

7 December 2020

**GOLD EXPLORATION TO COMMENCE OVER PILBARA PROJECTS
FOR HEMI-STYLE TARGETS**

Highlights

- **Exploration to commence over Sayona's 100% owned 824 sq km Pilbara gold tenements in Western Australia**
- **Primary focus on Mt Dove Project, located 10km south-west of De Grey Mining's Hemi gold discovery, in addition to Tabba Tabba Project**
- **Geochemistry and airborne magnetics planned to advance intrusion-hosted gold targets; field assessment to commence immediately amid continuing gold bull market.**

Emerging lithium miner Sayona Mining Limited (ASX:SYA,OTC:DMNXF) announced today the start of exploration over targets identified within its 824 sq km Pilbara gold tenements in Western Australia. This will include testing for intrusion-related gold mineralisation, similar to De Grey Mining's nearby Hemi discovery.

Initial work will focus on Sayona's Mt Dove Project, E47/3950, located 10km south-west of the Hemi project. Fieldwork will include orientation soil geochemistry over two target areas and reconnaissance mapping over the one area of outcrop already identified. Much of the Mt Dove area is masked by surficial cover which has hampered past exploration and the tenement remains effectively untested for its gold potential.

Additional work will also be undertaken at the Company's Tabba Tabba East tenement, E45/4703, which is located near the Malindra Stock and Wallareenya Granodiorite. These high-Mg diorites of the Indee Suite are similar to those which host the Hemi and Toweranna gold mineralisation further to the west.

The launch of exploration activities follows Sayona's resumption of full ownership of its Pilbara gold and lithium portfolio (refer ASX release 24 November 2020) and amid a protracted bull market for gold.

Sayona’s Managing Director, Brett Lynch, Managing Director, commented: “We are delighted to launch this exploration program, with a recent assessment identifying a number of targets across our 100% owned Pilbara gold portfolio.

“The Hemi discovery has highlighted the region’s potential and we look forward to unlocking the prospectivity of our large tenement holding for the benefit of shareholders, adding to our flagship Authier Lithium Project and other lithium projects in Canada and Western Australia.”

This follows record high gold prices in 2020 above US\$2,000 per ounce, with investment banks such as Goldman Sachs forecasting prices for the precious metal will reach US\$2,300 in 2021 amid a “structural bull market for gold.”

Pilbara gold tenements

Sayona resumed full ownership of its Pilbara project leases in November 2020 after terminating its Earn-In Agreement with Altura Mining (ASX:AJM). Altura did not earn any interest in the leases.

The Pilbara leases comprise gold rights to nine tenements covering 824 sq km. This package includes the recently pegged Indee lease, E45/5817. Two additional tenements, Mallina and Tabba Tabba, are held for their pegmatite minerals only. Tenure is displayed in Figure 1 below:

