

# EXPLORATION REVIEW

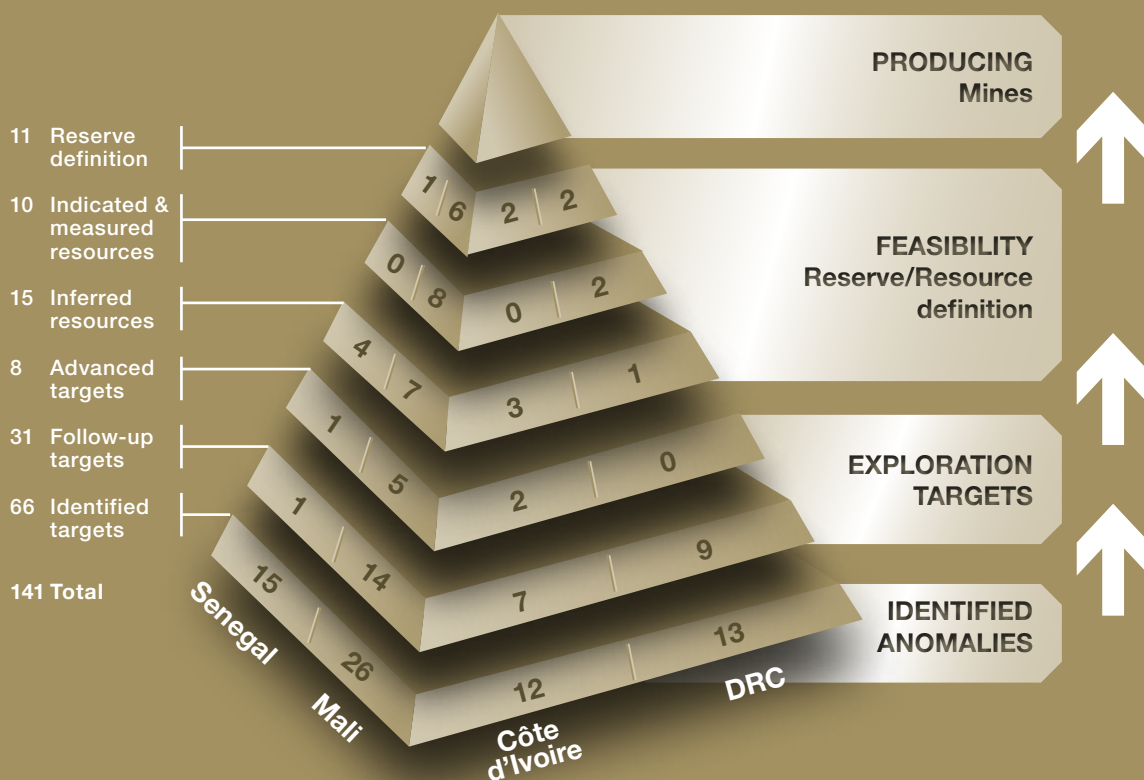
## MINES

Morila – Mali  
 Loulo – Mali  
 Tongon – Côte d'Ivoire  
 Goukoto – Mali  
 Kibali – DRC

## RESOURCE TRIANGLE

## FEASIBILITY PROJECTS

Massawa – Senegal  
 Goukoto underground – Mali  
 Gorumbwa – DRC



EXPLORATION

CORPORATE

A busy year in the field delivered good returns in both greenfields and brownfields work. Significant momentum on a number of projects has laid the foundation for 2016 when our priority remains to find a new world-class deposit and replace mining depletion across the group.

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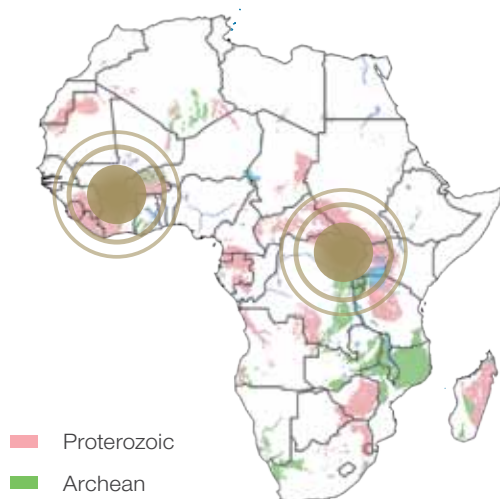
## 2015 ACHIEVEMENTS

- Group resources increase year on year (after depletion) with reserves down slightly
- Inferred ounces added at Gara replaced depletion at Loulo and highlighted the potential for further addition
- High grade extensions and potential confirmed at Yalea
- Massawa feasibility study makes progress
- Confirmed high grade extensions at Sofia highlights potential for significant resource growth
- Increased footprint in DRC and Mali through JVs
- Large mineralised systems delineated in Côte d'Ivoire at Fapoha, Mankono and Boundiali
- Progressed four permits through new system in Côte d'Ivoire
- Domba grade control programme at Morila delivered a resource upgrade
- Identified potential at Tete Bakangwe and Sessengue SW at Kibali

## 2016 TARGETS

- Extend footprint in key regional structures
- Progress Massawa feasibility study and bring Sofia to account
- Progress WAXI data interpretation to update interpretations and prospectivity analysis for Loulo district, Kedougou Kenieba Inlier and West African Craton
- Complete detailed orebody audits on Yalea and Kibali
- Complete NE DRC isotope and geochronology study
- Start work on new DRC portfolio in the Moto and Ngayu belts
- Advance Bakolobi and other key targets along Senegal-Mali Shear
- Continue to add ounces at Gara and Yalea
- Generate and test targets on Boundiali permit using updated information from VTEM survey
- Start work on new Côte d'Ivoire permit portfolio
- Drill test and define potential on Mankono and Fapoha permits
- Move Tongon satellites and depth extensions into reserves
- Deliver Kibali brownfields targets by converting to reserves
- Continue to generate targets and explore potential along the KZ trend

### AREAS OF EXPLORATION INTEREST IN AFRICA



Exploration has always been an integral part of Randgold's strategy of creating value through the discovery and development of world-class gold mines as well as replacing the ounces produced through ongoing exploration around existing mines.

## WEST AFRICAN GROUNDHOLDING<sup>1</sup>



<sup>1</sup> As at 14 March 2016

The team continued its drive to replace mining depletion and find deposits which pass Randgold's strategic filters: an IRR of 20% and the potential for 3 million minable ounces at a long term gold price of \$1 000/oz. Work during the year discovered a number of interesting targets and added resources which more than replaced the 1.4Moz depleted by mining.

The focus was sustained on the priority areas: the MTZ in Senegal, the Senegal-Mali Shear in Mali, the Boundiali and Senefou belts in Côte d'Ivoire and the KZ Structure in NE DRC, a portfolio which contains 141 targets. During 2015 Randgold also developed new business functions to ensure an equal balance between greenfields and brownfields work. By the end of the year three joint venture agreements had been concluded in the DRC, giving Randgold control over the Ngayu Archean greenstone belt and increasing its groundholding in the country to over 6 500km<sup>2</sup>, and its permit portfolio in Africa to 13 912km<sup>2</sup> with a further 4 299km<sup>2</sup> under application. Joint venture agreements on properties in western Mali have also been signed and a number of other negotiations were in progress at year end.

## SENEGAL MASSAWA

At Massawa, the feasibility study was progressed, producing strong intersections from the Sofia target,

located 10km to the west of the main Northern Zone and Central Zone (CZ) deposits.

Several large diameter, close spaced drilling programmes were completed to further improve the mineralisation model and provide further samples for the large amount of testwork required by the feasibility study. Both shallow and deep RC and diamond drilling programmes were completed in the more complex CZ, leading to a significant modification of the geological model which includes an early, broad, low grade phase of refractory, arsenic-rich mineralisation, overprinted by a later, narrow and complex set of structures containing visible gold, quartz, antimony and arsenic. Testwork on these high grade structures towards the end of the year confirmed a high percentage of gravity recoverable (up to 68%) and leachable gold which will improve the economics of the CZ ore, previously thought to be largely refractory.

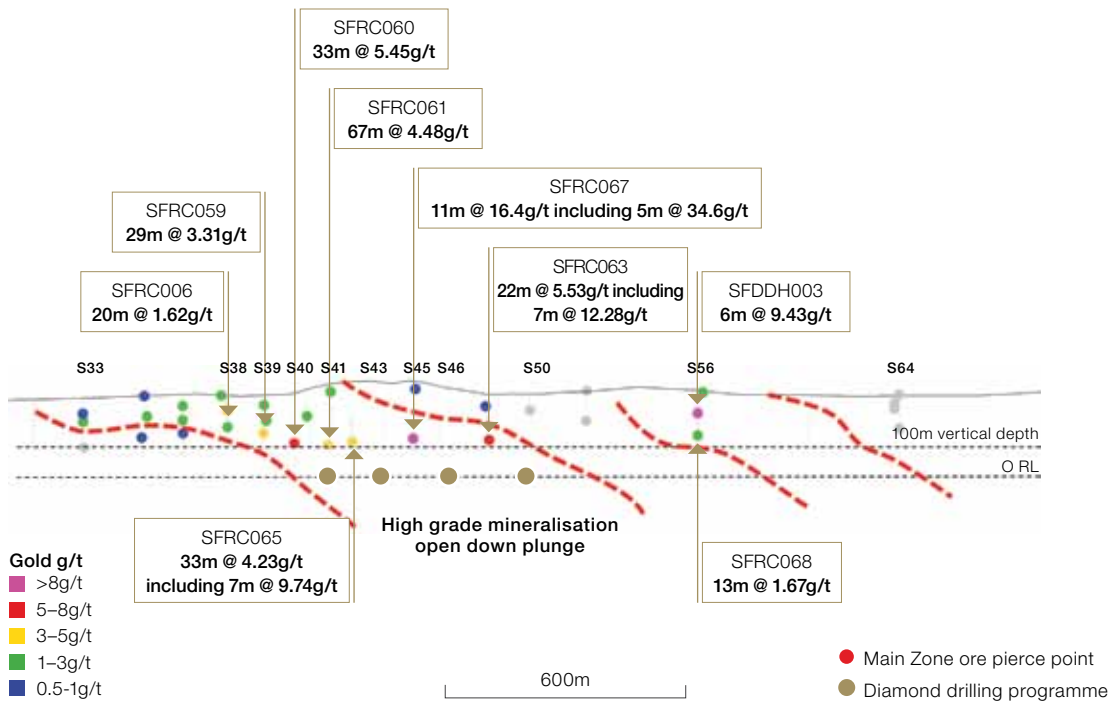
The Massawa deposit does not currently pass the company's strategic filters due to the high cost associated with processing refractory ore, and the feasibility study is focused on reducing tonnes and increasing grade and recovery to pass the 20% IRR hurdle. Reserves at Massawa are currently 20.73Mt @ 2.1g/t for 2.2Moz. The feasibility study is due to be completed in 2016.

