of the Lennard Shelf comprises Late Devonian (Fammenian-Frasnian) reef-complexes of the Pillara Limestone, Napier Formation and Windjana Limestone. The Napier Range lying to the NE of E04/1936 is formed from an exhumed reef complex. The majority of the tenement is comprised of flat-lying to gently-dipping reef-margin, reef-flat and back-reef subfacies forming massive to well-bedded dolomitic stromotoporoid, cyanobacterial and oolitic limestone with subordinate massive debris-flow conglomeratic deposits and inter-bedded calcareous sandstone. Stromatolitic bioherms have been mapped in the Oscar Range Embayment (Playford et al 2009).

A Quaternary veneer of transported black soil (<2m thick) covers much of the karst-like topography of E04/1936. Fissured limestone crops-out on the western and southern boundaries of the tenement. Beds of staurolite-bearing quartz gravel have been mapped by previous explorers in drainages across the tenement and a lag gravel-cobble horizon containing metamorphic quartz has been intersected at the base of the black soil horizon. Shallowly-incised ephemeral drainages form tributaries to the Brooking and Homestead Creeks which flow diagonally across the tenement towards the SE. NE-SW and E-W trending lineaments and joints in the bedded limestone have controlled the evolution of the first and second order tributaries of Brooking and Homestead Creeks.

The most economically significant of the approximately sixty Miocene-aged lamproite intrusions recorded on the Lennard River 1:250,000 map-sheet is the diamondiferous Ellendale Lamproite Field mined by Kimberley Diamonds Ltd. The latest available resource and reserve statement (dated 1 January 2012) shows a probable reserve from the E9 pipe of 6.052Mt at an average grade of 4.38 carats per hundred tonne (cpht) and a total combined resource (Indicated and Inferred JORC categories) of 91.3 Mt at an average grade of 4.35 carats per hundred tonne (cpht) from the E4 and E9 pipes. The sub-economic Big Spring Lamproite Cluster discovered by the Ashton Joint Venture in 1976 lies immediately to the NNE of E04/1936. The barren Leopold 1 lamproite, discovered by Rio Tinto in 2002, lies to the NE of E04/1936.

Exploration for Mississippi Valley Type Pb-Zn mineralization in structurally-controlled zones within the Middle-Upper Ordovician carbonates of the Lennard Shelf and Pillara Platform was undertaken from 1963 to the early 1970's and more recently by Billiton Australia between 1990 and 1993. Lead and zinc were mined at the Lennard Shelf (Pillara) Mine by Teck Resources Ltd/ Xstrata plc until 2008. The Lennard Shelf Project was acquired by Meridian Minerals Ltd in 2009 and a resource for the newly discovered Cadjebut Splay Prospect of 1.6Mt@8.3%Pb, 2% Zn, 16.6g/t Ag was reported in March 2011.

Gold, tin, limestone and road gravel also have a production history within the region. The northern edge of the Canning Basin is being explored for oil and gas.

5.0 PREVIOUS EXPLORATION

The Brooking Diamond Joint Venture Project area was explored for base-metals from 1963 until the early 1970's and since then has been explored continuously for diamonds. The diamond prospectivity of the Big Spring area was first identified during a grass-roots exploration programme undertaken by the Kalumburu Joint Venture (the predecessor of the Ashton Joint Venture and managed by Tanganyika Holdings). Five lamproite bodies were discovered in 1976 following a programme of aeromagnetic survey and stream-sediment and soil sampling which recovered abundant kimberlitic chromites and diamonds. Subsequent follow-up work in the Little Spring Creek tributary of Cajuput Creek by the Ashton Joint Venture until 1986 and then by Stockdale, involved stream-sediment and loam sampling with ground magnetic and auger drilling. Lamproitic chromites and some small diamonds were recovered upstream in Cajuput Creek and in a tributary of Brooking Creek, but a primary source (or sources) for the indicator minerals and diamonds was not found. This anomalous area was then explored as E04/478 between 1988 and 1990 under tenure by Mr Manning in joint venture with Metana Minerals NL.

5.1 1988-1990 Metana Minerals NL

Metana Minerals NL initially collected 28 drainage samples, acquired black and white aerial photography and commissioned Aerodata Holdings to fly a low-level regional aeromagnetic survey (1000 line km, 100m N-S line spacing, 13m sample interval with a sensor height of 60m). Three magnetic anomalies were detected; Katies Bore, Fence (a fence-line east of E04/1936) and the Big Spring West lamproite. The enlargements of the black and white aerial photographs failed to reveal photo-features deemed worthy of follow-up. Diamonds, kimberlitic chromite, pyrope, kimberlitic zircon and priderite were recovered from drainage samples collected from tributaries of Brooking Creek and Little Spring Creek (to the north of E04/1936). The most significant results were; BS4781-2 diamonds, 12 chromites, 1 kimberlitic zircon, BS20 – 2 chromites, 1 priderite, BS21 – 38 chromites, BS24 – 220 chromites and BS25 – 200 chromites. Traces of gold and cassiterite were recovered from drainage samples collected from a small tributary of Brooking Creek near the Santa Fe Dam. The kimberlitic indicator minerals were fresh-worn and were within a transported resistate heavy mineral assemblage dominated by well-rounded, worn grains of tourmaline, staurolite, zircon, rutile, garnet, epidote, haematite, ilmenite, limonite and andalusite with subordinate anatase, biotite, corundum, leucoxene, magnetite, monazite, pyrolusite, pyroxene, sillimanite, spinel and topaz. The provenance for this resistate mineral assemblage was thought to be metamorphosed Archaean and Proterozoic igneous and sedimentary rocks of the Halls Creek Group cropping out to the northeast and northwest of the tenement area.

The catchment area between the headwaters of Little Spring Creek and the magnetic anomaly at Katies Bore was intensively sampled during 1990. Soil sampling on a 100mx100m grid (284 samples), loam sampling on a 200mx200m grid east and north-east of Katies Bore, follow-up drainage sampling and shallow percussion drilling were completed. Soil samples failed to detect anomalous values of Ni and Nb. Traces of chromite was recovered from two loam samples over the black soil plains. Shallow percussion drilling (42 vertical holes for 231m – average hole depth of 5m) bottomed in limestone and failed to intersect lamproite or anomalous values of Cr, Nb or Ni in bedrock geochemistry. Ground magnetic traverses over limestone outcrops east of the drilling grid failed to detect surface magnetic anomalies proximal to the drainage divide between Katies Bore and Little Spring Creek from which 23 diamonds and 2400 chromites had previously been recovered from drainage samples. Metana reached the conclusion that the transported black soil cover had effectively masked any lamproitic intrusions from effective exploration by conventional soil and loam sampling and geochemical assay.

5.2 1990 Quicksilver Resources NL

In 1990 Quicksilver Resources NL investigated the area under an option agreement and concluded that a primary source of diamonds existed as sills, dykes or small plugs in the headwaters of Little Spring Creek.

5.3 1991-1995 Moonstone Mines NL (Moonstone Diamond Corporation NL)

In 1991, following the withdrawal of Metana from E04/478, Mr Manning entered into a joint venture with Moonstone Mines NL who had been exploring their own tenement group (E04/591, E04/809, and E04/810) which surrounded E04/478. The combined tenement grouping became known as the Camerons Bore Prospect and was managed by Moonstone. Moonstone commissioned L.Smith to undertake a photo-geological interpretation of 1:50,000 scale black and white aerial photographs (flown in 1987 by the Western Australian Department of Land Administration), which identified 35 areas displaying anomalous structural, vegetation, soil or topographic features. In 1992 an additional 1:20,000 scale colour aerial photography survey was flown by AAM Surveys. A regional aeromagnetic and radiometric survey flown by Kevron Geophysics Pty Ltd (2305 line km, 150m N-S traverse line spacing, tie-line spacing 1500m E-W, 100m sensor height), was interpreted initially by B. Dockery, re-interpreted in 1992 by Expert Investments and interpreted for the third time by Robertson Australia in 1993. Twenty-seven aeromagnetic anomalies were identified.

