HIGH PRIORITY GEOPHYSICAL TARGETS IDENTIFIED FOR IMMEDIATE DRILL TESTING

DeSoto Resources Limited (ASX:DES or 'Company') is pleased to report on progress of the 2024 drill program planning to test multiple high priority targets generated from recently completed ground geophysical surveys at the Spectrum and Fenton Projects, located in the Northern Territory.

HIGHLIGHTS

- All ground geophysical surveys at Spectrum and Fenton Projects (Fig.1) have now been completed with modelling and interpretations now completed.
- Ground Induced Polarisation (IP) survey confirmed the presence of four discrete conductors at Vesper and several discrete chargeable zones along the western limb of the Vesper trend.
- A detailed drill plan to test the highest priority geophysical and geochemical targets at Quantum and Vesper has been designed (Fig. 2).
- Drilling application for up to 20 RC/diamond holes has been submitted to the Northern Territory Department of Environment, with approval expected imminently.
- A land access agreement has been signed with the owners of Tipperary and Douglas West Stations, allowing access for drilling.
- Infill MMI soil surveys at Quantum and Vesper and an initial soil survey at Fenton South have been completed and samples are at the laboratory. Assays are pending and will assist to refine existing targets and geological interpretations.
- Multi-purpose drill rig contractor identified to complete immediate drill testing of top ranked targets at Quantum and Vesper, with drilling to commence as soon as NT Government approvals are received.

UPDATE ON NEW NORTHERN TERRITORY DRILL PERMITTING PROCESS

- At the end of 2023, the NT Government passed legislation to "streamline the process" for making drilling applications. The new process was planned to come into effect 1st July 2024.
- Unfortunately, due to delays in the roll out of the new process and other governmental delays, the new process were two months late, resulting in a two-month delay to DeSoto in lodging its approvals for drilling programs and a delay in drilling commencement.
- With the new process now live, the Company has lodged its drilling approvals with drilling to commence shortly.
- The Company is also hoping the new process will provide an expedited approvals process, as advertised by the former Government.

