FLEM CONFIRMS HIGH-VALUE COPPER AND BASE-METAL CONDUCTORS AT SPECTRUM

HIGHLIGHTS

- Eight Fixed-Loop Electro-Magnetic (FLEM) surveys have been completed at the Spectrum Project, located in the Northern Territory, with preliminary modelling of the FLEM data covering the Vesper copper target, now completed.
- Preliminary FLEM modelling over Vesper (Figure 1) shows a very strong correlation between the ground EM and previously modelled airborne EM conductor plates (VES001 – VES004)[1]. The correlated EM anomalies are interpreted as being due to strong discrete conductive sources in the basement.

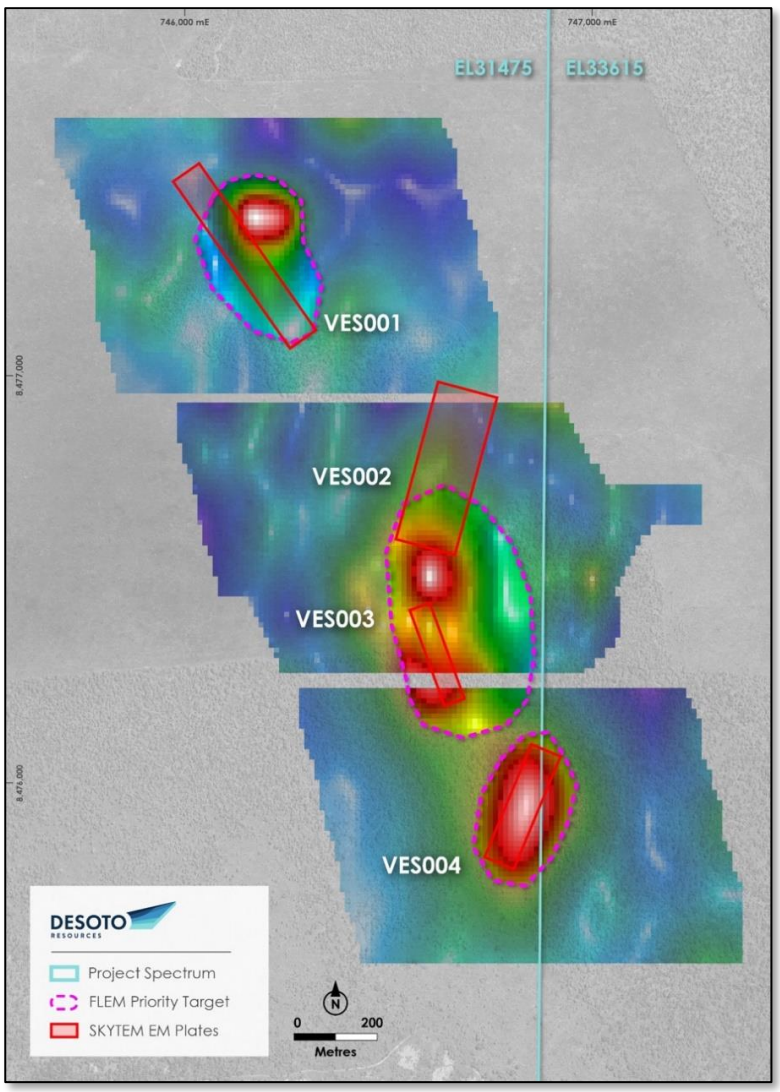

Figure 1 - Modelled Vesper FLEM data showing location of airborne EM plates and preliminary Priority 1 FLEM targets, noting the strong correlation between the ground EM and airborne EM conductor plates.

[1]DES ASX announcement: REE-CU-Au potential continues to emerge at Spectrum (11th June 2024)

- Six FLEM loops have been completed at the Vesper copper prospect, two FLEM loops have been completed at the Quantum REE prospect and three FLEM loops have been completed at Fenton South, with the data currently being validated and modelled.
- DeSoto is undertaking a comprehensive grid-based gravity program to better define structural features in the basement that will assist in targeting at both Vesper and Quantum targets. This data combined with Fixed Loop Ground Electro-Magnetic (FLEM) surveys will better define drill targets.
- Plate modelling of the Vesper FLEM data is now well advanced and expected to form an important part of the upcoming drill campaign.