Ground magnetic surveys to investigate the aeromagnetic targets resulted in the ranking of the following high priority targets; A3, A5, C1 with lower ranked targets B3, C7, C9, and D3. A review of the aeromagnetic data was conducted by Cowan Geodata Services which resulted in a re-ranking of the high priority targets to A1, A3, A5, C1, and C9. Target C1 (747000E, 8031000N)

is the only one of Moonstone's priority geophysical targets within E04/1936 and was located upstream from stream samples collected from Homestead Creek from which lamproitic chromite, phlogopite and diamond were recovered. Targets A3, A4, C7 and D3 were located close to the contact between Devonian sediments and the Oscar Range Group to the south of E04/1936. They display high magnetic background over red residual lateritic soils and were extensively loam sampled. Targets A2, C8, D1, D2, and D4 were located proximal to an interpreted NNW trending mafic dyke south of E04/1936. Target C5 was located south-west of a tributary of Brooking Creek from which stream samples containing lamproitic chromite, diamond, ilmenite, olivine and gold were recovered. Target C6 was located NW of Santa Fe Dam (747000E, 8031000N) and Target B1 was located at Katies Bore (747200E, 8033200N). Target C6 and B1 were drill-tested during 1994.

A follow-up stream sediment sampling programme was completed in 1994 and involved the collection of 19 x 10 bag samples, 8 x 2 bag samples, and 1 x 6 bag samples. The broad spread of positive results from regional drainage sampling suggested that despite the poor to moderate quality of heavy mineral trap-sites in the shallowly incised creeks in the black soil plains, at least one primary source existed on the Camerons Bore Prospect. The recovery of fresh to fresh-worn, coarse-grained, lamproitic chromite, the presence of pyrope, the relative abundance of +0.8mm diamonds (CAM38- 1+0.8mm, CAM51- 1+1mm @ 0.012ct, CAM77- 1+1mm, CAM106- 1 @ 0.00355ct, 1 @ 0.0016ct), and the concentrations of indicators and diamonds in discrete geographical areas resulted in two prospective areas being drilled.

Three air-core drill holes (SFH1-3) were drilled vertically along a NE trending traverse from the Santa Fe Dam. The holes terminated in hard limestone at <4m depth and did not detect lamproite or lamproitic geochemical signature. A ground magnetic traverse oriented N-S for 1.5km across the Santa Fe Dam area did not detect any obvious magnetic anomaly. Loam sampling with associated heavy mineral observation failed to report lamproitic indicator minerals.

Nine shallow air-core drill holes (CAMKBH1-9) were drilled vertically along a NE trending traverse across the drainage divide between Katies Bore and Little Spring Creek. Most holes terminated in hard pink limestone at 2m depth. No lamproitic indicator minerals, lamproitic geochemistry, or lamproite were reported. Six lamproitic chromites recovered from CAMKBH2 (2-4m) were interpreted to have been displaced from the overlying black soil horizon. A ground magnetic traverse with readings taken every 10m accompanied by geochemical soil samples collected every 50m, failed to detect any magnetic response or anomalous geochemistry in the Katies Bore area.

In 1994 the Bunuba Native Title Claimants signed their legal rights of negotiation to the Kimberley Land Council necessitating individual sample site clearances and thus restricting future on-ground exploration programmes.

5.4 1995-1997 Moonstone Mines NL - Astro Mining Ltd

Astro Mining Ltd entered into an option agreement with Moonstone in 1995, but withdrew prior to conducting fieldwork as a result of delays in negotiations with the Kimberley Land Council to gain access to sample sites. A comprehensive mineralogical study, electron microprobe analysis and interpretation of populations of kimberlitic indicator minerals were partially completed by M. Muggeridge. This study demonstrated that the majority of indicator minerals (chromite, pyrope, phlogopite, chrome-diopside, almandine, ilmenite and diamond) displayed standard lamproitic morphology and mineral geochemistry suggestive of the existence of a primary source or sources of diamonds within the tenement area.

Six target areas were defined but no field work was carried out:

Santa Fe Dam - (CAM12, CAM76-1 diamond, 20 chromites, 1 pyrope)

Katies Bore - (CAM14, CAM15-1 diamond, 2 chromites, CAM16- 1 diamond, 6 chromites, CAM17, CAM18- 11 chromites, CAM39, CAM40, CAM88- 1 diamond, 6 chromites, 1 pyrope, 1 almandine, CAM89- 3 diamonds, 33 chromites, 1 almandine)

Camerons Bore Tributaries – (CAM42- 4 chromites, CAM47- 2 chromite, 2 pyrope, 1 diopside, CAM48- 1 diamond, 1 chromite, CAM62- 2 pyropes, 2 almandine, CAM63- 2 diamonds, CAM84- 2 diamonds)

Robertson Geophysical Target A2/A3, X1/2 – (CAM106- 2 diamonds 1@0.00355ct, 1@0.0016ct, 6 chromites, 1 pyrope)

Robertson Geophysical Target A4 – (CAM85- 6 chromites, CAM87- 3 chromites)

Homestead Creek North – (CAM35-28 chromites, CAM36- 20 chromites, CAM77- 1 diamond +1mm, 61 chromite, phlogopite, almandine, CAM103- 2 diamonds, 49 chromite, CAM104- 47 chromites)

5.5 1997-1998 Diamond Rose NL

Diamond Rose NL acquired Moonstone's interest in the Camerons Bore Prospect in 1997. A structural geological study investigated the importance of NE-trending lineaments and EW-WNW directional controls on intrusions in the Ellendale Lamproite Field (Jaques et al 1986). A mineralogical orientation study was partially completed which confirmed the existence of different populations of chromites within the Camerons Bore heavy mineral concentrates. The use of thermal imagery to evaluate potential structural features present under cover was considered.

5.6 1999-2001 Thundelarra Exploration - Resource Exploration

In 1999 the area previously known as the Camerons Bore Prospect, was re-pegged as E04/1128 and E04/1129 by Thundelarra Exploration in a joint venture with Resource Exploration. Their work programme comprised data review, an aeromagnetic and radiometric survey flown by UTS Geophysics (3236 line km, 75m N-S line spacing, 25m sensor height), the purchase of merged Landsat/SPOT imagery (TM Bands 3, 5, 7), geological traversing of target areas and two traverses of shallow vertical percussion drilling over a weakly magnetic circular anomaly defined at the Santa Fe Dam area (LPAC1-11 for 91m). The drill holes intersected dolomite and slightly domed, weakly magnetic, haematitic siltstone beneath the black soil cover.

5.7 2001-2002 Diamond Exploration Consultants – Alcaston Mining NL

In January 2001 Resource Exploration transferred the ownership of E04/1128 and E04/1129 to Diamond Exploration Consultants Pty Ltd. In July 2001 Alcaston Mining NL acquired a 100% interest in the tenements. A work programme comprising re-processing of geophysical data by Hungerford Geophysical Consultants was completed. A proposed work programme comprising; loam sampling on a 200mx200m grid over the catchment areas of creeks anomalous in diamonds and indicator minerals, follow-up drainage and loam sampling proximal to Moonstone's Robertson magnetic target C1 on Homestead Creek, magnetic-Turam airborne EM and gravity surveys on a 100m line spacing with drilling and bulk-sampling was not done as a result of corporate politics.

5.8 2002-2005 Alcaston Mining NL – Rio Tinto Exploration Pty Ltd

In 2002 Rio Tinto Exploration Pty Ltd farmed in to E04/1128 and E04/1129 owned by Alcaston Mining NL. A due diligence programme of stream sediment sampling (8 samples of 40kg, -1mm sample material), wide-spaced loam sampling (2kmx2km grid), indicator mineral chemical analysis and petrology, confirmed the presence of diamonds and fresh to fresh-worn lamproitic indicator minerals in tributaries of Brooking Creek (samples 5575527-5575531), Little Spring

Creek and within the black soil plain. The best stream sediment results from the Brooking Creek tributaries were sample 575528 – 7 diamonds, 55 chromites (AGD84-747110E, 8031748N); sample 5575529 – 3 diamonds, 9 chromites (AGD84- 747410E, 8031470N) and sample 5575530 – 3 chromites, 1 Group10 pyrope (AGD84- 746798E, 8030470N). Micro-probe analyses of chromites from sample 5575528 indicated that the chromites were lherzolitic chromites with elevated Fe^{3+} and Ti indicative of either crystallization in an oxidative environment, or metasomatism, both factors possibly deleterious to diamond preservation.

A helicopter EM survey (784 line km, 100m N-S line spacing) with field reconnaissance over selected geophysical targets led to the discovery of the polyphase olivine-leucite/olivine-phlogopite lamproite dyke named Leopold 1 over the geophysical anomaly 3.1 (proximal to Moonstone's Robertson magnetic target A1). Geophysical targets were identified over drainage catchments of tributaries of Little Spring Creek and Homestead Creek.

