



®

BANTOU PROJECT

NI 43-101 TECHNICAL REPORT – MINERAL RESOURCE ESTIMATE

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Effective Date: December 31, 2019

Report Date: April 3, 2020



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Appendix A – *Analytical Quality Data and Relative Precision Charts*

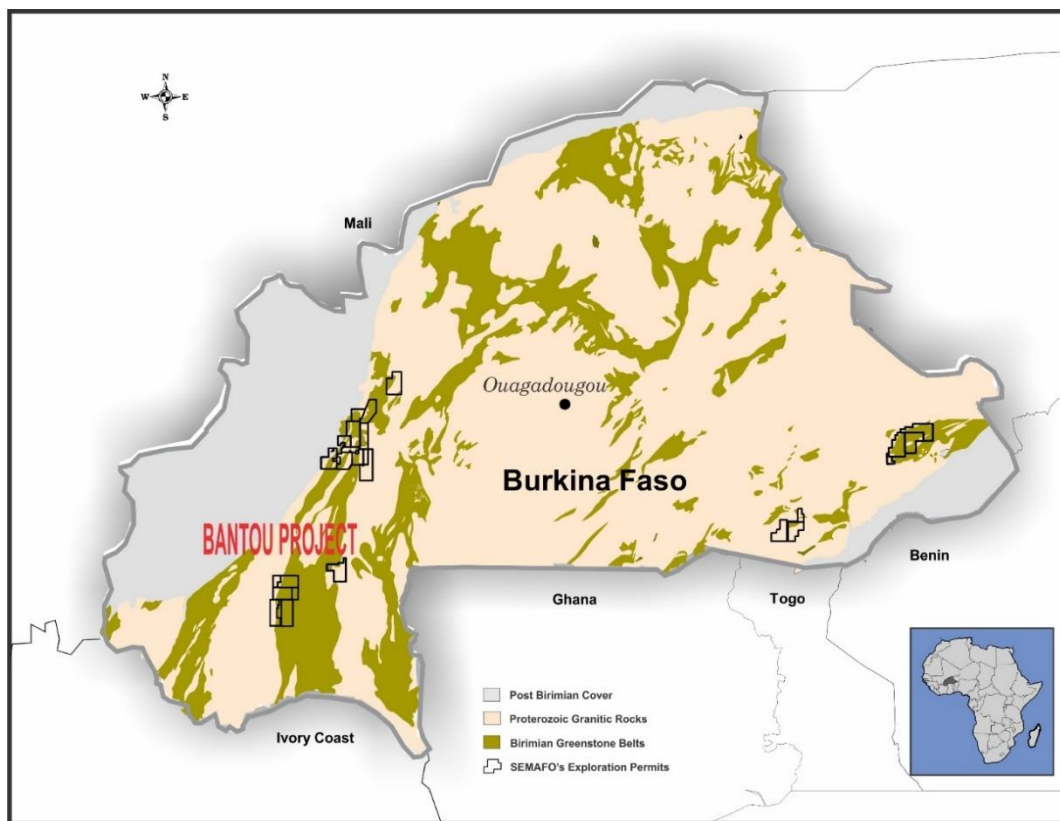
1 SUMMARY

The following Technical Report (herein after “the Report”) is a review and compilation of the exploration and metallurgical work performed by SEMAFO on the Bantou Property (“Property”). At the request of SEMAFO, DRA/Met-Chem has been mandated to prepare a NI 43 101 Report for the Project with the participation of specialized consultants. Met-Chem, a division of DRA Americas Inc. (“DRA/Met-Chem”) has provided engineering and integration services for all aspects of the NI 43-101 Technical Report Mineral Resource Estimate (“MRE”) on the Bantou Project.

1.1 Property Description and Location

The Bantou Project is located in Burkina Faso, West Africa, approximately 260 km south-west of Ouagadougou, the capital of Burkina Faso in Figure 1.1. It is centred on UTM coordinates 406,900 mE and 1,171,300 mN (WGS84, zone 31N).

Figure 1.1 - Location Map



Source: SEMAFO

The Bantou project is composed of 6 contiguous exploration licences covering approximately 934 km² on the Western margin of the Houndé greenstone belt in Figure 1.1 in southwest of Burkina Faso.

1.2 Accessibility, Climate, Local Resources, Infrastructure, and Physiography

Access to Bantou camp is by means of Route Nationale RN01, an all-weather bitumen road from Ouagadougou, the capital of Burkina Faso, through Boromo to the Pâ junction. From there, travel is via RN12 followed by RN20, also all-weather bitumen road through the town of Diebougou, to the Bondigui junction. From Bondigui, travel is made via successions of laterite roads to the property, located some 62 km to the southwest.

The Bantou area is relatively flat and sits at an elevation of approximately 300 m above sea level. Toward the centre of the property are isolated hills and ridges that rise to 513 m above the sea level. The deposits in the Karankasso area are contained in a north-northeast trending valley with elevation ranging between 300m and 350m above sea level.

The climate of Burkina Faso is semi-arid, with a rainy season from May to September, and a hot dry season from February to April. Average temperatures range between 16° centigrade (“°C”) overnight in the cool season to over 40°C during the day in the hot season. Vegetation in the region is a mosaic of cultivated land and tropical acacia savannah.

There is no significant infrastructure near the site. Unskilled local workforce is available readily in the area. Skilled workers, general services and equipment can be obtained in Bobo-Dioulasso or the capital city of Ouagadougou.

1.3 History

Various mapping campaigns were made by the BRGM (Bureau de Recherches Géologique et Minière) and later by the BUMIGEB (Bureau des Mines et de la Géologie du Burkina) between 1939 and 1982.

No modern production of gold has occurred in or near the Bantou area, although few deposits are known for few years already. There is plenty of artisanal activity on the exploration licenses as well as on the neighbouring licenses. The total tonnage and grade of material extracted from artisanal workings in the various deposits remains unknown, a detailed survey of the artisanal extraction is underway to better evaluate the volumes excavated.

1.3.1 BANTOU HISTORY

The Dynikongolo license was first granted December 17, 2008 to Moumouni Sawadogo. An earn-in joint venture agreement between Birimian Resources SARL (formerly owned by Orbis) and the license owner was signed in May 2010. Orbis commenced exploring using rock chip sampling, the excavation of 5 trenches and surface mapping. An extensive drilling program was undertaken in 2013 and included 32 reverse circulation (“RC”) drill holes along with 10 diamond (“DD”) drill holes mostly near the known Bantou artisanal mining site. The results from this program confirmed the significance of the Bantou anomaly. SEMAFO initiated a takeover of Orbis in December 2014 and

Orbis was delisted from the Australian Securities Exchange (“ASX”) on March 16, 2015. No work has been done at Dynikongolo between the completion of the takeover and 2018 except for a small DD campaign carried out in July 2017. The 2017 program aimed at confirming the at depth extension of the Bantou zone as well as carrying out some metallurgical tests on the mineralized zones. Positive metallurgical results lead to the resource definition of the Bantou early 2018.

1.3.2 KARANKASSO HISTORY

The first modern exploration work took place between 1997 and 2001 following the signing of a joint venture agreement between Shield Resources Burkina Faso SARL and Delta Gold Australia. Between 2005 and 2007, Resolute West Africa Ltd and Goldbelt Resources West Africa SARL continued work also on an area now part of the Bio and Niawé licences. The Houndé South project was then acquired in 2010 by Avion Gold Corporation (“Avion”).

Savary Gold Corporation (“Savary”) acquired the Houndé South project in 2012 as part of an option agreement with Endeavour Mining Corporation (“Endeavour”). Endeavour had previously acquired Avion. A first NI 43-101 Technical Report dated July 31, 2012 was completed by P & E Mining Consultants as part of the transaction. During the same year, Sarama started working the Serakoro 1 licence.

The earn-in for the Houndé South Project was completed in May 2014. Later in the year, Savary and Sarama Resources Ltd (“Sarama”) entered in a JV which unified the ownership of the 500 km² Houndé South Project with the 250 km² Serakoro 1 licence previously owned by Sarama. The new 750 km² project was named Karankasso and Savary became the operator.

A second NI 43-101 Technical Report dated October 7, 2015 was produced by P&E Mining Consultants Inc. for Savary as part of the Houndé South joint venture between Savary and Sarama. The 2015 report concluded an historical resource of 671,000 oz with a 2.28 g/t grade for the six (6) mineralized zones on the project; Kien East, Kueredougou Main, Kueredougou West, Kueredougou West Trend, Diosso South and Karangosso. On November 1, 2017, Savary announced an upgrade to its resource at 805,000 oz grading 2.03 g/t Au mainly through the addition of a new zone, known as the Serakoro 1 West.

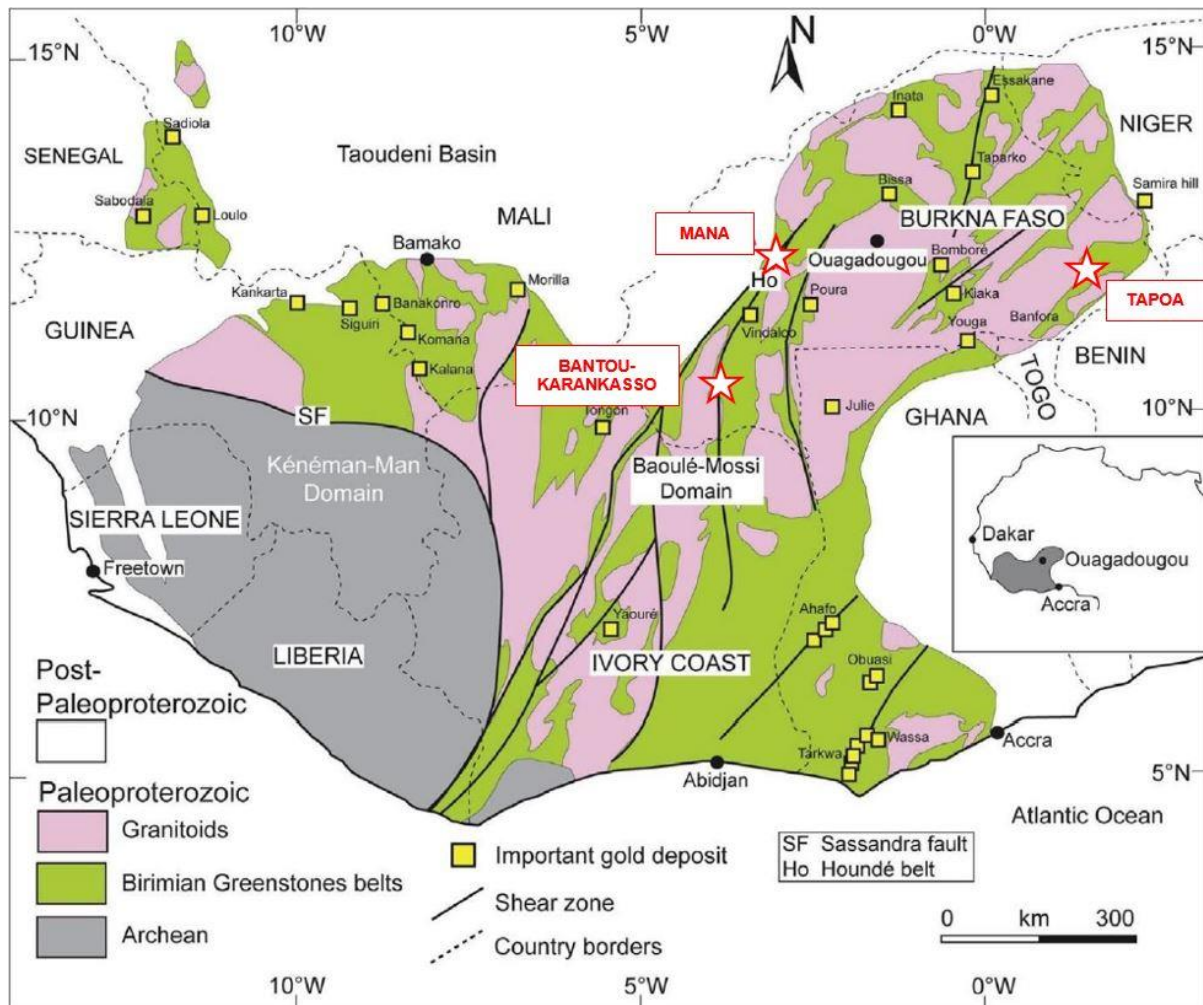
SEMAFO announced its intent to acquire Savary on February 11, 2019 and completed the transaction on April 30 of the same year. As of December 31, 2019, Sarama’s share in the Project was established at 19.91% having been gradually diluted through a formula devised in the original joint venture agreement.

1.4 Geological Setting and Mineralization

Burkina Faso is for the most part underlain by rocks from the Leo-Man Shield (Rise) that forms the southern extent of the West African Craton (WAC). The Leo-Man Shield comprises an Archean cratonic block, the Kénéma–Man domain (3.60–2.70 Ga) centered over Liberia and Sierra Leone

and the accreted Paleoproterozoic Baoulé-Mossi domain (2.30 – 2.00 Ga) extending to the east and northeast (Figure 1.2).