NEXT STEPS AND DRILLING PROGRAM

- Geophysical contractor Zonge Engineering is currently completing a ground Pole-Dipole Induced Polarisation (PDIP) survey with one line planned at Quantum, three lines planned at Vesper and one line planned at Fenton South.
- PDIP surveys will further refine conductor targets generated from the FLEM surveys and assist with geological interpretations.
- The FLEM and PDIP data will be modelled and integrated to assist with detailed drill planning at Quantum, Vesper and Fenton South.
- Infill MMI soil surveys at Quantum and Vesper and an initial soil survey at Fenton South have commenced to further generate and refine existing targets and assist with geological interpretations.
- Drill permitting is underway with approvals expected in late August-early September pending the finalisation of the NT Government's release of a new drilling permitting process.
- Located on a Pastoral Station, the Spectrum Project has no known environmentally sensitive sites or determined Native Title Claims, with drilling to commence as soon as the drill permits have been received.

DeSoto Resources Limited (ASX:DES or 'Company') is pleased to report on the progress of the ground Fixed Loop Electro-Magnetic (FLEM) surveys at the Spectrum and Fenton Projects in the Northern Territory.

ABOUT SPECTRUM, GEOLOGY AND DISCUSSION

The Spectrum Project licence EL31475 is located wholly within DeSoto tenement EL33615 (Figure 2) on Douglas West pastoral station and is accessible via an extensive network of local road and pastoral tracks from Oolloo Road. No known Aboriginal Land Claims are registered over the licence area and environmentally sensitive areas are excluded from the tenement and form the southern boundary of the project.

