

Large base metal targets identified in first modern geophysical survey at Merlin Diamond Project in NT

The targets are just 50km from world-class McArthur River zinc-lead mine with very similar regional geology

- ❖ Preliminary review of Merlin Electromagnetic (EM) survey has identified two large conductive targets considered to be highly prospective, which importantly sit below an inlier of McArthur River Group sediments
- ❖ The survey, which was a new generation Xcite™ survey, was the first EM program flown at Merlin in 25 years
- ❖ The second phase of survey data processing is underway to identify new kimberlite and any further base metal targets, with results expected to be released in this quarter
- ❖ In light of these outstanding results, Lucapa is now planning follow-up ground-based geophysics to define the targets

Lucapa Diamond Company Limited (ASX: LOM) ("Lucapa" or the "Company") is pleased to announce outstanding results from the first geophysical survey conducted in 25 years at its Merlin Diamond Project in the Northern Territory.

A preliminary review of the electromagnetic survey data has identified two large and highly conductive base metal targets (see Map 1).

The program involved a new generation helicopter-borne time-domain electromagnetic (HTDEM) survey over the 234sqkm area, covering both the Merlin Mineral Lease (MLN1154) and the surrounding Exploration Licence (EL26944).

The base metals targets occur along structures in an area of Proterozoic sediments with very similar geology to those which host the world-class McArthur River zinc-lead resource approximately 50km to the north of the project area. This area has previously been identified as having potential to host mineralised structures and therefore is of high interest for hosting base metal deposits.

Glencore's McArthur River base metal mine, which is one of the world's largest deposits of zinc and lead, has been operating for 30 years along structures that extend through the Merlin Exploration License area (as highlighted in Map 2).

The mine generates over 250,000 tonnes of zinc, 1.2 million ounces of silver and 50,000 tonnes of lead a year.

The geology of the Merlin area is considered prospective for similar types of deposits and is highly suitable for electromagnetic (EM) surveys due to limited conductive cover in most areas of the tenements, hence Lucapa's excitement about the two targets announced today.

Lucapa will now undertake the next phase of processing, interpretation and modelling, which is suitable for looking for smaller and less conductive targets. This phase is expected to identify any new kimberlite targets or extensions to existing kimberlites along with any smaller base metal targets.