Figure 1.2 - Simplified Geological Map from the Leo-Man Shield



(Modified from Baratoux et al., 2011)

1.4.1 LOCAL GEOLOGY

The Houndé greenstone belt consists of mafic to intermediate volcanic, volcano-sedimentary and sedimentary rock sequences distributed along an approximately NNE axis. This belt extends for over 330 km within Burkina Faso. The Houndé greenstone belt was affected three deformational events.

1.4.2 PROPERTY GEOLOGY

Bantou project is located in the central portion of the Houndé greenstone belt, along the western edge. The property geology is comprised of a north-northeast trending assemblage of mixed calc-

alkaline volcanic and sedimentary rocks having been affected by polyphase deformation and metamorphosed to greenschist facies. The volcano-sedimentary sequence is intruded by a series of felsic to mafic intrusions. Numerous gold zones have been identified within the Bantou property.

1.4.3 MINERALIZATION

The Bantou-Karankasso deposits comprises two distinct geological contexts. The Bantou domain with a strong primary (volcanogenic) input and the Karankasso domain with typical orogenic setup. The description of the gold-bearing zones on the Karankasso district are based on the previous 2015 NI 43-101 report from Savary.

1.5 Exploration Work and Drilling

1.5.1 EXPLORATION

1.5.1.1 Bantou

Regional soil and rock chip sampling programs were commenced by Orbis in 2012 and expanded to permit scale mapping and rock chip sampling during the 2013 and 2014 field seasons. Property mapping and soil sampling was completed by SEMAFO between 2017 and 2019. An extensive drilling program was undertaken in 2013 and included 32 reverse circulation (“RC”) drill holes and 10 diamond (“DD”) drill holes mostly near the known Bantou artisanal mining site. This program was successful in confirming the significance of the Bantou anomaly.

Drilling at Bantou was performed using a combination of RC and diamond drilling. The diamond drill holes completed by Orbis were pre-collared using RC drilling down to approximately 20 m above the interpreted top of mineralisation. Diamond tails (HQ diameter) were used to complete the holes. These are recorded as multi-purpose (MP) holes in the database. The total dataset comprises 163 drill holes, of which 66 were used for the Bantou resource estimate. Of these, 4 were drilled by SEMAFO in 2017 while the remaining holes were drilled by Orbis between 2010 and 2014. Table 1.1 summarizes the drilling information for the Dynikongolo exploration license.

Table 1.1 - Dynikongolo License Drill Hole Details

Drill type	Number of holes	Pre-collar total length (m)	Diamond tails total length (m)	Average total depth (m)	Total length (m)
Diamond	4	-	1,218.0	304.50	1,218.0
Multi-purpose	11	1,077.4	937.5	183.17	2,014.9
RC	148	14,626.0	-	98.82	14,626.0
Total	163	15,703.4	2,155.5	109.56	17,858.9

1.5.1.2 Karankasso

Regional soil and rock chip sampling programs were initially carried-out by Delta Gold between 1997 and 2001, followed by Goldbelt between 2005 and 2007 and Avion from 2010 until 2011. Sarama and Savary continued exploration between 2012 and 2016. The property has been subjected to numerous drilling programs by Avion, Delta Gold, Goldbelt and Sarama prior to its acquisition from Savary in April 2019.

1.5.2 DRILLING

SEMAFO database has been updated with all the Savary drill hole data. The current database is comprised of holes from the Orbis database (2010-2014), the Savary database (1997-2019) and the SEMAFO database (2017-2019). Normalisation to SEMAFO legend was also performed to integrate the various source of information into one single standardized database.

Table 1.2 - Summary of Database Entries by Hole Type

Hole Type	Count	Cumulative Length (m)	Number of Assays	Sum of Assayed Length (m)
DDH	50	10,455	3,884	4,355
RC	467	55,626	47,598	49,004
MP	43	10,770	4,178	4,006
AC/RAB	64	2,638	2,121	2,677
TR	2	151	-	-
Total	626	79,640	57,781	60,042

1.6 Mineral Processing and Metallurgical Testing

Preliminary internal and external metallurgical test work has been performed for Bantou project. Internal metallurgical testing was carried out for the Bantou and North Bantou deposits, while one external (independent) metallurgical test work program on the Karankasso deposit. The tests show promising results with many tests achieving gold recoveries from 80% to 95%. Additional work is recommended to get a better understanding of the performance of individual deposits.

1.7 Mineral Resources Estimate

The Mineral Resources for Bantou were estimated by SEMAFO's resource geologist. The resource estimate has an effective date of December 31, 2019 and supersedes any previous estimates done by the previous property owners.

The resources estimate includes eight (8) different deposits, namely Bantou, Bantou Nord, Kueredougou West, Kueredougou Main, Diosso, Karangosso, Serakoro, Kien, and constitute the basis of the Bantou Project Mineral Resources.

To produce the final resource estimates, all mineralized material is first classified by mineralization type and category from the block models. Resources are that part of the mineral inventory that reflect a “reasonable prospect of economic extraction” of such resources as defined by the CIM Definition Standards for Mineral Resources and Mineral Reserves. This requirement implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade.

In the upper portion of deposits, the conceptual limit of economical extraction is an optimized pit shell with reasonable technical (maximum pit slopes, gold recovery) and economical (gold price, unit mining and processing costs) parameters. Unlike pit design shells for reserves, those for resources include the inferred blocks of the mineral inventory.

The optimized pit shells parameters are listed in Table 14.8 with the following comments:

- Maximum pit slope angle, mining recovery, dilution, royalties and sale costs are based on SEMAFO’s experience in their current operation, as well as DRA/Met-Chem’s experience on similar projects.
- Unit mining and processing costs used are outlined in Table 14.8.
- Unit costs for mining waste include an additional transportation cost to the waste pad. Unit costs for milling ore include general and administration (G&A) costs and a transportation cost to a mill.
- Gold recoveries ranges from 65% to 93%.
- Gold price is USD 1,500/oz.

The estimated Inferred Mineral Resources is comprised of 1) open pit constrained Mineral Resources using cut-off grades ranging from 0.43 to 0.86 grams of gold per tonne; and 2) an underground Mineral Resources at Bantou using a cut-off of 2.0 g/t beneath the open pit surface. Table 1.3 presents the results from the mineral resource estimate.

Table 1.3 – Bantou – Mineral Resource Estimate as of December 31, 2019

Deposits	Tonnage (Mt)	Grade (g/t Au)	Total Gold (x1,000 oz)
Bantou	2.26	5.98	434
Bantou Nord	36.11	0.90	1,101
Diosso	2.77	2.00	175
Karangosso	2.59	1.80	148
Kien	3.02	1.60	151
Kueredougou West	1.32	1.80	75
Serakoro	3.04	1.60	160
Total Inferred Resources	51.11	1.37	2,245

Notes:

- (1) The Mineral Resources in this press release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.
- (2) The Mineral Resources have been estimated using a gold price of USD 1,500/oz.
- (3) Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- (4) The inferred mineral resource in this estimate has a lower level of confidence that applied to an indicated mineral resource and must not be converted to a mineral reserve. The quantity and grade of reported inferred mineral resources are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as indicated or measured mineral resources, and it is uncertain if further exploration will result in upgrading them to these categories.
- (5) The Bantou Property Mineral Resources Estimate was prepared by François Thibert M.Sc. geo., Directeur, Groupe Estimation Ressources et Réserves, Afrique de l'Ouest and SEMAFO's QP.
- (6) The Kueredougou Main deposit was excluded from the Mineral Resources Estimate because of extensive artisanal mining currently on-going.

1.8 Interpretation and Conclusions

The Bantou permit group is located on the prolific Birimian Gold Province that hosts several world-class gold deposits distributed throughout West Africa, notably in Ghana, Mali, Burkina Faso, Ivory Coast and Senegal.

This resource estimate is effective as of December 31st, 2019 and is based on a database with 626 drill holes with 79,640 samples. Based on open pit cut-off grades ranging from 0.43 to 0.86 g/t of gold, and an underground cut-off grade of 2 g/t for Bantou, the Bantou Project properties are estimated to contain an Inferred Resource of 51,110,000 tonnes at grade of 1.37 g/t Au for a total of 2,245,000 contained ounces of gold.

1.9 Recommendations

1.9.1 MINING AND GEOLOGY

It is recommended to increase the level of knowledge of the mineral resources of the Bantou Project with the implementation of a new drilling campaign. This campaign should aim at bringing the resource category to the Measured and Indicated level as much as possible, and also to increase the resource base at depth and along strike at some selected targets.

The Bantou deposit shows a significant amount of mineralized material below the Resource Pit Shell, so a drilling campaign aiming at testing the deep extensions should be undertaken.

A geotechnical drilling program will have to be carried out, with the following objectives:

- Final pit slope angle assessment;
- Recommendation for stope dimensions for the UG targets.

1.9.2 PROCESS

Additional metallurgical test work is recommended to be used for a Preliminary Economic Assessment (PEA). This work should be conducted on point samples from each deposit and should include chemical and physical characterization, gravity concentration tests, bottle roll tests, and carbon loading tests.

Once the selected flowsheet is confirmed with testing, it is recommended that domain composites and point variability samples be prepared and tested with the selected flowsheet at the Prefeasibility Study (PFS) stage.

1.9.3 ENVIRONMENT

It is recommended to perform the following work in connection with environmental activities:

- Extend soil and surface water surveys to select the best location for the tailing ponds, waste rock and overburden piles;
- Carry out a hydrogeological study to collect field data in order to estimate from groundwater flow modeling dewatering rates and impacts;
- Start the environmental studies required to support permitting requirement and to optimize the site layout;
- Identify environmental requirement for site closure and estimate the cost.

2 INTRODUCTION

The following Technical Report (herein after “the Report”) is a review and compilation of the exploration and metallurgical work performed by SEMAFO on the Bantou Property (“Property”).

Met-Chem, a division of DRA Americas Inc. (“DRA/Met-Chem”) has provided engineering and integration services for all aspects of the NI 43-101 Technical Report Mineral Resource Estimate (“MRE”) on the Bantou Project (“Project”) with the participation of SEMAFO in Sections 4 to 12, Section 14, and 23 of the Report.

2.1 Qualified Persons

At the request of SEMAFO, DRA/Met-Chem has been mandated to prepare a NI 43-101 Report for the Project with the participation of specialized consultants. Table 2.1 provides a detailed list of qualified persons as defined in Section 1.5 of NI 43-101 and their respective sections of responsibility.

Table 2.1 – Qualified Persons and their Respective Sections of Responsibilities

Section	Title of Section	Qualified Persons
1	Summary	Patrick Pérez and related QPs
2	Introduction	Patrick Pérez
3	Reliance on Other Experts	Patrick Pérez
4	Property Description and Location	Richard Roy
5	Accessibility, Climate, Local Resources, Infrastructure and Physiography	Richard Roy
6	History	Richard Roy
7	Geological Setting and Mineralization	Richard Roy
8	Deposit Types	Richard Roy
9	Exploration	Richard Roy
10	Drilling	Richard Roy
11	Sample Preparation, Analysis and Security	Francois Thibert
12	Data Verification	Richard Roy and Claude Bisailon
13	Mineral Processing and Metallurgical Testing	Jordan Zampini
14	Mineral Resources Estimates	Francois Thibert and Claude Bisailon
15	Mineral Reserve Estimates	N/A
16	Mining Methods	N/A
17	Recovery Methods	N/A
18	Project Infrastructure	N/A
19	Market Studies and Contracts	N/A

Section	Title of Section	Qualified Persons
20	Environmental Studies, Permitting and Social or Community Impact	N/A
21	Capital and Operating Costs	N/A
22	Economic Analysis	N/A
23	Adjacent Properties	Richard Roy
24	Other Relevant Data and Information	Patrick Pérez
25	Interpretation and Conclusions	Patrick Pérez and related QPs
26	Recommendations	Patrick Pérez and related QPs
27	References	Patrick Pérez and related QPs

2.2 Effective Date and Declaration

This Report is considered effective as of December 31st, 2019 and is in support of SEMAFO's press release, dated February 24th, 2020, entitled “Bantou Project Inferred Resource Increases to 2.2M oz.”

This Report provides an independent Technical Report for the estimate to complete for the Bantou Project, in conformance with the standards required by NI 43-101 and Form 43-101F1.

It should be understood that the Mineral Reserves presented in this Report are estimates of the size and grade of the deposits based on a number of drill holes and samplings and on assumptions and parameters currently available. The level of confidence in the estimates depends upon a number of uncertainties which include, but are not limited to, future changes in product prices and/or production costs, differences in size and grade and recovery rates from those expected, and changes in Project parameters.

2.3 Site Visit

This Section provides details of the personal inspection on the Property by some of the Qualified Persons.

Richard Roy, P. Geo., visited the Bantou Project site several times, the last visit being between the 16th of April 2019 and the 20th of April 2019. During his visits, he has completed a personal inspection of several sectors of the Property, as well as a few outcrops and several old drill sites. Selected drill cores were examined, the database, core logging and sampling activities, QA/QC procedures and geological interpretation were reviewed.

2.4 Units and Currency

In this Report, all currency amounts are Canadian Dollars (“**CAD**” or “**\$**”) unless otherwise stated, with commodity prices typically expressed in US Dollars (“**USD**”). Quantities are generally stated in *Système international d’unités* (“**SI**”) metrics units, the standard Canadian and international practices, including metric tonne (“**tonne**”, “**t**”) for weight, and kilometre (“**km**”) or metre (“**m**”) for distances. Abbreviations used in this Report are listed in Section 28.