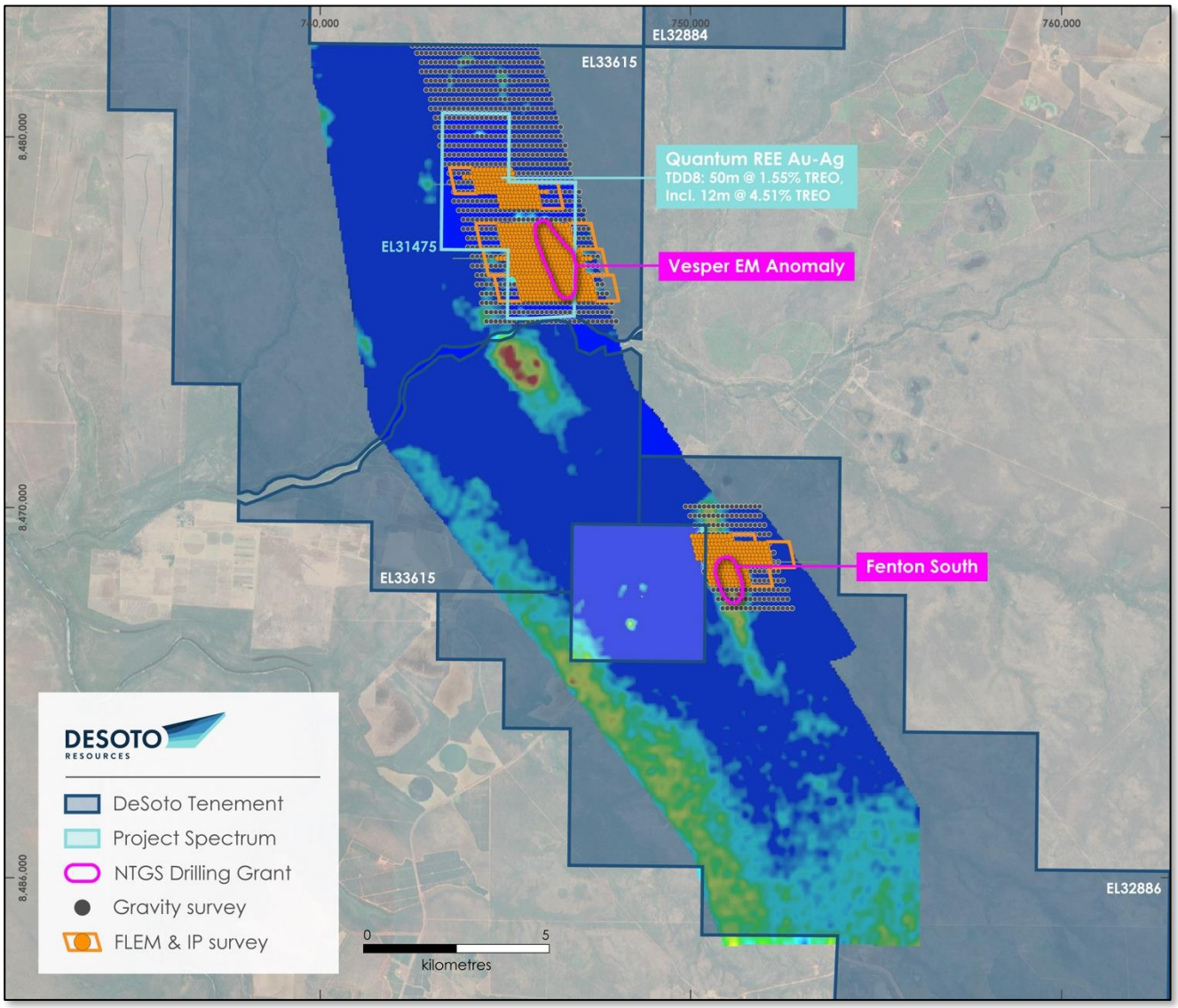

Figure 2 - DeSoto's Fenton and Spectrum Projects, located in the Northern Territory.

Originally identified by DeSoto from its SkyTEM survey flown in late 2023, the Spectrum Project contains the Vesper target, a 2km-long by 0.5km-wide EM anomaly located approximately 1.5km to the southwest of the Quantum REE-Au discovery.

DeSoto has employed gravity and aeromagnetic gradients ("worms") to guide the Company's under-cover interpretation, integrated with the mapping of key faults and structures. Longer faults typically have deeper roots and can be more mineralised or provide pathways for mineralising fluids to focus along. Hence, a proxy for deep faults is the inferred strike length.

The Company's analysis highlights long NNW-SSE trending structures along the structural grain of the basement and a series of intersecting NE-SW faults (Figure 3). The Fenton Shear Zone (FSZ) is a major feature along the western edge of the Pine Creek inlier. In addition, the NE-SW trending cross-cutting structures control the emplacement of Cullen Suite granitoids and can localise Uranium and Gold occurrences, such as along the Hayes Creek Fault (HCF) zone.

The SW extension of the HCF towards the FSZ was identified by DeSoto as a high priority regional scale fault intersection target in the first instance. Fault intersections are targeted as being areas of structural complexity, fluid flow and mineralisation.

Both the Quantum REE-Au mineralisation and Vesper AEM and Cu soil anomaly are located along the east side of the FSZ. The historical MMI Cu soil anomaly is strongly coincident with the FSZ as defined by the gravity and AEM data. The Vesper AEM and Cu anomaly is associated with a major fault step in the basement and the intersection of the FSZ with the HCF. The FLEM data being acquired over the Spectrum Project will be used to further define the drill targets at Quantum and Vesper.