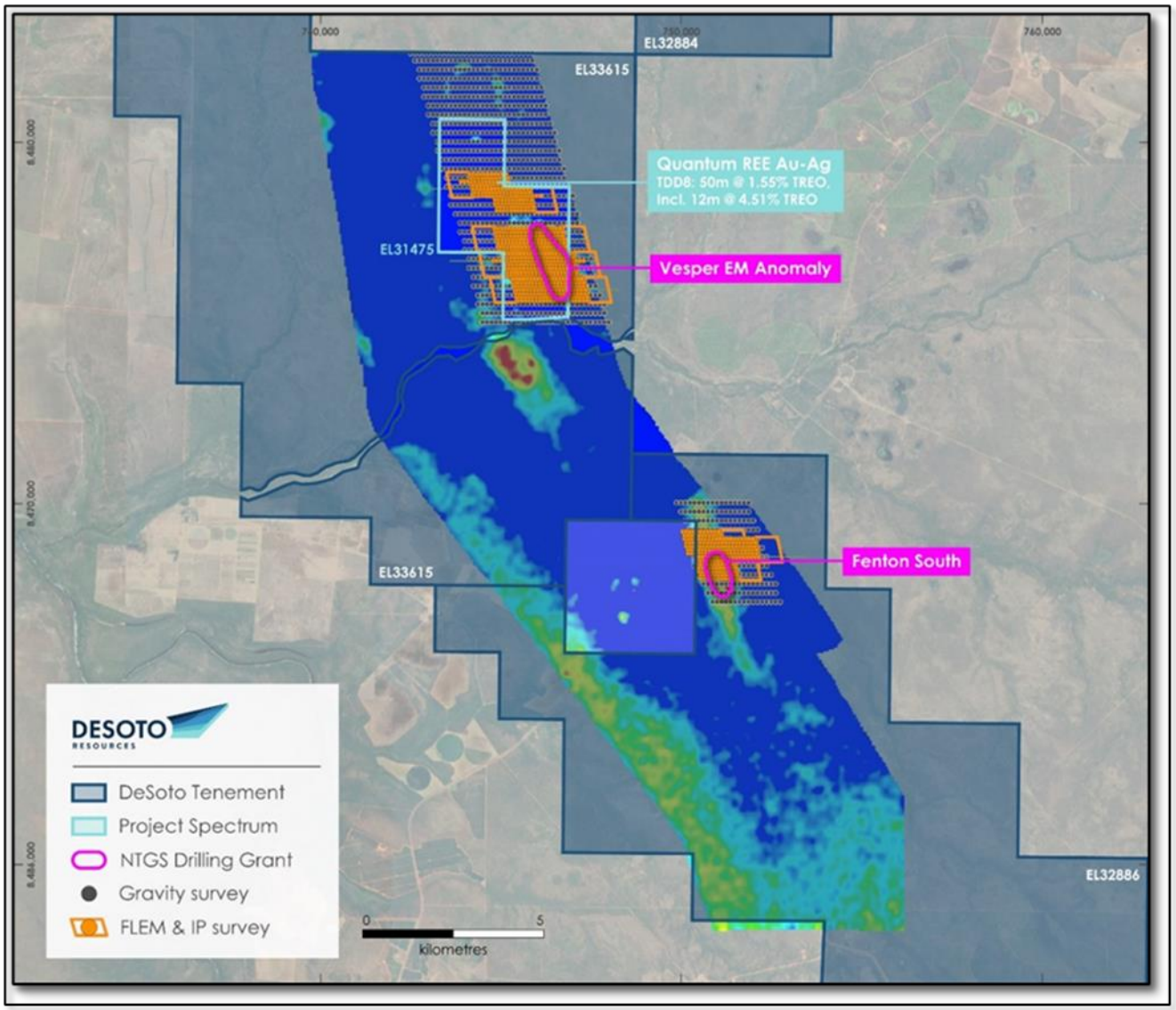

Figure 1 – Fenton and Spectrum Project locations on SKYTEM late-time ch 34 showing locations of gravity survey stations, FLEM and IP survey lines.

Ground Geophysical Program

A 7-week ground electrical geophysical survey program was completed by Zonge Geophysics covering the Quantum, Vesper and Fenton South target areas. The survey comprised 13.5-line km of 2D pole-dipole induced polarisation (PDIP), and 77-line km of fixed loop electromagnetics (FLEM) collected across eleven transmitter loops.

The local scale geophysical surveys were planned to test for possible copper-gold mineralisation at Vesper associated with an Airborne Electromagnetic (AEM) conductivity anomaly identified from the NT government co-funded 2023 SKYTEM survey. The FLEM surveys aimed to further refine modelling of the AEM conductor plates prior to drill testing to ensure optimal hole designs. These conductivity anomalies are coincident with anomalous copper enriched MMI geochemical trends and zones of structural complexity inferred from high resolution ground gravity data[1]. The FLEM and IP

[1]DES ASX Announcement 1st August 2024: Compelling Gravity Targets Generated At Spectrum and Fenton South

survey results confirm the presence of all four discrete AEM basement conductors previously modelled and generated six new conductivity and/ or chargeability anomalies that may represent accumulation of massive, disseminated or vein hosted sulphides. These new data indicate a ~2km long by 1.6km prospective zone of anomalous geochemical and geophysical responses at Vesper (Figure 2). Drill testing is now required to determine the cause of these responses.

Two loops of FLEM and one 2D profile of IP were collected over the Quantum area to test if the REE-Au mineralisation has a geophysical response and/ or if a target may be present beneath the current limits of drilling at depth. FLEM channel imaging results indicate that four conductivity anomalies occur coincident with or along strike of historic drill intercepts[2] at Quantum. These are aligned along a strike extensive reactivated basement fault, inferred from AEM and high-resolution ground gravity data, that may have a structural control on mineralisation. IP models indicate a broad chargeability zone at depth coincident with the historic drilling at Quantum.

