Significant copper mineralisation in first hole at Sandover (NT)

- **The first diamond drill hole (ESA001) at the 100%-owned Sandover project has intersected a narrow zone of high-grade copper mineralisation:**
  - **0.3m at 2.1% Cu from 634.3m**
- **ESA001 was designed to test for a first reductant unit within the Neoproterozoic sequence at a key structural location near the western margin of this known copper-mineralised basin [1]**
- **However, ESA001 intersected copper mineralisation in the basement rocks at the flat-lying unconformity below the targeted Neoproterozoic basin sediments**
- **The mineralisation is on the basement contact, an analogous position to the Lumwana copper deposit in Zambia (owned by Barrick) and opens up potential for new deposit styles at Sandover**
- **Magnetic features have been identified adjacent to ESA001 and further geophysics, including a detailed magnetic survey, is planned prior to further drilling in the second half of 2024**

Encounter Resources Ltd ("Encounter") is pleased to announce that the first drilling at the Sandover project (100% ENR), located 170km north of Alice Springs, has intersected high grade copper mineralisation.

Commenting on the copper intersected at Sandover, Encounter Managing Director Will Robinson said:
"Greenfield exploration is an iterative learning process. In the south-east of Sandover there is an outcropping red-bed sandstone sequence with multiple narrow but strike extensive grey shale units (reductants) containing copper oxide mineralisation. This horizon has been mapped over 20km.

We drilled this first diamond drill hole into what we interpreted was a favourable structural position, at the western end of the basin targeting the first reductant. We didn't intersect the targeted reduced unit, so we extended the hole to the basement unconformity where it intersected high grade copper mineralisation.

This provides further evidence of highly charged copper fluids in the basin. Mineralisation has been identified in both reduced sedimentary horizons within the basin and now also at the basement unconformity. Further geophysical surveys are planned to guide the next phase of drilling.

We thank the Northern Territory Geological Survey for their support and co-funding of this drillhole."

Photo 1 – ESA001 634.4m Strong to intense hydrothermal alteration including chalcopyrite in medium to coarse grained biotite-muscovite granite

Background

Sandover is located 170km north of Alice Springs and covers a major structural corridor on the southern margin of the Georgina Basin.

Field mapping and surface sampling confirmed the presence of an outcropping red-bed sandstone sequence with multiple narrow but strike extensive grey shale units containing copper oxide mineralisation [1].

Inspection of historical drill holes (drilled in 1968 and 1971) confirmed key geological units and processes to enable the formation of sediment-hosted copper deposits. Significantly, narrow zones of copper sulphide minerals, including bornite, have been identified in historical drill core [2]. This provides encouraging evidence that processes capable of forming high-grade copper mineralisation are present in the basin.

Furthermore, shale units containing the outcropping copper mineralisation at Sandover are considered to be only moderate reductants yet have precipitated considerable copper. This suggests that a highly copper charged fluid has been active at Sandover.

The remainder of the Sandover basin is essentially unexplored. The most recent diamond drilling was conducted by CRA in 1994, when two diamond drill holes (DD94MG001 & 002) were completed, 50km apart, along the northern margin of the basin (Figure 2 & 3).

An NTGS co-funded gravity survey was completed by Encounter at Sandover in 2022. The integration of this gravity data with existing magnetic data defined a key structural location on the south-western margin of the basin, now named the Ginger prospect ("Ginger").

Diamond drill program

A targeted stratigraphic diamond drill hole was completed at Ginger to test a faulted margin of the Sandover basin where an interpreted NE-SW orientated cross cutting lineament extends across the basin and intersects the major NW-SE trending basin margin structure, both of which are interpreted to have been active over the history of the basin.

ESA001 was drilled to a depth of 668.7m and intersected a stacked sequence of Phanerozoic sediments to 320.7m. Drilling continued through the Neoproterozoic Mopunga Group consisting of feldspar-rich sandstones, siltstones and shales. The targeted reductant Elyuah Fm was not present.

A sharp lower contact of the Sandover Basin sedimentary sequence was intersected at 634.3m. This erosive contact displayed strong, pervasive hydrothermal alteration affecting both sedimentary and crystalline basement rocks immediately adjacent to it.

