

# Exploration Update for the first half of 2020

## GREENFIELDS

During the first half of 2020, Greenfields Exploration activities were undertaken in Australia, Brazil and the USA. Greenfields Exploration completed 31,877m of drilling globally with a total expenditure of \$15.3m for the period.

In **Australia**, exploration took place in Western Australia in the Laverton District (AGA 100%) and the Lake Carey JV (AGA 70%).

During the first half ended 30 June 2020, at the Cleveland prospect (100% AGA), 60 Reverse Circulation (RC) holes were completed for 7,593m, defining a NNW-trending zone of gold mineralisation hosted within a broader zone of quartz-sericite-pyrophyllite-chloritoid schist. Further drilling is planned for the second half of 2020. At the Turing prospect (100% AGA), air-core drilling was completed with 59 holes totalling 3,515m. Positive gold intersections were returned associated with quartz veins within a >2km long NNW-trending zone open along strike to the north and south. A follow up programme of air-core (AC) is planned for the second half of 2020. At Kraken, 1,393m AC drilling was completed at the Vampire prospect (100% AGA) and 6,680m at the Triton prospect (70% AGA). Results are pending.

In Queensland (100% AGA), field programmes consisting of mapping and soil sampling were postponed due to the state border closure in response to the COVID-19 pandemic.

In the **USA**, one RC hole was completed for 360m at the Silicon project. The drilling was stopped and placed on care and maintenance while awaiting permitting to be completed for the project Plan of Operations. During that time, work has focussed on refining the geological model and prioritising the drilling programme planned for the second half of 2020.

The final \$2.4m payment of the Silicon Option Earn-in Agreement was paid to acquire 100% ownership of the Silicon Project.

At Rhyolite, RC drilling for 2,423m was completed with no significant results received. Further prospecting over the claim block delineated additional target areas with favourable fault architectures along with elevated gold and antimony values from rock chip sampling. At Transvaal, detailed geological mapping, rock chip sampling and drill target delineation was finalised at three prospects.

In **Brazil**, additional exploration licenses were granted at the WBC project.

In **West Africa**, exploration focussed on target generation activities.

## BROWNFIELDS

During the first half of 2020, Brownfields Exploration activities were undertaken across the globe, completing 574.8km of drilling for a total expenditure for the first half of \$28.9m (capital) and \$31.4m (expensed).

**South Africa:** Nothing to report.

**Tanzania:** Capitalised (underground) and expensed (surface/ underground) drilling programmes completed a total of 53,798m during the first half of 2020. Expensed underground projects completed exploration drilling at Star and Comet Cut 2-Cut 3 gap; Star and Comet Cut 3; and Nyankanga Block 3.

Mineral Resource development drilling for capitalised underground projects was completed at Star and Comet Cut 3; Roberts; as well as at Nyankanga Blocks 3.

At Roberts, drilling aimed at defining the geometry of the orebody was carried out and significant intersections were reported which confirming the presence of economic ore zones. The 3D-geological model update and pit optimisation studies were completed and confirmed the potential for open pit mining thus warranting the Mineral Resource conversion drilling.

Mineral Resource development drilling was also carried out at Star and Comet Cut 2 and Cut 3 where significant intercepts confirmed the models. At Nyankanga Block 3 underground drilling was carried out and the results confirmed the connectivity of mineralisation within the tested areas and mineralised pods.

Exploratory drilling was conducted in the Star and Comet Cut 2-Cut 3 gap and confirmed the presence of mineralisation. Drilling at Star and Comet Cut 3 and Ridge 8 confirmed existence and continuity of the Ridge 8 mineralised shear zones. While at Nyankanga Block 3 exploratory underground drilling suggested potential down dip continuity of mineralisation.

**Guinea:** Capitalised and Expensed drilling programmes completed a total of 53,731m during the first half of 2020.

At the Kami Saddle infill drilling was aimed at increasing the Mineral Resource confidence and confirmed the continuity of the mineralisation. While at Sintroko West infill drilling is planned with 22 holes and three drillholes returned assays results with a significant intercept in the Inferred Mineral Resource. Sanu Tinti infill drilling intersected the expected mineralisation in Sanu-Tinti breccio-conglomerate layers. At Sokunu the infill drilling programme is completed and multiple significant intersections confirmed the Mineral Resource.

