

ASX

ANNOUNCEMENT



ABN: 33 061 267 061

ASX:DRX 



FAVOURABLE SCOPING STUDY DELIVERS BOOST FOR TICK HILL

Diatreme Resources Limited is an Australian based diversified mineral explorer with significant projects in WA and QLD.

The Board and senior personnel exhibit wide experience, ranging through the exploration, development and financing phases of resource project management.

Australian Securities Exchange
Codes: DRX, DRXO

Board of Directors
Non-Executive:
William Wang - Chairman
Andrew Tsang
Daniel Zhuang

Executive:
Neil McIntyre – Chief Executive
Tuan Do – CFO & Co. Secretary
Ian Reudavey – Chief Geologist

Key Projects:
• Cyclone Zircon Project
• Tick Hill Gold Project
• Cape Bedford Silica/HMS Project
• Clermont Copper Project

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Share Registry:
Link Market Services Limited
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9th March 2016

In another boost for the Tick Hill Gold Project, Diatreme Resources Limited (ASX: DRX) announced today that a favourable scoping study report has confirmed the viability of a standalone operation processing the tailings resource. The study follows the recent announcement of a maiden Mineral Resource for the tailings material, estimated at 630kt at 1.08 g/t Au containing 680kg (22,000 troy ounces) gold (refer ASX announcement 19 January 2016).

According to the study prepared by external consultants Metcor, Tick Hill has the potential for a 20-month operation processing the tailings through a standard CIP/CIL circuit at the historically rich former mine near Mount Isa, Qld.

Commenting on the study, Diatreme's CEO, Neil McIntyre said: "Even using conservative gold price and exchange rate assumptions when compared to current prices along with stage appropriate capital and operating cost estimates, the study shows Tick Hill's potential to deliver a commercial return. If we apply the current Australian dollar gold price of approximately \$1,700/oz, the project could be a highly profitable operation for the benefit of shareholders."

Diatreme and its joint venture partner, Superior Resources Ltd (ASX: SPQ) will now progress further engineering and commercial studies, including grinding requirements, the pricing of major plant items required for processing operations and energy and labour costs. This will allow for a feasibility report to be prepared and a detailed implementation and approvals timeline established to allow project equity funding and external debt financing options to be explored with interested parties.

For further information, please contact:
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TICK HILL TAILINGS MINERAL RESOURCE ESTIMATE

Diatreme Resources has completed a Mineral Resource estimate for the tailings material located within the rehabilitated tailings dam at the Tick Hill Gold Project in northwest Queensland.

The Tick Hill Gold Mine operated from August 1991 through to March 1995, with the processing plant comprising crushing and milling circuits designed to deliver a product with a p80 of 70µm to a CIL circuit for gold recovery. Tailings were discharged into a tailings dam comprising two paddocks of a “turkeys nest” construction with a perimeter embankment with a clay core to retain tailings.

Following successful exploration drilling programs in July and September 2015, and completion of a comprehensive first stage metallurgical testwork program with positive results in December 2015, sufficient data is available to develop a resource model for the Tick Hill tailings material.

The Mineral Resource estimate for Tick Hill tailings is 630 kt at 1.08 g/t Au at 0.5 g/t Au cut-off grade.

TABLE 1: TICK HILL TAILINGS RESOURCE ESTIMATE

Category	Location	Au cut-off g/t	Material Volume '000 m ³	Material Density	Material '000 t	Au g/t	Au kg	Au t oz
INDICATED	West Paddock	0.5	245	1.4	345	0.80	275	8,800
INDICATED	East Paddock	0.5	205	1.4	285	1.42	405	13,000
INDICATED	TOTAL	0.5	450	1.4	630	1.08	680	21,800

A summary of information material to understanding of the mineral resource estimate includes;

- Geology – the mineralisation comprises fine sand and silt tailings material within the two paddocks of the historical Tick Hill Gold Mine tailings dam.
- Sampling – 1m samples were collected via a cyclone from aircore drilling of the tailings dam and submitted to a commercial laboratory. Sub-sampling of samples >3.2kg in weight was by riffle splitting. Samples were pulverised and a split taken for analysis.
- Drilling – drilling was undertaken by the company owned and operated aircore drilling rig utilising NQ rods and a blade bit with 3m drill runs. All drill holes are vertical.
- Classification – the mineral resource is classified as Indicated based on the drill and assay data spacing (25m spaced offset grid with 1m downhole samples).
- Analysis – samples were analysed for gold only using a 50g charge for FA (ALS method AA26).
- Estimation – Micromine software was utilised to construct a 3D wireframe for each tailings paddock, using a combination of high resolution DEM data, drill logging data and reported tailings dam design parameters. A block model was generated within the wireframe, and gold values assigned by ID3 interpolation of the drill assay data.
- Cut-off grade – all material within the tailings dam is considered mineralised such that a defined cut-off grade has not been routinely applied to drill data. Evaluation of the resultant block model shows that a nominal cut-off grade of 0.5 g/t Au can be applied to the reported resource estimate.
- Mining and metallurgical parameters – possible mining methods include conventional truck and shovel mining or hydraulic mining. Mining will be relatively simple given the shallow depth/thickness of the mineralisation, lack of overburden, and the free-digging nature of the material. Metallurgical testwork shows that very high levels of gold extraction can be achieved by cyanide leaching of re-ground tailings material.

Competent Person Statement

The information in this report, insofar as it relates to Exploration Results and Mineral Resources is based on information compiled by Mr Ian Reudavey, who is a full time employee of Diatreme Resources Limited and a Member of the Australian Institute of Geoscientists. Mr Reudavey has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the 2012 Edition of 'The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Reudavey consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

TICK HILL BACKGROUND

The Tick Hill Gold Mine operated from August 1991 through to March 1995, with commissioning of the site processing plant in December 1991. The plant comprised crushing and milling circuits delivering a product with a p80 of 70µm to a CIL circuit. Tailings were discharged in to a tailings dam comprising two paddocks of a "turkeys nest" construction in which a perimeter embankment with a clay core retains tailings. Wall heights range from 6m to 10.5m. Since decommissioning the surface has been capped and both the surface and batters seeded, with good vegetation cover now present.

The total published production for the Tick Hill Gold Mine was 705,000t at 22.6 g/t Au for 15,900kg Au at 97% gold recovery. Some initial high grade open pit ore was mined and transported to the Carpentaria Gold operations at Ravenswood to provide early cash flow to the project, which has been estimated at 20,000t based on the reported 19,000oz produced at Ravenswood in the 1991/1992 financial year (with head grades for that year reported as 30.2 g/t Au).

The tailings dam covers approx. 8 ha and could contain between 600,000-650,000t of tailings material, based on historical records.