High grade copper up to 2.1% was returned between 634.3-634.6m where hydrothermal sulphide (chalcopyrite) alteration was present in hydrothermally altered granite gneiss. Hydrothermal copper anomalism was also present in Neoproterozoic sediments above the unconformity where 665ppm Cu was returned over 0.5m between 633.8-634.3m.

Basement rocks intersected below 634.3m included banded, foliated granite gneisses and coarse grained to pegmatitic felsic intrusive rocks which were drilled through to EOH at 668.7m.

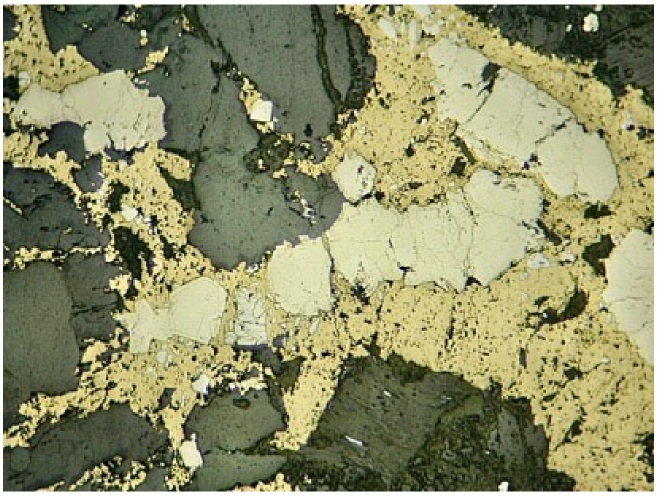


Photo 2: – ESA001 Thin section at 634.39m. Aggregate of sulphides invasive into altered granite, showing residual quartz (dark), chalcopyrite (yellow) and paragenetically earlier pyrite. Small, whitish grains left of centre are marcasite. Plane polarised reflected light, field of view 2mm across.

The lower contact of the Sandover Basin sedimentary sequence, where copper mineralisation was intersected in ESA001, is interpreted to be flat, suggesting highly charged mineralised fluids moved horizontally to this position. This basement unconformity is laterally extensive and hence opens up potential for a new deposit style at Sandover.

The location of the mineralisation on the basement contact, is an analogous position to the mineralisation at the giant Lumwana copper deposit in Zambia (owned by Barrick). In this context, the unconformity itself may be behaving in a similar fashion to the conceptual "first-reductant horizon" that is normally considered a key target for this style of mineralisation.

Another possibility is that the copper mineralisation ESA001 could represent lateral movement of ore fluids along the unconformity away from a more concentrated position hosted by an adjacent steeper feeder fault.

ESA001 was co-funded by a drilling grant from the NT Government.

Next Steps

Interesting magnetic and gravity features have been identified adjacent to ESA001 (Figures 1 & 2) and further geophysics, including a detailed magnetic survey, is planned prior to further diamond drilling which is expected in the second half of 2024.