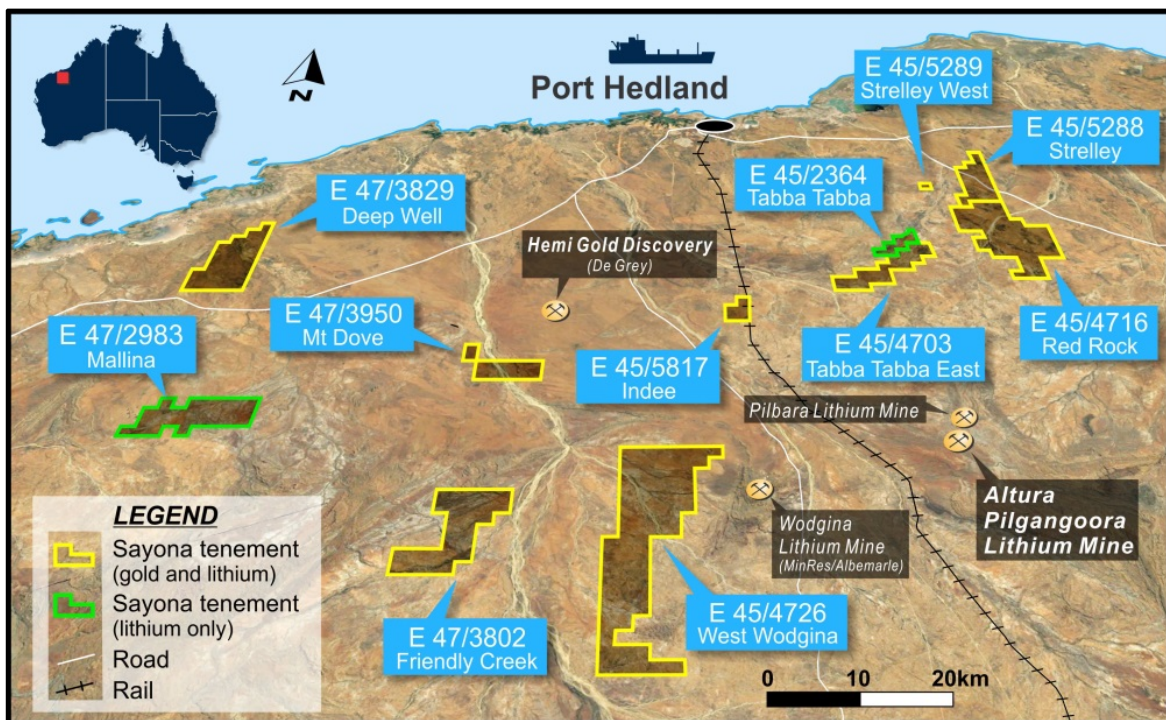


Figure 1: Sayona Pilbara Project Leases

Mt Dove Project

The Mt Dove project is located south-west of the Hemi gold discovery, being 10km south-west of the Falcon prospect and 12 km south-west of the Brolga prospect. It is within 5km of the Greater Hemi project area, a 15km trend which includes Hemi and adjacent intrusions including Scooby, Antwerp, Alectroenus and Shaggy. A number of targets have been identified by De Grey in their tenure to the north, north-east and west of the Mt Dove lease (see Figure 2 below).

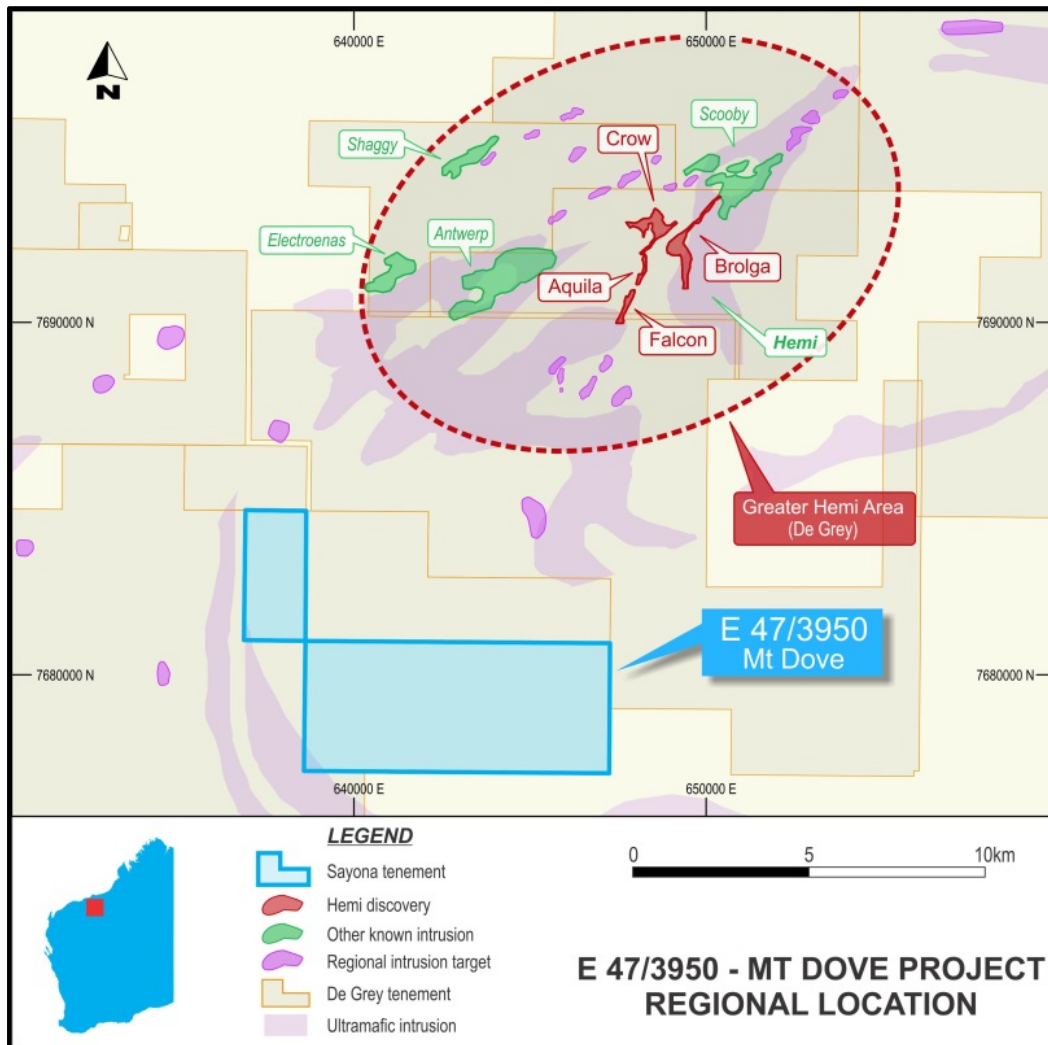


Figure 2: Mt Dove lease and Surrounding De Grey targets and Hemi Discovery

Hemi style of gold mineralisation

The Mallina Basin is host to late stage high-Mg diorite intrusions of the Indee Suite. These intrusions post-date peak metamorphism and deformation and range in age between 2955 – 2945Ma.