SENEGAL – MASSAWA AND SATELLITE TARGETS



SOFIA TARGET – GOLD INTERSECTIONS

Long section looking NW with recent RC drill results



In 2014, the Sofia target had an inferred resource of 736koz @ 1.7g/t, a strip ratio of 3.3:1 and gold recoveries of 92%. Of the 4km long Sophia orebody, a 200m long section contained shallow, higher grade drill intersections and was targeted by drilling in 2015 to confirm whether the higher grades within this zone were related to supergene enrichment at the redox boundary.

During the second half of the year, six deeper RC holes over 600m of strike length confirmed the zone of high grade mineralisation, returning an average weighted (true width) intersection of 30m @ 5.18g/t at 100m vertical depth for the main zone sulphide ore and confirming a hypogene source for the high grade mineralisation. The holes also confirmed the existing hangingwall and footwall lodes. The main orezone is located immediately beneath a mylonitic structure, and is hosted in strongly sheared gabbro and felsic intrusive units with silica flooding and carbonate-sericite alteration. These results further highlight the potential for Sofia to provide over 1Moz of high grade, non-refractory, ore to the Massawa project and at year end the Sofia resource had increased to 850koz @ 2.44g/t. The high grade mineralisation is believed to plunge to the north and further drilling programmes are being planned to test this open potential in 2016.

The target is located on the Sofia-Sabodala structure which hosts a number of the Sabodala orebodies along strike to the north and marks the western limit of the volcanic domain in the Mako belt. Historical work on a number of targets around Sofia has returned strongly anomalous results from near surface which form a portfolio of priority targets for follow-up work in 2016.

#### Bambadji joint venture

Work on the Bambadji permit in Senegal was placed on hold in 2015 as Randgold renegotiated the terms under the joint venture with lamgold Corporation and the government. Work is expected to restart in 2016.

## MALI LOULO

#### Brownfields

At Gara, the 2015 brownfields programme was highly successful, delivering an inferred resource increase (before depletion) of 713koz @ 3.93g/t, largely generated by 18 drill holes through the folded quartz-tourmaline target to the immediate south of the existing block model and seven holes through the deep central part of the orebody. This programme confirmed the extension of the Gara system to the south, with an average true width of 7.68m which remains open down-plunge. Work will infill on this resource during 2016 to convert it to the indicated category while exploration work will focus on the down-plunge extension to the south.

At Yalea, the southern extension to the Purple Patch was tested by a number of deep drill holes with some significant results. YADH19 returned a high grade intercept at the edge of the block model (11.3m @ 12.1g/t from 711.9m) where a footwall structure is interpreted to intersect the main shear, producing a plunging rod of high grade, Purple Patch type mineralisation. 300m down-plunge from this

intersection, YDH277 returned two zones of high grade mineralisation: Zone 1 - 13.40m @ 6.50g/t, including 6.60m @ 11.06g/t; and Zone 2 - 11.86m @ 4.43g/t, including 3.66m @ 7.50g/t. Silica-carbonate alteration and breccia textures suggest this hole pierced the plunge extension of the target tested by YaDH19 and highlights the considerable potential at Yalea to locate further zones of high grade, Purple Patch type ore. To date, scout exploration drilling in the south of Yalea, in the form of four drill holes, outlines the potential for 420koz @ 4.06g/t beyond the limits of the current block model. Work is focused on locating zones of +6g/t material with sufficient size to support the capital expenditure on a separate shaft for a new, high grade supply of ore to the plant.

#### Greenfields

A number of existing satellites were reviewed (P125-Loulo 3 Gap, Baboto North and South, Loulo 2 South, Loulo 3 and Loulo 1). Exploration work focused on the advancement of the Yalea Ridge South and Gara South targets which are not currently in resource.

At Yalea Ridge South, RC drill results confirmed the small nature of the oxide potential (1 925oz @ 4.25g/t), with a further 680oz @ 1.52g/t hosted in the transition zone. At Gara South, a new geological model of a sinistrally folded quartz-tourmaline unit was confirmed by diamond drilling, with the best result of 6.08m @ 4.0g/t (205.44m) from LOCP213. The new model increases the economics of the target by structurally repeating the orezone close to surface, with additional potential for shallowly plunging high grade shoots in the fold hinges amenable to open pit mining. Further work on this target will be carried out in 2016.

Further generative work was completed across the Loulo permit with the aim of better understanding and targeting the large structures which have acted as strain and fluid conduits across the permit. Further structural mapping and interpretation was completed and highlighted five principal structures which run N-S to NE-SW across the permit and form the basis of target generation and prioritisation work with priority targets located along two of these structures, Far West, around Iron Hill and the Yalea structure.