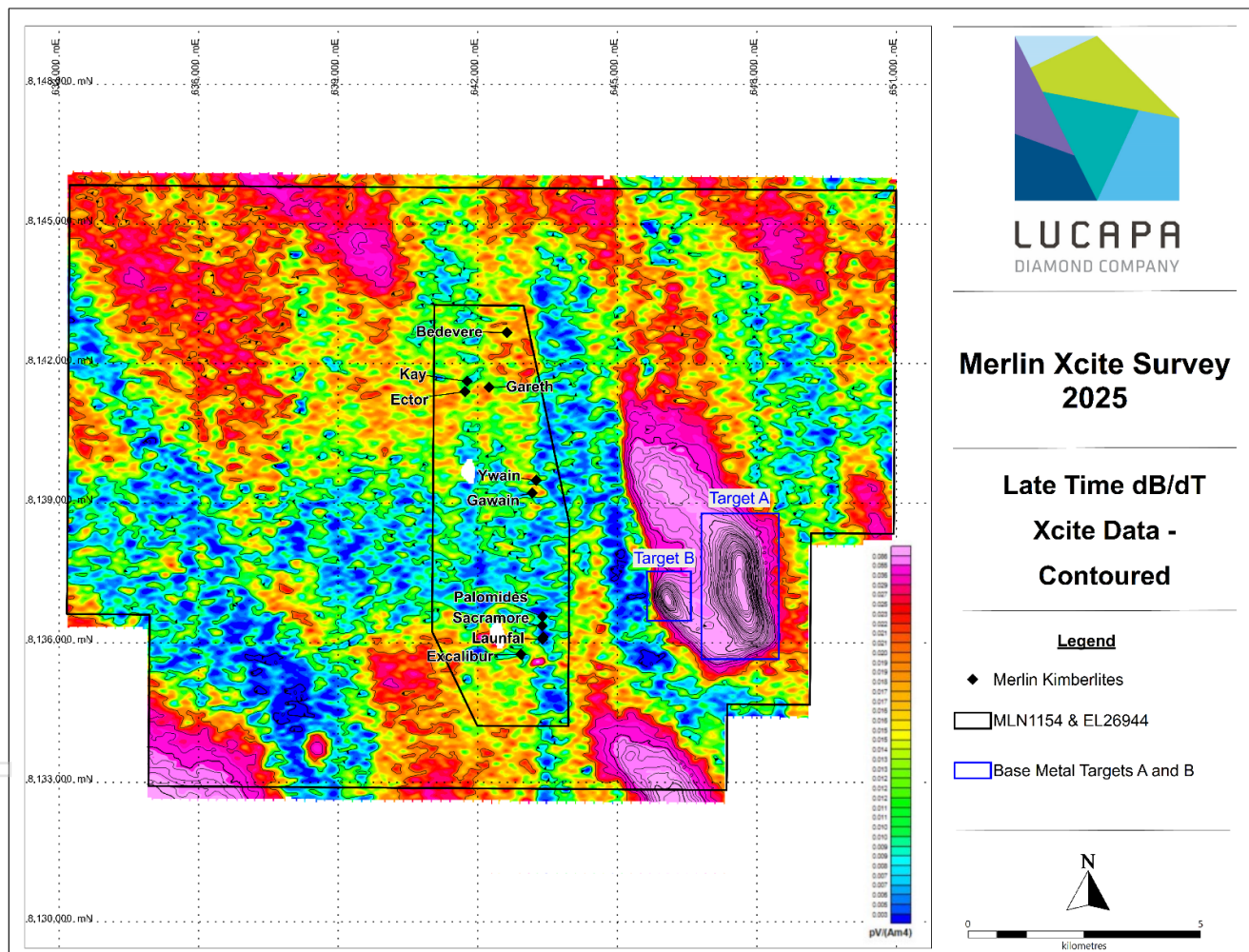


This modelling of the geophysics data will continue over the coming weeks and will also assist in better defining the targets announced today.

Lucapa Managing Director Alex Kidman said: *"These are highly promising results in an area which has never been exposed to the latest geophysics technology and which sits just 50km from the giant McArthur River zinc-lead mine."*

Given the highly prospective nature of the targets identified, we are already considering the next phase of exploration, which will probably comprise ground-based geophysics to further define the targets.

We also look forward to receiving the results of the next phase of data review this quarter, which should identify any new kimberlite targets".