3 RELIANCE ON OTHER EXPERTS

The Qualified Persons (QPs) prepared this Report using reports and documents as noted in Section 27. The Authors wish to make clear that they are qualified persons only in respect to the areas in this Report identified in their “Certificates of Qualified Persons”, submitted with this Report to the Canadian Securities Administrators.

A draft copy of the Report has been reviewed for factual errors by SEMAFO. Any changes made as a result of these reviews did not involve any alteration to the conclusions made. Hence, the statement and opinions expressed in this Report are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of this Report.

The QPs who prepared this Report relied on information provided by experts who are not QPs. The QPs who authored the sections in this Report believe that it is reasonable to rely on these experts, based on the assumption that the experts have the necessary education, professional designations, and / or relevant experience on matters relevant to the Technical Report.

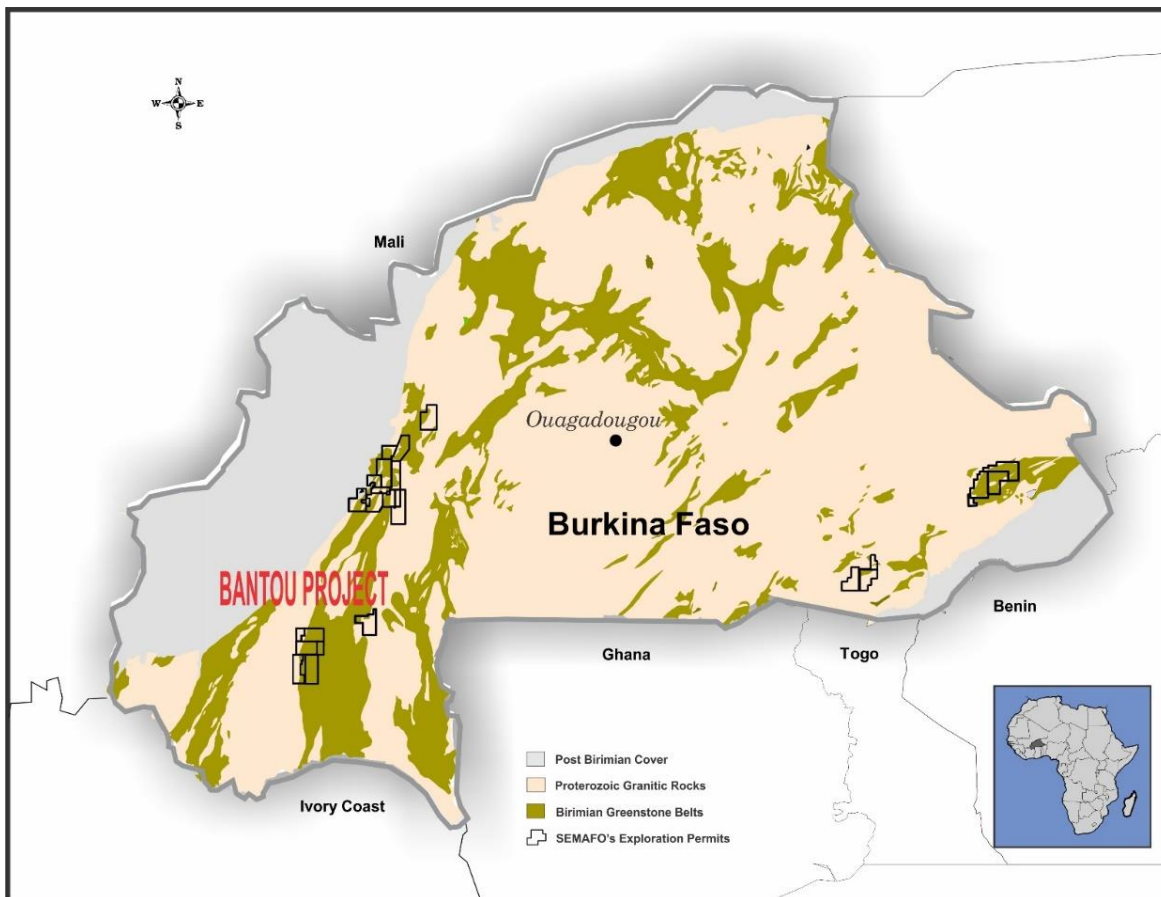
The QPs used their experience to determine if the information from previous reports was suitable for inclusion in this Technical Report and adjusted information that required amending. This Report includes technical information, which required subsequent calculations to derive subtotals, totals and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, the QPs do not consider them to be material.

The Reader is referred to these data sources, which are outlined in the “References”, Section 27 of this Report, for further details.

4 PROPERTY DESCRIPTION AND LOCATION

The Bantou Project is located in Burkina Faso, West Africa, approximately 260km south-west of Ouagadougou, the capital of Burkina Faso in Figure 4.1. It is centred on UTM coordinates 406,900 mE and 1,171,300 mN (WGS84, zone 31N).

Figure 4.1 - Location Map



Source: SEMAFO

4.1 Type of Mineral Tenure

The Mining Act of Burkina Faso (number 031-2003/AN of 8 May 2003) provides the legal framework for exploration and mining activities within Burkina Faso. Exploration Permits up to 250 km² are granted for an initial period of three years and may be renewed twice for periods of three years. At the second renewal, the permit area must be reduced by 25%, although an exemption from this requirement can be applied for at the time of the second renewal. Exploration activities are required to be reported annually to the Director General of Mines and Geology, along with the provisional program of work and budget expenses for the subsequent year.

Exploitation (Mining) Permits, which are required for mining to commence, are granted for a term of 20 years (with unlimited five-year renewals) and the government retains the right to a 10% free carried interest (via a 10% equity interest in the local holding company). The application for an Exploitation Permit requires an Environmental and Social Impact Assessment (“ESIA”) and an environmental monitoring and management plan. The current Mining Act includes a sliding scale royalty to the government which is dependent on the gold price (3% to USD 1,000, 4% to USD 1,300 and 5% >USD 1,300).

4.2 Property Description

The Bantou Project is composed of six (6) contiguous exploration licences covering approximately 934 km² on the Western margin of the Houndé greenstone belt in Figure 4.1 in southwest of Burkina Faso.

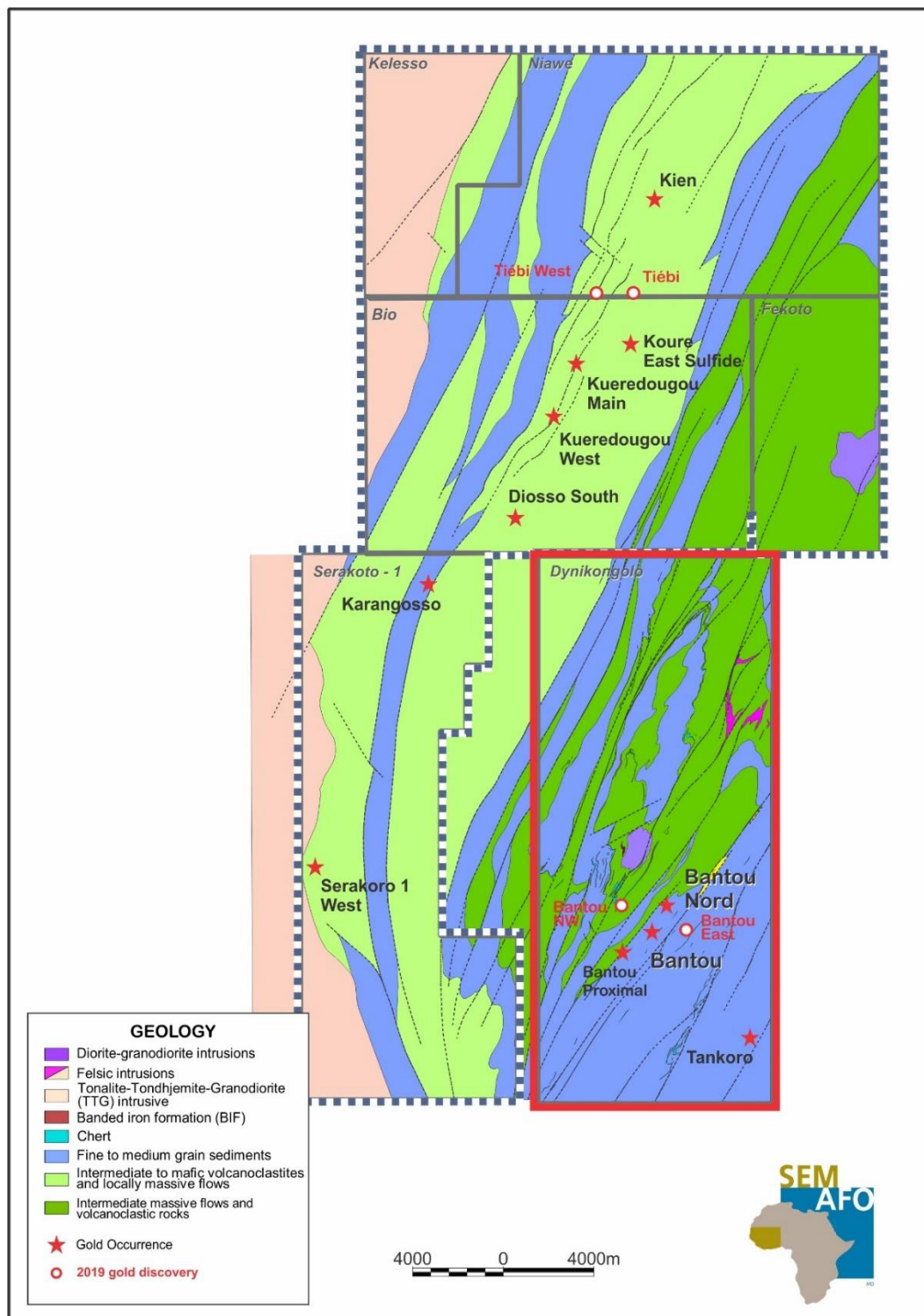
Table 4.1 shows details for Exploration licences details regarding the Bantou – Karankasso Permit Group.

Table 4.1 - Bantou Project - Exploration Permits

Permit Name	Ownership (2019/12/31)	Grant Date (Decree no.)	First Renewal Date (Decree no.)	Second renewal date (Decree no.)	Exceptiona l renewal date (Decree no.)	Final Permit Expiry Date	Net Profit Interest	Area (km ²)
Dynikongolo	100% SEMAFO	2008/12/17 (2008/243)	2012/11/07 (2012/256)	2015/08/03 (2015/228)	2018/09/05 (2018/188)	2020/12/16	1%	250
Bio	80.09% SEMAFO, 19.91% Sarama	2018/06/26 (2018/101)	-	-	-	2027/06/25		188.7
Niawé	80.09% SEMAFO, 19.91% Sarama	2018/06/26 (2018/100)	-	-	-	2027/06/25		185
Kelesso	80.09% SEMAFO, 19.91% Sarama	2015/07/03 (2015/191)	2018/07/03 (2019/108)	-	-	2024/07/03		60.586
Fakoto	80.09% SEMAFO, 19.91% Sarama	2015/07/03 (2015/190)	2018/07/03 (2019/109)	-	-	2024/07/03		62.125
Serakoro 1	80.09% SEMAFO, 19.91% Sarama	2010/11/29 (2010/184)	2013/11/29 (2014/005)	2016/11/29 (2017/051)	*	2019/11/28		187.49

* application for exceptional renewal is in process, decree pending.

Figure 4.1 - Map of the Bantou Project showing the Bantou Property and Karankasso Option



The Dynikongolo permit was acquired by Met CI from Moumouni Sawadogo on May 1st, 2010. The agreement included cash payments and a 1% NPI remaining interest following the permit transfer. The permit was transferred to Birimian Resources Burkina Faso SARL on April 30th, 2013, a company 100% owned by SEMAFO Inc. through the acquisition of Orbis Gold.

The Karankasso Project consists of the Bio, Niawé, Kelesso, Fakoto and Serakoro 1 exploration permits and was formed with the signing of a joint venture agreement between Savary and Sarama Resources Ltd. (“Sarama”) on March 10, 2014. The ownership was established at 65% for Savary and 35% for Sarama with the former acting as operator. The original Dioso and Mandiasso licenses were allowed to lapse in 2017 as both had reached exceptional renewal term. The area was reapplied for under permit names Bio and Niawé and both licenses were granted on June 26, 2018.

The Karankasso Project was acquired through the amalgamation of Savary Gold Corp and a subsidiary of SEMAFO Inc. to become a wholly owned subsidiary of SEMAFO in an all-share transaction completed on May 2, 2019. As of December 31, 2019, Sarama’s share in the project was established at 19.91% having been gradually diluted through a formula devised in the original joint venture agreement.

The UTM coordinates for the outline of each exploration licence making up Bantou Project are detailed in Table 4.2 to Table 4.7.