Clusters of geophysical anomalies were ranked and drill-testing to a minimum depth of 50m was recommended to test the anomalies. Rio Tinto Exploration collected and processed 57 bulk (>69kg) loam samples and drilled 8 RC drill holes over 7 of the priority geophysical targets. The targets that were drill-tested were 1.1(BS04), 1.2(BS05), 3.1(BS06, BS07), 4.1(BS01), 5.1(BS02), 9.1(BS03) and 11.1(BS08). Drill holes BS06 and BS07 tested Target 3.1 and intersected a polyphase dyke with dimensions of 700mx60m composed of phlogopite-rich lamproite and phlogopite-poor lamproite intruded into brecciated Devonian limestone beneath 1m of black soil. Petrology of drill cuttings identified assemblages consisting of phlogopite-leucite-diopside-richterite lamproite and olivine-leucite-diopside lamproite. Caustic fusion processing of 272kg of lamproite confirmed Leopold 1 was barren of diamonds. The K-Ar dating of phlogopite grains confirmed an emplacement age for Leopold 1 of 21.73 + 0.44Ma.

Twenty-five bulk loam samples of un-sieved black soil material were collected over discrete geophysical targets. Thirty-two bulk loam samples were collected on a 2kmx2km grid over the black soil plain in order to determine whether a local lamproitic source was present within the catchments of drainages where anomalous concentrations of diamonds and indicator minerals had been recovered. Twenty-four of the loam samples reported kimberlitic indicator minerals which were predominantly chromite, with three samples reporting diamond, pyrope or picro-ilmenite. Ten samples recovered sufficient chromite to enable an interpretation of source provenance to be made. Four samples collected over identified Priority 2 and Priority 3 ranked geophysical targets recovered chromite with mantle-dominant provenance (6026934- Target 6.1-1 diamond, 5 chromites, 6026935- Target 6.2- 11 chromites, 6026942- Target 10.4-10 chromites, 6026945- Target 10.2- 34 chromites). Two samples recovered chromites from mixed mantle and crustal provenances (6026917- 3 diamonds, 27 chromites, 3 pyrope, 1 picro-ilmenite, 6026930- Target 8.4- 18 chromites).

A rock grab sample of 125 kg of Devonian pebble conglomerate was collected east of Target 5.1 (west of the Tunnel Creek-Fairfield Road) and processed to determine the heavy mineral content. The sample contained 2 chromite grains (one of which was of mantle provenance), in a resistate assemblage of >50% limonite, >10% biotite, haematite, muscovite, >3% garnet, ilmenite, <1% amphibole, epidote, pyrite, rutile, tourmaline with traces of monazite and staurolite.

Rio Tinto Exploration withdrew from the joint venture with Alcaston Mining in 2005 following the lack of positive results from the drilling and bulk loam sampling of their geophysical targets and the barren nature of the Leopold 1 lamproite.

5.9 2007-2009 Diamondex Pty Ltd

In 2007 Diamondex Pty Ltd explored the area covering the headwaters of Brooking Creek as E04/1613. There is no public record of work completed by Diamondex Pty Ltd on E04/1613 despite an expenditure of $61,940 claimed for 2008. The tenement was surrendered on 26/6/2009 due to insolvency.

5.10 2010-2012 Brooking Diamond Joint Venture - Worldwide Diamond Exploration Consultancy Pty Ltd, Global Diamond Exploration Services Pty Ltd and S. E. Dowling

Exploration completed over E04/1936 by the Brooking Diamond Joint Venture during 2011 comprised; extensive historic exploration data compilation and review, re-processing of open-file geophysical data, collection of 30 (-1.2mm, 20kg) stream sediment samples (B001-B028, B032, B033) and collection and geochemical assay of 27 (1kg unsieved) soil samples (R1-R12, BS1-BS9, KBHW, KBHE, Dl, B034, SD soil, 07 creek) and 3 (20kg unsieved) ant-hill samples (B029-B031), processing (Wilfley tabling and TBE separation) of 30 stream-sediment samples (B001-B028), 3 ant-hill samples (B029-B031) and 1 clay/soil sample (B034), diamond indicator mineral observation (0.8mm, 0.5mm, 0.4mm, 0.3mm fractions) of 30 stream sediment samples (B001-B028), 3 ant-hill samples (B029-B031) and 1 soil sample (B034), and negotiation with the Kimberley Land Council to gain sample site clearances for the portion of E04/1936 lying on Bunuba Lands.

Positive stream sediment results in combination with the identification of untested geophysical anomalies and untested photo-anomalies increased the prospectivity of E04/1936 to host diamond-bearing lamproites. The following diamond indicator minerals were recovered from

the -1.2mm+0.3mm heavy mineral concentrates from nineteen positive 20kg stream sediment samples; 6 diamonds, 157 fresh to fresh-worn kimberlitic chromites (plus 11 chromites of indeterminate provenance), 4 pyropes, 6 possible picro-ilmenites and 7 ferro-magnesian micas (B002-B007, B010-B012, B014-B020, B023, B024 and B033). Three chromites of indeterminate provenance were recovered from an additional three surface samples (B008, B009, B034). Twelve samples reported negative for diamond indicator minerals (B001, B013, B021, B022 and B025-B032).

TABLE 2 Diamond Indicator Mineral Results Brooking JV 2011

Sample number	Diamond	Chromite	Pyrope	Picro-ilmenite	Phlogopite	Comments
B001 stream sediment						NEGATIVE
B002 stream sediment		1				
B003 stream sediment		5		2 possible		
B004 stream sediment		17		2 possible		
B005 stream sediment	1	10 definite 6 indeterminate.	1	1 possible		
B006 stream sediment	5	2				
B007 stream sediment		42				
B008 stream sediment		1 common				Probably crustal
B009 stream sediment		1 indeterminate.				
B010 stream sediment		8 definite 4indeterminate.				
B011 stream sediment		2				
B012 stream sediment		2			7 possible	SEM 2012 confirms biotite affinity
B013 stream sediment						NEGATIVE
B014 stream sediment		4				
B015 stream sediment		37	1			
B016 stream sediment		3				
B017 stream sediment			1			
B018 stream sediment		2				
B019 stream sediment		1	1			
B020 stream sediment		12		1 possible		
B021 stream sediment						NEGATIVE
B022 stream sediment						NEGATIVE

B023 stream sediment		2				
B024 stream sediment		5				
B025 stream sediment						NEGATIVE
B026 stream sediment						NEGATIVE
B027 stream sediment						NEGATIVE
B028 stream sediment						NEGATIVE
B029 ant- hill						NEGATIVE
B030 ant- hill						NEGATIVE
B031 ant- hill						NEGATIVE
B032 stream sediment						NEGATIVE
B033 stream sediment		2 definite 1 indeterminate.				
B034 clay/soil		1 indeterminate.				
TOTAL COUNT +0.3mm	**6 DIAMONDS**	**157 KIMBERLITIC CHROMITES**	**4 PYROPES**	**6 POSSIBLE PICRO-ILMENITES**	**7 possible**	**SEM 2012 confirms biotite affinity of mica**

Exploration completed over E04/1936 by the Brooking Diamond Joint Venture during 2012 comprised: geological reconnaissance of photo-anomalies (vegetation, soil and structure) and geophysical anomalies, the collection of 7 rock-chip samples of local Devonian limestone and Miocene lamproite (LS1-LS3, BS1-BS3, LEO1) for an ADROK ^{TM} data-base signal calibration study, the collection of 22 stream-sediment sampling (10 samples sieved at -1.0mm, 20kg, B035-B044 and 12 samples sieved at -1.2mm, 20kg, B045-B056), the collection of 10 soil-samples for MMI ^{TM} partial digest (BM1, LEO1B-LEO9,)the collection of 1 ant-hill sample for MMI ^{TM} partial digest (LEO1A), the processing (Wilfley tabling and TBE separation) of 10 stream-sediment samples (B035-B044), diamond indicator mineral observation (0.8mm, 0.5mm, 0.4mm, 0.3mm fractions) of 10 stream sediment samples (B035-B044), soil geochemistry (11 assays MMI^{TM}), mineral geochemistry of ferromagnesian micas (17 mineral grains SEM), an evaluation of GIS compatible imagery from the recently published WA ASTER Geoscience Map Broome 1M map sheet (http://c3dmm.csiro.au, http://portal.auscope.org), and the purchase and ortho-rectification of satellite imagery (4 band bundle imagery over 27 sq km area at 0.5m resolution) from GeoImage.

Ten samples (B035-B044) were collected during July 2012, from which one (1+0.3mm) diamond, three (3+0.3mm) kimberlitic chromites, two (2+0.3mm) chromites of indeterminate provenance, two (2+0.3mm) pyropes, one (1+0.3mm) possible pyrope and one (1+0.3mm) possible picro-ilmenite were recovered from the heavy mineral concentrates. Samples B045-B056 collected during August-September 2012 were processed and observed during 2013.