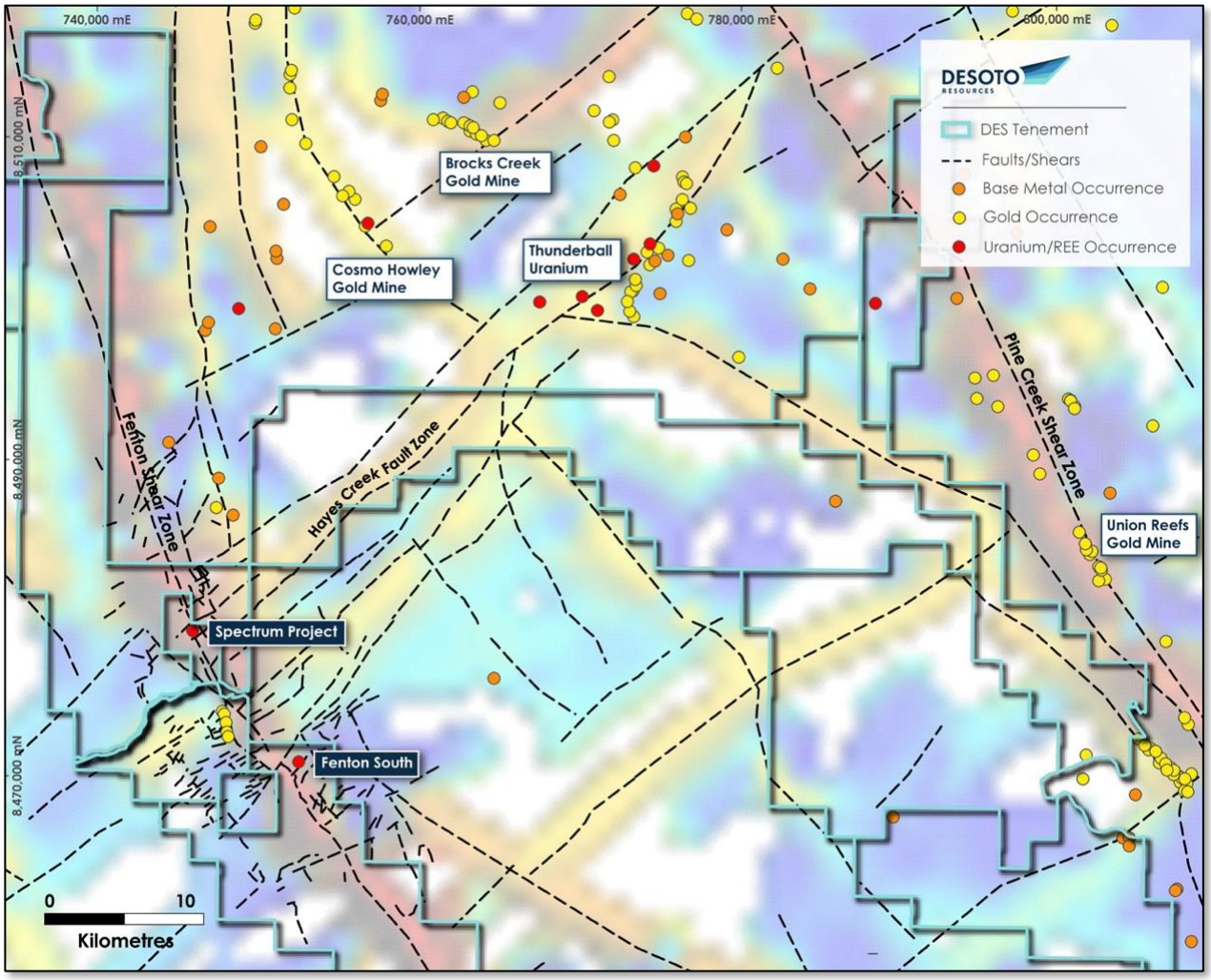

Figure 3 - Regional structural setting of the Spectrum Project at the intersection of the Fenton Shear Zone and the Hayes Creek Fault Zone and locations of known gold, base metal and uranium+/-REE mineralisation. The underlying colour image is of interpreted fault length (longer faults shown as warmer colours). This highlights long and by inference deep structures. The fault length image is derived from integrated interpretation of magnetic, gravity and mapped fault data sets.

