

DRILLING RAMP-UP UNDERWAY WITH GEOPHYSICS AND REGIONAL PROGRAMS COMPLETED

HIGHLIGHTS

Fenton Gold Project

- Ground geophysical surveys completed at the Fenton Gold Project comprising 16.3-line km of 2D pole-dipole induced polarisation (IP), and 32.8-line km of fixed loop electromagnetics (FLEM).
- A number of strong geophysical targets have been identified in preliminary data¹ with detailed processing and modelling in progress to define drill targets for the Company's upcoming maiden drill program.
- The Fenton Shear Zone is an under-cover, structurally complex Palaeoproterozoic hosted gold target zone that extends for over 20km along strike by 4km across strike.

Regional Programs

- Regional reconnaissance exploration programs, targeting potential lithium, copper and gold mineralisation were completed across the Shoobridge and Copperfield project areas, including mapping, rock, stream and soil sampling.
- Quartz vein rock samples were collected at the Barrapool prospect, where the Company recently reported historic high-grade coarse gold pan concentrate stream results up to 257g/t Au²
- At Copperfields, 24 rocks and 90 soil samples were collected to follow-up initial encouraging results, including gold values of 4.1g/t Au and copper up to 6.5% Cu³.

Next Steps

- Geophysical data interpretation and modelling is currently underway with the results to be used to plan the Company's maiden drilling program at the Fenton Gold Project expected to commence in mid August.
- All regional surface samples have been submitted to ALS Adelaide for analysis, with results awaited.

¹DES ASX Announcement - Strong EM & IP Anomalies at Fenton Gold (5th July 2023)

²DES ASX Announcement - Historic gold grades up to 257g/t Au uncovered at new regional prospect (13th June 2023)

³DES ASX Announcement - Encouraging initial rock results from Fenix up to 4.1g/t Au & 6.5% Cu (31st January 2023)

- Following the successful grant of \$96,283⁴ in co-funding for Round 16 Geophysics and Drilling Collaborations (GDC) by the NT Government, the Company has engaged SkyTEM Australia to complete a ~835 line-km helicopter-borne electromagnetic (AEM), magnetic (Mag) and DTM survey over a large section of the 20km-long Fenton Shear Zone. This program is expected to be commence in early October.

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

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DeSoto Resources Limited (ASX:DES or 'Company') is pleased to announce that it has completed ground geophysical surveys at its Fenton Gold Project and a regional exploration program at the Shoobridge, Copperfield and Barrapool prospect areas (Figure 1).



Figure 1 –Stream sediment sampling at the Company's Shoobridge Project.

⁴DES ASX Announcement– Desoto Awarded Resourcing the Territory Grant for Fenton Gold Project (7th June 2023)

A 4-week ground geophysical survey was completed by Zonge Geophysics covering a 4km-long section of the Fenton Shear Zone (FSZ). The survey comprised 16.3-line km of 2D pole-dipole induced polarisation (IP), and 32.8-line km of fixed loop electromagnetics (FLEM). The data is currently being processed and modelled to define targets for the upcoming Fenton drilling program expected to commence in mid-August.

Regional exploration mapping and sampling was completed at Shoobridge and Copperfield which collected a total of 34 rock, 26 stream and 90 soil samples over a three-week period. The regional program targeted potential lithium, copper and gold mineralisation including at the historic Barrapool target. All samples were submitted to ALS in Adelaide with assay results pending.

ABOUT FENTON GOLD

The Fenton Gold Project covers an under-cover, structurally complex Palaeoproterozoic hosted gold target zone (FSZ) and extends for over 20km along strike by 4km across strike on the western edge of the Pine Creek inlier. It is covered by 50-200m of Cambrian limestones and mudstones of the Daly Basin.

In the mid-1990's, Homestake Gold (now Barrick Gold), conducted a global search for deposits analogous to the +40Moz Lead Gold deposit in South Dakota. During this search, Fenton was identified as a potential candidate due to its similarities with the host rocks and structure found at Lead, particularly within the South Alligator Group.

Subsequent drilling by Homestake Gold at Fenton returned good grades including FEND18 (55m at 0.89g/t gold, incl. 20m at 1.74 g/t gold) and FEND14 (17m at 0.71g/t gold, incl. 8m @ 1.27g/t Au)⁵.

Ground electrical geophysics is key to unlocking exploration potential at Fenton. Observations on historic drill core demonstrate the correlation of elevated gold intervals with intensely sheared pyrrhotite rich zones, confirming the potential to host gold mineralisation along a significant shear zone (FSZ).

The target ore zones are predicted to have a high conductivity response to Electrical Magnetic surveys and a high resistivity/chargeability response to an Induced Polarization (IP) geophysical survey.

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

⁵DES ASX Announcement: Prospectus (14th December 2022)

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ABOUT DES AND PROJECTS

DeSoto is a gold and battery-metal exploration Company with a 1,893km² landholding located in the Northern Territory's prolific Pine Creek gold and pegmatite province. The Company's immediate focus is the ongoing exploration of these exciting assets with an experienced Board that uses a distinctive exploration method and capability which sets us apart from our peers.

With strong mineral-finding capability and a systematic geophysics and geochemical approach to gold exploration, DeSoto is well positioned to make new mineral discoveries. The Company has already identified important indicators of lithium potential in our Northern Territory projects, including pegmatites in some historical core and known tin occurrences.

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 Ms Bianca Manzi. Ms Manzi 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. Ms Manzi consents to the inclusion in this report of the matters based on this information in the form and context in which they appear.

COMPLIANCE STATEMENT

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