Three loops of FLEM and one 2D profile of IP were collected over the Fenton South gold target area that was originally identified from the 2023 SKYTEM survey. A ground gravity survey was also completed over this area and detected a significant +1mgal residual anomaly that is semi-coincident with magnetic and AEM anomalies. The FLEM surveys identified two conductive zones of interest. IP models indicate a lower order chargeability anomaly slightly offset from the high-density body.

The targeted possible copper-gold mineralised zones are predicted to be associated with sulphide alteration that would have a high conductivity response to EM surveys and a high chargeability response to IP geophysical surveys. Positive gravity and magnetic responses are anticipated to arise from alteration related to a hydrothermal mineralised system.

Drill Program Discussion

A drilling application for up to 20 RC and diamond holes across the Spectrum and Fenton South projects has been completed and lodged with approval expected within weeks.

Processing of the geophysical data has been completed and interpreted in conjunction with MMI soil geochemistry, gravity, magnetic, airborne electromagnetic, geological and drilling data. This work has generated numerous high priority drill targets at Quantum, Vesper and Fenton South. A total of 13 priority drill holes have been designed to test the geophysical, geochemical and structural targets.

A multi-purpose RC/Diamond rig will be utilised to complete the 2024 drill program (Fig. 2).

The four highest priority drill holes will be completed first and will focus on testing the Quantum and Vesper targets (see Table 1 for collar details). It is envisaged that the remainder of the planned drill holes will be completed during the 2025 field season.

Details of the highest priority drill holes are:

Hole 1 (Target FEN24001): designed to twin and extend historic drill hole TURC097 that ends in 6m @ 0.97% TREO (incl. 2m @ 1.75% TREO at EOH) from 240m[3]. This drill hole will provide stratigraphic and structural data on the setting of the Quantum REE-Au mineralisation and test the assumption the REE mineralisation is fold hosted. It will provide an understanding on the mineralisation style and samples for mineralogical and metallurgical analysis.

Hole 2 (Target FEN24003): designed to test the strongest EM conductor in an area of strong MMI Cu anomalism and structural complexity. This drill hole will test the conductor plate and provide

[2-3]DES ASX Announcement 29th May 2024: Acquisition of High-Grade Rare Earths Project in the Northern Territory.

information on the stratigraphy and structure of the “eastern limb” at Vesper. See Figure 3 for the cross section of this hole.

Hole 3 (Target FEN24008): designed to test a discrete IP chargeability anomaly in an area of strong MMI Cu anomalism and structural complexity. This drill hole will test the chargeable zone and provide information on the stratigraphy and structure of the “western limb” at Vesper. See Figure 4 for the cross section of this hole.

Hole 4 (Target FEN24004): designed to test the second strongest EM conductor which also has a coincident gravity anomaly in a favourable geochemical and structural setting. See Figure 5 for the cross section of this hole.

Soil Geochemical Program

A program of 106 infill MMI soil samples were collected at Quantum and Vesper, and an initial MMI soil survey of 49 samples was completed at Fenton South. The samples have been dispatched and are currently at the laboratory in Perth. Assay results are pending.