Located 2.5 hours south of Darwin (Figure 4), the Spectrum Project is located in the western and central sections of the Central Domain of the Pine Creek Orogen, approximately and comprises units of the Cosmo Supergroup which include the South Alligator Group, and Finniss River Group.

The stratigraphic sequences are dominated by mudstones, siltstones, greywackes, sandstones, tuffs, and limestones. These sedimentary units, as well as basic intrusions, were folded, metamorphosed, and intruded by the Cullen Batholith. Pegmatites occur throughout the region in close proximity to the Cullen Suite Granites.

The project area is overlain by younger Cambrian basin sedimentary sequences.

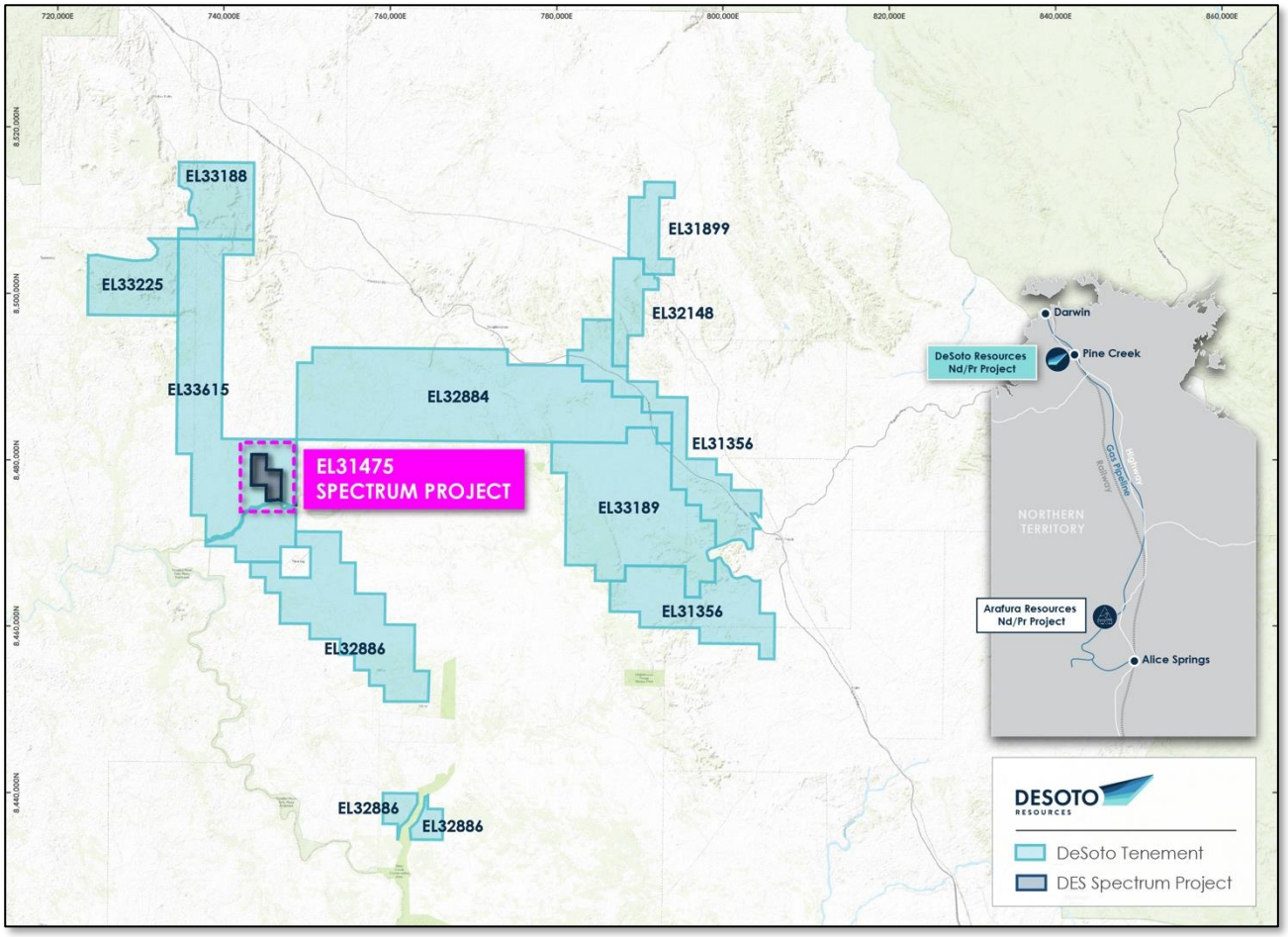

Figure 4 - DeSoto's Northern Territory Project portfolio, including the Spectrum Project, located 2.5 hours south of Darwin.

-END-

This release is authorised by the Board of Directors of DeSoto Resources Limited.

For further information visit our website at DeSotoresources.com or contact:

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COMPETENT PERSONS STATEMENT

The information in this report that relates to exploration results is based on and fairly represents information and supporting documentation prepared by Mr Nick Payne.

Mr Payne is an employee of the company, is a member of the Australian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Payne consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.

CAUTIONARY STATEMENT

DeSoto advises that it is not aware of any new information or data that materially affects the previous exploration results contained in this announcement and all material assumptions and technical parameters underpinning the results continue to apply and have not materially changed.

TABLE 1 – JORC CODE – GEOPHYSICS RESULTS

Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling Technique	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.	ELECTROMAGNETIC GEOPHYSICAL SURVEY • A Time Domain Fixed Loop electromagnetic geophysical survey was undertaken during July-August 2024, by Zonge Engineering and Research Organisation Pty Ltd, an independent geophysical acquisition contractor. • The survey employed the following sampling techniques: Time Domain Fixed Loop Electromagnetic geophysical survey. • The survey used the following sampling equipment: Method: Fixed Loop EM Geometry: Fixed Loop Rectangle ~2,600m perimeter Receiver line spacing (m): 100 Station Move Up (m): 100 Receiver Antenna: 3 component EMIT B Field. Receiver System: SmarTEM Base Frequency: 0.5Hz Transmitter System: Zonge GGT-30 Transmitter Waveform: Square, 2 sec on 2 sec off Stacking Time (sec): 90 Readings: 3 or more