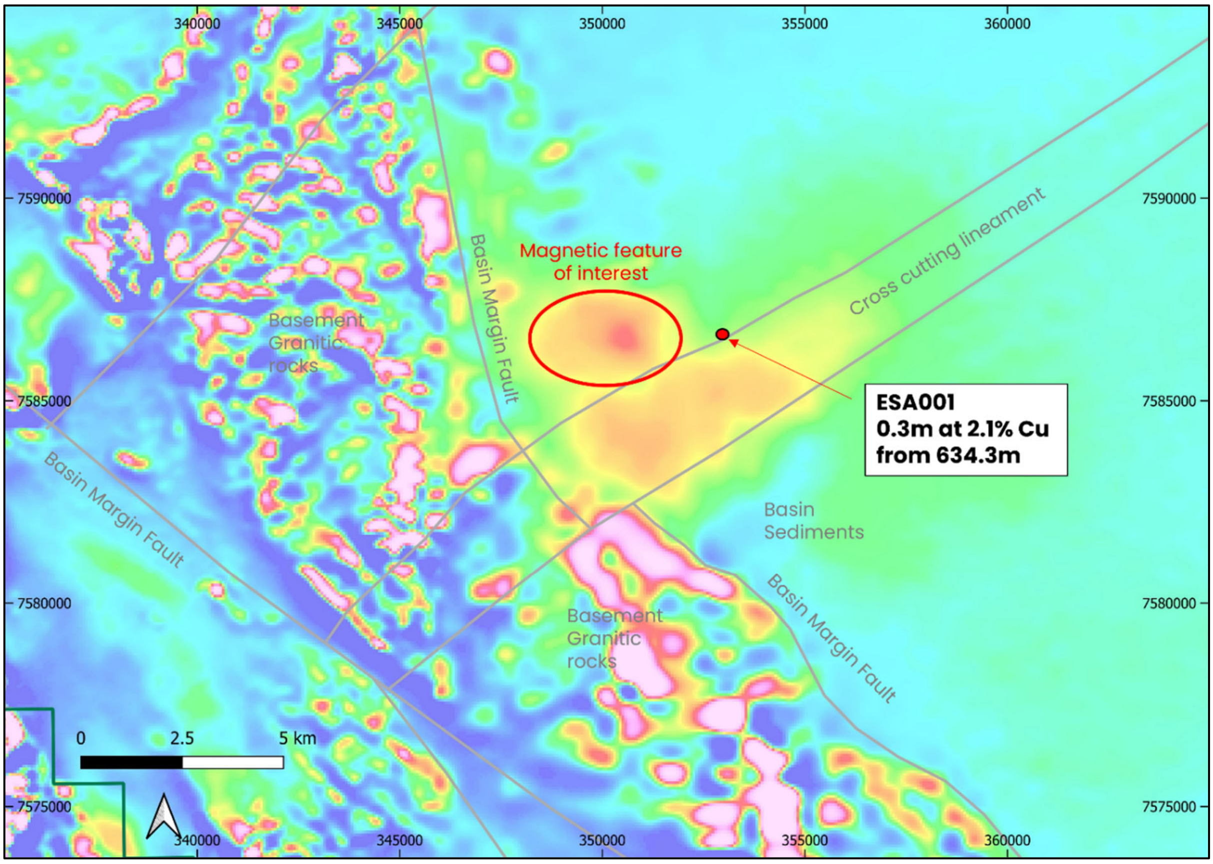


Figure 1 Sandover Ginger Prospect (ESA001) location plan over Magnetic TMI 1VD image