TABLE 3 Diamond Indicator Mineral Results Brooking JV 2012

Sample number	Diamond	Chromite	Pyrope	Picro-ilmenite	Comments
B035		3 kimberlitic			Plus 1 common chromite
B036		1 indeterminate			
B037			1		
B038			1	1 possible	
B039					NEGATIVE
B040		1 indeterminate			Plus 1 common chromite
B041					NEGATIVE
B042					NEGATIVE
B043	1				
B044			1 possible		
TOTAL COUNT +0.3mm	**1 DIAMOND**	**3 KIMBERLITIC CHROMITES, 2 indeterminate chromites**	**2 PYROPES 1 possible pyrope**	**1 possible PICRO-ILMENITE**	

The background mineral assemblage comprised well-rounded grains of staurolite, haematite, tourmaline, rock fragments, epidote, rutile, ilmenite, and almandine with subordinate barite, andalusite, kyanite, amphibole, clinopyroxene, zircon, spinel, monazite, sillimanite, topaz, corundum, anatase and gold. This assemblage was interpreted to have been transported by palaeo-drainages and sheetwash from a provenance of metamorphosed sedimentary and igneous rocks.

6.0 WORK DONE

Exploration activities completed in 2013 over E04/1936 are summarized in Figure 5 and comprised;

- 7 seismic survey lines over three areas of interest
- an ADROK ^{TM} data-base signal calibration study of 7 rock-chip samples of local Devonian limestone and Miocene lamproite (LS1-LS3, BS1-BS3, LEO1) that were collected during 2012
- the collection of 2 stream-sediment samples (2 samples sieved at -1.2mm, 20kg, B068 and B069)
- the processing (Wilfley tabling and TBE separation) of 14 stream-sediment samples (B045-B056, B068 and B069)
- diamond indicator mineral observation (0.8mm, 0.5mm, 0.4mm, 0.3mm fractions) of 14 stream sediment samples (B045-B056, B068 and B069)

6.1 Stream-sediment sampling

Two (2) stream sediment samples were collected during 2013 (B068 and B069). Access to the sample sites was initially by 4WD vehicle along station tracks and then by foot.
The sample sites were dry and were poor to moderate in quality; the heavy mineral trap sites consisted of joints in bedrock pavements and sheet-wash lag gravel deposits. Limestone bedrock formed the substrate of the samples collected in streams that were incised <1m into the black soil plain. The selection of the sample sites was based on the follow-up of anomalous sample results through sampling at closer-spaced intervals between positive samples that had been collected in 2012.
The samples were hand-dug and approximately 20kg of -1.2mm gravel was collected from each sample site. The samples were road-freighted from Fitzroy Crossing to Perth and sample were processed (Wilfley tabled and concentrated by TBE) at the Perth laboratory of Diamond Recovery Services.
The heavy mineral concentrates (+0.8mm, +0.5mm, +0.4mm, +0.3mm fractions) of samples B045-B056, B068 and B069 were observed by B. Michelly, S. Dowling and D. Lee.

Sample locations are presented in Figure 6 and Appendix 1.

6.2 Seismographic survey trial transects

Seven (7) seismic survey lines were laid out over three sites of interest within E04/1936, Figure 5. Seismic Lines 1 and 2 were laid out along and across the E-W creek sampled by B020-B022, B045-B051, B068 and B069. Seismic Lines 3, 4, and 5 were laid out across the composite magnetic feature north of Santa Fe Dam. Seismic Lines 6 and 7 were laid out at right angles to each other across the circular photo-anomaly "G11".

The investigation was conducted by Rob Hanbury, a Geotechnical Engineer with experience in refraction surveys. The equipment was loaned by Knight Piesold Pty Ltd, Perth. All testing was performed with a Geometrics Geode seismograph with a string of up to 24 geophones. A sledge hammer on a steel plate was used for the shots and stacked from 6 to 10 blows. Five shots, 1 at each end and at ¼ points were used but limited to a spread of 200m. The analysis used in all cases was a Tomographic analysis using the software SeisImager/2DTM, Version 3.3 provided by Geometrics. The modules Pickwin v. 4.0.1.5 and Plotrefa v. 2.9.1.6 were used.

6.3 Adrok^{TM} data-base signal calibration study

The seven (7) rock-chip samples of local Devonian limestone and Miocene lamproite (LS1-LS3, BS1-BS3, and LEO1) collected in 2012 were analyzed in Adrok's research facility in Edinburgh, Scotland. The limestone samples (LS1-LS3) were collected from outcrop near Photo-anomaly G11. Three lamproite samples (BS1-BS3) were collected from outcrop of weathered, metasomatised, and brecciated lamproite at Big Spring 1. One sample of calcretised lamproite caprock (LEO 1) was collected from surface rubble developed over Leopold 1.

The sample locations for these rock chip samples are presented in Figures 5 and 6.

Atomic dielectric resonance (ADR) technology was developed by Adrok ^{TM} as an innovative improvement over synthetic aperture radar (SAR) and ground penetrating radar (GPR) through the creation and use of pulsed electromagnetic microwave and radio wave beams of resonating energy. The frequency, energy levels and phase changes of the return signal of the resonant energy response are determined by the minerals in the rocks that the wave passes through. Computer processing of harmonic analyses of the electromagnetic radiation enables the recognition of characteristic energy and frequency of signals from different minerals and rocks. Repeated characterisation of ADR signals received from

known rock types at known depths in quarries and logged drill holes has enabled the compilation of a library of calibrated material signals.

An ADR survey is non-invasive and designed to be completed with minimal environmental impact, with the signal generator and signal receivers able to be transported by 4WD vehicle. E04/1936 lies within the newly gazetted Kimberley Heritage Area and the main areas of prospectivity within the tenement are located in close proximity to windmills and dams. A "virtual drill hole" can be generated by Adrok ^{TM} with minimal disturbance to the water table and grazing stock.

Historic shallow percussion drilling in E04/1936 has not penetrated beyond 2-26m depth before terminating in hard dolomitic limestone or calcrete. The Brooking Diamond JV propose to conduct an Adrok ^{TM} survey over a high priority exploration target of a circular structure with a diameter of approximately 800m (Santa Fe Dam), which is coincident with composite magnetic and resistivity anomalies and diamond indicator mineral trails. The current exploration model to be tested is that a weathered Miocene-aged lamproite intrusion may be concealed within a post-Permian doline (sink-hole) developed within the karstified Devonian coral-reef limestone platform. This doline may be infilled with Quaternary and Tertiary sediments, capped by calcrete and covered by up to 5m of acidic black soil. The objective of the Adrok ^{TM} survey would be to maximize geological information at depth before the commencement of percussion drilling.

7.0 RESULTS

7.1 Stream sediment sampling

Samples B045-B056 collected during August-September 2012 were processed and observed during 2013. Two samples (B068 and B069) were collected during 2013. From these 14 stream-sediment samples ninety-nine (99 +0.3mm) kimberlitic chrome-spinels and six (6+0.3mm) pyropes plus 3 (3+0.3mm) possible pyropes were recovered from the heavy mineral concentrates, Figure 7, Appendix 2.