Table 4.2 - Dynikongolo Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	401,947	1,184,892
B	412,294	1,184,892
C	412,294	1,160,730
D	401,947	1,160,730

Table 4.3 - Bio Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	394,380	1,196,216
B	411,536	1,196,216
C	411,536	1,185,216
D	394,380	1,185,216

Table 4.4 - Kelesso Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	394,380	1,207,000
B	401,263	1,207,000
C	401,263	1,201,125
D	398,515	1,201,125
E	398,515	1,196,216
F	394,380	1,196,216

Table 4.5 - Niawé Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	401,263	1,207,000
B	413,864	1,207,000
C	413,864	1,206,964
D	417,180	1,206,964
E	417,180	1,196,216
F	398,515	1,196,216
G	398,515	1,201,125
H	401,263	1,201,125

Table 4.6 -Fakoto Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	411,536	1,196,216
B	417,201	1,196,216
C	417,201	1,184,900
D	411,536	1,184,900

Table 4.7 - Serakoro 1 Permit Boundary (UTM – Clarke 1880 Datum: Adindan, Zone 30N)

Point	Easting (mE)	Northing (mN)
A	391,600	1,184,892
B	399,975	1,184,892
C	399,975	1,179,941
D	398,876	1,179,941

Point	Easting (mE)	Northing (mN)
E	398,876	1,177,026
F	397,749	1,177,026
G	397,749	1,167,956
H	401,156	1,167,956
I	401,156	1,160,730
J	391,600	1,160,730

There are no known environmental liabilities associated with the Project. The area where the permits are located is not part of the most unsafe area of Burkina Faso, however; the company has put in place the same safety measures as on all its exploration camps to ensure that workers are adequately protected, and that exploration activities can be carried out safely.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

5.1 Access and Physiography

Access to Bantou camp is by means of Route Nationale RN01, an all-weather bitumen road from Ouagadougou, the capital of Burkina Faso, through Boromo to the Pâ junction. From there, travel is via RN12 followed by RN20, also all-weather bitumen road through the town of Diebougou, to the Bondigui junction. From Bondigui, travel is made via successions of laterite roads to the property, located some 62km to the southwest.

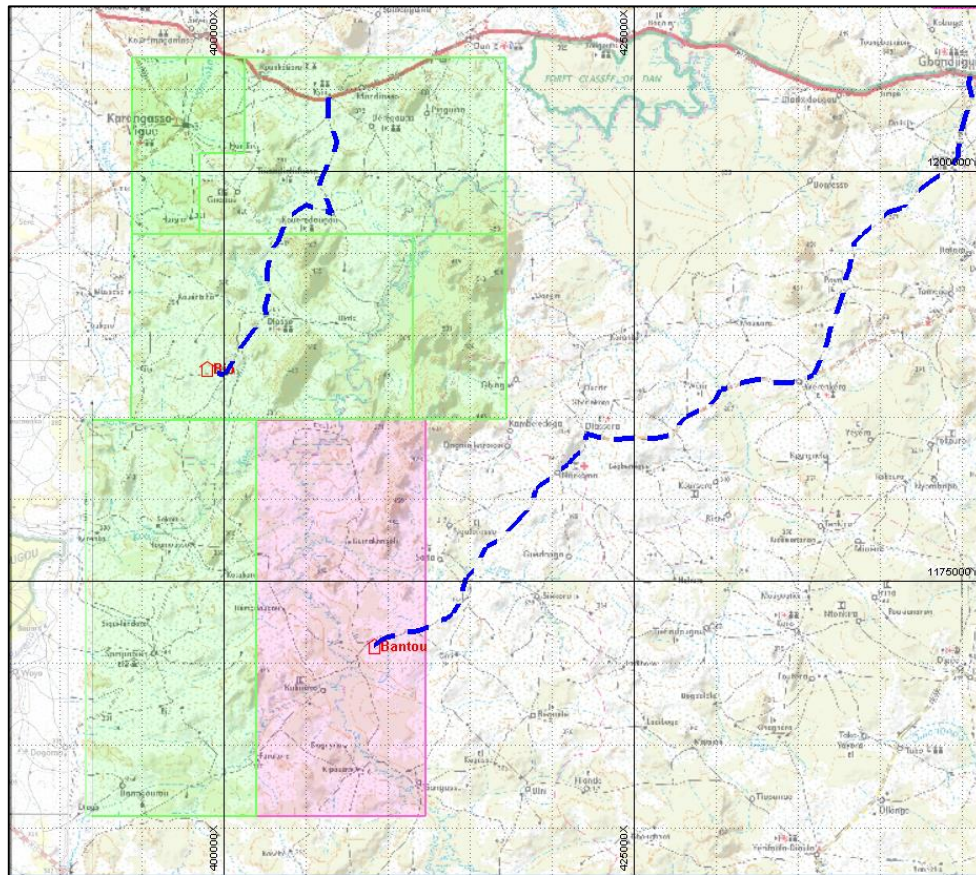
Access to Bio camp is by means Route Nationale RN01, an all-weather bitumen road from Ouagadougou, the capital of Burkina Faso, through Boromo to the Pâ junction. From there, travel is via RN12 followed by RN20, also all-weather bitumen road through the town of Diebougou, to the Kyin junction. From Kien, travel is made via successions of laterite roads to the property, located some 22 km to the southwest.

Diebougou is the nearest town with basic hospital, hotel and limited resupply facilities. Any significant supplies must be sourced from Ouagadougou or Bobo-Dioulasso.

The Bantou area is relatively flat and sits at an elevation of approximately 300 m above sea level. The Bantou and Bantou Nord deposits are located directly east of a topographic low formed by a riverbed, that sits at an elevation of approximately 280 m above sea level, while Bantou West Proximal lies directly west of that same riverbed. Toward the centre of the property are isolated hills and ridges that rise to 513 m above the sea level. The deposits in the Karankasso area are contained in a north-northeast trending valley with elevation ranging between 300 m and 350 m above sea level.

Numerous tracks allow for access to most places throughout the Bantou area, as it is shown in Figure 5.1. During the wet season (June to October), heavy rain may temporarily restrict vehicle movement in the area, including the access road to the site.

Figure 5.1 - Bantou – Karankasso Access Routes

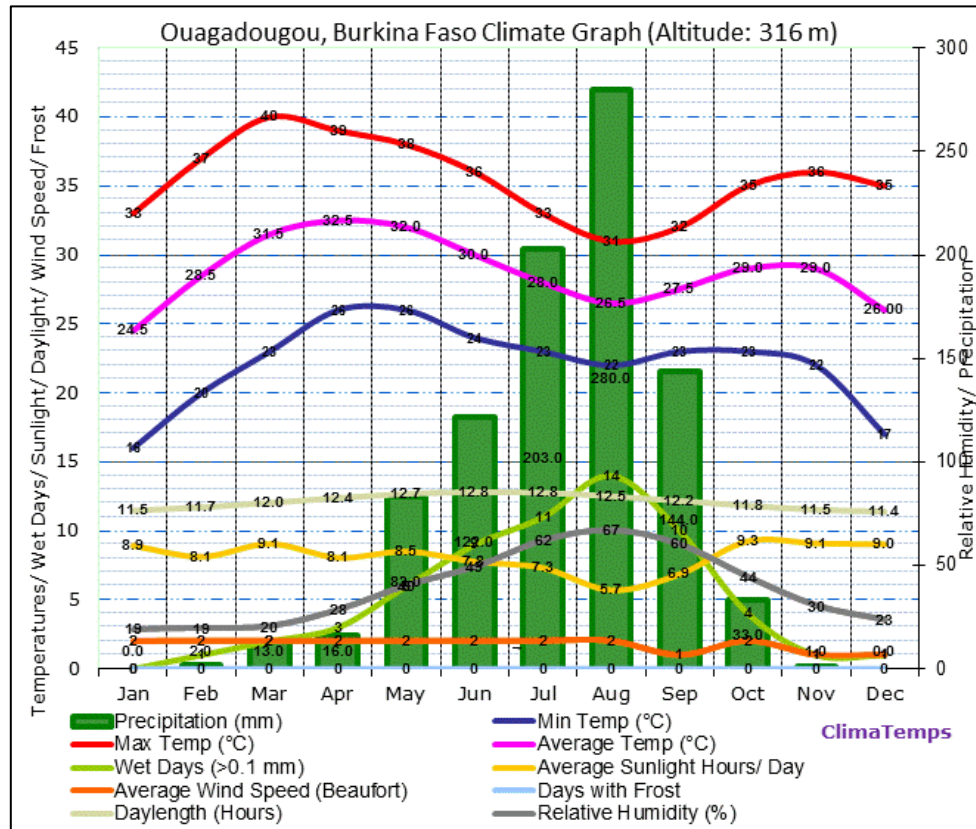


Source: SEMAFO

5.2 Climate

The climate of Burkina Faso is semi-arid, with a rainy season from May to September, and a hot dry season from February to April. Average temperatures range between 16° centigrade (“°C”) overnight in the cool season to over 40°C during the day in the hot season. Average annual rainfall is approximately 900 mm, although large inter-year variability is common (Figure 5.2). Between December and April, the climate is heavily influenced by the dry, dust-laden northwest trade wind known as Harmattan, which blows down from the Sahara Desert.

Figure 5.2 - Climate Information for Ouagadougou



Monthly rainfall historic data has been obtained from the Climate Data Organization website (<https://fr.climate-data.org/afrique/burkina-faso/hautes-bassins/bobo-dioulasso-3162/>) for the Bobo Dioulasso weather station located approximately 80 km northwest from Bantou. The average monthly rainfall data from this station is given in Table 5.1. August is on average the wettest month of the year with an average rainfall of 281 mm, while January is the driest months with average rainfall close of 1 mm.

Table 5.1 - Average monthly rainfall for Bobo-Dioulasso

Month	Average Monthly Rainfall (mm)
January	1
February	4
March	20
April	43
May	105
June	136

Month	Average Monthly Rainfall (mm)
July	202
August	281
September	186
October	60
November	10
December	3
Annual Total	1,051

Vegetation in the region is a mosaic of cultivated land and tropical acacia savannah.

Photos overlooking the Bantou artisanal mining area, taken during the February 2018 site visit, are presented in Figures 5.3 and 5.4.

Figure 5.3 - Photo of the Bantou Deposit Area



Source: R. Roy (photo taken February 2018, looking Southwest)

Figure 5.4 - Photo of the Bantou Nord Area



Source: D. Lalonde (photo taken February 2018, looking Southeast)

5.3 Infrastructure

There is no significant infrastructure near the site. Diebougou is the nearest town with basic hospital, hotel and limited resupply facilities. Any significant supplies must be sourced from Ouagadougou or Bobo-Dioulasso.

5.4 Local Resources

Unskilled local workforce is available readily in the area. Skilled workers, general services and equipment can be obtained in Bobo-Dioulasso or the capital city of Ouagadougou. All the mining-related equipment, including machinery, tools and supplies must be imported and delays are to be expected.

6 HISTORY

Various mapping campaigns were made by the BRGM (Bureau de Recherches Géologiques et Minière) and later by the BUMIGEB (Bureau des Mines et de la Géologie du Burkina) between 1939 and 1982.

No modern production of gold has occurred in or near the Bantou area, although few deposits are known for few years already like the MM zone and Bondigui (Sarama), Bantou (SEMAFO), Karangosso (SEMAFO). There is plenty of artisanal activity on the exploration licenses as well as on the neighbouring licenses. Extraction of gold by the local community from artisanal workings has occurred for an unknown period of time, with free gold being recovered by gravity methods in gold pans or through simple sluicing methods. The vertical extent of the workings is unknown however, they are known to reach a maximum depth of 30 m due to the high-water table level that prevents the artisanal miners to go deeper. One notable exception is the Kérédougou artisanal pit that is estimated to reach below 100 m. The total tonnage and grade of material extracted from artisanal workings in the various deposits remains unknown, a detailed survey of the artisanal extraction is underway to better evaluate the volumes excavated.

6.1 Bantou History

The Dynikongolo license was first granted December 17, 2008 to Moumouni Sawadogo. An earn-in joint venture agreement between Birimian Resources SARL (formerly owned by Orbis) and the license owner was signed in May 2010. No significant exploration is known to have occurred on the Dynikongolo permit prior to 2010. Orbis commenced exploring using rock chip sampling, the excavation of 5 trenches and surface mapping. Airborne geophysics (magnetic and radiometric) was also conducted in 2010, followed by ground IP surveys on selected targets between November 2012 and April 2014. An extensive soil and rock chip sampling program was initiated in 2012 on a grid spacing of 800 m by 100 m and closing-in on anomalous areas using a tighter 200 m by 50 m sampling mesh. The soil geochemical coverage of the property was completed in 2013.

An extensive drilling program was undertaken in 2013 and included 32 reverse circulation (“RC”) drill holes along with 10 diamond drill (“DD”) holes mostly near the known Bantou artisanal mining site. The results from this program confirmed the significance of the Bantou anomaly. Few additional drill holes were completed at Bantou in 2014 focusing on regional exploration over the license area.

SEMAFO initiated a takeover of Orbis in December 2014 and Orbis was delisted from the Australian Securities Exchange (“ASX”) on March 16, 2015. No work has been done at Dynikongolo until 2018 except for a small DD campaign carried out in July 2017. The 2017 program aimed at confirming the at depth extension of the Bantou zone as well as carrying out some metallurgical tests on the mineralized zones. Positive metallurgical results lead to the resource definition of the Bantou deposit early 2018.