Drilling	Drill type (eg core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).	This release has no reference to previously unreported drill results.
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.	This release has no reference to previously unreported drill results.

Logging	Whether core and chip samples have been geologically and geotechnical 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/Trench, channel, etc) photography. The total length and percentage of the relevant intersections logged.	This release has no reference to previously unreported drill results.
Sub-Sampling Technique 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.	This release has no reference to previously unreported drill results.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	ELECTROMAGNETIC GEOPHYSICAL SURVEY • A Time Domain Fixed Loop electromagnetic geophysical survey was undertaken during July-August 2024, by Zonge Engineering and Research Organisation Pty Ltd, an independent geophysical acquisition contractor. • The survey consisted of 98.8 line km of data collected along 100m spaced E-W traverses. • Data QAQC was completed by the acquisition contractor and verified by an independent consultant geophysicist using industry standard Maxwell software. • Data QAQC showed that the obtained data is of moderate quality. • Processing of the data was completed by an independent consultant geophysicist using industry standard Maxwell and Windisp software. • This release has no reference to previously unreported drill results, sampling, assays or mineralisation.
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	Data QAQC was completed by the acquisition contractor and verified by an independent consultant geophysicist. This release has no reference to previously unreported drill results, sampling, assays or mineralisation.
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.	The coordinate system used is GDA94 MGA Zone 52S coordinates. Garmin Etrex 10 hand-held GPS was used to locate EM receiver and transmitter stations. km = kilometre; m = metre; mm = millimeter; mgal = milligal; msec = milliseconds