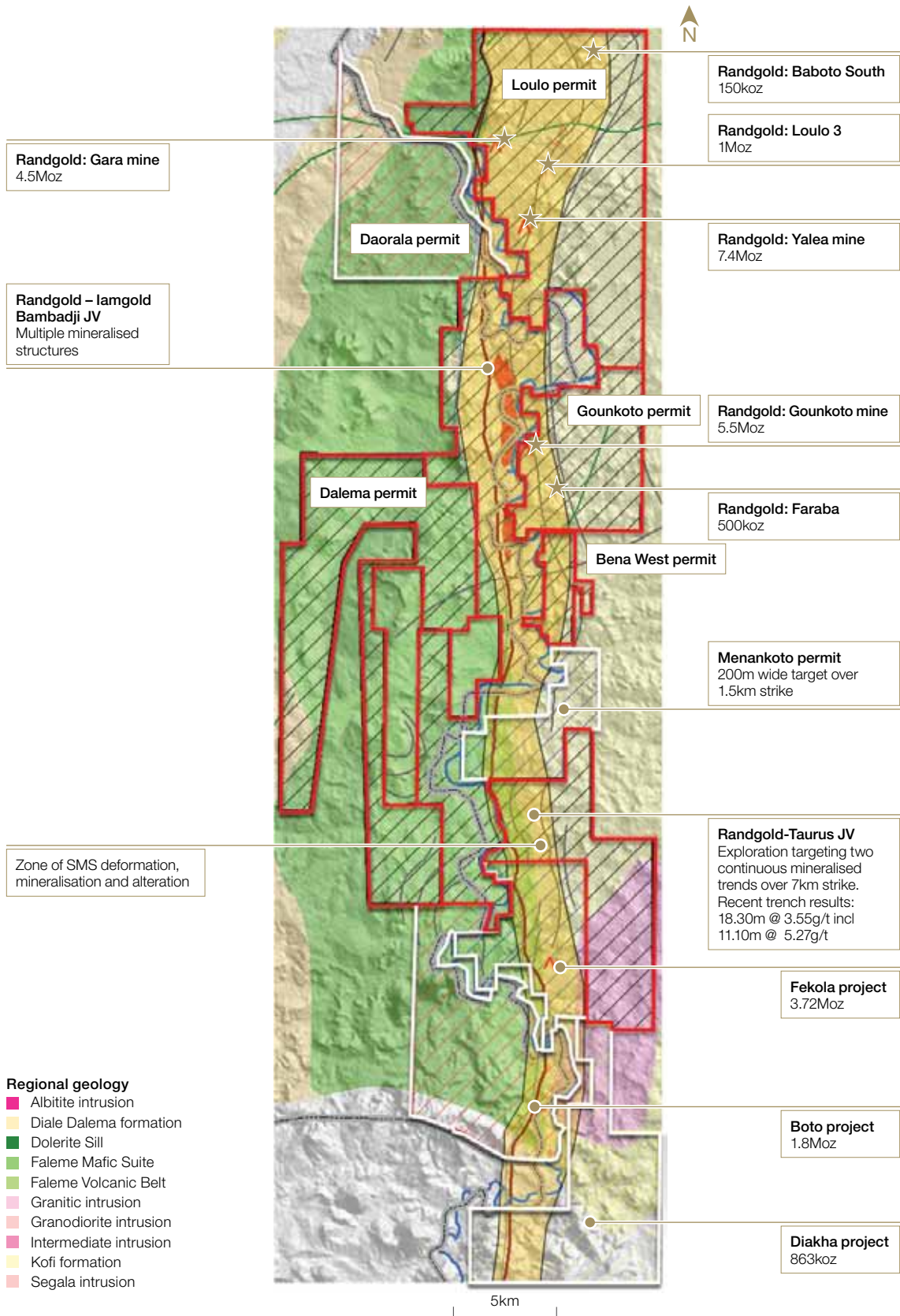
#### GOUNKOTO

##### Brownfields

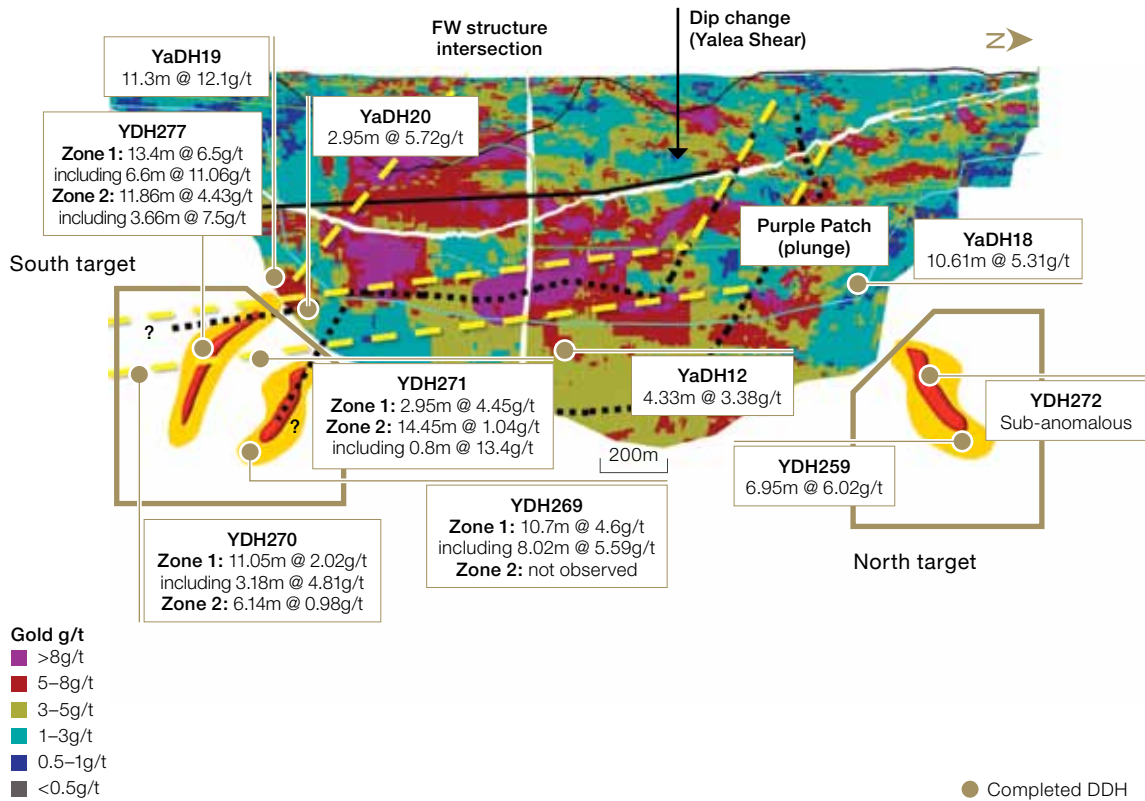
At Goukoto, five drill holes were completed beneath the \$1 000/oz pit shell, testing narrow, high grade plunging lodes in MZ1 which form at the intersection of differently oriented footwall and hangingwall structures. All holes intersected the target structure as modelled, but results were weak, showing that the three higher grade shoots targeted have limited down-plunge continuity at depth. The weak results returned from this programme downgraded the MZ1 underground target.

In MZ3 in the north of the deposit, drillhole GKDH432 returned 10.8m @ 1.02g/t down-plunge to the north of the Jog Zone underground project confirming it to be open. Northerly plunging mineralised shoots are controlled by the intersection between a brecciated structure in HW quartzite with silica-albite-sericite alteration, and a FW shear consisting of albite

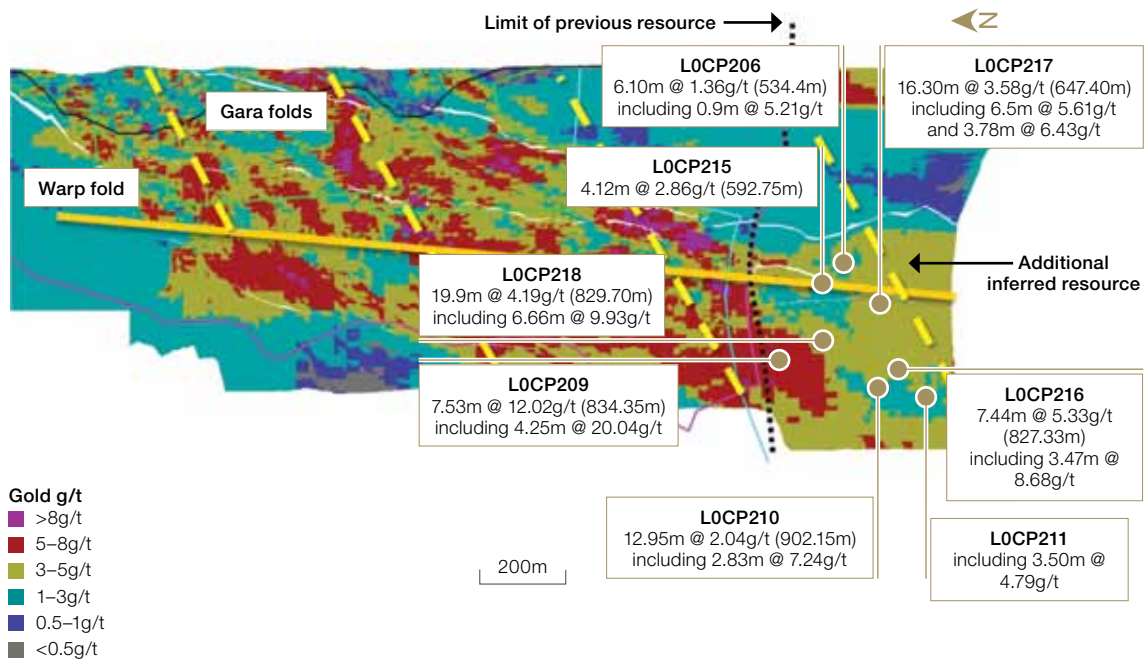
LOULO – A WORLD CLASS GOLD DISTRICT



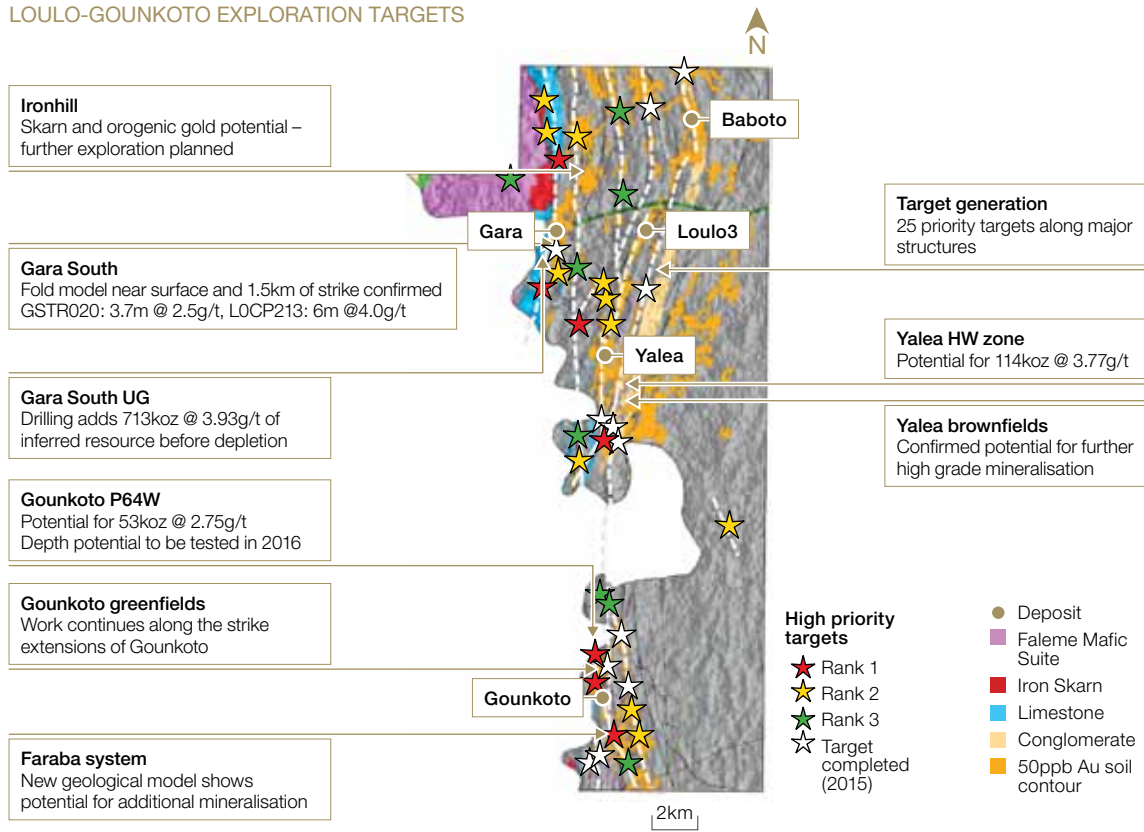
YALEA - HUNT FOR NEXT PURPLE PATCH



GARA ADDS +700KOZ INFERRED RESOURCES AND 4 YEARS LOM

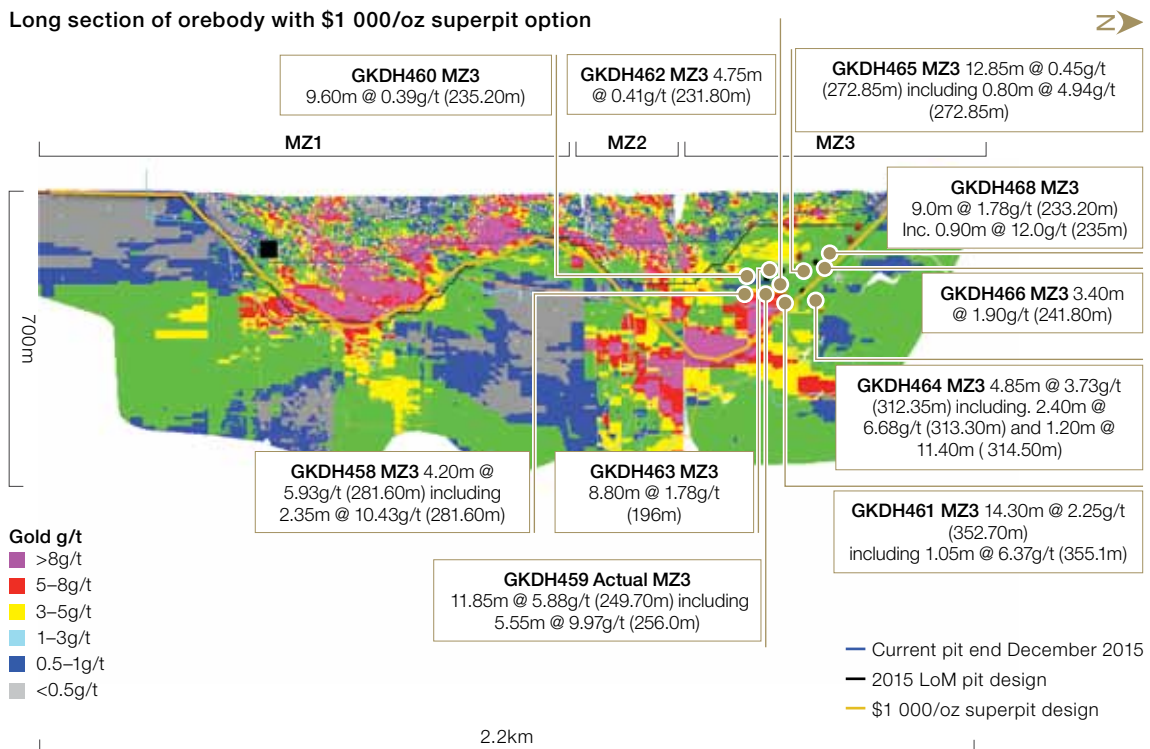


LOULO-GOUNKOTO EXPLORATION TARGETS



GOUNKOTO – DRILL RESULTS ON AUGUST 2015 BLOCK MODEL

Long section of orebody with \$1 000/oz superpit option





with overprinting chlorite and hematite alteration. A potential of 61koz @ 4.52g/t for 423kt (sectional) has been identified to the north of a brittle fault that intersects the shoots at depth and which marks the limit of the current underground resource. Further work on this target is pending an evaluation of a new superpit concept at Goukoto which would extract a large part of the high grade underground resource.