Later exploration (2018 and 2019) campaign will be described in Sections 9 and 10.

6.2 Karankasso History

The first modern exploration work took place between 1997 and 2001 following the signing of a joint venture agreement between Shield Resources Burkina Faso SARL and Delta Gold Australia. The exploration was conducted in the area now covered by the Bio and Niawé licenses and consisted in 3,410 surface soil samples; 231 rotary air blast (“RAB”) and air core (“AC”) drill hole for a total of 6,355 m; and 51 RC holes totalling 3,666 m.

Between 2005 and 2007, Resolute West Africa Ltd and Goldbelt Resources West Africa SARL continued work also on an area now part of the Bio and Niawé licences by drilling 86 RC holes for 7,939 m.

The Houndé South project was then acquired in 2010 by Avion Gold Corporation (“Avion”). UTS Aeroquest Geophysics conducted an airborne geophysical survey which included detailed magnetic, radiometric and digital terrain. Following this survey, SAGAX Afrique (“SAGAX”) was contracted to conduct an induced polarization survey on selected targets along the main NNE trending interpreted shear zone. Between 2011 and 2012, Avion explored the area now covered by the Bio and Niawé licences through 9,320 soil samples and 12 DD for a total of 2,126 m.

Savary Gold Corporation (“Savary”) acquired the Houndé South project in 2012 as part of an option agreement with Endeavour Mining Corporation (“Endeavour”)” Endeavour had previously acquired Avion. A first NI 43-101 Technical Report dated July 31, 2012 was completed by P&E Mining Consultants as part of the transaction.

Savary collected 1,831 soil samples in 2012 and mandated SAGAX to conduct a 3 by 9 km IP gradient geophysical survey. During the same year, Sarama started working the Serakoro 1 licence and collected approximately 6,300 soil samples and conducted an IP survey over a 1.1 by 1.4 km grid (Serakoro 1 West Zone) through SAGAX.

In 2013, Savary drilled 35 RC holes for a total of 3,470 m, collected 279 soil samples and 10 grab samples while Sarama drilled 21 RC holes for 2,108 m and 250 AC hole for 8,399 m on the Serakoro 1 licence.

The earn-in for the Houndé South Project was completed in May 2014. Later in the year, Savary and Sarama Resources Ltd (“Sarama”) entered in a JV which unified the ownership of the 500 km² Houndé South Project with the 250 km² Serakoro 1 licence previously owned by Sarama. The new 750 km² project was named Karankasso and Savary became the operator. During that year, Savary drilled 32 RC holes for 3,394 m and 13 DD for 2,615 m on what are now the Bio and Niawé licences. A 3.0 by 1.3 km IP grid on the Karangosso zone was surveyed by SAGAX. Further, 398 soil samples and 128 grab samples were collected on the Serakoro 1 licence.

2015 exploration commenced with an airborne geophysical survey (magnetic and radiometric) over the Serakoro 1 licence in February followed by approximately 103 km of gradient IP and 115 RC

holes for 14,515 m, mostly aimed defining a maiden resource on the project. A second NI 43-101 Technical Report dated October 7, 2015 was produced by P&E Mining Consultants Inc. for Savary as part of the Houndé South joint venture between Savary and Sarama. The report concluded to an historical resource of 671,000 oz with a 2.28 g/t grade for the six (6) mineralized zones on the project; Kien East, Kueredougou Main, Kueredougou West, Kueredougou West Trend, Diosso South and Karangosso.

From May 2016 to July 2017, Savary completed 183 RC and 14 DD holes for a total of 23,170 m, drilled mostly to extend the known zones laterally and at depth. On November 1, 2017, Savary announced an upgrade to its resource at 805,000 oz grading 2.03 g/t Au mainly through the addition of a new zone, known as the Serakoro 1 West.

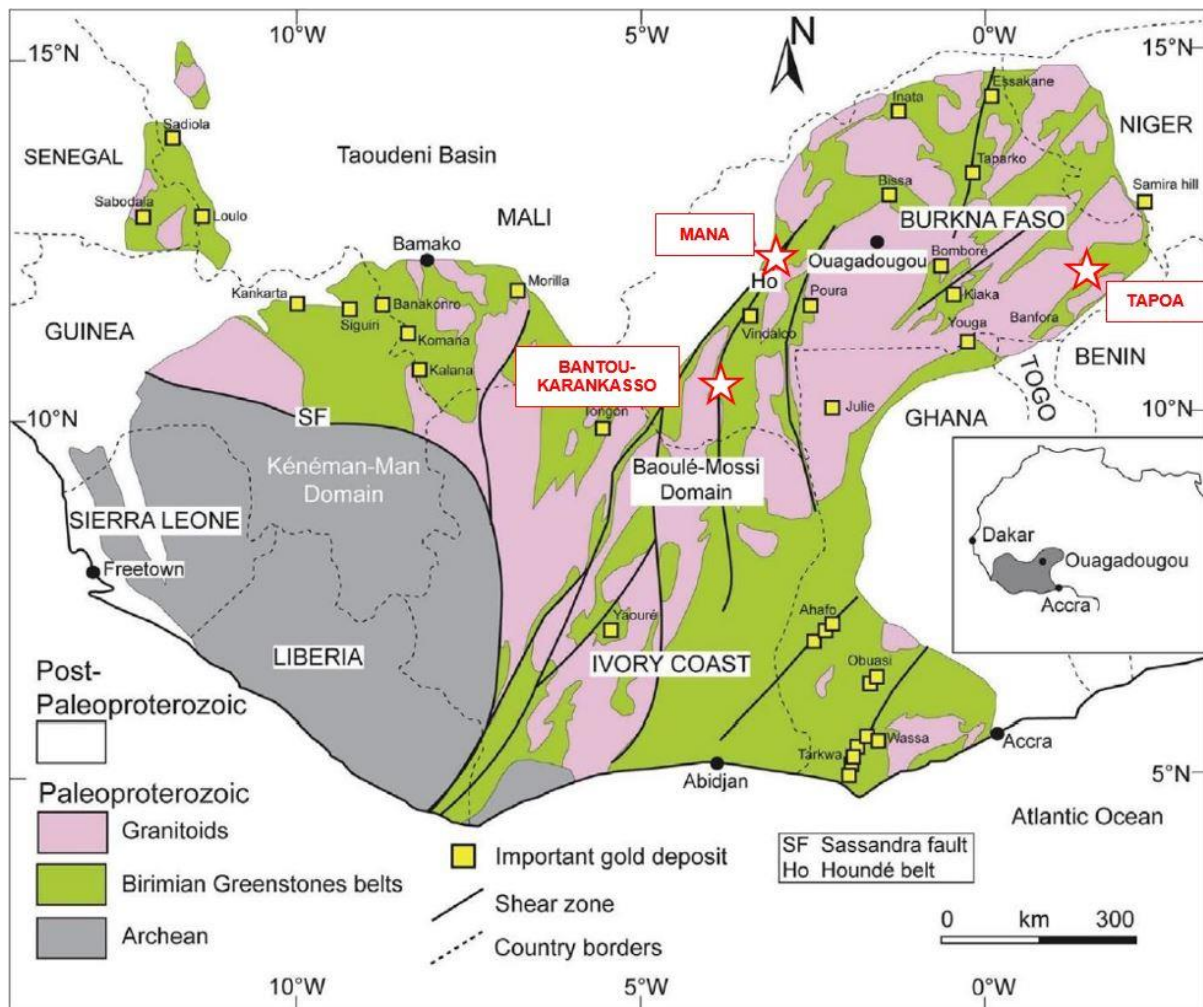
In 2018, Savary drilled further 64 RC holes for 7,150 m, 14 DD holes totalling 1,772 m and 109 AC holes for 8,576 m.

SEMAFO announced its intent to acquire Savary on February 11, 2019 and completed the transaction on April 30 of the same year. During the 2019 campaign, prior to the acquisition, Savary completed one last round of 33 RC holes for 3,839 m as well as 109 AC holes totalling 5,616 m.

7 GEOLOGICAL SETTING AND MINERALIZATION

Burkina Faso is for the most part underlain by rocks from the Leo-Man Shield (Rise) that forms the southern extent of the West African Craton (WAC). The Leo-Man Shield comprises an Archean cratonic block, the Kénéma–Man domain (3.60–2.70 Ga) centered over Liberia and Sierra Leone and the accreted Paleoproterozoic Baoulé-Mossi domain (2.30 – 2.00 Ga) extending to the east and northeast (Figure 7.1).

Figure 7.1 - Simplified Geological Map from the Leo-Man Shield



(Modified from Baratoux et al., 2011)

The geology of Burkina Faso consists of Paleoproterozoic rocks from the Baoulé-Mossi Domain (Baratoux et al., 2011; Gasquet et al., 2003) with, from base, Birimian greenstone belts consisting of mafic volcanics and their sedimentary derivatives (Junner, 1940; Bessoles, 1977), granite-gneiss terrains, unconformably overlain by fluvio-deltaic Tarkwaian Sequence. Neoproterozoic sediments, the Volta Sedimentary Basin extending towards the southeast and the Taoudeni Basin along the

north and northwestern edge of the country form the youngest rocks and lie in discordant contact over the Birimian rocks.

The Birimian greenstone belts have been subdivided into two main series regarded as being time equivalent (Appiah *et al.*, 1991):

- Lower Series; predominantly volcanic rocks: andesitic tuff, tholeiitic basalt, with associated basic intrusive rocks and interbedded graphitic phyllite.
- Upper Series; chiefly sediments: argillite, phyllite, schist and meta-greywacke with subordinate volcanic rocks, metamorphosed to greenschist facies (Appiah *et al.*, 1991; Dzigbodi-Adjimah, 1993);

The Lower Series consist of mafic tholeiitic volcanic rocks together with intermediate and acid calc-alkaline effusive suites that are typical of volcanic arc environments forming elongated N-NE trending belts. These are locally interbedded with graphitic phyllite units. The Upper Series are essentially clastic metasediments derived from the volcanics; greywacke and shales with occasional lavas and chemical sedimentary rocks defining elongated and broad basin-type structures. These greenstone belts are bound together by pre- to syn-granite-gneiss terrains and have been intruded by syn- to late-tectonic granitic plutons.

Numerous intrusive episodes have been recognized in the granite-gneiss domain (2,153 Ma to 2,097±7 Ma). The earliest is referred to as the plutonic tonalite-trondhjemite-granodiorite suite (TTG) and this suite was intruded by later granitic intrusive cycles (Gasquet *et al.*, 2003). The syn-orogenic foliated granitoid batholiths were preferentially emplaced into the basin centres whereas the late orogenic, unfoliated intrusions tend to occur within the Upper Series volcanic belts (Leube *et al.*, 1990). Younger granitoids and lavas (2.10 and 2.07 Ga) were mostly emplaced in the western portion of the Baoulé-Mossi domain and along the contact zone with the Archean craton (Egal *et al.*, 2002; Hirdes and Davis, 2002; Liégeois *et al.*, 1991).

The Tarkwaian basin rocks are comprised of conglomerates, quartzites and shales lying unconformably on top of the greenstone belts. These were deformed during late orogenic episodes and the basins are now bound by regional-scale shear zones (Davis *et al.*, 1994; Perrouty *et al.*, 2012). The Tarkwa formation (2,081 ±25 Ma to 1,968 ±49 Ma; Hirdes *et al.*; 1987) was originally defined in Ghana where it covers vast areas and hosts several large gold deposits. Although the composition of the conglomeratic facies varies according to the rocks forming the substratum, all were deposited after the first tectono-metamorphic phase (D1). No Tarkwaian rocks have been found within the main Birimian basins of the Lower Series.

7.1 Structural Evolution of the Eburnean Orogeny

The Eburnean orogeny is the major deformational event having affected the region. It is responsible for the structural trends of the litho-tectonic units and the dominant fabrics in the WAC (Bonhomme, 1962; Eisenlohr and Hirdes, 1992; Feybesse *et al.*, 2006; Lemoine *et al.*, 1990; Milési *et al.*, 1989;

Milesi *et al.*, 1992; Perrouy *et al.*, 2012). The number of deformation phases characterizing the Eburnean orogeny is still under debate. However, the presence of an early compressional phase resulting in broad-scale folding and medium- to high-grade metamorphism followed by two phases of transcurrent tectonics with a low-grade metamorphic overprint is well-established (Block *et al.*, 2015; Caby *et al.*, 2000; Debat *et al.*, 2003; Galipp *et al.*, 2003; Ganne *et al.*, 2012; John *et al.*, 1999; Klemd *et al.*, 2002; Liégeois *et al.*, 1991; Opare-Addo *et al.*, 1993; Pitra *et al.*, 2010; Triboulet and Feybesse, 1998).

The first deformation stage (D1; around 2,100 – 2,090 Ma) is characterized by a collisional event with the thrusting of the Lower Proterozoic over the Archean craton along a north-south orientation (Milesi, 1989). The second stage is described as a transcurrent tectono-metamorphic phase (D2 dated 2,096 – 2,073 Ma in the north of the Ivory Coast; Milesi, 1989) and resulted in regional-scale folding and N-S to NE-SW strike-slip faults. The subsequent transcurrent D3 deformation phase (2,091 ± 33 Ma to 2,073 ± 7 Ma in southern Mali) is marked by the development of large-scale folds controlled by regional shear zones and the overall northeast-southwest realignment of the belts in the WAC. The D1 to D3 events form a continuous and overlapping deformational sequence.