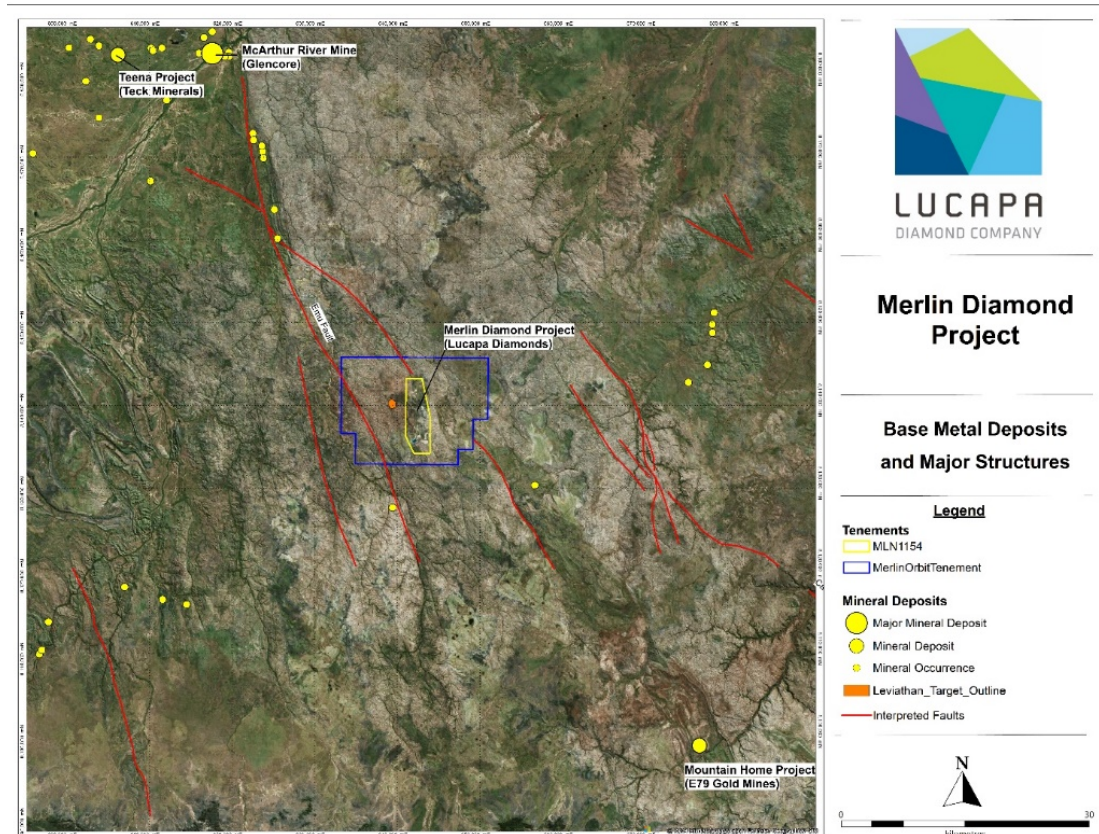


Map 1: Late Time dB/dT Xcite data showing two conductive targets (Targets A (dimensions ~2.5km x ~1km) and B (dimensions ~0.75km x ~0.5km)) within an inlier of Proterozoic sediments

The airborne EM system used was Xcite™, developed and operated by New Resolution Geophysics (NRG). It is considerably more advanced than the previous airborne system applied at Merlin, which was limited to a maximum investigation depth of approximately 100 metres.



The Company expects that it will be able to locate targets missed by previous operators within the Exploration License and Mineral Lease, as the Xcite™ TDEM allows for near continuous depth investigations from near surface to approximately 500 metres below surface, with the highest resolution in the industry, with along line sampling carried out every 50cm.



For and on behalf of the Lucapa Board

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ABOUT LUCAPA

Lucapa is an ASX listed diamond miner and explorer with assets in Angola and Australia. It has an interest in the Lulo Alluvial Diamond Mine in Angola which has been in commercial production since 2015, (conducted by Sociedade Mineira Do Lulo, Lda ("SML") Lucapa 40%, Endiama 32%, Rosas & Petalas 28%).

The large, high-value diamonds produced from Lulo attracts the highest prices per carat for alluvial diamonds globally.

Lucapa also has a 39% interest in the Lulo Kimberlite Exploration Joint-Venture (Endiama 51%, Rosas & Petalas 10%), which is exploring for the potential primary source kimberlites at the prolific Lulo concession in Angola.

In 2021, through its wholly owned subsidiary, Australian Natural Diamonds Pty Ltd, Lucapa completed the strategic and transformative acquisition of the Merlin Diamond Project, an historic Australian mine in the Northern Territory of Australia.

The Board, management and key stakeholders in Lucapa have deep global diamond industry experience and networks all through the value chain from exploration to retail.

Competent Person's Statement

Information included in this announcement that relates to exploration results and resource estimates is based on and fairly represents information and supporting documentation prepared and compiled by Richard Price MAusIMM who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Price is an employee of Lucapa Diamond Company Limited. Mr Price has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves. Mr Price consents to the inclusion in the announcement of the matters based on this information in the form and context in which it appears.

No New Information

To the extent that this announcement contains references to prior exploration results, a production target and financial information derived from a production target and Mineral Resource estimates, which have been cross referenced to previous market announcements made by the Company, unless explicitly stated, no new information is contained. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of a production target and financial information derived from a production target and Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

Forward-Looking Statements

This announcement has been prepared by the Company. This document contains background information about the Company and its related entities current at the date of this announcement. This is in summary form and does not purport to be all inclusive or complete. Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this announcement.