Exploration work around Goukoto confirmed the P64 orebody to be a NE striking dilation zone between two reactivating north-south structures. Further studies were carried out with the aim of updating the geological model on which a revised resource estimate will be based. This work constrained new mineralisation wireframes to sandstone with subordinate limestone and silica-albite breccia host rocks that are variably altered with tourmaline, magnetite and chlorite. This resulted in a potential of 53koz @ 2.75g/t (0.60Mt), with a decrease of 47% in tonnes and an increase in grade of 29%, compared to the previous model. Additionally, the work confirmed open, high grade shoots below the base of the pit which will be tested in 2016.

RC drilling during the year on the Toronto target to test oxide potential at intersections of the Faraba structure with cross cutting NE chlorite-sericite shears, confirmed limited shear zone hosted oxide potential of 18koz @ 1.8g/t in two separate, sub-parallel zones.

#### Greenfields

At Toronto South, one diamond hole was drilled to test the structural model of higher grade at depth within the central portion of a sinistral jog, in a zone of maximum dilation that was not tested by previous drilling. TSDH001 intersected two weakly anomalous zones, a wide hangingwall zone with 41.5m @ 0.16g/t from 526.35m and a second zone of 8.3m @ 0.42g/t from 574.3m. Consequently the target was removed from the resource triangle.

Investigation of the strike extents of the Goukoto domain boundary (a key structure controlling mineralisation in the Goukoto orebody) continued in the north of the project area at Goukoto North as well as in the south at Faraba West and South West. Initial results confirmed the prospectivity of the NNW extension of this structure with strongly silica-albite-tourmaline altered heterolithic breccia that returned strong results (8.8g/t and 22.8g/t) from the banks of the Falémé River to the north of P64. Follow-up trenching returned an intercept of 3.7m @ 1.44g/t, including 1.2m @ 3.94g/t (GNWTR02) from the same breccia with silica-carbonate veinlets, which was then confirmed in trenching 100m to the south in trench GNWTR04 (6.8m @ 0.64g/t, including 1.7m @ 1.29g/t). This structure will be further tested in 2016. At Faraba West and South West pitting and trenching programmes confirmed the extension of the domain boundary but failed to intersect significant mineralisation and work is ongoing along this target.

Minan is a blind target that was identified from project wide integrated mapping and target generation work. Trenching on the target in Q2 intersected a discrete 3m wide ferruginous mineralised shear which graded up to 5.5g/t beneath transported alluvial material. RC drilling on the target confirmed the presence of disseminated sulphides in bedrock which are

weak but within a system which appeared to be dilating to the south. However, only sub-anomalous grades were returned (12m @ 1.12g/t from 40m (GSWRC11), 28m @ 0.82g/t from 152m, including 2m @ 4.61g/t (GSWRC03) and 4m @ 1.59g/t from 248m (GSWRC13). The low grades are interpreted to be due to the absence of early silica-albite and tourmaline alteration that prepares the host rocks for subsequent mineralisation during brittle-ductile deformation. Encouragingly, the work on the target confirms the efficacy of the target generation system described above, which has also highlighted a number of other targets across the Goukoto system and further afield, beneath transported material at Bena and Bakolobi.

## REGIONAL

Randgold controls a portfolio of 627km<sup>2</sup> along the Senegal Malian Shear (SMS) structure in western Mali. The SMS is a key regional control on gold mineralisation and is proximal to the Sadiola (AGA/ IAG), Loulo (RRS) and Fekola (B2G) ore systems.

#### Bakolobi (Taurus joint venture)

At Bakolobi, between Goukoto and Fekola, a first phase of trenching across key targets on the permit was completed. Nine trenches in total were excavated over zones of bedrock mineralisation, identified through the initial reconnaissance RC drill programme. Results from these trenches included: BKTR006 - 20.13m @ 1.59g/t; BKTR004 - 23.70m @ 0.61g/t; BKTR009 - 24.60m @ 0.23g/t; and BKTR005 - 14.96m @ 3.83g/t including 6.25m @ 7.71g/t and 11.45m @ 1.94g/t (88.60m) including 3.50m @ 5.39g/t. The trenching confirmed that the mineralised structures dip uniformly to the west and that the highest grades are associated with the intersections of NW and NNE-NS striking structures.

Follow-up pitting confirmed the southern extension, beneath transported alluvial material, of the Koliguinda target with anomalous pits returning values up to 0.4g/t over a 50m wide structural corridor. The Koliguinda target is interesting as it features a left hand flexure which would be dilatational in a largely sinistral system such as the SMS and is the target which has, to date, returned the strongest results from trenching (shown above). It is also in an area which is intersected by a major NW structure interpreted to be a transverse fault in the original belt architecture. It also happens to be the area where transported gravels are thickest.

The other targets in the permit are still thought to be prospective with widths at surface averaging approximately 20m with grades of between 1g/t and 2g/t. Follow-up work on the permit was carried out including the completion of a new interpretation over the ground following a review of all existing data. Pitting is now in progress over targets which are not covered by the thick alluvial material, a problem across much of the permit. A drilling programme which aims to test key parts of the two main mineralised trends is being prepared for 2016.

#### Legend joint venture

On the Legend Gold joint venture to the south of Sadiola, work continues along the SMS which strikes

over 18km within the permit area. Both trenching and pitting have been ongoing through the year on targets close to the Kofi formation boundary, in the area of influence of the SMS, and have focused on the anomalous contacts of carbonate and siliciclastic rocks which provide a key chemical and rheological contrast in this district. This work has tested a number of targets, but many of them have been removed from the resource triangle during the year as they have shown no potential beyond the weakly anomalous results.

At Woyanda, groove results returned 5.60m @ 0.30g/t, 8m @ 0.37g/t, and 4m @ 0.39g/t (95.40m). However, no significant results were returned from five lines of exploration pits testing the strike extensions of the target, which was consequently downgraded.

The Sourokoto East target, located at the lithological contact between volcano-sedimentary units (pyroclastic, brecciated tourmaline greywacke) in the east and volcanics (mostly andesites) to the west, returned an encouraging pit result in early work of 2.99g/t, 1.8km along strike from a zone of in-situ saprolite mineralisation grading up to 0.89g/t. Follow-up pitting confirmed the continuity over 600m strike length of in-situ gold anomalism within a 30m wide alteration zone with values of 0.16g/t to 11.3g/t in sheared greywackes with silica-carbonate-hematite alteration. A trench over the alteration zone (SRTE001) returned 8.85m @ 0.28g/t and confirmed that the higher grades are related to millimetric oxidised quartz veinlets within the greywacke, an observation which downgrades the potential of the target.

Trenching is currently in progress on the Sebesoukoto South target, where previous work defined silica-carbonate-tourmaline and chlorite alteration within a gossanous structure over 1km strike, and lithosample values up to 1.6g/t.

### Bena

The Bena project is located to the immediate south of the Goukoto permit. At Boulandissou, a 3km strike length target was previously generated which

incorporated a number of historical mineralised intersections and samples and this target was the sole focus of work on the project at the beginning of the year. Historical results from the target include 26m @ 3.53g/t from trench BNT02 in the north and 13m @ 1.57g/t from RC drill BORC02 in the south. A phase 1 programme of three trenches and one groove was carried out over the target with the trench over RC hole BORC02 returning 12.87m @ 2.04g/t, confirming the west-dipping nature of the mineralised structure. Groove BGV010 returned 12.6m @ 1.84g/t to the immediate east of the main target structure but the other excavations along the target returned no significant intersections restricting the known mineralisation to limited strike extents. Because of this, and due to uncertainties over the geological interpretation for the permit, an updated interpretation was carried out in parallel with the Bakolobi and Goukoto work, (both permits lie along strike from Bena) and a new portfolio of targets was generated. Field work on these targets is in progress. The Bena permit is less affected by the difficult transported regolith in the Bakolobi permit and therefore more conventional surface exploration work can be done.

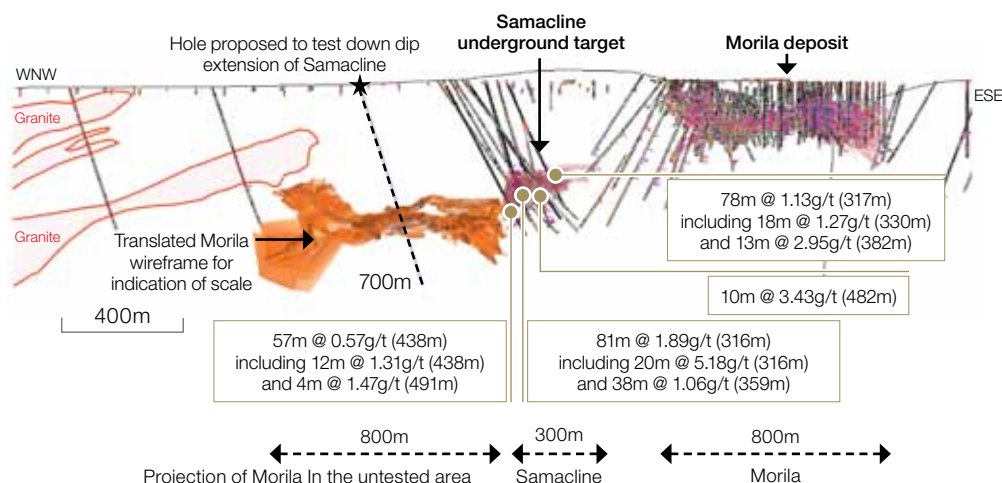
### MORILA

Work on the near mine conceptual targets at Morila continued through the first half of the year with the team relogging holes across the SE of the permit where coincident features associated with the Morila deposit such as flat foliation, high temperature leucosome/quartz plagioclase veins, tonalite intrusives, MG rich biotite and arsenopyrite mineralisation were identified. The distribution of these features was mapped but the team was unable to generate any targets for drill testing due to the lack of any visible control.