7.2 Local Geology

The Houndé greenstone belt consists of mafic to intermediate volcanic, volcano-sedimentary and sedimentary rock sequences distributed along an approximately NNE axis. This belt extends for over 330 km within Burkina Faso. The following description is based on the Baratoux *et al.* (2011).

The stratigraphy is characterized by a thick basal sequence of tholeiitic basalts and gabbros intercalated with a sequence of intermediate calc-alkaline volcanics (massive and pillowed lavas, tuffs, pyroclastic flows and diorite), with minor levels of rhyolite and beds of chert (ferruginous, manganese-rich). Those units are topped by volcano-sedimentary and fine-grained clastic sedimentary rocks (volcaniclastics, argillites and wackes).

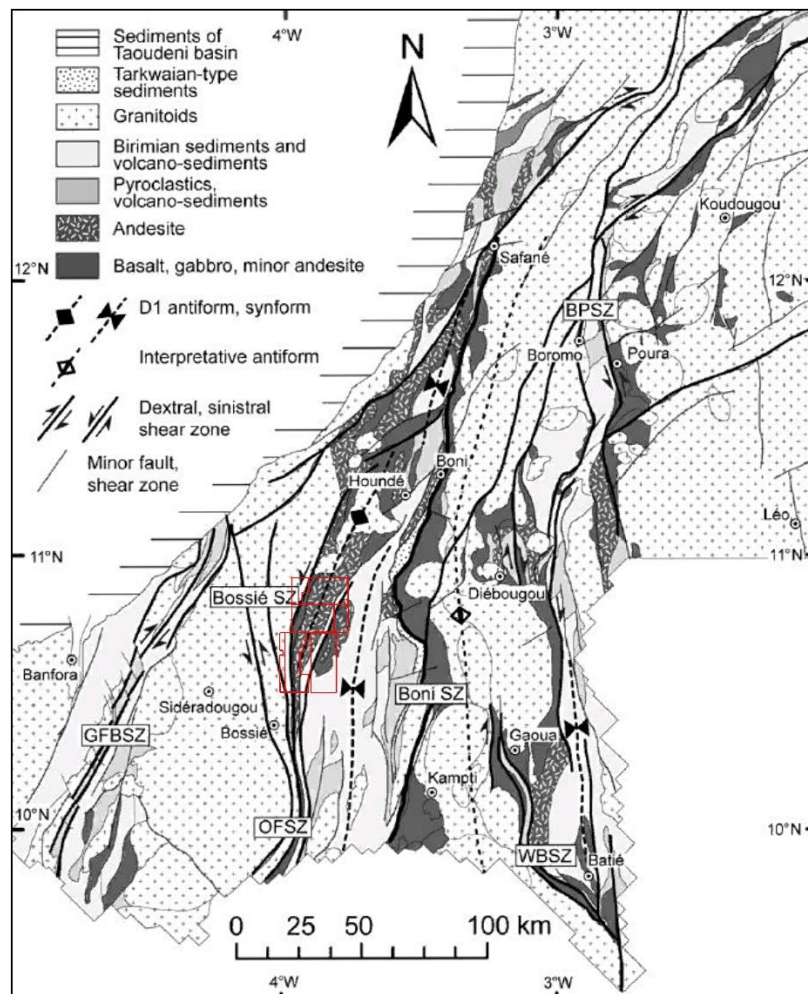
Tarkwaian type detrital sediments unconformably overlie the above units along the eastern margin of the belt. These metasedimentary units are made up of weakly metamorphosed conglomerates, sandstones, gritstones, arkoses and phyllites (Bossière *et al.*, 1996). All the above rocks were metamorphosed to greenschist and locally amphibolite facies during Eburnean Orogeny.

Multiple episodes of granitoid intrusions have been distinguished; tonalite-trondhjemite-granodiorite (ME1), potassic granodiorite-granite (ME2), potassic granite and small gabbro-diorite bodies (ME4). Late dolerite dykes crosscut the entire sequence trending predominantly towards northwest.

The Houndé greenstone belt was affected three deformational events. The first two originated during the Eburnean orogeny (~2160 and 1980 Ma). D1, the first recorded event, is associated with a WNW-ESE compressional cycle and is characterized by broad scale folding, penetrative foliation and N to NNE shear zones. The Tarkwaian type sediments were deposited during late D1 through an extensional event following the compressional stage. The D2 event is characterized by EW to WNW

transpression strain which resulted in steeply dipping, anastomosing, NNE to ENE shear zones. This event is significant in that it is believed to be responsible for a majority of the gold occurrences along ductile-brittle shear zones and faults. The third, post-Eburnean, D3 event resulted from NS compression and is characterized by crenulation cleavages, reverse faults and chevron or kink folds.

Figure 7.2 - Simplified Structural Map from Birimian of the Western Burkina Faso



Indicating major shear zones. **BPSZ** – Boromo-Poura shear corridor; **GFBSZ** – Greenville-Ferkessedougou-Bobo-Dioulasso Shear zone; **OFSZ** – Ouango-Fitini shear zone; **WBSZ** – West Batié shear zone. (Baratoux et al., 2011)

7.3 Property Geology

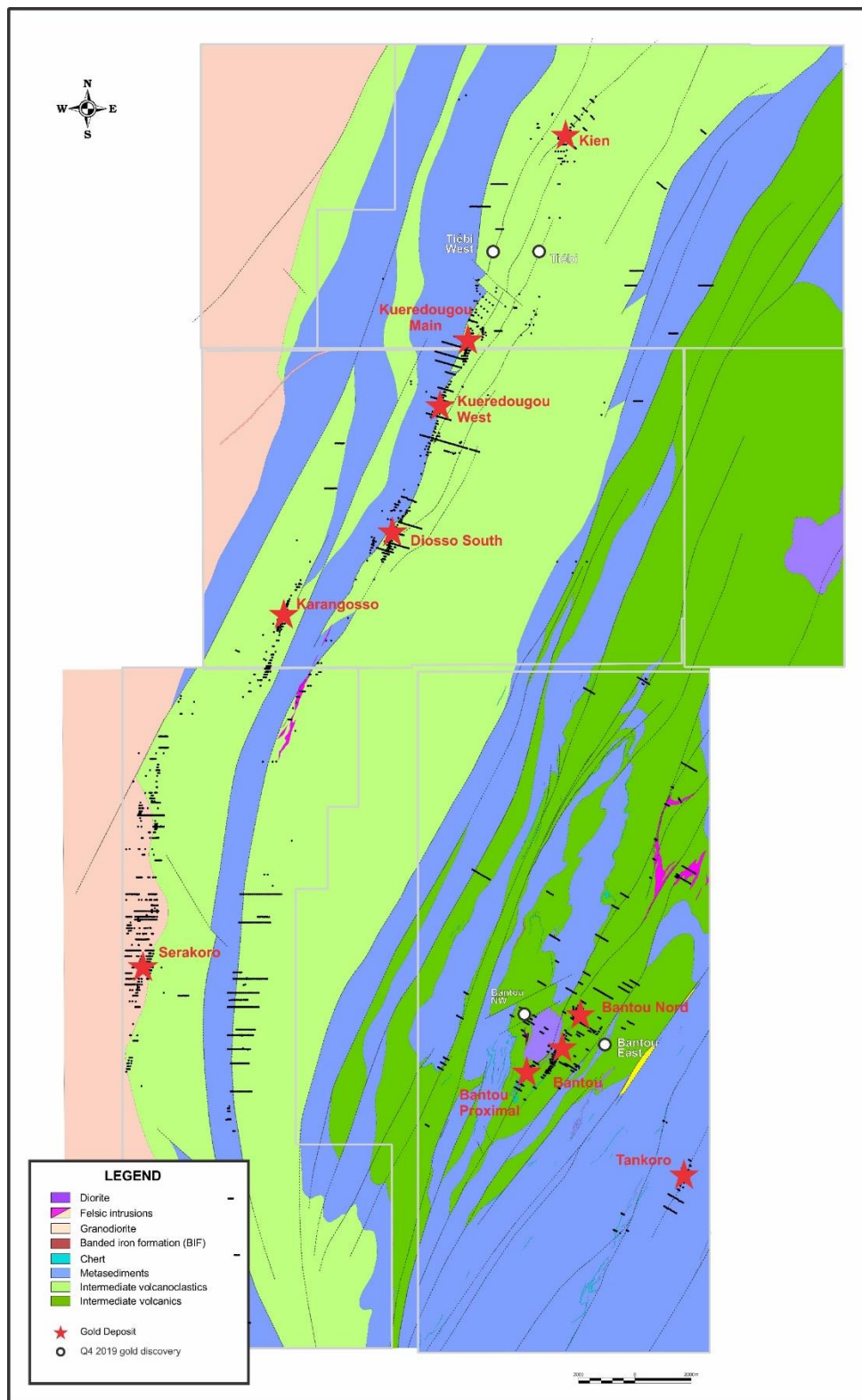
Bantou Project is located in the central portion of the Houndé greenstone belt, along the western edge. The property geology is comprised of a north-northeast trending assemblage of mixed calc-alkaline volcanic and sedimentary rocks having been affected by polyphase deformation and metamorphosed to greenschist facies. The volcano-sedimentary sequence is intruded by a series of felsic to mafic intrusions (Figure 7.3). The calc-alkaline volcanic series is made up of massive and

pillowed andesitic flows, volcanoclastic flows and tuffaceous horizons. The sedimentary sequence is predominantly an alternating sequence of pelagic and detrital sedimentary rocks, including shales locally graphitic, sandstones, volcanoclastics. Chemical sediments such as cherts and banded iron formations (“BIF”) occur abundantly in association with tuff horizons within andesitic volcanics in the eastern portion of the property.

Structurally, the western limit of the permit group is crosscut by the north-northeast trending regional Ouango-Fitini shear zone (“OFSZ”). This shear structure separates the Houndé greenstone belt in the east from the Sidéradougou TTG (tonalite, trondhjemite, granodiorite) domain in the west. Of mention, it is host to the Serakoro 1 West deposit and also to the Wona Kona deposit on Mana. A series of splays crosscut the entire rock sequence exposed on the Bantou permits and these probably originated from the same tectonic episode responsible for the OFSZ. Examples of these are the north trending shear zone that hosts the Kuere Trend deposits as well as the northeast trending shear zone that separates the dominant calc-alkaline complex in the east (Bantou domain) from the rest of the terrain (Karankasso domain).

Numerous gold zones have been identified within the Bantou property. The Bantou domain is host to the Bantou and Bantou Nord deposits and the Bantou Proximal mineralization found within the andesitic sequence. The Tankoro zone occurs within the southern sedimentary sequence of the Bantou domain. The Karankasso domain deposits are distributed along a 45 km north-northeast trend. From north to south these include the Kien, Kuere Trend (Kueredougou Main, Kueredougou West and Diosso South), Karangosso and Serakoro deposit. Two additional gold occurrences of Kueredougou West Trend zone and Koure East Sulfide Zone have also been identified.

Figure 7.3 - Bantou Property Geology



7.4 Deposit and Significant Occurrence Geology

This section summarizes the main geological characteristics of the deposits and significant occurrences of the Bantou property. The Karankasso domain is host to several deposits namely: Kien, Kuere Trend, Karangosso, Serakoro 1 West as well as the Kueredougou West Trend and Koure East Sulfide occurrences. Deposits associated with Bantou domain include: Bantou, Bantou Nord, Tankoro and the Bantou Proximal occurrence. The description of the Karankasso deposits are based on the previous 2015 NI 43-101 report from Savary.

7.4.1 KIEN DEPOSIT

The Kien deposit occurs near the northern part of the property. The gold mineralization has been defined over a strike length of approximately 2.9 km. The deposit displays a S-type geometry, where the northern part has N040° strike direction and the southern part has N010° strike direction. The structure dips 35°-45° to east at the centre. The southern portion dips 40°-45° to east and the northern portion dips 50°-55° on the south and becomes subvertical up north.

The host rocks include an intercalation of fine-grained andesite (Figure 7.4 A), medium-grained feldspar porphyritic diorite-granodiorite (Figure 7.4 B) with horizons of intermediate tuffs and graphite-rich black shale. These units occur within a N040° strike length shear zone. The deformation is characterized by a strong foliation affecting the entire sequence. Weak to strong sericite and silica alteration appears to be associated with the deformation corridors. The gold-bearing intercepts exhibit features described above and also characterized by quartz veins and disseminate pyrite. In the northern portion, the mineralization is hosted mainly within the feldspar porphyritic diorite-granodiorite dykes and along their contacts whereas in south, the mineralization occurs predominantly within the volcanic rocks and to a lesser extent in the dykes.

The Kien deposit is a good example both in terms of geology and tectonic setting to the deposits found along Kuere Trend and highlights the exploration potential of the property. Two artisanal gold mining sites are currently been exploited in both parts of the deposit. The artisanal sites are a mix of surface scouring and deeper pits.