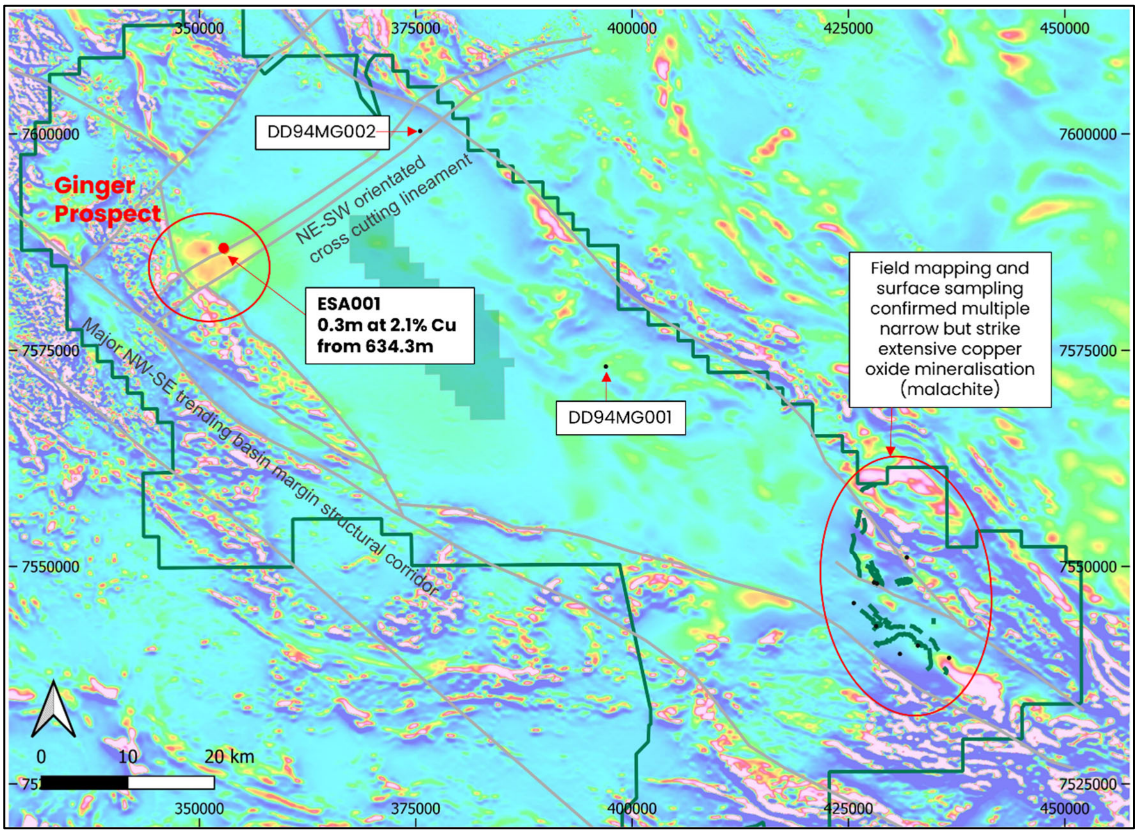


Figure 2 Sandover - Magnetics (TMI 1VD image) with location ESA001, diamond drillholes and mapped outcropping copper horizon [1]

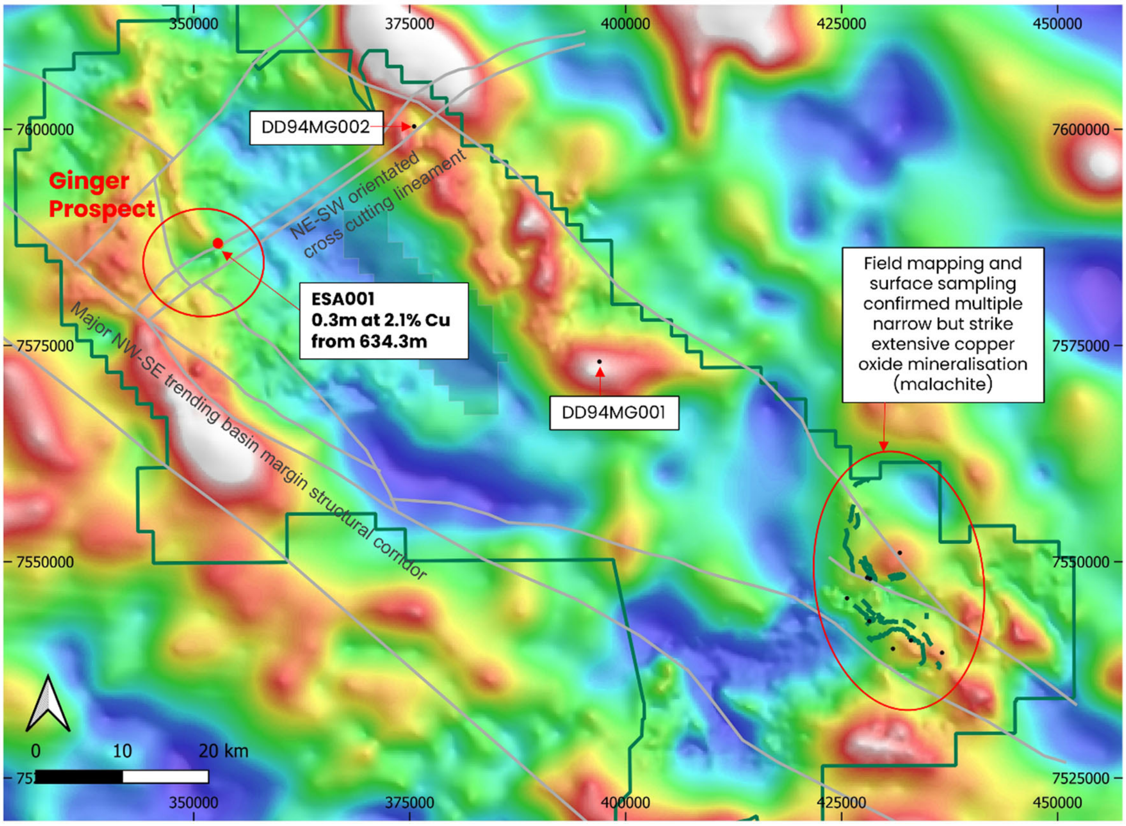


Figure 3 Sandover - Gravity with location ESA001, diamond drillholes and mapped outcropping copper horizon [1]