Following the completion of the Domba grade control drilling programme, the exploration team undertook a relog of the Samacline deposit which is located at 300m depth to the immediate west of Morila.

The updated interpretation for the target has identified open, high grade mineralisation within a wide, low

## MORILA – SAMACLIN UNTESTED DEEP TARGET TO THE WEST



grade envelope of up to 80m in width. The untested area down dip to the west of Samacline is large enough to hold a Morila-type deposit and is the target of a diamond hole being planned to test the model that Samacline could be the eastern edge of a large deposit.

## CÔTE D'IVOIRE

Randgold holds, in its own name or through joint ventures, 5 589km<sup>2</sup> of ground in Côte d'Ivoire (11 permits) which includes four permits which have passed the inter-ministerial commission in 2015. Additionally, nine applications (3 592km<sup>2</sup>) through joint ventures are pending.

### NIELLE

At Tongon, a full relog of the deposit's core and the modelling of the skarn system enabled the team to project and identify a number of targets at the base of the \$1 000/oz pit shell where infill drilling indicated the potential to increase the grade, or the number of mineralised structures in the model. The reduced strip ratio as a result of positive results could enable the pit to access deeper ore. To test the updated model, a programme of 10 diamond holes was undertaken at Tongon with five holes in the southern pit; two in the oxide pit and three beneath the Northern Zone pit. Results from the Northern Zone failed to extend the existing block model with intersections from three holes being either narrower

or lower grade than predicted. In the Southern Zone the holes intersected several zones of mineralisation outside the existing block model but failed to intersect mineralisation in a wide area of internal waste, which is limiting pit depth in current optimisations.

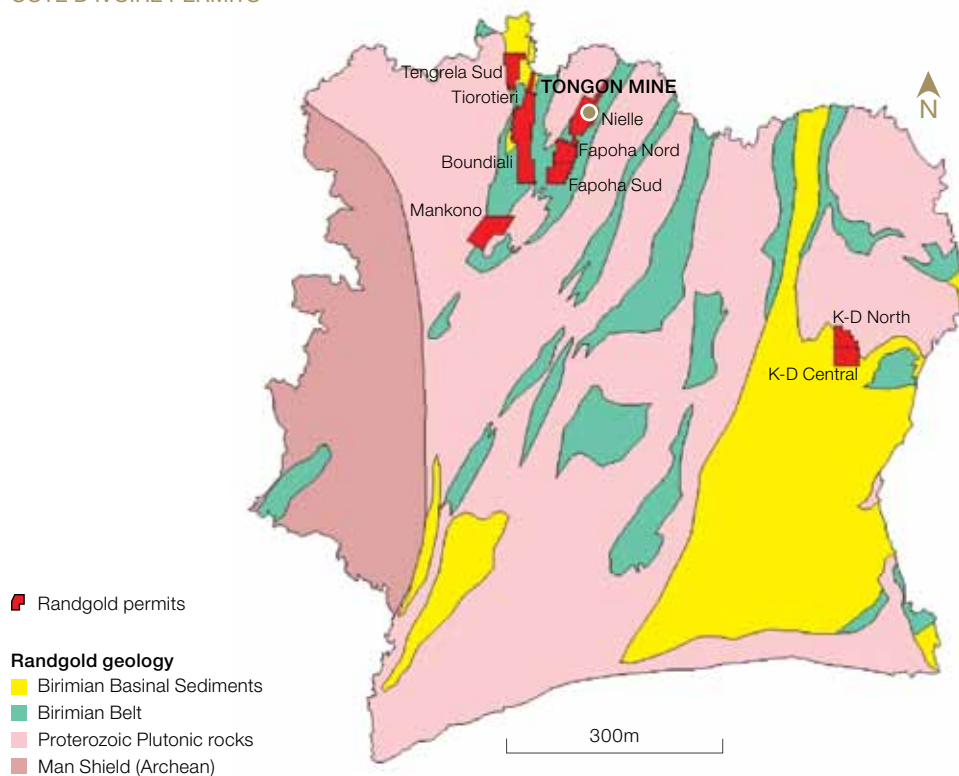
Towards the end of the year infill drilling programmes were carried out on two nearby satellite deposits. Tongon has the ability to make money from low grade satellites and current resources in the two targets (Sekala and Seydou) have the potential to supplement the orefeed, extend Life of Mine and protect the resource in a low gold price environment. At the time of writing, most results from these programmes were still pending.

In greenfields exploration, the Yvette West target was prioritised within the 20km Bladonon corridor target in the SW of the Nielle permit and mapping and sampling during the year identified silicified volcanoclastics/tuffs, sheared and locally folded argillites and carbonaceous shales with lithosamples returning significant values up to 9.63g/t from silicified tuffs. Work will continue on this mineralised trend in 2016.

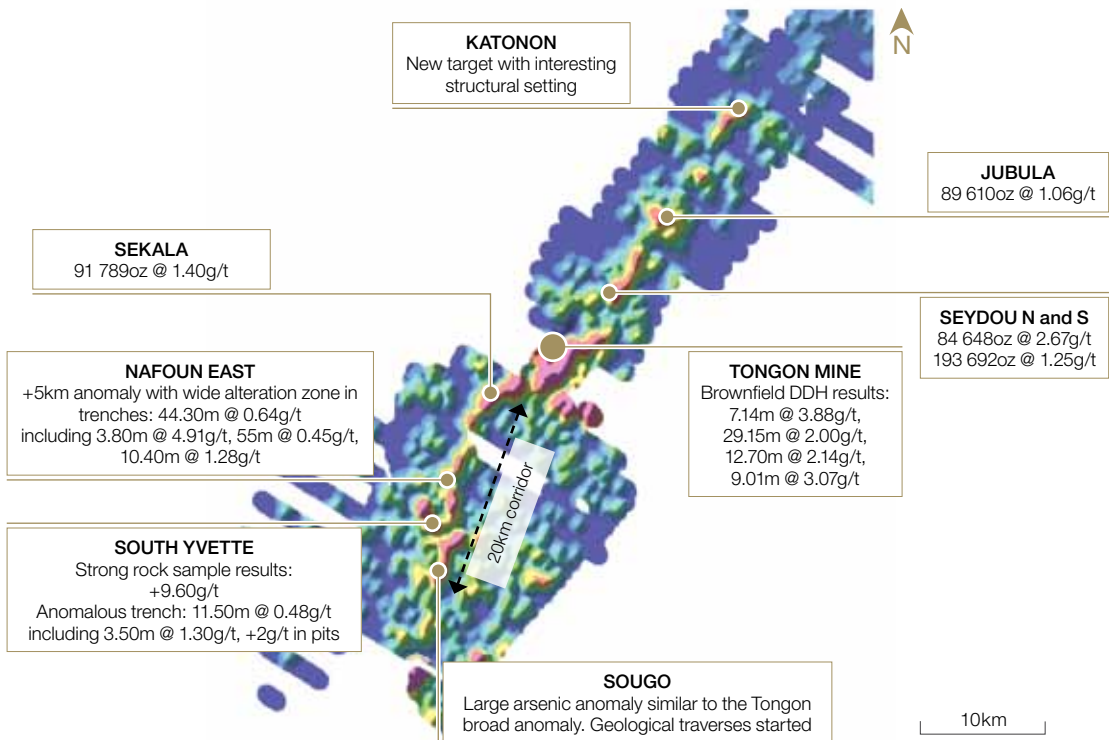
### MANKONO

On the Mankono permit to the SW of Fapoha, where the Senefou belt and the Boundiali belt structures intersect, the team discovered two styles of mineralisation on the Gbongogo target. Trenching throughout the year confirmed 400m strike of wide,

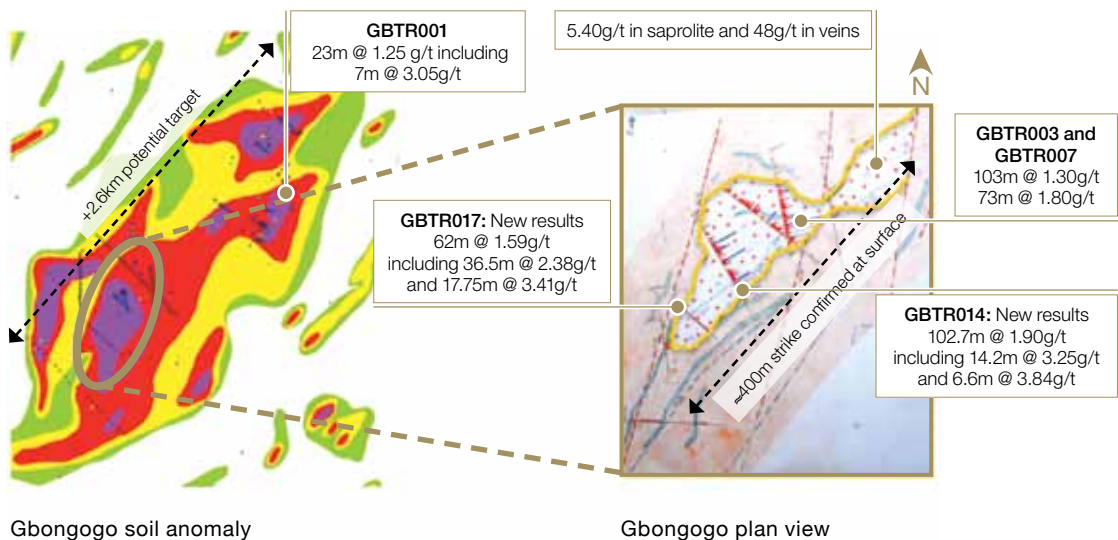
## CÔTE D'IVOIRE PERMITS



NIELLE PERMIT PLAN SHOWING ARSENIC ANOMALY AND GOLD TARGETS



MANKONO PERMIT – GBONGOGO TARGET



Gold in soil ppb

- >20
- >50
- >100
- >300

low grade ore which may be amenable to bulk mining. Trench results this year include: GBTR003 - 103m @ 1.30g/t; GBTR007 - 73m @ 1.80g/t; GBTR014 - 102.70m @ 1.90g/t including 73.60m @ 2.36g/t, 14.20m @ 3.25g/t and 6.60m @ 3.84g/t; and GBTR017 - 62m @ 1.59g/t including 36.50m @ 2.38g/t and 17.75m @ 3.41g/t. The mineralisation is hosted in a quartz tourmaline stockwork in a silica-sericite altered coarse grained rock. The presence of strong silicification and sericite with associated boxworks after sulphides are indications of the higher grade mineralisation. The mineralised system is interpreted to be related in some way to the core of a fold hinge which plunges to the NE and its potential is to be tested by drilling in 2016. Lower grades were intersected in GBTR015: 59m @ 0.46g/t and 28.50m @ 0.33g/t and in trench GBTR016: 10.60m @ 0.32g/t. A strong soil anomaly extends from these trenches over a strike of 2.6km and work is ongoing to define the continuation of the stockwork system.