Figure 7.4 - Hand Samples from the Kien Artisanal Mining Sites



*A) Strongly deformed intermediate volcanic with quartz vein subparallel to the foliation.
B) Feldspar porphyritic diorite-granodiorite with strong sericite and moderate silica alterations with a well-developed foliation.*

7.4.2 KUERE DEPOSITS: KUEREDOUGOU MAIN, KUEREDOUGOU WEST, DIOSSEO SOUTH

The Kuere trend is constituted of three (3) mineralized zones along the same north-northeast trend, Kueredougou Main, Kueredougou West and Diosseo South. These deposits lie along an open-ended IP chargeability high that extends over a strike length of more than 18 km. This geophysical anomaly is interpreted as the expression of a large N020° trending shear zone corridor.

The deposits are mainly hosted into fine-grained intermediate to mafic volcanic rocks. The mineralization has developed along the northeast-southwest subvertical Kuere shear zone. The deformation is highlighted by a pervasive foliation and characterized by moderate to strong sericite, silica and carbonate alteration. The gold-bearing zones contain quartz veins and 2-3% disseminated pyrite (Figure 7.5 A and B).

Figure 7.5 - Hand Samples from Artisanal Gold Mining at Kueredougou North Zone



*A) Well deformed rock with strong sericite and silica alteration and 3-4% of disseminated pyrite.
B) Sericite schist with fuchsite as accessory mineral and quartz veinlets parallel to the schistosity.*

The Kueredougou Main deposit consists of a series of parallel structures extending for approximately 1.25 km, a width of up to 100 m and subvertical dip. The higher and wider portions of the mineralization appear to plunge shallowly to the north-northeast. The Kueredougou West deposit is located approximately 1.3 km south of the Kueredougou Main deposit. It displays a series of mineralized structures along 2.9 km strike length over a 100 m width. The deposit dips 55°-70° to the east steepening to 70°-75° east towards the southern portion. The Diosso South deposit is situated approximately 3.5 km south of the Kueredougou West Zone. It consists of a series of parallel structures traced along 2.1 km long by 100 m wide corridor and dips 60°-70° towards east. The wider and richer grades would appear to exhibit a shallow north plunge.

In addition to the three deposits, two (2) other gold occurrences are found along the same trend including Kueredougou North, to the north of Kueredougou Main and Diosso extension in the south. Gold in soil geochemical data indicates significant potential for other mineralized along the Kuere Trend but no resource has thus far been outlined on these.

7.4.3 KUEREDOUGOU WEST TREND ZONE

The Kueredougou West Trend zone lies approximately 500 metres west of the Diosso South deposit. This zone was discovered during a 2014 field program and validated during the 2015 drill program. The mineralization is interpreted as three parallel N020° trending mineralized structures along a 600 metres strike and to a depth of approximately 120 metres.

The geology is characterized by an intercalation of black shales and pale-colored siltstones. The black shales contain up to 1% primary disseminated pyrite and is not associated with the mineralization. From the orientation of the artisanal mining sites, the gold trends in soil anomalies and the airborne geophysical survey, a N060° trending sinistral fault offsetting the northern half from the south can be interpreted. This local fault seems to extend through the northern portion of the Diosso South deposit as well, distant by some 700 m to the northeast.

7.4.4 KARANGOSSO DEPOSIT

The mineralization at the Karangosso deposit was first drilled in 2013 and is interpreted along as a series of subvertical mineralized structures oriented at N020° with a strike length of 1.6 km, a width of 100 m wide and down to a depth of approximately 150 m.

The deposit is hosted in a sequence of deformed alkali granite intrusions oriented at N020° bordered to the west by a fine grained intermediate volcanic sequence and to the east by silicified sediments. The gold mineralization has developed along a northeast-southwest subvertical regional scale shear zone. The shear zone lies along the original stratigraphic contact between the volcanic and the sedimentary sequences. The entire rock sequence has been affected by a penetrative foliation that progresses from the narrow shear zones towards the contact. The sediments display Z-fold pattern between the shear zones suggesting a sinistral kinematic to the shear zone.

The zone is deemed one of the highest potential zones on the property. Karangosso mineralization lies along a structure parallel to the 2.4 km eastern Kuere Trend and is at the southern end of a 9 km long and strong gold-in-soil geochemical trend. This zone does not outcrop and has not been subjected to any artisanal mining activity. Prospecting has identified silicified felsic intrusion floats up to 1.2 km north of the zone and grab samples from artisanal mining areas located at 4.6 km northeast along the trend returned values grading up to 13.5 g/t Au.

7.4.5 SERAKORO 1 WEST DEPOSIT

The Serakoro 1 West Zone was explored by Sarama Resources since 2012 through RC and AC drilling. The zone is situated at the southwestern edge of the property and lies along a north-south magnetic lineament and a moderate to strong gold-in-soil anomalous trend, approximately 3.8 km to west of the main Kuere Trend. The mineralization is defined by a main north-south structure, with a western zone extending 1.1 km along strike and an eastern zone traced approximately 800m along strike. The gold-bearing structures dip between 45°-55° to east.

The mineralization is hosted by a medium grained granodioritic intrusion crosscut by a series of subvertical, metric shear zones. These structures are often associated with weak to strong sericite and silica alteration and trace to 2% of disseminated pyrites.

The Serakoro 1 West zone is a high potential prospect with numerous gold-bearing intercepts. The geology is poorly known due to minimal rock outcropping over the zone; however, a few artisanal

mining sites have been located along the same trend, notably a 100 m long by 30 m wide site associated with quartz veining.

7.4.6 KOURE EAST SULFIDE ZONE

The Koure East Sulfide Zone was discovered in late 2014 when a grab sample from an artisanal mining site waste pile returned a result of 28.5 g/t Au. The sample contained 20% of finely disseminated arsenopyrite and pyrite. This zone lies along a N025° trending IP chargeability anomaly and is situated approximately 1.7 km east of the Kueredougou Main Zone.

The lithologies are mainly characterized by a fine to medium-grained intermediate to mafic volcanic sequence with local fine-grained sediments, felsic dykes and a distinctive fine-grained black chert. Fine grained sediments occur as graphite-rich black shales with primary disseminated pyrite. These units are crosscut by a series of narrow and parallel shear zones, moderately dipping to the south-east.

Gold-bearing mineralization is hosted within narrow deformation corridors in association with strong sericite alteration (mainly into the well foliated dykes) and pervasive silicification. It is typically found in quartz veins with 2-3% of pyrite and arsenopyrite. The southern extension of the Koure East Sulfide Zone is located 2.4 km to the south-east, lies along the same chargeability and resistivity IP trend and with the same lithology.

7.4.7 BANTOU

The Bantou deposit is a unique occurrence on the Bantou property. The mineralization lies along a 1.6 km strike length on chert and BIF horizons trending N25°, situated on the center of the Dynikongolo permit. Both horizons dip approximately 75°-85° to west-northwest and plunge to NE (Figure 7.6). This deposit was the first target to be explored on the Dynikongolo permit and was already the object of artisanal mining through a series of pits along the main mineralized trend.

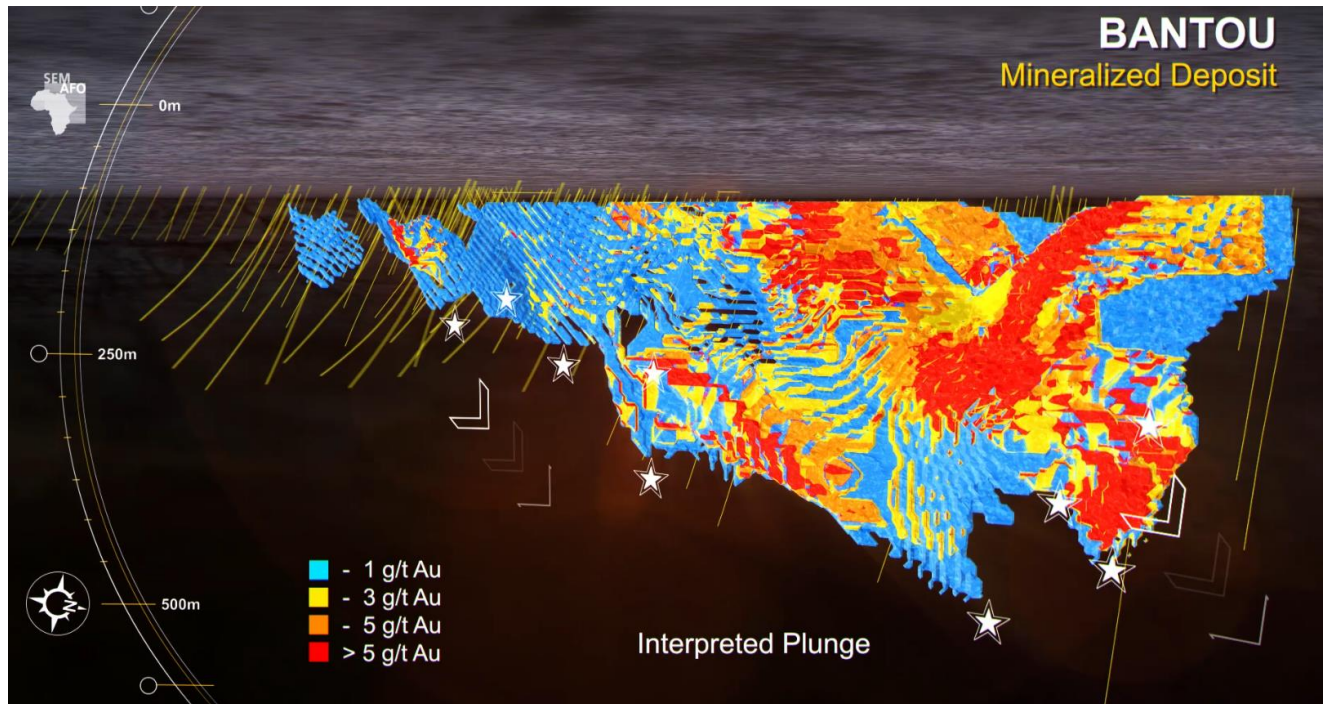
The mineralization is hosted by chert and BIF horizons that are part of an intermediate-felsic volcanic sequence (Figure 7.7) From base to top, this sequence is characterized by: 1) Massive dacite with brecciated top; 2) Quartz crystals-rich felsic and lapilli tuffs crosscut by felsic dykes; 3) Chert horizons with banded to brecciated texture and graphite-rich beds; 4) Fine laminated volcanoclastics; 5) Magnetite-rich banded iron formation; 6) Upper intermediate volcanoclastic sequence varying from tuffs to lapilli tuffs; and 7) Diorite to granodiorite dykes that crosscut the summit sequence and the chert and BIF horizons.

The chert has a dominant grayish color and may occur as massive, banded or brecciated. When banded, it is intercalated with millimetric to centimetric graphite-rich black shale levels. Intense pervasive silicification may occur at the base and the summit of the unit. Silicification is also present along the brecciated levels and weak hematite alteration occurs at the core of the mineralization.

The drill hole thickness of this chert horizon varies from 9.5 to 28 m and it represents the main gold-bearing lithology from the Bantou deposit.

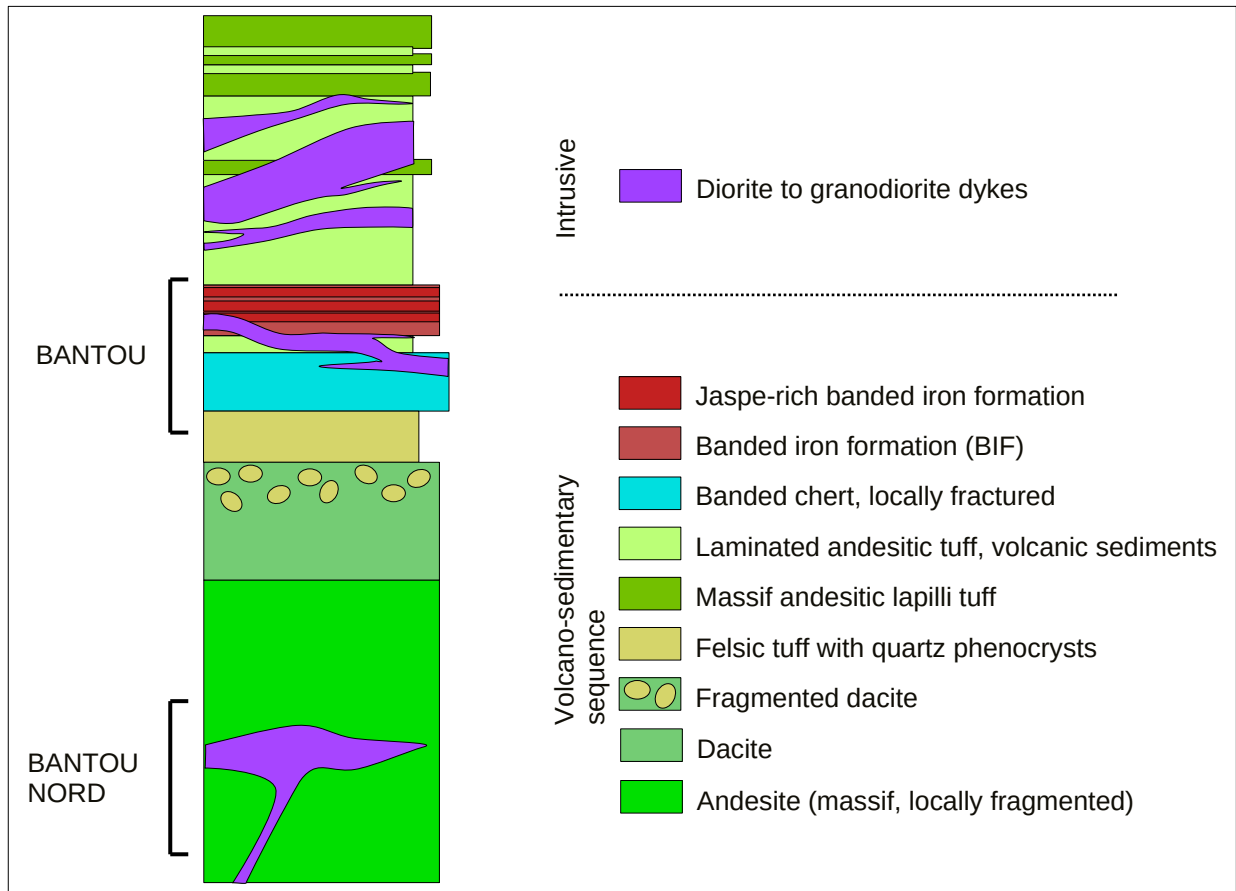
The BIFs have apparent thicknesses of 11.6 to 32 m and are characterized by the intercalation of:
 1) Magnetite-rich BIF; 2) Jasper; 3) Chert; and 4) Laminated volcanoclastics. Zones with proportionally thicker magnetite levels present can be directly correlated to higher gold grades.