They display features typical of high-Mg diorite (sanukitoid) suites present in other late archaean terrains which are widely associated with intrusion-related gold mineralisation.

At Hemi, gold is associated with sulphide and other alteration within the host intrusion and contact rocks. Other gold deposits in the area such as Toweranna (De Grey Mining, 524,000 oz Au), relate to sheeted quartz veins at the apex of the intrusion whilst at the Camel gold deposit pyrophyllite alteration indicates a magmatic hydrothermal source to the gold mineralisation. The Hemi discovery, a potential world-class gold discovery, cements the Pilbara as a Tier 1 exploration province.

Next steps

Exploration, including geophysical targeting and planning for geochemical orientation and reconnaissance rock sampling has commenced. As a first step, sample pulps of 119 previously collected rock samples have been submitted for gold assay determination.

These rocks comprise pegmatite, aplite and altered intrusive which, together with quartz veining, were collected during past pegmatite exploration and have not been previously tested for their gold content.

Geophysical work to identify the subtle magnetic features typical of the target Indee Suite has commenced and following review it is anticipated high resolution airborne magnetic surveying will be commissioned.

Mt Dove Project targets

During field reconnaissance, only one area of outcropping bedrock has been identified to date. Further sampling and petrology over this area is planned, together with orientation geochemistry.

Interpretation of government compiled airborne magnetics data has identified eight discrete magnetic features within the Mt Dove lease that display signatures similar to Hemi type magnetic targets. Available data is being further processed and planning for a dedicated high resolution airborne magnetic survey is underway to better define and allow 3D inversion and other modelling.

Orientation geochemistry will commence shortly, with gold determined by the ultrafine technique developed by CSIRO/MRIWA (research project M462). This is a highly sensitive analysis of gold in the ultrafine (minus 2 micron) fraction of soils, carried out by Labwest Minerals Analysis. This analytical method offers the opportunity to provide a low cost method of detecting geochemical anomalies in covered terrane within Sayona's tenement package.

The western 9.4 sq km of the Mt Dove tenement lies within the Yandeyarra Aboriginal Reserve. An access agreement is required before exploration can be undertaken over this area, which covers approximately 25% of the total lease area of 38.4 sq km.

Tabba Tabba Project targets

The Tabba Tabba Project comprises four tenements that margin the Tabba Tabba shear zone, which has been a locus for of a variety of late stage intrusions, including prospective Indee suite high-Mg diorites. The shear zone has a broad deformation zone which extends eastwards into rocks of the East Pilbara Tectonic Zone.

Reconnaissance rock sampling is planned over north-east trending veining, structures and intrusive rocks within E45/4703. This target orientation is a predominant structural trend affecting Indee Suite intrusions such as the Peawah Granodiorite to the south west.

Deep Well Project targets

The Deep Well tenement, E47/3829 covers Mallina Basin sediments which have been intruded to the east by nested plutons of the Portree granitic complex. The Portree Suite is a high temperature alkaline (high Na) suite of granite, including tonalite and granodiorite, dating at 2946 Ma +/- 6Ma, the same age as the prospective high-Mg suite diorites.

The Portree Suite intrusions do not crop out within the Deep Well tenement area. Interpretation of magnetics data is being undertaken to identify prospective contact zones and magnetic features for future testing.

This announcement is authorised by Sayona's Board of Directors.

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About Sayona Mining

Sayona Mining Limited is an emerging lithium miner (ASX:SYA), with projects in Québec, Canada and Western Australia.

In Québec, Sayona is progressing a bid for the North American Lithium mine with the backing of a world-class advisory team, while advancing its flagship Authier Lithium Project and its nearby Tansim Project.

In Western Australia, the Company holds a large tenement portfolio in the Pilbara region prospective for gold and lithium.

For more information, please visit us at www.sayonamining.com.au

Competent Person Statement

The information in this report is based on information compiled by Mr. Simon Attwell, a Competent Person, and who is a Member of The Australasian Institute of Mining and Metallurgy. Mr. Attwell is an employee of Attgold Pty Ltd ("Attgold") which provides geological services to Sayona.