Bidini infill drilling results confirm potential extension of the mining pit shell for low grade mining. While the Bidini-Tubani-Kalamagna pushback infill drilling is complete and the results confirmed the continuity of the Inferred Mineral Resource which requires further drilling to upgrade to Indicated. The Sofore-Tubani infill drilling is also complete and the assay results received confirm and increase the Mineral Resource. The Saraya infill drilling which is aimed at converting the Mineral Resource is underway.

At Kami North reconnaissance drilling looking for additional mineralisation to the north of Kami pit indicate extensions to the mineralisation associated with folding on the NW edge of the Kami pit. At Kami West and South the reconnaissance drilling returned multiple significant intersections which confirm the Mineral Resource. While at Foulata reconnaissance drilling was aimed at testing the potential extension of mineralisation in the fresh rock and results have shown mineralisation associated with volcano-sediments and felsic intrusions.

The Solakoro North reconnaissance drilling is completed, and the assays results received with a significant intersection related to disseminated sulfides in breccio-conglomerate and marbles. The Silakoro SW QAQC drilling is complete with assay results awaited. The Seguelen reconnaissance drilling is halfway and drilling has confirmed the oxide potential toward the SE and fresh rock potential along the plunge of the mineralisation to the SW.

The Carbonate Hills reconnaissance drilling is aimed at testing the orthogonal quartz veins and 30 holes were completed, with assays awaited. The Komatiguiya South East reconnaissance drilling resumed with drilling almost complete, but no assay results received.

Mapping and field works were conducted at Kami, Doko, Didid, Kossisem Kozan, Sokunu and Kalamagna, and there were encouraging observations.

Geometallurgical test work focus on XRF and Terraspec data collection and interpretation as well as Lecco analysis. From the pXRF at Tubani, high copper concentrations have been identified and modelled. The Terraspec analysis at Tubani identified material with high clay concentration and Lecco data highlighted areas with high organic carbon in Tubani and Saraya. At Saraya metallurgical Diamond Drilling (DD) deeper hole drilling was completed, aimed at understanding Western intrusion.

**Ghana:** At Iduapiem, the first half of 2020 drilling totalled 18,953m.

Drilling focussed on the Block 1 and Efuanta projects. Drilling (RC and DD) was carried out in Block 1 and significant intercepts were reported. Drilling continued at Efuanta with significant intercepts reported.

Auger drilling at Mile 8 target was completed in April and sampling is currently ongoing. Preliminary analysis show that some areas will need follow up work to delineate the extent of mineralisation down dip. Reconnaissance mapping identified a conglomerate outcrop a ML6J and more work is to be carried out in second half of 2020.

At Obuasi, drilling continued to ramp up in the first half of 2020 with a total of 24,700m drilled in the underground exploration programmes. Exploration and infill drilling activities continued on 41 level targeting block 10, and from stockpiles 12, 13 and 14 along the ODD.

Grade control drilling continued on 27 level for Block 8 from crosscuts 334, 335, 339, 323 and, on 18 level for Sansu from cross cuts 395 and 405.

A fifth rig was added to the fleet of rigs during the second quarter to support production drilling and it started drilling at the 18N1 395 and 405 crosscuts. The rig is currently drilling at 23 level 363 crosscut in Sansu 3.

Block 10 drilling on 41 level continued and results from drilling proved continuity of the Obuasi fissure above and below 41 level, also intersecting the hanging wall fissure above 41 level.

The results from the exploratory drilling at SP 13 along the ODD is showing continuity in grade and structure within the Obuasi fissure. The drilling has also identified a secondary discontinuous mineralised lode which splays from the Obuasi fissure.

**Democratic Republic of the Congo:** Capitalised and Expensed drilling programmes completed a total of 11,699m during the first half of 2020. The focus of exploration was on Mineral Resource replacement/addition and underground projects.