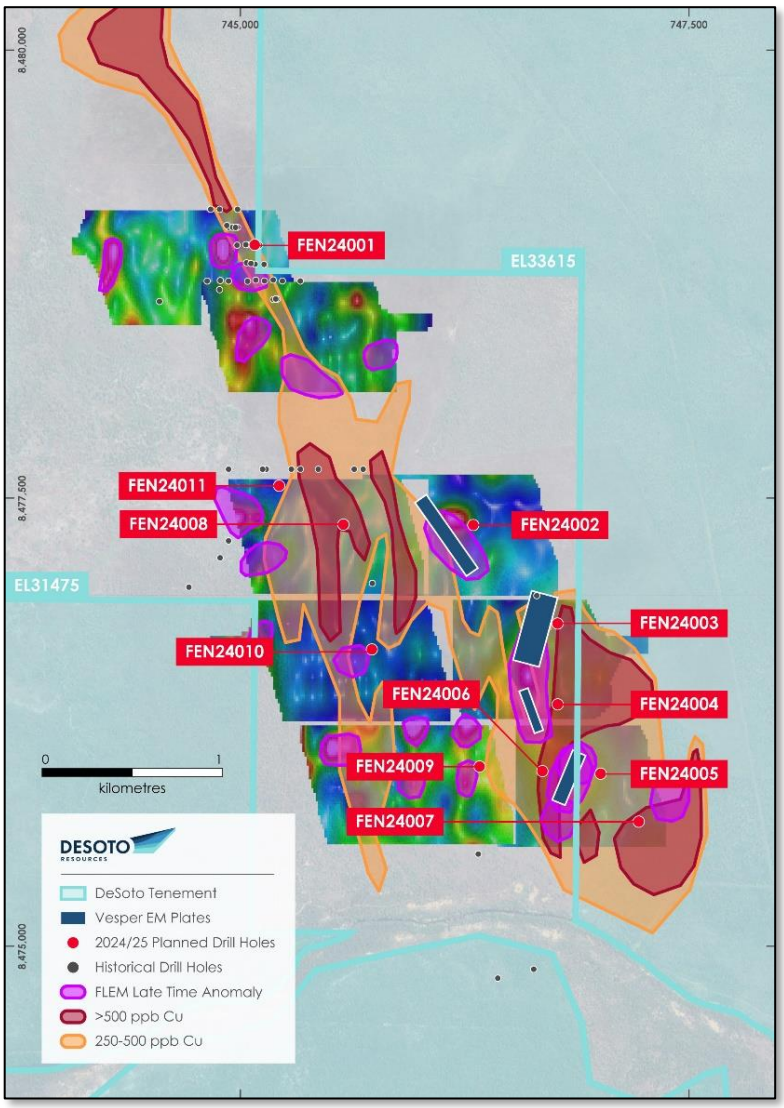

Fig. 2 - 2024 proposed high priority drill holes on FLEM channel images with EM conductor plates and Cu MMI contours.