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Appendix 1

Reporting of geophysics exploration results for the Merlin Project

– JORC Code (2012) requirements –
Sampling Techniques and Data

Criteria	JORC Code Explanation	Lucapa Commentary
Sampling techniques	- Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.) These examples should not be taken as limiting the broad meaning of sampling. - Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. - Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	- The TDEM (Time Domain Electro-Magnetic) survey was conducted by New Resolution Geophysics Australia, using a helicopter-borne Xcite™ system. - The survey was conducted at a flight line spacing of 100m with highest interest areas infilled at 50m line spacing. - All flight lines were surveyed N-S. - The nominal survey height for the EM system was 30-40m EM coil height above ground surface. - Magnetic data was acquired concurrently with the EM data
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	No drilling is reported
Drill sample recovery	- Method of recording and assessing core and chip sample recoveries and results assessed. - Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No drilling or sampling is reported.



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Logging	- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. - Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. - The total length and percentage of the relevant intersections logged.	No drill logging is reported
Sub-sampling techniques and sample preparation	- If core, whether cut or sawn and whether quarter, half or all core taken. - If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. - For all sample types, the nature, quality and appropriateness of the sample preparation technique. - Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. - Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. - Whether sample sizes are appropriate to the grain size of the material being sampled.	No sampling is reported
Quality of assay data and laboratory tests	- The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. - For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. - Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	No assay data is reported
Verification of sampling and assaying	- The verification of significant intersections by either independent or alternative company personnel. - The use of twinned holes. - Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. - Discuss any adjustment to assay data.	No sampling or assay data is reported



**Location of
data points**

- Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.
- Specification of the grid system used.
- Quality and adequacy of topographic control.

- Reading positions are located using a Novatel DL-V3L1L2 GPS system with differential correction

**Data spacing
and
distribution**

- Data spacing for reporting of Exploration Results.
- Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
- Whether sample compositing has been applied.

- Line spacing was nominally 100m with readings approximately 50cm along line.

**Orientation
of data in
relation to
geological
structure**

- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
- If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.

- No drilling is reported

**Sample
security**

- The measures taken to ensure sample security.

- No sampling is reported

**Audits or
reviews**

- The results of any audits or reviews of sampling techniques and data.

- The data was interpreted and reviewed by K Jones - Geophysical Consultant
- No audits were considered necessary for this stage of exploration.



**– JORC Code (2012) requirements –
Reporting of Exploration Results**

Criteria	JORC Code Explanation	Lucapa Commentary
Mineral tenement and land tenure status	- Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. - The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Merlin Diamond Project is contained within mining lease ML1154 in the Northern Territory, Australia and covers 23.5 km². The lease was initially granted in 1998 for a period of 25 years and was renewed until 2047 in 2022. It is held by Australian Natural Diamonds Ltd, which is a 100% owned subsidiary of Lucapa Diamonds Limited. Exploration license EL26944 surrounds MLN1154 was granted in 2009 and covers approximately 186 km² and is due for renewal in April 2025.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The lease is located on Special Purpose Crown Lease held by Wardell Nominees Pty Ltd on behalf of Ashton Mining Limited.
Geology	Deposit type, geological setting and style of mineralisation.	A Native Title Agreement with local traditional owners includes a minimum annual payment of \$10,000, and a Net Profit Interest to be paid annually at the rate of 1% on total profit <\$10M and scaling up to 5% above \$40M.
Drill hole Information	- A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: - easting and northing of the drill hole collar - elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth hole length. - If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	No drilling is reported
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No data aggregation was used.



Relationship between mineralisation widths and intercept lengths Diagrams Balanced reporting Other substantive exploration data Further work	- Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. - The assumptions used for any reporting of metal equivalent values should be clearly stated.	
	- These relationships are particularly important in the reporting of Exploration Results. - If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. - If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	No mineralisation was intersected.
	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Appropriate map and plans for the reported mineralisation with scale and north points are included with the text of the report.
	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	No grades are reported.
	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other exploration data is reported.
	- The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling). - Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Follow-up geophysics will be planned once detailed assessment and modelling of the airborne data is complete.

SECTION 3 (RESOURCES) DOES NOT APPLY TO THIS ANNOUNCEMENT

SECTION 4 (RESERVES) DOES NOT APPLY TO THIS ANNOUNCEMENT