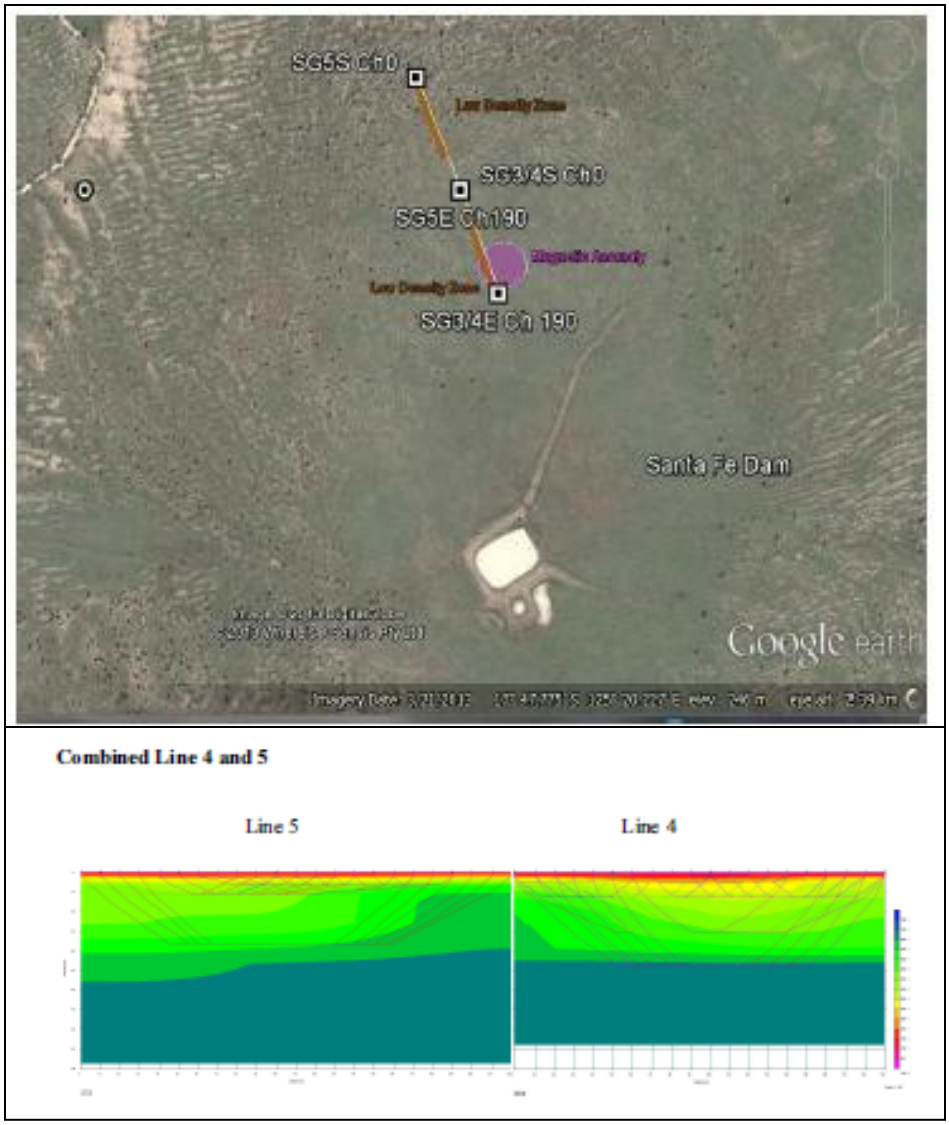
Table 4-Kimberlitic Indicator Minerals observed in samples B045-B056, B068, B069

Sample number	Diamond	Chrome-spinels	Pyrope	Picro-ilmenite	Comments
B045		9 kimberlitic			
B046		9 kimberlitic			
B047		20 kimberlitic			
B048		27 kimberlitic			Trace supergene gold
B049		15 kimberlitic	1 definite + 2 possible pyropes		
B050		1 kimberlitic			
B051		6 kimberlitic	4 pyropes		
B052					NEGATIVE
B053					NEGATIVE
B054		8 kimberlitic	1 pyrope		
B055					NEGATIVE
B056		3 kimberlitic	1 possible pyrope		
B068		1 kimberlitic			
B069					NEGATIVE
TOTAL COUNT +0.3mm		**99 KIMBERLITIC CHROME-SPINELS**	**6 PYROPES Plus 3 possible pyrope**		

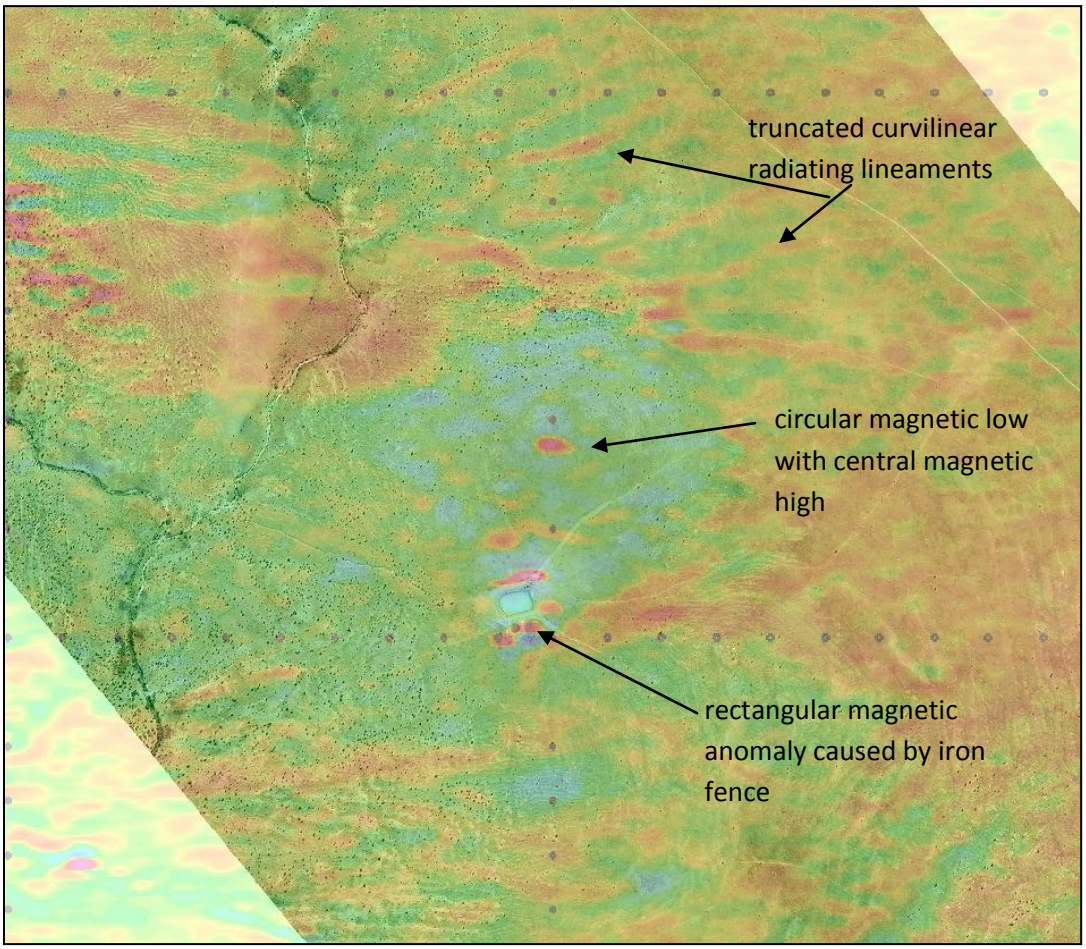
7.2 Seismic survey

The complete report of the seismic survey is provided in Appendix 3. A summary of significant findings is provided below.

7.21 Santa Fe Dam area-composite magnetic anomaly – (Site 2)

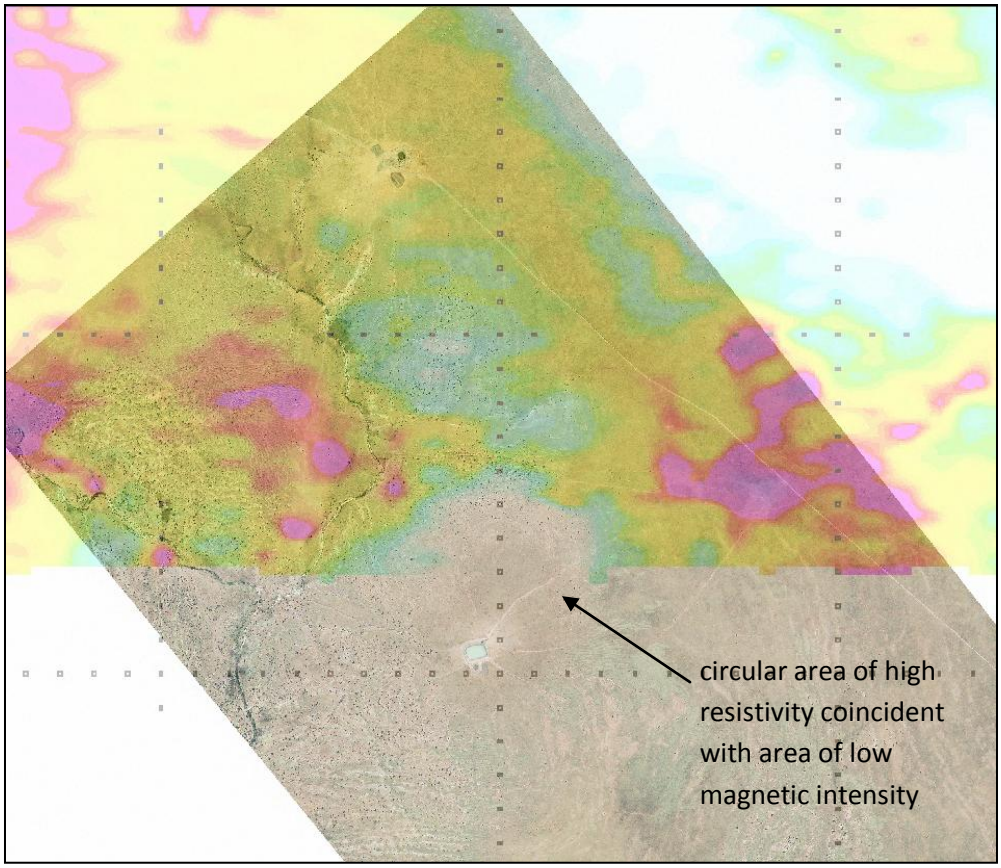


A mound of high density between two lower density hollows is interpreted for this site. The location of the high density mound coincides with the central magnetic high contained within the circular magnetic low outlined in the TMI 1VD RTP image below. A possible interpretation is that the low density hollows represent weathered lamproite and the higher density, magnetic "mound" represents a stock of unweathered lamproite. Detailed follow-up ground geophysics is planned for the next reporting period.



