

# Q1 2014 EXPLORATION UPDATE

## GREENFIELDS EXPLORATION

During the first quarter of 2014 focussed Greenfields exploration activities were undertaken in three countries; Australia, Colombia and Guinea, while minor work was also completed in Brazil. Total expenditure for the quarter was \$8.97million, with 7,700m of diamond and RC drilling completed.

In **Colombia**, exploration continued at the Nuevo Chaquiro target, Quebradona project, in joint venture with B2Gold (AGA 86.2%). In January drilling was restarted with a single diamond drilling rig, continuing to deepen CHA-48 to a final depth of 1500m. A significant zone of mineralization was intersected over 800m downhole with intense disseminations and veins of chalcopyrite associated with an early quartz diorite intrusive. Hole CHA-49 drilled in the opposite direction on another target intersected over 400m of less intense mineralization. A second diamond rig has been mobilised to site to test the northwest extension of the mineralized zone intersected in hole CHA-48. Regional evaluations and reconnaissance continues on AGA's large and very prospective tenement package in Colombia.

In **Australia**, airborne EM surveys were completed early in Q1 at the Tropicana JV (AGA 70%), the results of which have identified two priority bedrock conductors which will be followed up with ground EM and drilling. Further encouraging results were returned from the first pass diamond drilling at Madras prospect approximately 25km south of the Tropicana Gold Mine. Follow-up RC, diamond and aircore drilling programs are being designed for execution in Q2 2014. At the Nyngan JV (AGA earning 70%), induced polarisation (IP) geophysical surveying was completed over a third target area during the quarter. Processing and interpretation of the IP results is now complete for the three targets surveyed to date. Access negotiations with local land owners continue ahead of planned ground geophysics (IP) scheduled for Q2 2014

In **Guinea**, exploration work continued in Blocks 2,3 and 4 (AGA 85%) with 3,269m of reverse circulation drilling and 73.8 km of IP surveying completed at Kounkoun (Block 3) and 1,237m of reconnaissance diamond drilling completed at Kouremale (Block 4). At Kounkoun, drilling aimed to test the continuity of mineralisation between KK1 and KK2 along the turbidite/chlorite-magnetite-shale contact. The drilling in this KK1-KK2 Gap showed significant encouraging results. At Kouremale, drilling tested north-striking structural features delineated by IP and geochemical surveys. The results at Kouremale were disappointing and no further work will be required on those targets. Field work on Block 2 consisted of surface mapping of a newly discovered gold occurrence.

In **Brazil**, results were received from diamond drilling completed in Q4-2013 at the Nhandu Prospect, part of the Graben Joint Venture (AGA earning 51%). Drilling confirmed the presence of epithermal vein style mineralization but did not sufficiently demonstrate the grade or tonnage potential for an economic discovery. AngloGold Ashanti's optionality is however retained within the greater Graben JV tenement package where ongoing exploration activities will now focus on the advanced Pe Quente Project and generative exploration over untested parts of the remaining tenement package.

## **BROWNFIELDS EXPLORATION**

Total expenditure, including capitalised exploration costs, for the quarter was \$18,1million, with 85,802m of diamond and RC drilling completed.

In **South Africa**, four deep surface drilling sites were in operation during the quarter, one on the Moab Khotsong Mine and three at Mponeng (WUDLs). Percussion drilling commenced for MZA10 and the hole is currently at 402m. This hole is located to the east of the recently complete holes, MMB 6 and 7, and it is targeted to provide value information in the lower reaches of the early gold portion of Project Zaaiplaats.

At UD51, the long deflection design to intersect the VCR was completed and intersected thin VCR. Short deflection drilling has commenced. UD59 and UD60 are both currently redrilling after both holes had significant lengths of rods dropped. Redrill at UD59 has advanced to 2,349.8m and at UD60 to 1,412.7m. Pilot drilling (656m) has been completed at UD58 and site establishment has started with rigging commencing early in the next quarter.

In **Tanzania** at Geita Gold Mine drilling focused on infill drilling programs for Nyankanga Cut 8, Geita Hill West and Geita Hill East. A total of 6,292m were drilled. Assay results were received from infill holes drilled in previous quarters from Geita Hill East, Geita Hill West, and Nyankanga. Results were also received from Mineral Resource delineation drilling at Nyankanga Deeps and Matandani. A series of very thick high grade intersections were obtained from Matandani and work is ongoing to understand the full upside implications of this drilling.

At Nyamulilima, field work focused on the Selous, Mabe and Xanadu exploration targets. The geology is dominated by cherty-ironstone sequences, which have been irregularly intruded by igneous bodies. Field investigation, including observations from artisanal workings, indicate that gold mineralisation is associated with sheared and altered contact zones between intrusions and supracrustal rocks.

