FENTON DRILLING UPDATE

DeSoto Resources Limited (**ASX:DES** or '**Company**') is pleased to provide an update on the drilling program at the Fenton Gold Project, Northern Territory where a historical gold discovery was made by Homestake Mining in the mid-1990's which intersected **20m @ 1.74g/t Au** (FEND18)[1].

HIGHLIGHTS

- First hole completed and second hole commenced with over 1,000m of Diamond Drilling (DD) completed to date at the Fenton Gold Project since mid-August.
- More than 250 core samples have been cut and submitted to North Australia Laboratories in Pine Creek, for gold and multi-element analysis, results pending.
- The targeted Fenton Shear Zone (FSZ) is believed to have been intersected with a number of shears and faults noted during core logging. In addition, zones of chloritic and potassic alteration containing sulphides such as pyrite, pyrrhotite, ±chalcopyrite and arsenopyrite and have also been observed.
- Intervals of pegmatitic granites will be analysed for battery mineral potential.
- Drilling is ongoing with 5 holes planned and a steady stream of results expected in the coming weeks and months.
- High resolution AEM (Airborne Electro-Magnetic) survey is on track to begin in early October. The program will infill an existing regional scale Rum Jungle TEMPEST survey over the gold endowed Fenton Shear Zone corridor.

Figure 1 – Fenton Gold Project, diamond drilling underway with AMWD drilling.

[1]DES Announcement: Desoto Prospectus (14th December 2022)

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

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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 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.

TABLE 1 – JORC CODE – DRILLING

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.	A program of reverse circulation (RC) pre-collared diamond drill (DD) holes is currently in progress. DD –all core was metre marked and oriented where applicable prior to logging and sampling activities. Core was cut in half with an automatic core saw. Drillhole sample intervals were assigned based upon lithological contacts, with a minimum sample length of 50cm and a maximum of 120cm sampled and submitted to a commercial assay lab for analysis. RC pre-collar samples were collected directly from the rig cyclone in green PVC bags. No riffle splitting of samples occurred in the Cambrian cover sequence. Composite 4m samples were collected by spear sampling but have not been submitted for analysis. All sampling was supervised by qualified geologists and field technicians.
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).	A program of reverse circulation (RC) pre-collared diamond drill (DD) holes is currently in progress. RC pre-collars were generally less than 120m deep. RC chip samples were drilled using a 118mm diameter hammer. Samples were collected at 1m intervals and then spear sampled to form 4m composite samples. Diamond drilling was conducted by AMWD utilising a track mounted rig. NQ2 and HQ2 core sample intervals include 0.5 m, 1.0 m and 1.2 m with most core sampled as half core and duplicate samples as quarter core.
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.	Drill core: Sample recoveries were measured by standard industry practices for diamond drill core. Core recoveries were generally good except for the saprolite where some core loss was experienced owing to sandy and clayey core being washed out in the diamond drilling process. Significant sample bias is not expected with cut core. RC chips: Each 1 metre drill sample was collected and bagged off the rig, no weighing occurred. Sample recoveries were generally good except when samples became very wet and no samples were recovered. Pre-collars were stopped when excess water was encountered and /or hole deviated. No unusual measures were taken to maximise sample recovery. Significant sample bias is not expected with the RC chips. Some contamination may occur in wet samples.

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.	All drill samples were logged systematically for lithology, weathering, alteration, veining, structure and minor minerals. Minor minerals were estimated quantitively. A core orientation device was employed enabling orientated structural measurements to be taken. A KT9 magnetic susceptibility meter was utilised to collect readings for each recovered sample metre.
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.	The diamond drill samples were collected by longitudinally splitting core using a core saw. Half of the core was sent to the laboratory for assay. The sampling method is considered adequate for a diamond drilling program of this type. The RC samples were collected by spear sampling from large bags collected directly from the cyclone on the drill rig. Sample condition is dry to moist; however some samples are wet. The sampling method is considered adequate for an RC drilling program of this type where the cover sequence is not expected to be significantly mineralised.
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.	All samples were assayed by North Australian Laboratories (NAL) technique FA40 for gold with a detection limit of 0.01ppm Au. All Au assays above 1ppm are automatically re-assayed and reported. Base metals were analysed by NAL lab method G400I using a four acid digest and read by ICP-OES. Detection limits are shown in brackets. Au(0.01ppm), Ag(1ppm), As(10ppm), Cu(1ppm), Pb(5ppm), Zn(2ppm), Bi(10ppm), and Sb(5ppm). Field duplicates, standards and blank samples were each submitted for every 30 samples on a rotating basis. Diamond core duplicates were obtained by cutting the half core sample into two quarter core samples. As samples are not homogenised some variation is expected. No new assays are reported in this release.
Verification of Sampling and Assaying	The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes The verification of significant intersections by either independent or alternative company personnel. Discuss any adjustment to assay data	No new assays are reported in this release.
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 were recorded at the completion of each hole by hand-held GPS ±5m. Positional data was recorded in projection MGA1994 Zone 52S.

	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	The diamond drill holes were designed to test the gold potential and position of the Fenton Shear Zone in fresh rock based of geophysical targeting. Drillhole data spacing is not considered adequate for Mineral Resource estimation as an appropriate understanding of mineralisation continuity has not yet been established. No composite sampling has been applied to drill core.
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.	Holes were planned approximately perpendicular to magnetic features that define the targeted FSZ. Sampling is believed to be unbiased.
Sample Security	The measures taken to ensure sample security	Core trays and RC samples are stored on Middle Creek station while the program is in progress. Core trays are transported to Pine Creek by Desoto staff where they are cut and stored at the Bacchus Resources secure yard. Sampled cut core is bagged and put directly into sample cages that the lab collects and transports to the lab.
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 ten contiguous exploration licences (EL31356, EL32148, EL31899, EL32884-32886, EL33188-33189, EL33225 and EL33450 covering an area of 1,893 km^2. The licences are held by Mangusta Minerals Pty Ltd, a 100% owned Desoto subsidiary. 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. The current drill program is being conducted on EL32885.
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 Fenton 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 project area is overlain by younger Cambrian basin sedimentary sequences. The Fenton 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.	No new assays are reported in this release.
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.	No new assays are reported in this release.
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 downhole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	The overall orientation of mineralised zones is not yet known or properly understood. No new assays are reported in this release.
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	No new assays are reported in this release.

	hole collar locations and appropriate sectional views.	
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 based on geophysical surveys such as IP, EM, and magnetics, as well as structural observations. An airborne AEM survey is also scheduled for October 2023.