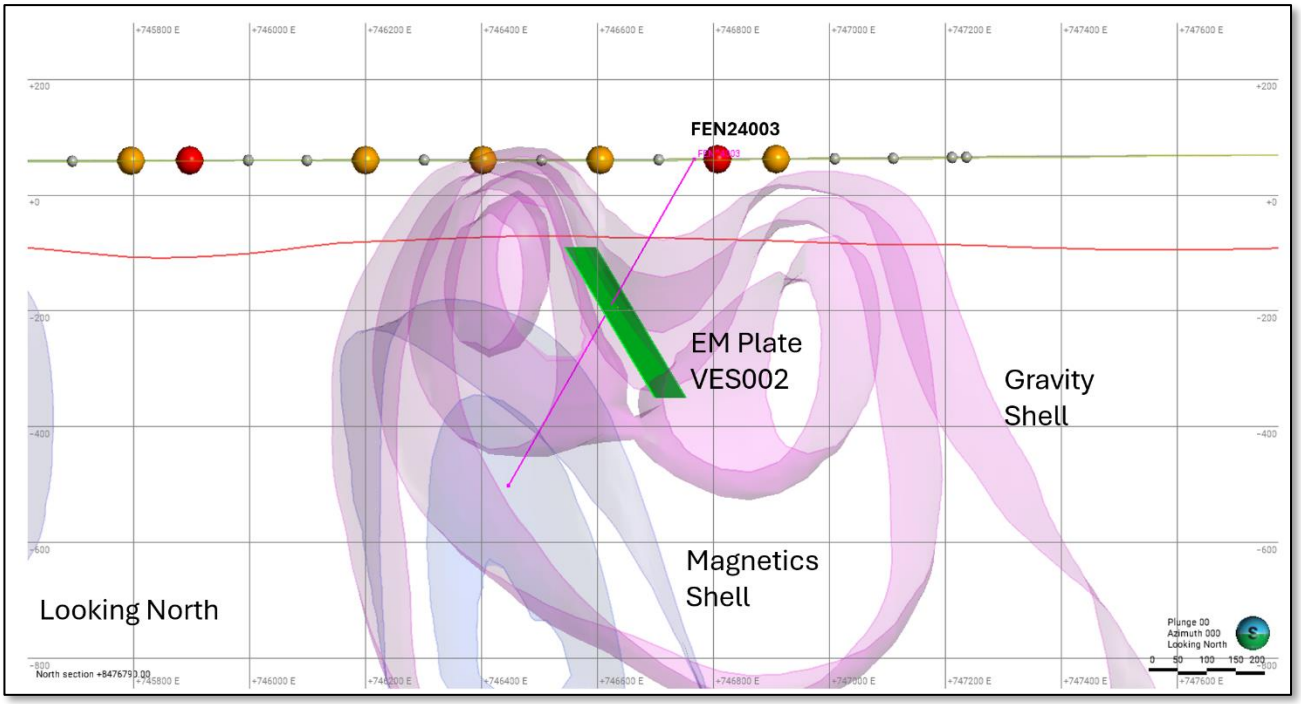

Fig. 3 – Cross section of planned hole 2 (target FEN24003) showing modelled EM plate VES002 and the magnetic (blue) and gravity shells (purple). Homestake MMI soils - Orange sphere > 250 ppb Cu, & red sphere > 500 ppb Cu.