In **Guinea** at Siguiro Gold Mine a total of 5,416m were drilled. This comprised 455m diamond and 4,157m RC infill at the Kami Fresh Rock Project, and 804m RC from the Kalamagna Below-Pit Infill Project.

At Kami, the drilling continued to intersect turbiditic units of the Fatoya Formation, with weak hematitic and siderite alteration. Visible gold is seen associated with quartz-carbonate veins. Massive arsenopyrite and disseminated pyrite occurs as pervasive alteration haloes together with moderate albitisation and silicification. Field checking of twelve of the nineteen regional targets have been completed. Assays from grab-sampling are in the process of being assayed.

In **Ghana** at Obuasi Gold Mine a total of 731m of drilling was completed. All the drilling was in the above 50 Level drilling campaign from the 41S-294E site. This drilling is designed to convert Mineral Resources within the Block 9 and Red Zone 6. No surface drilling was done.

At Iduapriem, core processing and logging was undertaken with the aim of completing all processing and assay by the end of May. A total of 874 samples from eight drill holes (including check samples) were submitted for assaying. Regional and pit mapping continued.

In the Democratic Republic of Congo at Kibali, Mineral Resource conversion drilling (6,368m) commenced and was completed at Gorumbwa. The drilling objectives were to convert Inferred Mineral Resource of which approximately 98% lies within the pit shell and is fresh rock. The program was also designed to test the depletion model. Initial results indicate the ore intercepts are generally thinner and of lower tenor than the previous estimates and that in general the measured cavities are smaller than previously modelled.

At KCD, a review of the 2013 drilling to test the continuation of economic mineralisation down plunge on the 3000 and 5000 lodes was completed and indicate that only the 5000 lode down plunge has potential for further investigation, with the 3000 lode too thin and low grade.

Regional activities focused on Memekazi and Biriki-Belengo, with a thorough data review and development of a 3D lithological model at the Mofu Target. At Memekazi, follow up infill soil sampling, geologic mapping, pit and litho sampling confirm the prospectivity of the area, with trenching ongoing. At Biriki-Belengo, a program of mapping, pitting and trenching, soil and stream sampling identified four target areas for investigation.

In the **Republic of Mali** at Sadiola, 4,384m of RC drilling was completed. Drilling took place at FE4 South, Tambali and Antarctica and in general disappointing assay results were obtained. XRF analysis of termite pulps was extended to the Dogofile target for identification of anomalous mineralogical associations (Au-As-Sb) and other pathfinder elements. Field mapping and sampling activities took place over three of the most important oxide targets, TB6, Kantela NW and Timbabougouni. Mineralised outcrops were mapped at Dogofile and data acquisition will be expanded and included in drill targeting.

In **Namibia**, at Navachab Gold Mine renewal applications were submitted for regional exploration permits.

In **Argentina**, drilling started at Cerro Vanguardia during the quarter with 2,640m drilled to date. Activities were mainly focused on field work to validate new targets identified by geophysical surveys.

In **Brazil**, exploration work for AGABM continued at the Cuiaba, Lamego and CdS production centers. 15,680m were drilled collectively in the surface and underground drilling programs to extend and expand ore bodies planned for testing in the year. Geological modeling continued for near mine exploration targets.

At **Serra Grande**, 10,685m of drilling were completed to test new targets identified within the mine infrastructure area and extend current ore bodies.

In **Colombia**, drilling and Mineral Resource modelling to support the Pre-Feasibility Study continued at the Gramalote Joint Venture. This included 630m completed in programs directed toward Mineral Resource infill drilling and opportunities for Mineral Resource addition. At La Colosa, drilling activities included 7,795m completed for Mineral Resource infill and extensions. Site investigation, hydrology and geotechnical drilling programs continued.

In the **United States**, 6,375m were drilled as part of the ongoing programs designed to confirm high grade mineralisation areas within the current life of mine plan, support open pit design work, and high grade targets outside of existing pit designs.

At Sunrise Dam in **Australia**, exploration focussed on Mineral Resource definition of the Sunrise Shear Zone, Astro, GQ, Cosmo and the Midway shear. A total of 14,597m were drilled. At Tropicana, the design, planning and permitting of a 3D seismic survey to image the mineralised zone down dip of TGM continued with the survey is planned for the second half of the year.

Review and exploration design work continued at the High Ball, Hat Trick Hill, Tumbleweed prospects. An updated geological and structural interpretation of Tumbleweed-Phoenix domain utilising the newly flown aeromagnetics is nearly complete and will help constrain exploration targeting for new open pit potential within 20km of TGM. Modelling of the basement conductor in the ground EM data was completed to allow design of drill holes at the Apocalypse prospect.

#### **AngloGold Ashanti/De Beers Joint Venture**

An update of the Preliminary Economic Assessment was completed during the quarter at which time the service company was liquidated. Legal work around the termination agreements and the dissolution of the Joint venture are nearing completion.