Located 800m to the NE of the Gbongogo fold hinge target, the second style of mineralisation is controlled by discrete dextral NS shears with moderate silicification and strong magnetite and coarse grained pyrite, located on the eastern limb of the regional fold. The best intersection to date is 23m @ 1.25g/t including 7m @ 3.05g/t with weaker intersections along strike, including 10.10m @ 0.36g/t.

## BOUNDIALI

At Fonondara South, the target was progressed from a soil anomaly to a drill programme as a result of strong results from trenching and pitting along the target. The mineralised shear zone, which dips steeply to the east, locates on the eastern margin of a massive andesite where it is in contact with interbedded tuffs and argillites.

Trenching and pitting exposed a wide zone of alteration (up to 57m) including 13m @ 1.56g/t and 6m @ 2.10g/t (open to the west) from FSTR011 in the south and 14m @ 1.00g/t and 23m @ 1.28g/t from FSTR012 in the centre of the target. Follow-up work of a 2014 trench (FSTR008) which intersected 16m @ 2.5g/t (including 11m @ 3.49g/t) in the north of the target revealed that a flat structure appears to have placed barren material on top of a significant, steeply dipping mineralised zone which is up to 30m wide and which returned consistent high grade mineralisation up to 16g/t. Further pitting 60m south of FSTR008 confirmed the flat structure and the high grade mineralisation beneath it. Intersections from

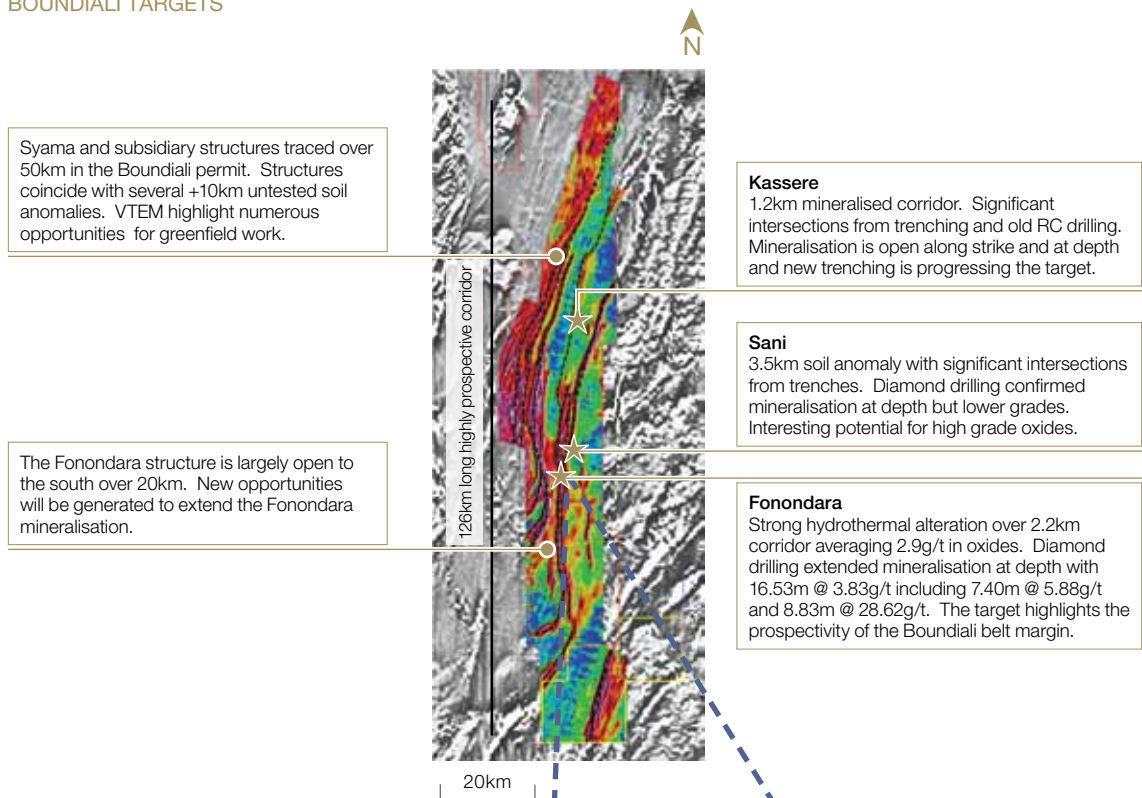
contiguous pits at 5m spacing across the target zone beneath the flat structure returned: FP442 - 6m @ 5.36g/t (open at depth); FP423 - 7m @ 4.68g/t (open at depth); FP424 - 7m @ 7.24g/t (open at depth); FP425 - 7m @ 3g/t (open at depth); FP428 - 4m @ 4.51g/t (open at depth); and FP434 - 6.70m @ 8.71g/t (open at depth).

This surface work at Fonondara South defined a system which averaged 16m @ 2.96g/t at surface over 1.5km strike at the margin of the Boundiali volcanic belt. To test this structure at depth, six diamond drill holes were drilled at 300m spacing along the full strike of the target and all intersected mineralisation approximately 100m beneath the trenches. Best results were received from hole FSDH003 which returned 16.53m @ 3.83g/t from 148.14m, including 7.40m @ 5.88g/t in the main zone, and 8.83m @ 28.62g/t from 188.07m including 4.10m @ 61.05g/t from the first of two footwall structures. Other holes intersected more moderate grades up to 1.5g/t over similar widths within a large low grade carbonate/sericite alteration system which contains a phase of late quartz veining and extensive visible gold in a sequence of volcanoclastic rocks and carbonaceous shales. Pyrite, pyrrhotite and arsenopyrite are present in all mineralised zones.

Initial metallurgical test work shows the sulphides at Fonondara to be moderately refractory. However, flotation has been shown to improve the recoveries in the problematic shale ore to 81% from 40% through direct cyanidation. Direct cyanidation recovers 85% of the gold in the volcanic ore and 98% of the gold in quartz ore.

Nine kilometres along strike to the north of Fonondara, three additional diamond holes (750m) were drilled at the 3.5km long Sani target to test the wide alteration system intersected in previous trenching which returned best results of 12m @ 3.90g/t, 6m @ 6.27g/t and 10m @ 4.12g/t. This drilling confirmed a wide and consistent low grade system with best results received from SNDH003: 54.41m @ 1.21g/t (from 132.84m) including 9.45m @ 3.28g/t within a +200m wide anomalous zone. Mineralisation is linked to coarse grained pyrite and chalcopyrite and initial metallurgical tests conducted on the fresh material returned an average recovery of 87%. The problematic shale ore seen at Fonondara is not present at Sani.

**BOUNDIALI TARGETS**



**FONONDARA-SANI MAP FOLLOWING RECENT GAIP**

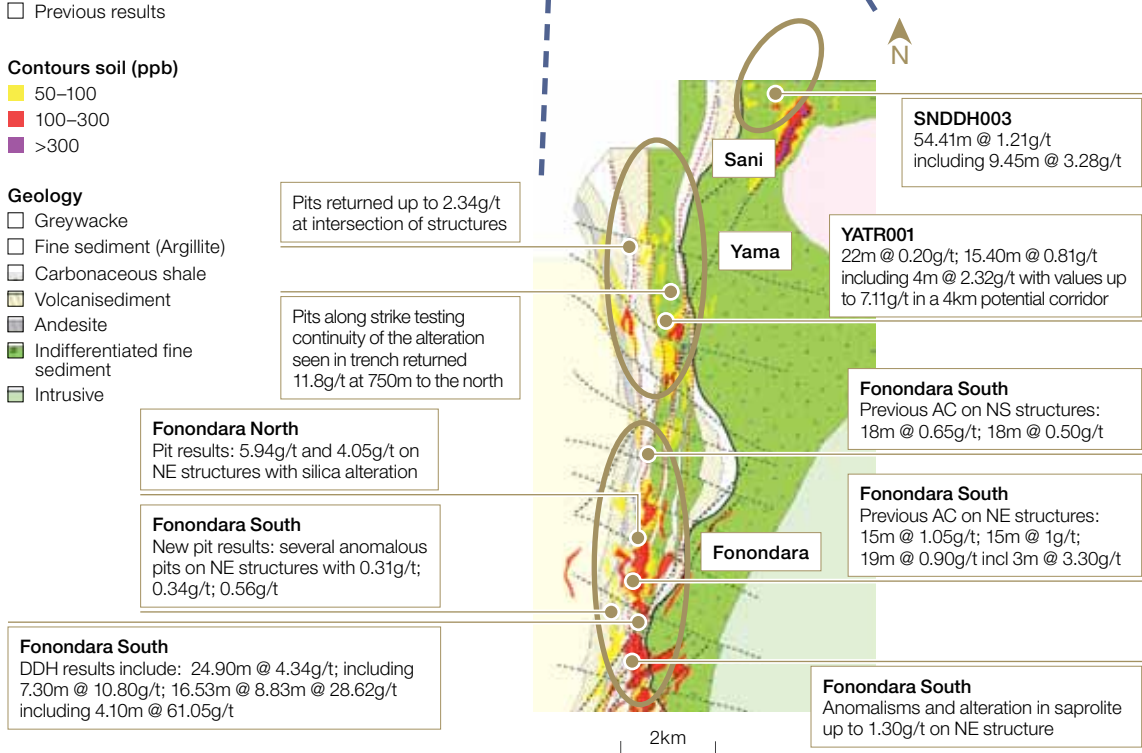
Previous results

**Contours soil (ppb)**

- 50–100
- 100–300
- >300

**Geology**

- Greywacke
- Fine sediment (Argillite)
- Carbonaceous shale
- Volcanisediment
- Andesite
- Indifferentiated fine sediment
- Intrusive



At Fonondara North, pit results graded up to 5.96g/t from in-situ sheared saprolite, while fieldwork carried out during the year at Yama, (to the north of Fonondara) identified a 750m long mineralised structure through trenching and pitting with sheared and altered samples returning 15.40m @ 0.81g/t including 4m @ 2.32g/t, with values up to 7.11g/t in a trench and up to 11.80g/t in pits. This structure is part of a corridor that could extend over 4km.