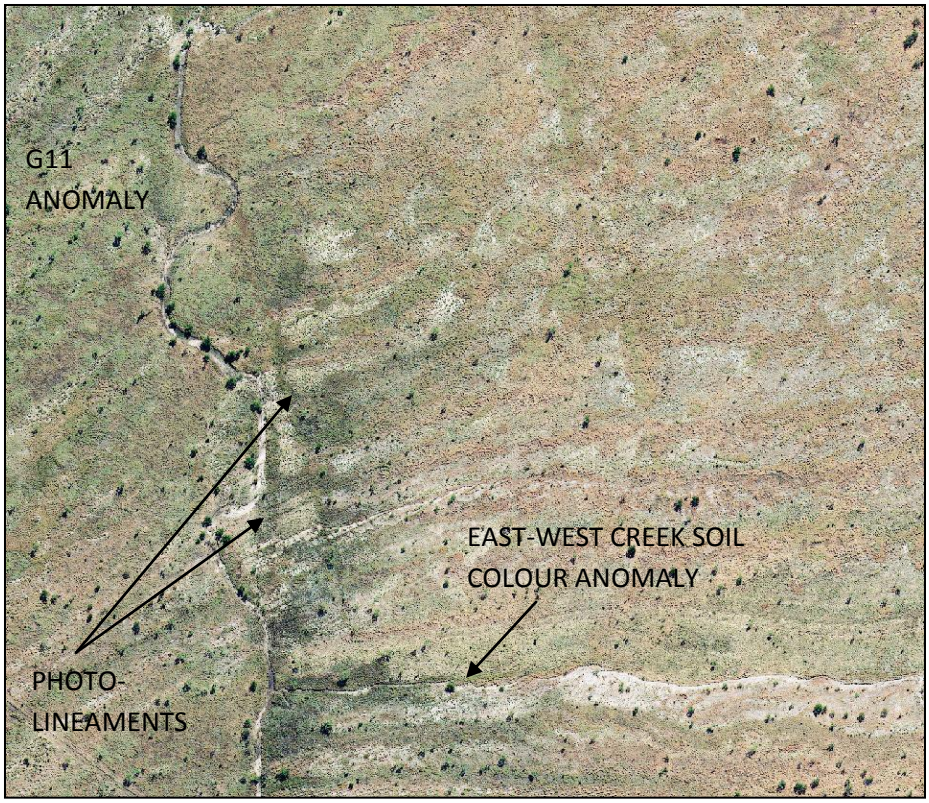
TMI over satellite photograph Santa Fe Dam

EM over satellite photograph Santa Fe Dam

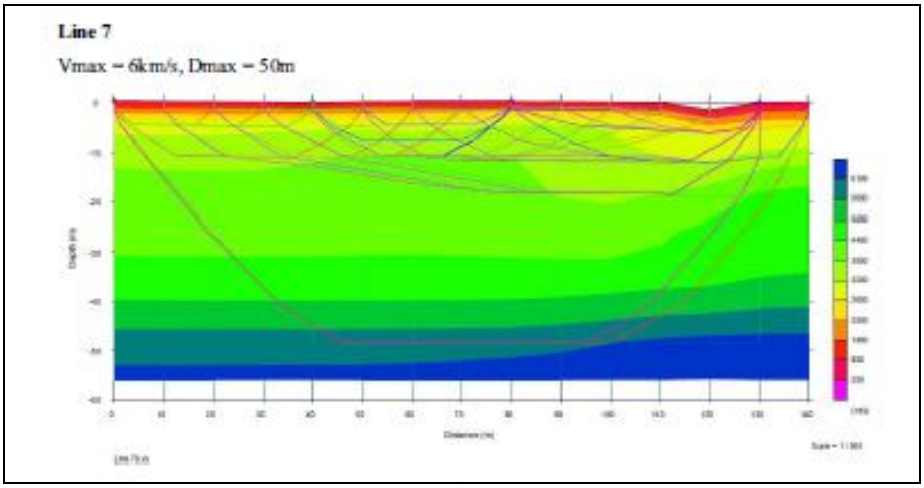


7.22 G11 circular photo anomaly – (Site 3)

SATELLITE PHOTOGRAPH G11 ANOMALY AND EAST-WEST CREEK

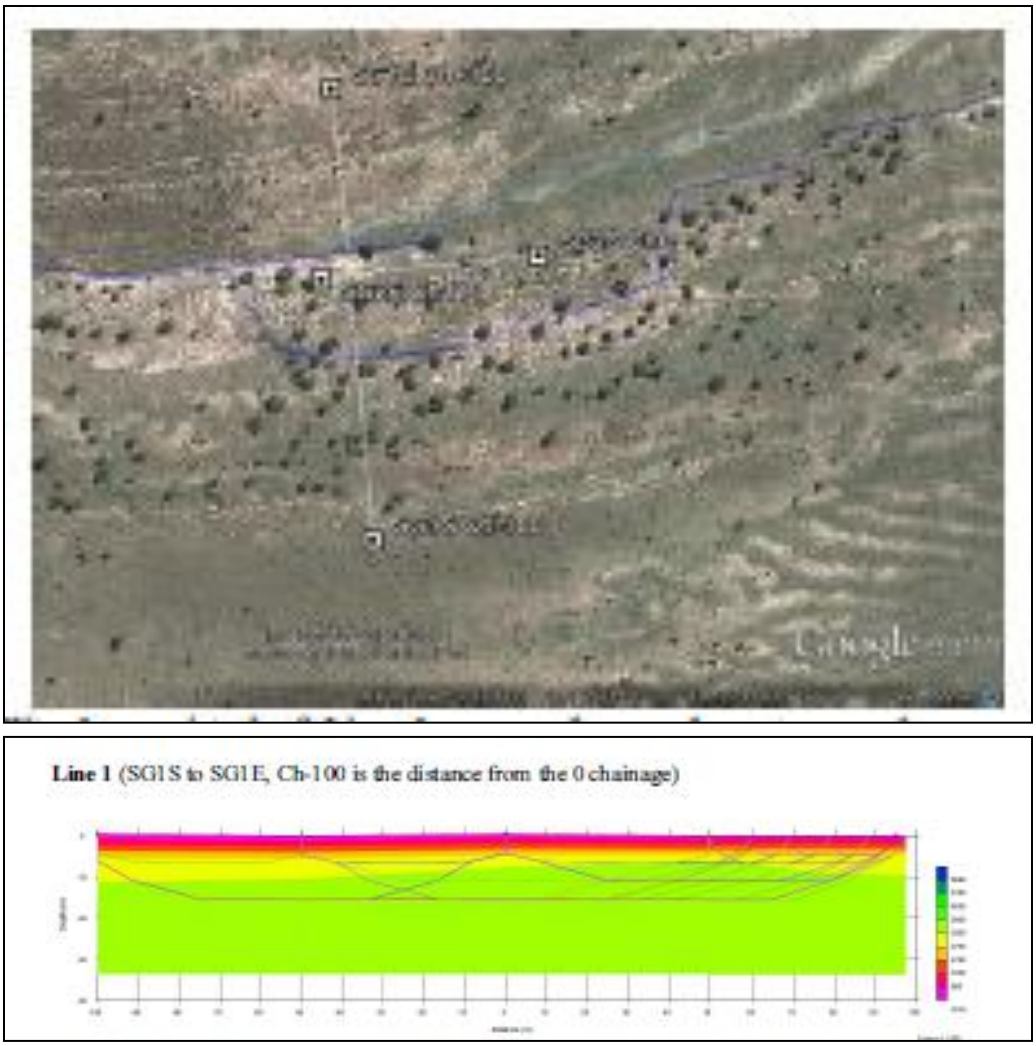


Line 6 and 7 were perpendicular lines over a circular visual anomaly in the creek system.



Flat lying uniform limestone stratigraphy by 20m depth is indicated at this site.