Mr. Attwell has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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. Attwell consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

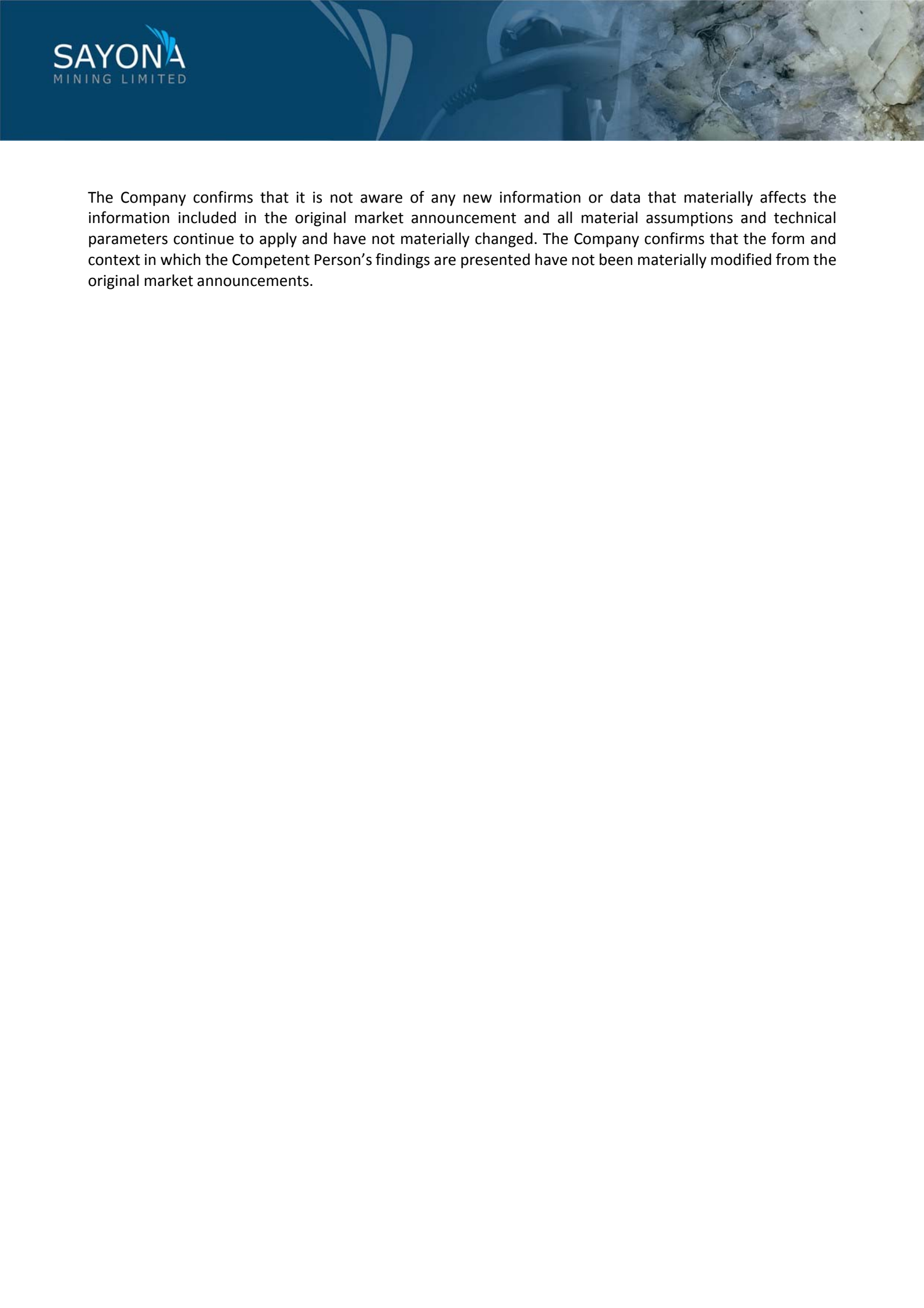
Reference to Previous ASX Releases

This report refers to the following previous ASX releases:

- Managing Directors Update: Quebec Accelerates EV Drive, 24 November 2020

Bibliography

- R. H. SMITHIES, D. C. CHAMPION, The Archaean High-Mg Diorite Suite: Links to Tonalite–Trondhjemite–Granodiorite Magmatism and Implications for Early Archaean Crustal Growth, *Journal of Petrology*, Volume 41, Issue 12, December 2000, Pages 1653–1671
- Hickman, AH 2016, Northwest Pilbara Craton: a record of 450 million years of Archean continental crust: Geological Survey of Western Australia, Report 160, 104p.

A background image showing a miner in a dark environment, wearing a hard hat and using a tool to work on a rock face. The image is partially obscured by a dark blue overlay on the left side.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.