Hole_ID	Hole_Type	Datum	Zone	Easting	Northing	RL	Azimuth	Dip	EOH Depth, m
ESA001	DDH	GDA94	53	352968	7586656	491	0	-90	668.7

Table 1: Collar locations and drill hole information of completed diamond holes at Sandover

Hole ID	from (m)	to (m)	interval (m)	Cu (ppm)	Ag (ppm)
ESA001	633.8	634.3	0.5	665	0.68
ESA001	634.3	634.6	0.3	21200	7.22
ESA001	634.6	635.1	0.5	296	0.34
ESA001	640.25	641.01	0.76	265	0.25

Table 2: ESA001 Diamond drill hole intersections above 100ppm Cu cutoff.

[1] **ASX announcement 25 November 2021**
[2] **ASX announcement 9 June 2022**

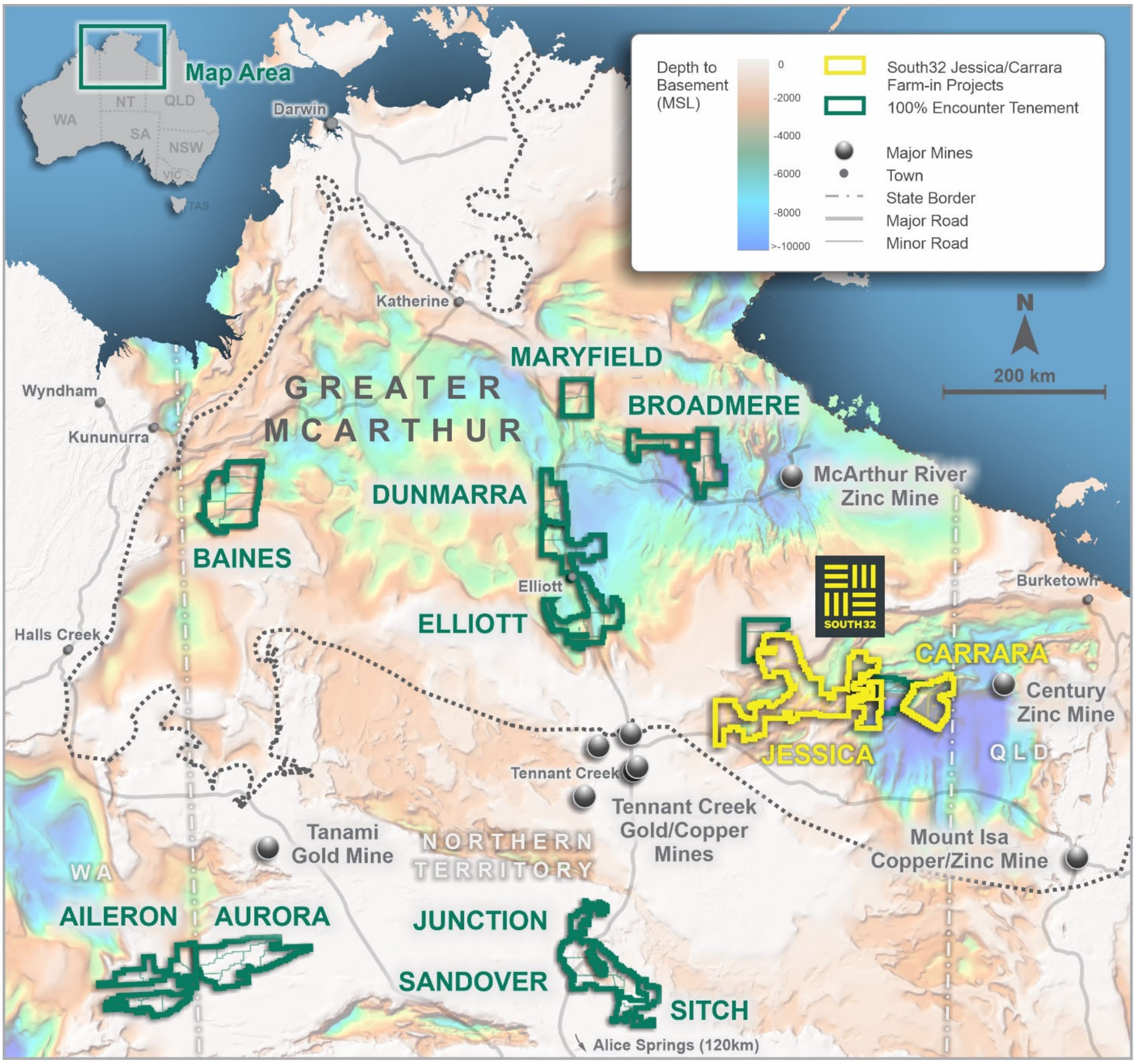
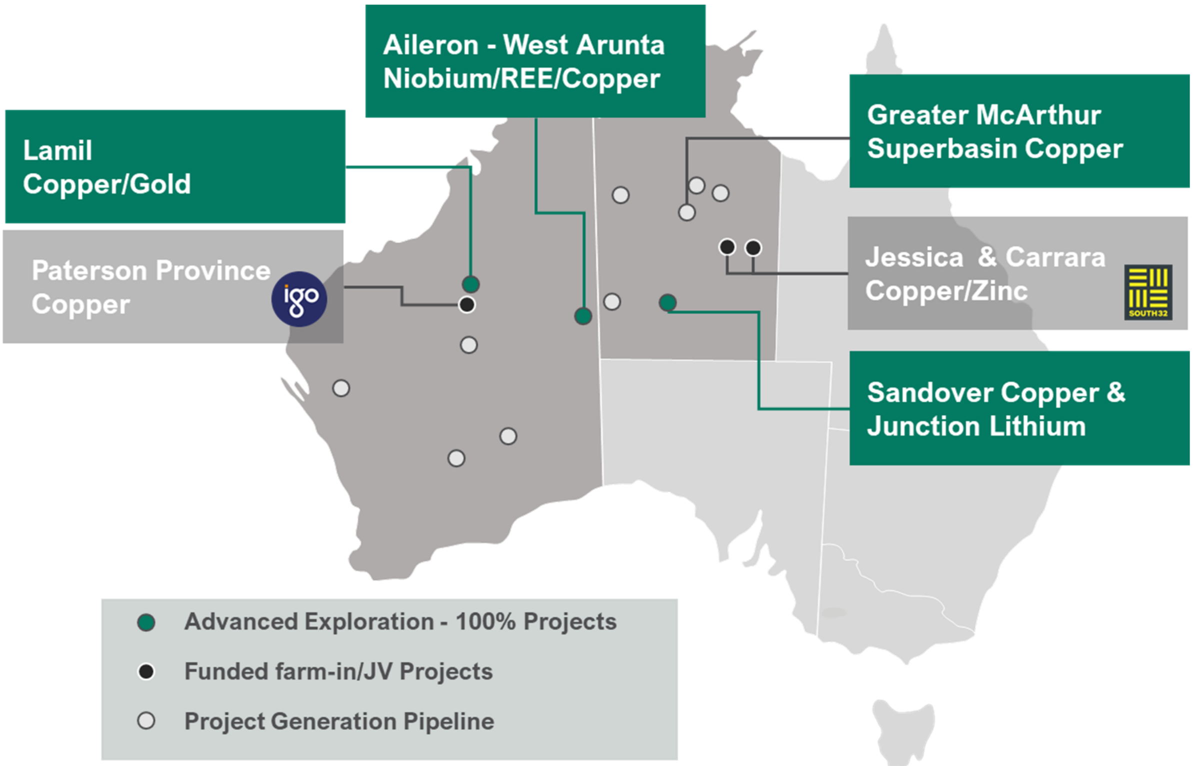


Figure 4 – Sandover project location – NT projects

About Encounter

Encounter is one of Australia's leading mineral exploration companies listed on the ASX. Encounter's primary focus is on discovering major copper and niobium/REE deposits in Australia.

Encounter controls a large portfolio of 100% owned projects in Australia's most exciting mineral provinces that are prospective for copper and critical minerals including the Aileron project in the West Arunta region of WA. Complementing this, Encounter has numerous large scale copper projects being advanced in partnership and funded through farm-in agreements with leading miners: South32 and IGO.