	Specification of the grid system used Quality and adequacy of topographic control	
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	ELECTROMAGNETIC GEOPHYSICAL SURVEY The survey consisted of 98.9 line km of receiver data collected along 100m spaced E-W (090-270) traverses. The survey used a 100m station move up. The receiver lines were 100m apart.
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.	ELECTROMAGNETIC GEOPHYSICAL SURVEY The survey consisted of 98.9 km of receiver data collected along 100m spaced E-W (090-270) traverses. This is approximately perpendicular to magnetic gradients and MMI soil anomaly trends.
Sample Security	The measures taken to ensure sample security	This release has no reference to previously unreported drill results.
Section 2 Reporting of Exploration Results		
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 Pine Creek Project comprises nine contiguous exploration licences (EL31356, EL32148, EL31899, EL32884, 32886, EL33188-33189, EL33225 and EL33615 (amalgamation of EL32885 and EL33450) covering an area of 1,565 km^2. The licences are held by Mangusta Minerals Pty Ltd, a 100% owned Desoto subsidiary. The Spectrum Project is held by CopperOz Pty Ltd and sits within exploration license EL31475 which is wholly enclosed within DeSoto exploration license EL33615. The Project is located approximately 150 km south of Darwin, and 8 km north of Pine Creek in the Northern Territory. Access to the Pine Creek Project is from the sealed Stuart Highway Hayes Creek via the sealed Dorat Road and Oolloo Roads and then via well maintained gravel roads.
Exploration Done by Other Parties	Acknowledgment and appraisal of exploration by other parties.	The majority of past exploration work within the Project area (including drilling, surface sampling; geophysical surveys, geological mapping) has been largely completed by Homestake Gold of Australia, North Mining, Newmont Australia, St George Mining Pty Ltd, Aztec Mining Ltd, AngloGold Australia, Davos Resources and Thundelarra Exploration The relevant reports are available on the Northern Territory Geological Survey GEMIS open file database library. A summary of previous work completed can be found in the company prospectus at www.desotoresources.com
Geology	Deposit type, geological setting and style of mineralisation.	The Project is located in the western and central sections of the Central Domain of the Pine Creek Orogen and comprises units of the Cosmo Supergroup which include the South Alligator Group, and Finniss River Group. The stratigraphic sequences are dominated by mudstones, siltstones, greywackes, sandstones, tuffs, and limestones. These sedimentary units, as well as basic intrusions, were folded, metamorphosed, and then subsequently intruded by the Cullen Batholith. Pegmatites occur throughout the region in close proximity to the Cullen Granites. The Pine Creek Project is considered prospective for orogenic Pine Creek gold mineralisation and pegmatite hosted lithium (spodumene) mineralisation. The majority of known gold deposits are hosted by the South Alligator Group and the lower parts of the Finniss River Group along anticlines, strike-slip shear zones and thrusts proximal to the Cullen Granite.
Drill Hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the	This release has no reference to previously unreported drill results.

	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.	
Data Aggregation Methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. 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.	This release has no reference to previously unreported drill results.
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 (eg 'down hole length, true width not known').	This release has no reference to previously unreported drill results.
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 plan view of drill hole collar locations and appropriate sectional views.	This release has no reference to previously unreported drill results. Diagrams including plan maps, perspective and section views are provided with this report.
Balanced Reporting	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.	The company believes this announcement is a balanced report, and that all material information has been reported.
Other Substantive Exploration Data	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.	Exploration work by previous explorer for lithium is minimal and has largely been of a preliminary or reconnaissance nature. The Company is aware of regional scale aeromagnetic surveys and geological mapping programmes undertaken by past explorers and has access to versions of the data that is available in reports. Surface soils, rock chip sampling and reconnaissance drilling programmes have been undertaken over many parts of the Project area but is not lithium specific. This has not been fully compiled by the Company as yet.
Further Work	The nature and scale of planned further work (eg tests for lateral extensions or large scale step out drilling.	Planned further work includes drill testing of selected target areas. These targets have been selected based on IP, EM, magnetic and structural data.

	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	