7.23 East-West Creek – (Site 1)



Flat-lying uniform limestone stratigraphy by 33m depth is indicated at this site. Gridded soil-MMI™/vegetation geochemical surveys are proposed over this area in 2014.

7.3 Adrok^{TM} data-base signal calibration study

The preliminary report of this study is copyright and remains commercial-in-confidence, Appendix 4. The laboratory results demonstrated that despite the poor correlation between XRF analyses and Adrok's current comparative library of phase and spectral analyses, it was still possible to observe the difference between lamproite and limestone samples using ADR harmonic energy images. Leopold Diamond Company Pty Ltd intends to pursue research collaboration with Adrok dependent upon securing external funding during 2014.

Figure 9 shows the E-*ADR* harmonic variation energy for the Lamproites (BS-1 to BS-3) including the LEO lamproite sample.

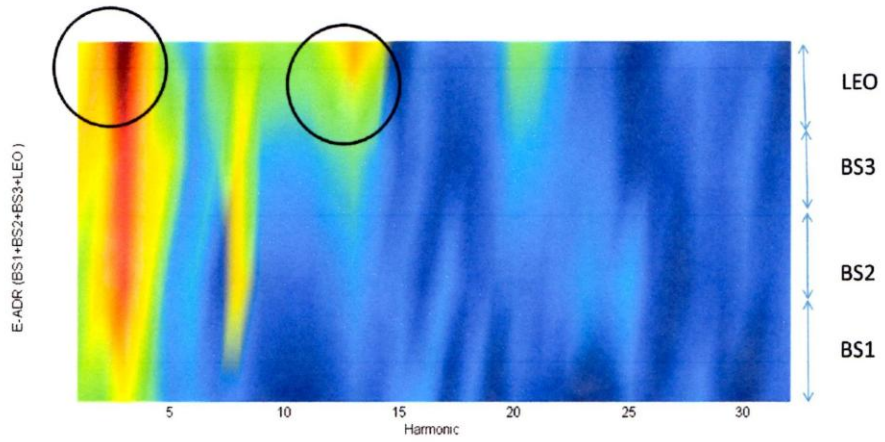


Figure 9. E-*ADR* harmonic energy variation for Lamproites samples (BS1+BS2+BS3+LEO).

Figure 10 shows the E-*ADR* Harmonic variation energy for the Limestone samples where they show a cleary different E-*ADR* harmonic energy pattern, compared to the Lamproite samples displayed in figure 8 and 9.

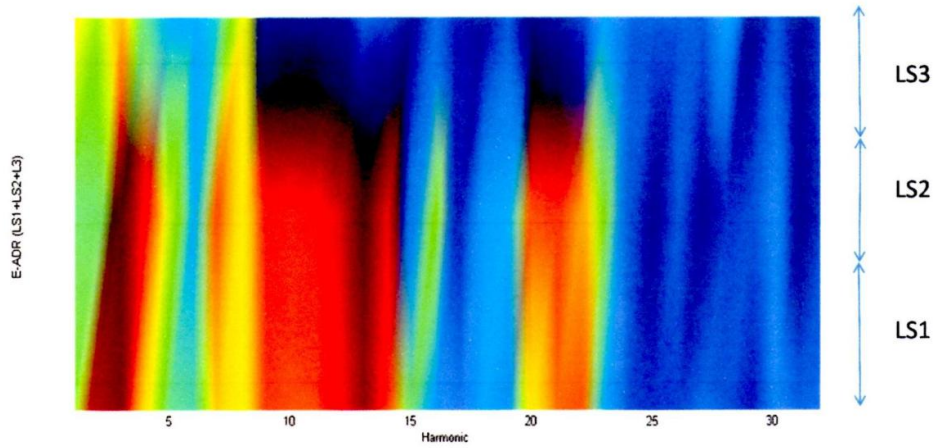


Figure 10. E-*ADR* harmonic energy variation for Limestone samples LS-1, LS-2 and LS-3.

Phase and Spectral Analysis

The phase changes for the Lamproite and Limestone samples are presented in figure 11. This result shows that phase information is unable to categorise the two rock groups, i.e. does not allow them to be distinguishable.

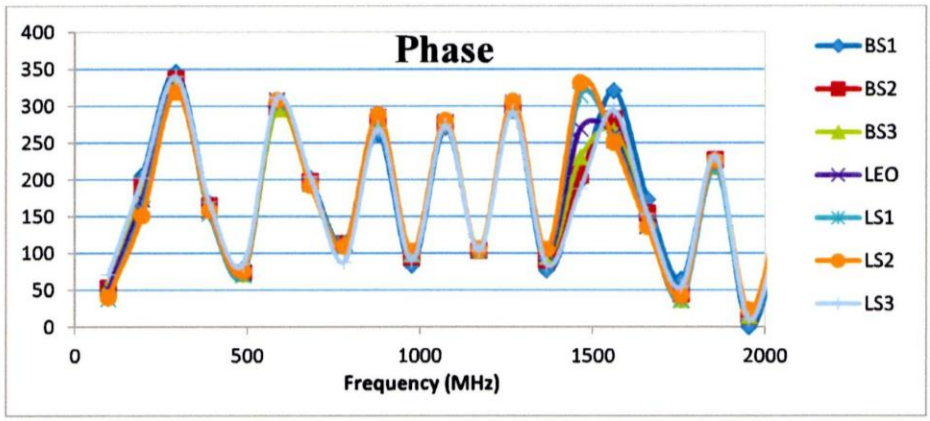


Figure 11. Phase relationship between all 7 samples.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Positive stream sediment results have continued to confirm the prospectivity of E04/1936 to host diamond-bearing lamproites. The following diamond indicator minerals were recovered from the -1.2mm+0.3mm heavy mineral concentrates from 10 positive 20kg stream sediment samples (B045-B051, B054, B056, B068); ninety-nine (99 +0.3mm) kimberlitic chrome-spinels and six (6+0.3mm) pyropes plus 3 (3+0.3mm) possible pyropes. Four samples reported negative for diamond indicator minerals (B052, B053, B055, and B069). The majority of positive results were reported from closely-spaced samples collected along the East-West Creek (B045-B051, B068). The remaining two positive samples were collected from a short radial drainage on the western part of the Santa Fe Dam (B054) and from the North-South creek south of Katie's Bore (B056).

Trial seismographic surveys of the composite magnetic feature at Santa Fe Dam revealed a shallow central mound of higher density rock surrounded by two areas of lower density rock. Extensions and overlapping seismic traverse lines are proposed in conjunction with ground magnetic, ground gravity and ground EM surveys to refine drill targets over the Santa Fe Dam area, and where concentrations of fresh-fresh worn kimberlitic indicator minerals have been recovered from the area proximal to Katie's Bore and the East-West Creek.
A helicopter-supported stream sediment sampling programme is recommended for the un-sampled western boundary of E04/1936 to enable assessment prior to statutory reduction by the end of 2015.

Five areas of E04/1936 are recommended for exploration during the next reporting period using a combination of geological mapping, first-pass and follow-up stream sediment sampling, gridded soil/vegetation sampling and Mobile Metal Ion ^{TM} partial leach geochemical analysis, kimberlitic indicator mineral observation, ground magnetic survey, ADROK ^{TM}, resistivity and gravity surveys; prior to trenching, RC drilling, and bulk-sampling. The locations of these areas identified in Table 5 are presented in Figure 9.