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The information in this report that relates to Exploration Results is based on information compiled by Ms Sarah James who is a Member of the Australian Institute of Mining and Metallurgy. Ms James holds shares and options in and is a full time employee of Encounter Resources Ltd and would not receive any incentive payment dependent on the results of the information being reported based on her work and has sufficient experience which is relevant to the style of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms James consents to the inclusion in the report of the matters based on the information compiled by her, in the form and context in which it appears.

The Company confirms that it is not aware of any new information or data that materially affects the information in the relevant ASX releases and the form and context of the announcement has not materially changed. The Company confirms that the form and context in which the Competent Persons findings are presented have not been materially modified from the original market announcements.

This announcement has been approved for release by the Board of Encounter Resources Limited.

SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	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.*	A single vertical diamond hole ESA001 was completed to 688.7m depth. Diamond core was transferred to core trays for logging and sampling.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	Samples were selected according to geological domains between 632m to 668.7m. Where distinct mineralisation boundaries or geological contacts were logged, sample lengths were adjusted to ensure they are representative. Samples were not taken for all core intervals.
	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	Diamond drill core was sampled as half and quarter core samples of HQ and NQ sized core. Samples were submitted to ALS Laboratories in Perth where they were crushed and pulverised for analyses. Samples were submitted for multiple laboratory analyses. Assays have been reported from ALS method ME-MS61r (4-Acid digest on 0.25g sample analysed via ICP-MS and ICP-AES) and ALS method PGM-ICP23 (Pt, Pd, Au package using 30 g lead fire assay with ICP-AES finish).
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).*	Diamond drilling was used to a depth of 688.7m in ESA001. Overlying Phanerozoic sequences were drilled MR and HQ3 where fractured or porous ground conditions were encountered, and the Neoproterozoic and basement rocks were drilled NQ2.
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed*	Sections of lost core were minimal in NQ2 and were noted by the diamond drillers. Core recoveries were measured and recorded with respect to each drill run.
	Measures taken to maximise sample recovery and ensure representative nature of the samples	Areas of core loss were identified and excluded from sampling to avoid any dilution.
	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.	To date, no detailed analysis to determine the relationship between sample recovery and/or grade has been undertaken for this drill program.

Criteria	JORC Code explanation	Commentary
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.*	Detailed logging of diamond holes was completed by Encounter Geologists
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Geological logging is qualitative in nature and records interpreted lithology, alteration, mineralisation, structure, veining and other features of the samples.
	The total length and percentage of the relevant intersections logged	Detailed logging of diamond holes was completed by Encounter Geologists for the complete length of the drilling.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	Selected samples submitted were cut and sampled ¼ or ½ NQ2 core.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	All samples submitted were from diamond core.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sample preparation was completed at ALS Laboratories in Perth for analyses. Samples were crushed and pulverised to enable a subsample for analyses. This is considered appropriate for the analysis undertaken.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No duplicate core samples were submitted for analysis. Laboratory QC procedures involve the use of commercial certified reference materials (CRMs).
	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.	Sampling intervals do not overlap and were determined by Encounter Geologists to be geologically representative. No duplicate core samples were submitted for analysis.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample sizes are considered appropriate to give an accurate indication of the mineralisation.
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.*	Diamond drill core was sampled as half and quarter core samples of HQ and NQ sized core. All samples were submitted to ALS Laboratories in Perth where they were crushed and pulverised for analyses. Samples were submitted for multiple laboratory analyses. Assays have been reported from ALS method ME-MS61r (4-Acid digest on 0.25g sample analysed via ICP-MS and ICP-AES). Sample pulps were also analysed using ALS method PGM-ICP23 (Pt, Pd, Au package using 30 g lead fire assay with ICP-AES finish). These analyses are considered total. Standard laboratory QAQC was undertaken and monitored by the laboratory.
	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.	Diamond core underwent routine pXRF analysis at 1 metre intervals using a Niton XL3t 950 analyser to aid in logging and identifying zones of interest. All pXRF readings were taken in Soil mode with a 60 second reading time. OREAS supplied standard reference materials were used to calibrate the pXRF instrument.