A number of +10km soil anomalies with confirmed bedrock mineralisation at Yama, Sani, Fonondara and Kassere, all along strike and all located along the Boundiali belt margin, highlight the significance of the structure as a large scale mineralised system with the potential to host world class deposits. Given these positive results and the scale and prospectivity of the Boundiali belt margin, a VTEM (helicopter EM, Mag and radiometric) survey over the Boundiali, Nafoun and Mankono permits was completed at the end of the year to improve the understanding of the regional setting of the Boundiali-Bagoe Belt, generate new targets and facilitate the reprioritisation of existing targets. An earlier IP survey completed during the wet season over the 20km Fonondara-Sani corridor showed that there is significant potential to change the existing interpretation of the key structures and identify new targets with additional remote data.

At year end, the survey was nearing completion and is clearly confirming the extension of regional structures, including the southern extension of the Syama and subsidiary structures, through the permit and highlighting new areas of interest along the Fonondara structure.

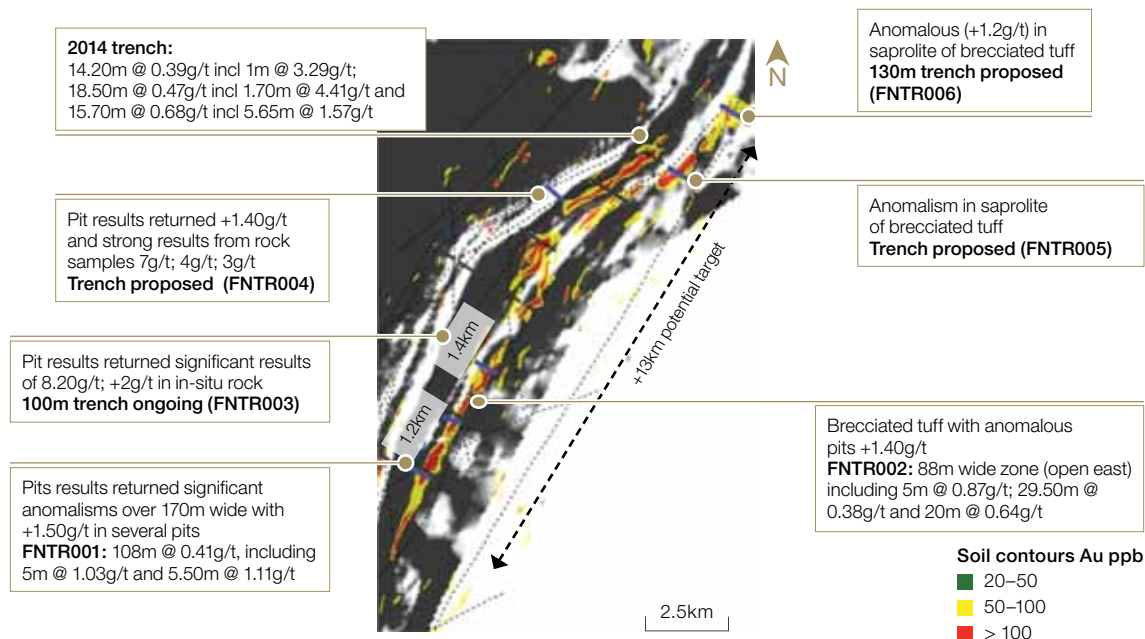
## FAPOHA

At Fapoha, work progressed on the two main target areas, in the north of the permit and in the south,

with both featuring multi kilometre long gold-in-soil anomalies at the sediment-volcanic lithological contact. At Ouboulo in the south, trenching over the 12km target returned best results of 27m @ 1.20g/t including 6m @ 2.36g/t and 5m @ 2.87g/t from a brittle vein system in volcaniclastics in contact with massive andesites and a quartz-diorite intrusion. Structures are generally a thin fracture network associated with narrow shear bands developed at the margin of the quartz-diorite and the target was downgraded.

At Fapoha North, a 13km +50ppb soil anomaly in a right hand flexure of the target structure was further investigated at the end of the year by pitting. The pits returned consistently anomalous grade, with values up to 8g/t in saprolite over the full width and strike of the target, which is up to 170m wide. Three trenches were excavated at year end at a spacing between 1.2km and 1.4km, all sited over existing anomalous pits. Results from two of these trenches were received at the time of writing. Trench YOTR001 returned a wide mineralised zone of 108m @ 0.40g/t, including 5m @ 1.03g/t and 5.50m @ 1.11g/t, whereas FTR002 yielded a low grade anomalous zone of 88m wide (open to the east) including 5m @ 0.87g/t; 29.50m @ 0.38g/t and 20m @ 0.64g/t. Zones of mineralisation in both trenches are hosted in a brecciated tuff in contact with a quartz diorite intrusion. Despite the low grades from initial trenches, the target is showing geological continuity between trenches and is confirmed as a wide, low grade mineralised system. Trenching will continue in 2016 to properly test the corridor along strike to the north and to potentially identify zones of dilation and higher grade mineralisation in the structure.

## FAPOHA NORTH TARGET – 13KM WIDE BEDROCK TREND



## DRC KIBALI

The Kibali project is located in the Archean Moto volcanic belt of NE DRC where Randgold holds ground over 35km strike of the KZ structure, a regional mineralised trend which has a global inferred resource of over 22Moz and which hosts the giant 17Moz KCD deposit.

### Brownfields

#### Megi

Scoping resource estimation work at Megi within a \$1 500/oz pit shell produced 5.63Mt @ 1.72g/t for 311koz of which approximately 67% or 208koz remains in the inferred category. The Q4 scoping model shows an 18% reduction in tonnes, a 5% increase in grade and 14% drop in ounces respectively when compared to the Q1 resource estimate of 6.8Mt @ 1.64g/t for 361koz. The changes are attributed to a more robust revised geological model, which indicates that mineralisation remains open down-plunge to the NE, providing exploration upside. A commercial review comparing mining costs and benefits at Megi against other satellite deposits will drive the timing of infill conversion drilling.

The brownfields team completed the rebuilding of lithological, alteration and mineralisation wireframes to enable the evaluation of a potential superpit option at Pakaka, Pamao and Bakangwe Aval for the Pakaka pit, while Kombokolo, Sessenge, Gorumbwa and Durba Hill were remodelled and combined for the KCD pit. Optimisations are in progress and results will guide further infill drilling around both pits.

#### Durba Hill

At Durba Hill, trenching returned anomalous intersections of 14m at 1.99g/t and 10.80m at 1.26g/t (both DBTR0004) and 10m at 3.03g/t (DBTR0003) all hosted in brecciated chert and siliciclastic BIF in the hangingwall of the dolerite above the KCD pit. Two holes were drilled on top of Durba Hill (between KCD and Gorumbwa) to test beneath the trench. Results returned (DHDD0001) 23.46m at 2.98g/t from 105.54m (including 5.16m at 8.30g/t from 105.54m) associated with silica carbonate alteration with pyrite, and is interpreted as being a plunging rod of mineralisation. A second deeper hole intersected a broad 40m zone of weak alteration with thin intervals of strong silica carbonate alteration containing 15m @ 0.15g/t from 113.7m (including 1m at 1.1g/t from 123m). It is interpreted that the follow-up hole clipped the edge of the mineralised rod which remains open down-plunge. Further drilling is planned for 2016.

### Greenfields

#### KZ Structure

Understanding of the deformational history of the Kibali area, and more specifically the mineralised KZ structure, was advanced. The team focused on the key criteria used to identify targets along the structure and re-ranked them after field validation of information, based on the potential to host a new multi-million ounce standalone deposit or an economic satellite. The analysis and ranking exercise generated a portfolio of 28 targets. A ranking of the portfolio identified Kanga Sud (1), Ikamva-Kalimva (2),

Sessenge SW (3), Oere-Libala (4), Tete Bakangwe (5), Megi (6) and Mengu Hill W (7) as the areas with highest potential of delivering a new multi-million ounce orebody.

In the KCD area work progressed on mapping the continuity of the folded F1 structure which marks the contact between clastic siliceous rocks with carbonaceous/ferruginous units in the KCD pit. The ore lodes of the KCD deposit occur close to this faulted contact around the hinges of a recumbent F2 fold which has been over printed by a second fold event, both of which have NE plunging hinges, thought to control the distinctive rod-like nature of the mineralised lodes at Kibali. These recumbent folds may be a more regional feature and are likely to be blind and a number of conceptual targets exist where fold hinges are interpreted to locate.

#### Tete Bakangwe

At Tete-Bakangwe, which is an old artisanal pit 4km from the plant, trenching returned significant results including 11.3m (true) at 2.04g/t, 37.35m (true) at 4.1g/t and 24.68m (true) at 1.59 g/t containing at least four higher grade mineralised lenses in BIF and metaconglomerate which plunge to the NE, with potential to provide mine schedule flexibility through high grade oxide resources. The lenses are associated with folded ironstone units cut by NE trending structures, creating a 150m wide corridor of deformation and low grade mineralisation where strong rotation of the regional foliation from the NW trend to the SW creates dilation. Down-plunge opportunities exist as does the potential for repeated mineralised lenses to the southwest towards the historic Agbarabo open pit.

An estimation based on old drill holes and new trench results gives an oxide potential of 30koz at 4.5g/t in a conceptual \$1 500/oz pit shell which will be drill tested in 2016.