Table 5 Areas identified for further exploration E04/1936, ELA04/2317 Brooking Diamond JV

AREA	DESCRIPTION	NW CORNER of QUADRANT	SE CORNER of QUADRANT
		AGD 66 ZONE 51	AGD 66 ZONE 51
PRIORITY AREA 1	Composite magnetic low NNW of Santa Fe Dam, E04/1936	747000E, 8032000N	749500E, 8029500N
PRIORITY AREA 2	North-east trending lineaments proximal to Katie's Bore, E04/1936	746000E, 8033000N	748000E, 8031000N
PRIORITY AREA 3	East-West Creek , E04/1936	749500E, 8028000N	751000E, 8027500N
PRIORITY AREA 4	Stream sediment sampling western boundary of E04/1936	738500E, 8033000N	742000E, 8025000N
PRIORITY AREA 5	Magnetic highs around headwaters of Homestead Creek, E04/1936	752000E, 8032000N	754500E, 8030000N
ELA04/2317	Reconnaissance and follow-up stream sediment sampling		

PRIORITY AREA 1 - Composite magnetic low NW of Santa Fe Dam

This area exhibits a circular magnetic low with a small internal magnetic high located to the NNW of the Santa Fe Dam. A large circular area of anomalous soil coloration is displayed in aerial photographs over the magnetic low and a smaller circular photo-anomaly lies immediately to the SE. The bedded limestone is abruptly truncated by this circular feature. Radial drainage has developed over this circular feature suggestive of doming. Cross-cutting swarms of NE-trending linear structures have been truncated by the circular feature. The circular feature has not been drilled by previous exploration companies; historic drilling by Moonstone and Thundelarra concentrated on the NE margins of the feature. The circular feature lies proximal to Moonstone's (Robertson) magnetic target C6 (747000E, 8031000N) and is drained by short streams from which diamonds, chromites and pyropes have been recovered. Moonstone Mines NL characterized the indicator minerals recovered from stream sediment samples collected from streams draining the Santa Fe Dam area as displaying standard lamproitic morphology and mineral geochemistry suggestive of a primary source, or sources, within the area. Stream sample CAM76 contained 20 fresh coarse-grained chromites, 1 diamond and 1 Group 9 pyrope. Sample B016 was collected downstream from these samples and recovered 3 chromites. A stream sample (CAM51) collected from Brooking Creek south of the Santa Fe Dam anomaly, but lying on the same NE-SW trend and near an unchecked photo-anomaly G8, recovered 1+1mm diamond, 4 chromites and 3 pyropes. Sample B017 was collected 1.5 km downstream from CAM51 and recovered 1 pyrope. Sample B018 was collected

on a previously un-sampled creek downstream of photo-anomaly G8 and recovered 2 chromites from this creek.

Rio Tinto collected 1 due diligence sample (40kg, -1mm) stream sediment sample (Sample 5575530 – 764798E, 8030470N AGD84) from a creek draining radially from the circular anomaly WNW of Santa Fe Dam. One Group 10 harzburgitic pyrope, 3 fresh-worn kimberlitic chromites and crustal ilmenite were recovered from this sample.

Trial seismic surveys have revealed the presence of a shallow high density mound surrounded by two lower density areas coincident with the composite magnetic feature at Santa Fe Dam. Future exploration of this circular feature will use ground EM, gravity and magnetic surveys to investigate whether it represents the surface expression of a weathered lamproitic pipe/dyke (with a central unweathered stock) and associated sink-hole filled with clay and capped by calcrete. North-east trending fissures and radial and arcuate fractures (? ring dykes) evident in magnetic and aerial photographs may be filled with lamproitic dykelets and may have an undetected surface expression. MMI ^{TM} geochemical surveys will be undertaken over the interpreted margin of the circular feature.

Stream sediment samples B053 (negative) and B054 (8 kimberlitic chrome-spinels, 1 peridotitic pyrope) were collected from short radial drainages on the western flank of the Santa Fe Dome.

PRIORITY AREA 2 - North-east trending lineaments proximal to Katie's Bore

The drainage divide between Katie's Bore and Little Spring Creek has been subjected to intensive exploration over the past twenty years. Abundant diamonds and lamproitic chromites with rare pyrope and picro-ilmenite have been recovered from stream sediment samples and loam samples. Moonstone Mines NL identified a geophysical anomaly (Robertson magnetic target B1) at Katie's Bore and RTE identified several geophysical targets in the headwaters of Little Spring Creek. To date no primary source or sources have been found.

In May 2011 preliminary stream sediment sampling by the Brooking Diamond Joint Venture recovered 6 diamonds, 60 kimberlitic chromites, 1 pyrope and 1 picro-ilmenite from samples B005-B007. Follow-up stream sediment and ant-hill sampling in August 2011 (B010-B015, B025, and B029-B031) recovered 53 definite kimberlitic chromites, 7 ferromagnesian micas and 1 pyrope from stream-sediment samples B010-B012, B014 and B015.

There is a co-incidence of positive sample sites in streams cross-cut by NE-trending lineaments. These lineaments, joints or fissures may either be filled by weathering lamproite dykelets and/or may also act as riffles and baffles to trap indicators being transported by sheet-wash

across the black soil plain. Ground checking local structures adjacent to positive sample sites and cross-referencing stream orientations against these regional structures may deserve further investigation with ground geophysical traverses and close-spaced geochemical sampling.

Stream sediment sample B056 (3 kimberlitic chrome-spinels and 1 possible peridotitic pyrope) was collected downstream of the confluence of the north-south drainage with Brooking Creek main channel to follow-up the concentrations of diamond indicator minerals in this region.

PRIORITY AREA 3 – East-West Creek and Circular photo-anomaly G11

A prominent pale coloured circular area (photo-anomaly G11), which is resistant to erosion and has caused a SW draining stream to flow around the area ,lies upstream from Moonstone's (Robertson) magnetic target C5. Moonstone collected two stream samples CAM12 (3 chromites, 1 olivine) and CAM76 (1 diamond, 20 chromites, 1 pyrope) downstream from the photo-anomaly G11. These samples were followed-up in May 2011 with stream sediment samples B003 (5 chromites, 3 possible picro-ilmenites) and B004 (17 chromites and 2 possible picro-ilmenites). Additional stream samples (B020-B024) and 1 clay sample (B034) were collected in August 2011. These samples recovered 19 chromites and 1 possible picro-ilmenite (12 chromites and 1 possible picro-ilmenite from B020 and 2 chromites from B023 and 5 chromites from B024).

East-West oriented drainages south of the G11 circular photo-anomaly have been sampled intensively during 2012. Stream sediment samples B045-B051 (87 kimberlitic chrome-spinels, 3 peridotitic pyropes, 1 eclogitic and 3 possible eclogitic pyropes) and B068 (1 kimberlitic chrome-spinel) and B069 (negative) were collected as follow-up samples to sample B020. Stream sediment sample B052 (negative) was collected as a follow-up sample to sample B019.

Trial seismic transects across the G11 circular anomaly and the East-West Creek areas revealed flat-lying dense limestone stratigraphy. Additional overlapping seismic, ground EM, magnetic and gravity surveys combined with gridded soil/vegetation geochemical surveys are planned for this area. The number of kimberlitic indicator minerals and the freshness of these indicators suggest the proximity of a primary source such as a shallowly-dipping lamproite sill.

PRIORITY AREA 4 – Reconnaissance and follow-up stream sediment sampling along western boundary of E04/1936

The western boundary of E04/1936 has not been sampled. Vehicle access is impossible and it is proposed that subject to funding, a helicopter-based stream-sediment sampling programme is undertaken over this area prior to statutory reduction required by the end of 2015.

The Proterozoic-Devonian unconformity lies within this area on the south-west corner of E04/1936. This unconformity may be prospective for base-metal and/or uranium mineralization.

PRIORITY AREA 5 - Magnetic highs around headwaters of Homestead Creek

These magnetic targets were first identified by Moonstone Mines NL (Robertson magnetic target C1) and Rio Tinto Exploration (targets 8.2, 8.3). The anomalous area lies within that part of E04/1936 lying within Bunuba Lands and exploration will depend on a schedule of Site Clearances by the KLC. There is no anomalous soil, vegetation or structure evident from aerial photography (Figure 9). The headwaters of the creek draining the area of geophysical targets have not been closely sampled. Moonstone collected several drainage samples downstream (CAM35, CAM36, CAM38, CAM77, CAM103, CAM104) and recovered a total of 4 diamonds (2 +0.8mm), 252 lamproitic chromites and a trace of phlogopite. Rio Tinto Exploration loam-sampled but did not drill-test their targets 8.2 and 8.3.

REFERENCES

Griffin, T.J., Tyler, I.M. and Playford, P.E., 1993, Lennard River Western Australia, 1:250,000 Geological Series Explanatory Notes (Third Edition) Sheet SE51-08.

Hassan, L.Y., 2004, Mineral Occurrences and Exploration Potential of the West Kimberley, Bulletin 88, GSWA.

Jaques, A.L., Lewis, J.D. and Smith, C.B., 1986, The kimberlites and lamproites of Western Australia, Bulletin 132, GSWA.

Playford, P.E., 2009, Guidebook to the geomorphology and geology of Devonian reef complexes of the Canning Basin, Western Australia, Record 2009/5, GSWA.

Playford P.E., Hocking, R.M., and Cockbain, A.E., 2009, Devonian Reef Complexes of the Canning Basin, Western Australia, Bulletin 145, GSWA.

APPENDIX 1

SAMPLE LOCATION

APPENDIX 2

SUMMARY OF HEAVY MINERAL OBSERVATIONS

2013 – SAMPLES B045 – B056, B068, B069

APPENDIX 3

REPORT OF SEISMIC SURVEY INVESTIGATION

APPENDIX 4

REPORT OF ADROK ™ PILOT STUDY