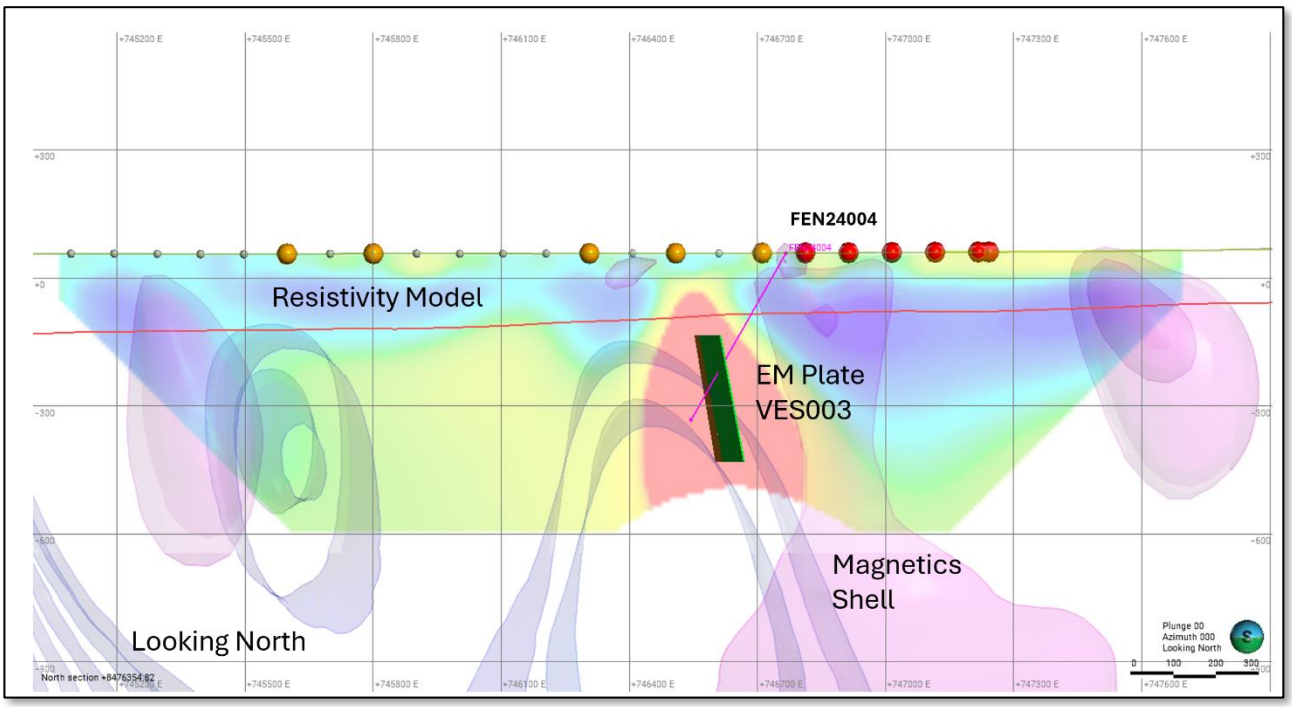

Fig. 4 – Cross section of planned hole 3 (target FEN24004) showing modelled EM plate VES003 and the magnetic (blue) and gravity shells (purple) and a slice of the Resistivity Model. Homestake MMI soils - Orange sphere > 250 ppb Cu , & red sphere > 500 ppb Cu.

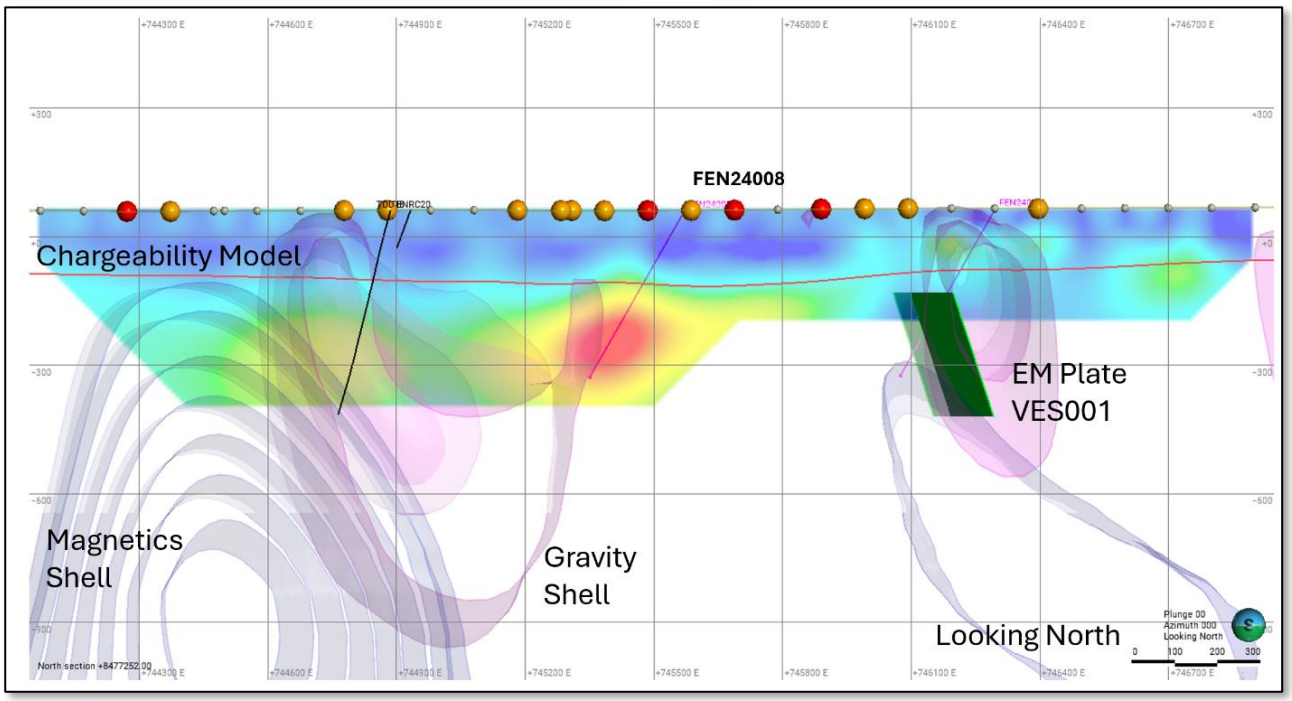

Fig. 5 – Cross section of planned hole 4 (target FEN24008) showing modelled, discrete conductive zone, magnetic (blue) and gravity shells (purple), and a slice of the Conductivity Model. Homestake MMI soils - Orange sphere > 250 ppb Cu, & red sphere > 500 ppb Cu.