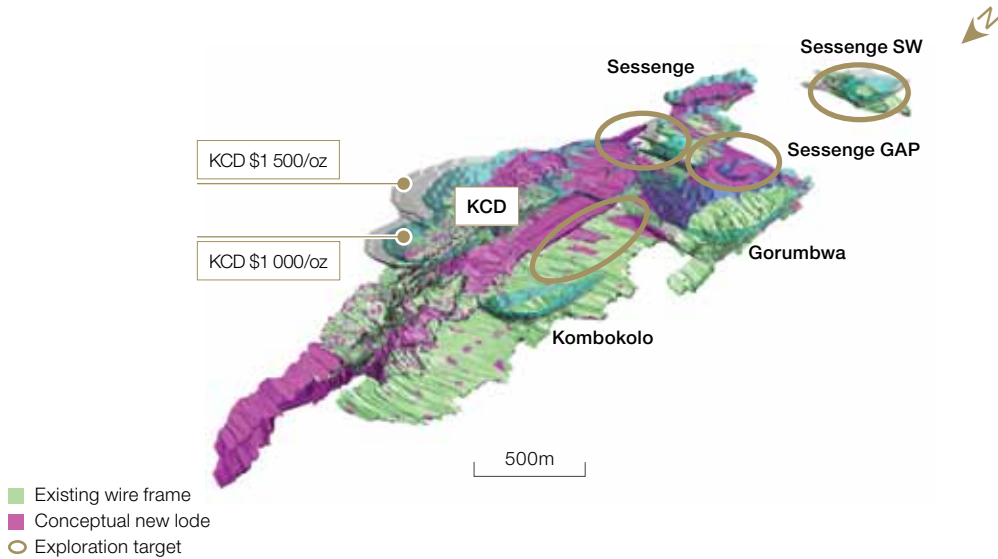
#### Sessenge SW

The Sessenge SW target is located 350m south of the Sessenge pit where folded ironstones with lithosamples to 10.7g/t are located. Historical drill results from the target area include 22m at 1.95g/t and 8m at 1.9g/t. In 2015 results received from trenches excavated across targets returned intersections of 22m @ 4.01g/t including 12m at 6.36g/t (STR0002) and 12m at 1.5g/t, 28m at 3.18g/t and 40.5m @ 3.76g/t on ironstone units in the targets area.

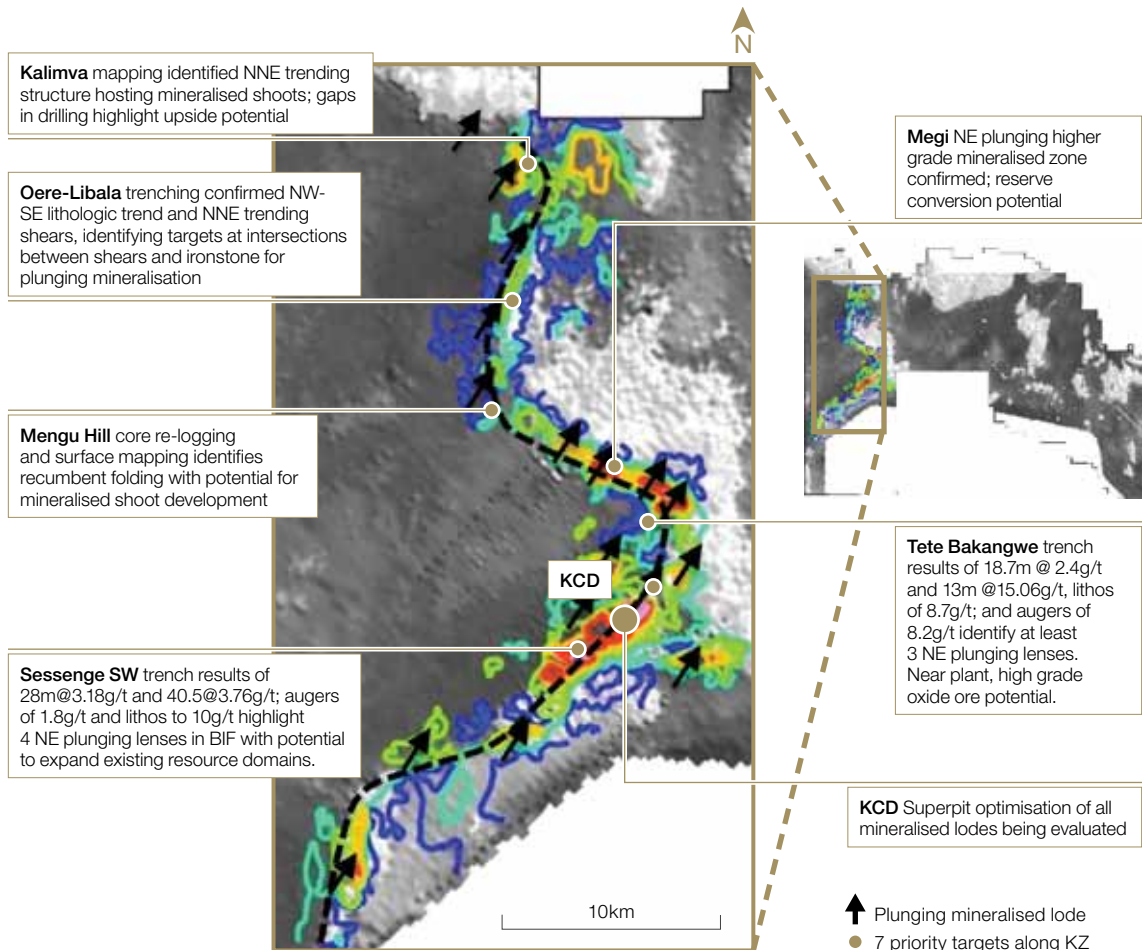
These trench intersections, combined with results from an auger programme and a ground magnetics survey across the target, helped define four areas with the potential to host at least four higher grade mineralised lenses in banded ironstone and metaconglomerate which plunge to the NE. The target area has not been adequately tested by deep drilling, and upside opportunities clearly exist for subsurface continuation of the lenses which may lead to the discovery of new 9000 lode style mineralised systems.



**KCD SUPERPIT - SCOPING CONFIRMS POTENTIAL FOR INCREASED OUNCES AND REDUCED STRIP RATIO**



**KZ TREND - WORK CONTINUES TO HIGHLIGHT POTENTIAL, PROVIDE BROWNFIELDS FLEXIBILITY**



### **Ikamva Kalimva**

Ikamva is considered to be one of the more prospective parts of the KZ Structure with structural similarities to KCD. Eight trenches were excavated during the year to investigate the extent of mineralisation and geological controls in the priority Zone 1 target area. Trenches mostly returned thin intervals of mineralisation associated with ironstones, with one trench (IVTR0003) returning significant mineralisation of 9.1m at 3.24g/t from 72.9m and 11m at 3.87g/t from 88m, 18m at 1.51g/t from 122m and 16m at 1.18g/t from 142m. Drilling beneath this trench failed to confirm the continuity of mineralisation but did highlight the potential at Ikamva, where there are several small Belgian pits. Further work planned on the target includes field mapping to upgrade the interpretation and to identify key controls on high grade mineralisation.

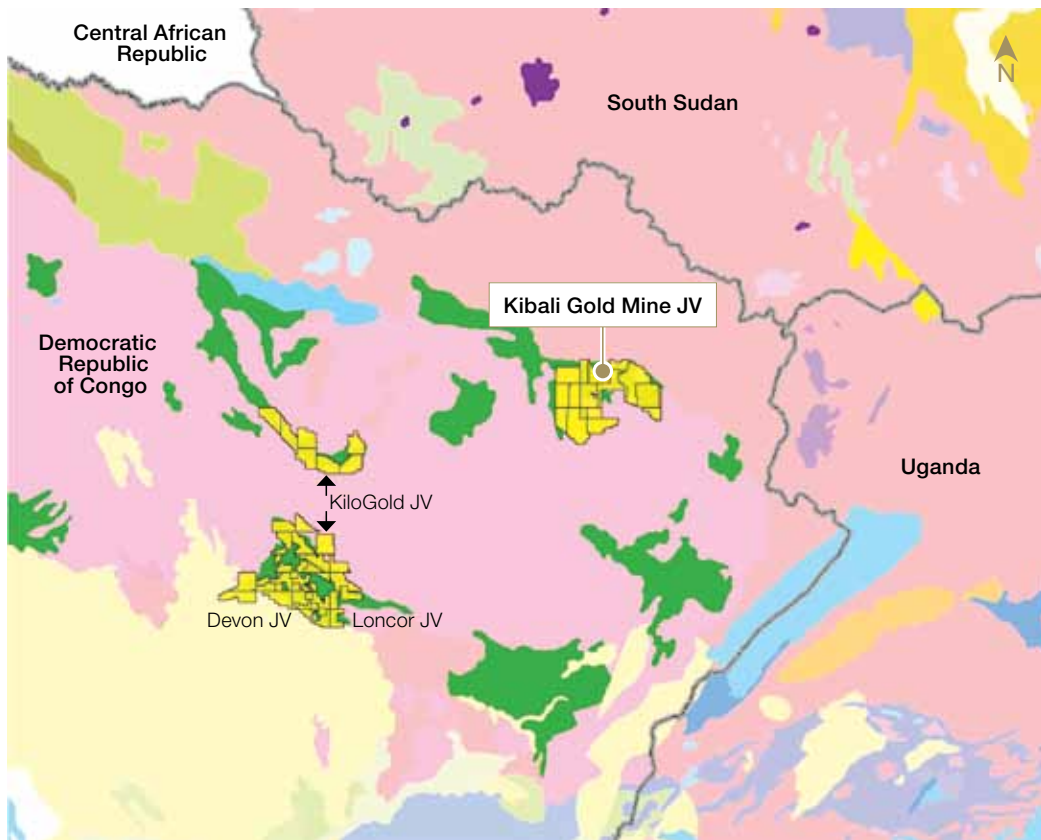
Prospect scale mapping and sampling at Kalimva, an old Belgian mine, confirmed the NNE trending shear corridor hosting rod/augen shaped mineralised alteration zones plunging at 30 degrees to the NNE. The down-plunge extension of mineralisation in the old pits was tested by previous diamond drilling programmes with mixed results but structural and lithological observations in 2015 suggest a vertical system, rather than the east dipping model tested previously, indicating exploration upside to be tested in 2016.

### **REGIONAL**

In the past year, two joint venture agreements were concluded in the DRC: Loncor Resources, and Devon Resources, which both hold permits over the Ngayu Archean greenstone belt, some 200km to the SW of the Kibali project. The Ngayu belt hosts a multitude of exploration opportunities and despite limited historical exploration work hosts resources of nearly 3Moz. The agreements give Randgold exclusive exploration rights over the majority of the Ngayu belt where it already holds 752km<sup>2</sup> under the KGL Isiro joint venture. The new agreements cover a total land area of over 2 200km<sup>2</sup>. Randgold has negotiated the right to earn up to 65% of each of the projects through the satisfactory completion of prefeasibility studies.

The newly signed joint venture agreements bring Randgold's total groundholding in NE DRC to 6 000km<sup>2</sup> (including Kibali) and is a significant expansion to its footprint in an area it believes to be one of the most prospective on the continent. This work paves the way for regional sampling programmes across the area in 2016 designed to collect detailed geochemical and geochronological data which will be used to define the most prospective belts and structures on this part of the craton.

### **EASTERN DRC GROUNDHOLDING<sup>1</sup>**



<sup>1</sup> As at 14 March 2016