At KCD drilling highlighted the Kanga Sud package sitting on a thicker BIF. While at Kalimva, contouring of Au grade, gram-meters and structures highlighted three important high-grade shoots with mineralisation still open down plunge below the \$1500/oz pit.

At Pakaka, holes testing lateral extension of the north-western high-grade mineralisation was completed and confirmed the geology. In the Memekazi-Madungu gap, RC drilling was completed and the holes do not support the BIF folded model and analysis is in progress.

RC drilling was completed at Renzi and confirmed the continuity along strike of the interpreted main lens. A follow up programme is planned for quarter 3. While at Ikamva East, drilling was carried out and returned encouraging intercepts confirming the model.

At Oere, overall results from both drilling and trenching programmes support the current model. While for the Kibali region, the KZ geological map was updated and four main sets of structures were highlighted and identified that infill soil sampling is required.

**Republic of Mali:** No exploration was done.

In **Argentina**, exploration activities were impacted by COVID-19 related restrictions, as a result a total of 0.93km of channels were carried out on the Carmela, Dora, Teresa and Gabriela veins in the southern and central parts of the tenements.

While, drilling activities were focused on the main central production area along the Serena trend as well as within existing open pit and underground mines such as Atila, Gabriela, Liliana and Mangas. For the first half of 2020, a total of 7,066m was drilled to define and develop possible deep and lateral extensions of existing mineralisation.

In **Brazil**, at Cuiabá and Lamego a total 48,362m were drilled.

At Cuiabá, a directional drilling programme started in March 2020. The methodology used in the LIB programme is supporting the directional drilling and it is currently focused on Fonte Grande South in order to mitigate technical issues in the testing of levels 21 and 22 targets.

The normal drilling programme for Fonte Grande South and Serrotinho (upright limb) orebodies remains in progress and is focused on levels 19 and 20.

An exploration strategy review focused on secondary orebodies (to mitigate delays in developing drill positions) such as the Serrotinho and Galinheiro Extensions between levels 5 and 7. Drilling completed to date shows positive gold grade results in the BIF and quartz veins. An extensive review of the endowment of secondary orebodies was completed for the quartz-vein VQZ and Viana models with significant intercepts returned for the VQZ secondary target on level 19. These confirmed the interpreted orebody geometry and provided intercepts with visible gold.

On the regional targets, Descoberto exploration surface drilling assays returned encouraging gold grades. While at Tinguá, surface work was completed, and the geochemical campaign returned positive gold results.

At Matarelli, a geochemical soil survey commenced, and the first results showed local gold anomalies. The soil geochemistry sampling of Lamego Sul is planned to start in the second half of 2020.

At Lamego, underground drilling continued and surface drilling commenced in May 2020.

The Mineral Resource conversion drilling programme for the Queimada orebody, was completed and assay results confirmed the continuity of the inverted limb. The programme at Carruagem Southwest, Level 1, was completed and the assay results confirmed the continuity of the normal limb.

A drill rig was mobilised to investigate the Carruagem orebody and was aimed at confirming the continuity between levels 9 and 10. The campaign is returning encouraging results with intercepts Inferred Mineral Resource and projected domains.

The Arco da Velha Oxide surface drilling programme commenced and is aimed at testing the weathered to semi-fresh portions of Arco da Velha orebody. A surface survey was completed, and the data is being processed. The first part of this campaign was focused on the validation of historical holes, and the following holes will investigate new areas.

Córrego Do Sítio capitalised and expensed drilling programmes completed a total of 74,518m during the first half of 2020. At CDS I, underground drilling focused on Cachorro Bravo, Laranjeiras and Carvoaria with positive results at all targets. Surface drilling was concentrated on Rosalino and Candeias-Cristina targets and results confirm the potential down plunge and in the vicinity of the production areas. At CDS II, the drilling campaign to test the São Bento target commenced and was completed, with all drilled holes intercepting mineralised regions. At CDSIII, drilling started at the Jambeiro target with drillholes intercepting BIF, which is the main host of the mineralisation.