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

-END-

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

Chris Swallow
Managing Director
P: +61 412 174 882
E: cs@desotoresources.com

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.

TABLE 1 – COLLAR AND DETAILS FOR HIGHEST PRIORITY 2024 PROPOSED DRILL HOLES

Planned ID	Easting	Northing	Dip	Azimuth	Depth	Area	Target Desc.
FEN24001	745079	8478913	-60	260	450	Quantum	Test fold hinge position and REE mineralisation
FEN24003	746766	8476800	-60	260	450	Vesper	Test EM plate/mag and grav anomaly and geochemical trend
FEN24004	746767	8476349	-60	260	450	Vesper	Test EM plate/mag and grav anomaly and geochemical trend
FEN24008	745573	8477352	-60	260	450	Vesper	Test IP chargeability anomaly and geochemical trend

TABLE 2 – 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 INDUCED POLARISATION GEOPHYSICAL SURVEY • A Time Domain Induced Polarisation and DC Resistivity 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 Induced Polarisation and DC Resistivity geophysical survey. • The survey used the following sampling equipment: Method: Induced Polarisation and DC Resistivity Array: Pole-Dipole Geometry: Inline 2D Receiver a spacing (m): 100 Transmitter a spacing (m): NA Station Move Up (m): 100 N level: > n = 12 Transmitter Electrode: Two 1x0.3x0.1m aluminium plates Receiver Electrode: Cu/CuSO4 non-polarising electrodes Receiver System: GDD 32ch Transmitter System: Zonge GGT-30 and 2x GDD Tx4 Transmitter Waveform: Square, 2 sec on 2 sec off Stacking Time (sec): 120 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. INDUCED POLARISATION GEOPHYSICAL SURVEY • A Time Domain Induced Polarisation and DC Resistivity geophysical survey was undertaken during July to August 2024, by Zonge Engineering and Research Organisation Pty Ltd, an independent geophysical acquisition contractor. • The survey consisted of 13.5 line km of data collected along four E-W (090-270) oriented profiles (lines: 8478800N, 8477300N, 8476400N, 8476000N) and one NE-SW (045-225) oriented profile (line: 1000N). • Data QAQC was completed by the acquisition contractor and verified by an independent consultant geophysicist using industry standard TQIPdb software. • Data QAQC showed that the obtained data is of moderate quality. EM coupling exists on some lines and may be geological in origin. • Modelling of the data was completed by an independent consultant geophysicist using industry standard Zonge2D inversion software. • The derived subsurface geo-electric models of Chargeability and Resistivity are interpreted with a high degree of confidence. • 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. Specification of the grid system used Quality and adequacy of topographic control	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
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. INDUCED POLARISATION GEOPHYSICAL SURVEY The survey consisted of 13.5 line km of data collected along four E-W (090-270) oriented profiles (lines: 8478800N, 8477300N, 8476400N, 8476000N) and one NE-SW (045-225) oriented profile (line: 1000N). Petrophysics and forward modelling confirmed that the array geometry and dipole sizes were appropriate to detect the mineralisation style targeted.
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. INDUCED POLARISATION GEOPHYSICAL SURVEY The survey consisted of 13.5 line km of data collected along four E-W (090-270) oriented profiles (lines: 8478800N, 8477300N, 8476400N, 8476000N) and one NE-SW (045-225) oriented profile (line: 1000N). 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 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.	This release has no reference to previously unreported drill results.
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. Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Planned further work includes drill testing of selected target areas. These targets have been selected based on IP, EM, magnetic and structural data.