		No pXRF results are being reported.
	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.	Laboratory QAQC involves the use of internal lab standards using certified reference material and blanks as part of in-house procedures. A formal review of this data is completed on a periodic basis.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	Geological observations included in this report have been verified by Senior Encounter Geologists.
	The use of twinned holes.	No twinned holes have been drilled.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Primary logging and sampling data is being collected for drillholes on toughbook computers using Excel templates and Maxwell Geoservice's LogChief software. Data collected is sent offsite to Encounter's Database (Datashed software), which is backed up daily.
	Discuss any adjustment to assay data.	No adjustments have been made to assay data.
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.*	Drill hole collar locations are determined using a handheld GPS. Down hole surveys were collected during this drilling program at approximately 30m intervals downhole.
	Specification of the grid system used.	The grid system used is MGA_GDA94, zone 53.
	Quality and adequacy of topographic control.	RLs measurements were measured of the drill collar using a handheld Garmin GPS (±5m accuracy).
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	Only one diamond drillhole has been completed.
	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.	Mineralisation has not yet demonstrated to be sufficient in both geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications to be applied.
	Whether sample compositing has been applied.	No sample compositing has been applied.
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.*	This is early-stage exploration drilling and the orientation of the hole with respect to key structures is not fully understood.
	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.	This is early-stage exploration drilling and the orientation of the hole with respect to key structures is not fully understood.
Sample security	*The measures taken to ensure sample security.*	The chain of custody is managed by Encounter. Samples were transported by Encounter personnel to the assay laboratory.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Sampling techniques and procedures are regularly reviewed internally, as is data. To date, no external audits have been completed on ESA001 data.

SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties including joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	ESA001 at the Sandover project is located within the tenement EL32695 which together with EL32694, EL32695, EL32421, EL32374, EL33065, EL33060 and ELA33048 are part of the Sandover Project 100% held by Encounter. ESA001 was drilled in an area contained within the Stirling Pastoral Lease. No heritage or environmentally sensitive sites have been identified in the area of work.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Historical drilling exploration activity at the southern end of the Sandover Project tenure was completed during the late 1960s and early 1970s. In 1966 Kennecott completed a three hole percussion drilling program (BH1-3) for a total of 610m together with regional costean sampling. In 1968, a program of 4 diamond holes for 662m (Mt Skinner 1-4) was drilled by the Mines and Water Resource Branch, NT. In 1970 Centamin N.L. drilled 4 diamond holes (CMS1-4) in the wider Sandover area for 1781m. Limited historical drilling exploration was completed at the northern and central end of the Sandover project during the mid 1990s. CRA drilled two diamond holes into the Sandover basin in 1994 (DD94MG01 -416.95m and DD94MG02 -175m) A line of 5 shallow RC holes was drilled by WMC in 1995 (TTRC61-65) within 10km of ESA001 for a total 354m.
Geology	*Deposit type, geological setting and style of mineralisation*	Sedimentary rocks at Sandover form the south western margin of the Georgina Basin. Neoproterozoic Mopunga Group sediments lie unconformably on the basement metamorphics of the Arunta block. Sandover is interpreted to represent a locally preserved Neoproterozoic depocentre, overlain by more extensive Cambrian Georgina Basin sediments. A number of the major elements of the sediment-hosted copper system are present at Sandover.
Drill hole information	*A summary of all information material to the understanding of the exploration results including 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 meters) of the drill hole collar* • *Dip and azimuth of the hole* • *Down hole length and interception depth* • *Hole length*	Refer to tabulations in Table 1 of this announcement.
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.*	All assays have been reported with a 100ppm Cu grade cut-off with no internal dilution included. No upper cuts-offs have been applied. No core loss was encountered within the reported mineralised interval.

	Where aggregated 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.	All results reported are downhole width and independent samples. No sample aggregation is reported.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents have been reported in this announcement.

Criteria	***JORC Code explanation***	**Commentary**
Relationship between mineralisation widths and intercept lengths	*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').*	The geometry of the mineralisation is not yet known due to insufficient drilling in the targeted area.
Diagrams	*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 plane view of drill hole collar locations and appropriate sectional views.*	Refer to body of this announcement.
Balanced Reporting	*Where comprehensive reporting of all Exploration Results is not practical, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All meaningful and material information has been included in the body of the text.
Other substantive exploration data	*Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observation; 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.*	All meaningful and material information has been included in the body of the text.
Further Work	*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.*	Geophysical techniques such as detailed magnetics are being considered to evaluate the potential at Sandover.