At Serra Grande, capitalised and expensed drilling programmes completed a total of 71,124m during the first half of 2020. Surface exploration drilling occurred at Palmeiras South, Forquilha, Mangaba-Corpo IV and Mina III South with significant intercepts reported at all targets. The Palmeiras South drilling focused on increasing the area of the newly discovered Structure 3.5 target. At Mangaba, drilling tested the up-plunge continuity. Underground exploration drilling was predominantly conducted at P Pequizão G and Ingá. While Mineral Resource conversion drilling targets included Ingá, Venâncio, Orebody G (Pequizão), Mina Nova, Forquilha and Orebody IV.

In **Colombia**, at Gramalote, RC drilling at Trinidad to confirm the oxide Mineral Resource commenced in January and results were received from 10 RC holes in the eastern area: 6 holes reported positive to anomalous intersections. The programme is currently on hold to focus on Gramalote Central and is expected to resume in August.

A National Quarantine was declared in Colombia on 25 March 2020 in response to Covid-19 impacting site activities, including the stopping of drilling. Infill diamond drilling resumed on 11 May at the Gramalote central and scaled up to 12 rigs by the end of May 2020.

Geotechnical logging is ongoing for the Gramalote open pit. Infrastructure drilling commenced in late May 2020. The metallurgical drill programme was completed, with all master and variability holes drilled, sampled and shipped to SGS Lakefield in Canada where metallurgical testwork is in progress.

La Colosa: no exploration occurred.

Quebradona: geotechnical photo logging was completed, and water inventory points were surveyed and identified 6 water springs, 3 domestic catchment, 2 geomorphological and 3 geological points. The hydrogeology report revisions for the FS were completed. Three holes were drilled and completed for pump-testing as part of the National Environmental Licenses Authority (ANLA) potential additional requirement plan.

Drilling was planned for ore passes and infrastructure sites, four holes were completed in June and samples sent to the lab. For the vent shafts, CHA-101 was completed, and downhole geophysical logging performed on CHA-105. CHA-101 geophysical logging is pending.

Exploration field reconnaissance, grab sampling and mapping was performed.

In **Australia**, at Sunrise Dam capitalised and expensed drilling programmes completed a total of 115,853m during the first half of 2020.

Eleven underground rigs were utilised during the period, testing the following targets:

- Frankie: Mineral Resource conversion drilling was completed testing structures below Sunrise Shear Zone. More drilling was done to test potential extension of mineralisation to south.
- Carey: exploratory drilling was completed to test for southern extensions to Carey mineralisation and commenced Inferred Mineral Resource drilling.
- Cosmo East: exploratory drilling was completed to target up-plunge extensions of Cosmo East.
- MWS Steeps: drilling completed to target southern extensions to the MWS Steeps
- Hammerhead South: Inferred Mineral Resource drilling was completed and drilling at Indicated Mineral Resource spacing commenced to test for potential steep structures south of the current Hammerhead Domain.
- Stella: exploratory drilling was carried out to test steep mineralisation below the lower MWS to the north and below the QC mining area.
- Vogue: drilling continued to advance south of the current Vogue Indicated Mineral Resource.
- Elle: drilling aimed at targeting northern extensions of the mineralisation continued.
- Western Ramps: exploratory drilling continued to test for structural repeats of the Sunrise Dam ore deposits.

Regional surface exploration utilised two rigs to target Pink Lady, Sunrise North and Golden Delicious.

Significant intercepts were reported for Vogue, Frankie, Carey, Hammerhead South, Midway Shear Steeps. Elle, Cosmo East, Western ramps, Stella and Sunrise North.

Tropicana: drilling in the first half of 2020 completed 68,594m.

Mine Mineral Resource development and infill drilling was carried out at Boston Shaker and Havana with positive results confirming the current interpretation. The best results from this drilling came from Boston Shaker underground drilling from surface and Havana infill drilling.

Regional exploration comprised RC and DD drilling at Madras/Masala, Springbok and Hat Trick/Highball, as well as AC drilling at Paradise, Madras, New Zebra, Husky, Sanpan, Snowball and Bushwacker.

All significant exploratory AC drilling results returned during the period were from the Paradise prospect.