Figure 7.6 - Bantou Mineralization Block Model



(Source: SEMAFO).

Figure 7.7 - Lithostratigraphic Sequence From Bantou And Bantou Nord Deposits

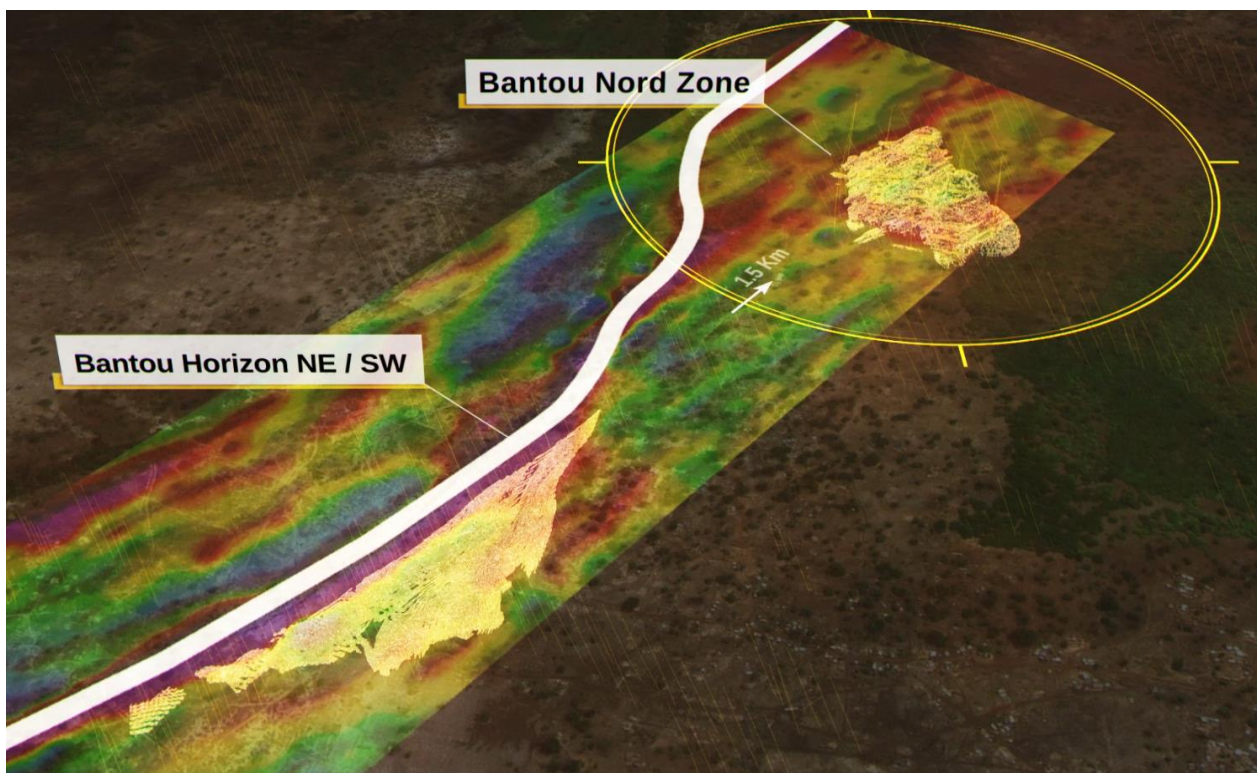


7.4.8 BANTOU NORD

Bantou Nord zone was discovered by SEMAFO during the 2019 drilling campaign. The zone lies 1.5 km northeast of the Bantou deposit (Figure 7.8), covers a 300 m by 250 m area and is characterized by wide, disseminated auriferous mineralization. The mineralization occurs along the stratigraphic footwall of the Bantou Banded Iron Formations (BIF) and the chert unit (Figure 7.9). It trends northeast, parallel to the general strike of the lithologies at about N025° and ends abruptly along its western edge.

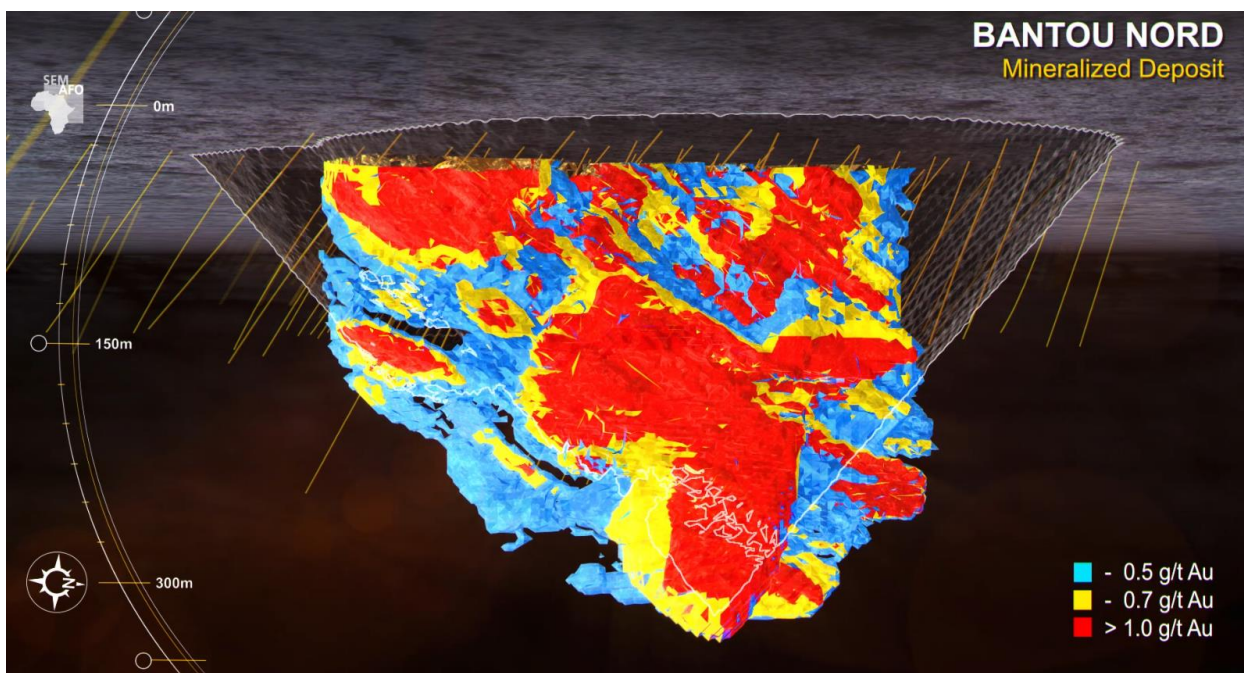
The mineralization is hosted within alternating intermediate volcanics and dykes. The intermediate volcanics comprise massive andesite with local brecciated facies (autoclastic breccia). The dykes are dioritic to granodioritic in composition and bear the same geochemical signature as the intrusive rocks found at Bantou. Although the enriched zones seem to be spatially associated with the dykes, the mineralization occurs in both rock types. Higher gold grades are found in both weakly chloritized rocks and strongly sericitized altered rocks.

Figure 7.8 - Bantou And Bantou Nord Location



(Source: SEMAFO).

Figure 7.9 - Northwest-Southeast Bantou Nord Mineralization Cross Section



(Source: SEMAFO).

7.4.9 BANTOU PROXIMAL

Bantou Proximal zone is located at 500 m west of the Bantou zone. The zone has been exploited by artisanal miners excavating the alluvial horizon lodged between the duricrust and the saprolite and through pits dug along a northeastern trend. The mineralization is currently known to extend for over 500 m on a N030° trend.

The stratigraphy exposed at Bantou Nord corresponds is an inverted equivalent of the sequence found in the Bantou zone. The top of the volcanosedimentary edifice points towards east instead of west at Bantou Nord, suggesting that both zones may represent opposing flanks of a NE oriented synclinal fold. However, unlike at Bantou, the mineralization is not hosted by chert and BIFs but occurs in fine-grained laminated volcanoclastic units and diorite-granodiorite intrusions. These units may correspond to the uppermost sequence of the Bantou footwall zone. The mineralization is characterized by moderate to strong sericitization and 1% to 3% of finely disseminated pyrite.

7.4.10 TANKORO

The Tankoro mineralization is found at the southeastern edge of the property. It represents the southwestern continuity of the MM zone originally discovered the Sarama property to the east. The geometry of the mineralization is defined by two (2) main, 3 to 5 metres wide zones, distant by approximately 30 to 50 metres and that can be traced for over 1.1 km. The orebodies are oriented N020° and dip approximately 70°-80° east. Tankoro is currently exploited by artisanal miners working on the 2 structures.

The mineralization at Tankoro consists of stockworks of veins and veinlets with 1 to 3% fine disseminated pyrite in both parallel feldspar-porphyry felsic dykes. The dykes are emplaced in a sedimentary sequence of alternating shales, graywackes and sandstones. A northeast trending fault is known to affect the sedimentary units.

7.5 Mineralization

The Bantou-Karankasso deposits comprises two distinct geological contexts. The Bantou domain with a strong primary (volcanogenic) input and the Karankasso domain with typical orogenic setup. The description of the gold-bearing zones on the Karankasso district are based on the previous 2015 NI 43-101 report from Savary. Table 7.1 summarizes the main characteristics of each deposit/zone.

Table 7.1 - Summary Table of Mineralization

	Deposit Occurrences	Host Rock	Structural Control	Mineralization Style	Hydrothermal Alteration	Sulfides Content
Bantou Domain	Bantou Deposit	Chert, Banded Iron Formation (BIF)	No evidence of structural control	Disseminated and quartz veinlets	Quartz+Hematite	Pyrite±Galena ±Sphalerite
	Bantou Nord Deposit	Calk-alkaline andesite, diorite dykes	No evidence of structural control	Disseminated and quartz veinlets	Sericite+Chlorite ±Quartz±Fuchsite	Pyrite +Chalcopyrite
	Tankoro Deposit	Felsic porphyry dykes	Local scale structure	Quartz-sulfide stringer veins	Quartz+Sericite	Pyrite
	Bantou Proximal Zone	Volcaniclastics	No evidence of structural control	Disseminated	Sericite+Quartz	Pyrite
Karankasso Domain	Kien Deposit	Andesite, graphite shale, felsic dykes	Local scale structure	Disseminated and quartz veins	Sericite+Quartz	Pyrite
	Kueredougou Main Deposit	Andesite	Regional shear zone	Disseminated and quartz veins	Sericite+Quartz +Carbonate	Pyrite ±Arsenopyrite
	Kueredougou West Deposit					
	Diosso South Deposit					
	Karangosso Deposit	Felsic porphyry intrusion	Regional shear zone	Disseminated and quartz veins	Sericite+Quartz	Pyrite
	Serakoro 1 West Deposit	Felsic to intermediate porphyry dykes	Regional shear zone	Disseminated and quartz veins	Sericite+Quartz	Pyrite
	Kueredougou West Trend Zone	Black shale, siltstone	Regional shear zone	?	?	?
	Kuere East Zone	Andesite, graphite shale, felsic dykes	Local scale structure	Disseminate and quartz veins	Sericite+Quartz	Arsenopyrite +Pyrite

7.5.1 KARANKASSO DOMAIN

The gold-bearing zones of the Karankasso domain display similar characteristics. They are all characterized by strong structural controls as displayed by local and regional shear zones bounded by alteration halos of sericite, silica, carbonate and locally fuchsite. Other alteration minerals observed locally are albite, tourmaline and hematite. Quartz veining with pyrite and lesser arsenopyrite are often associated with the higher gold grades.

The Kien Deposit mineralization is dominated by a weak to strong silica alteration and trace amounts of fuchsite occurring within strongly sericitized rocks. Local brownish albite alteration is associated with sericite along the quartz veins. High gold grades show a strong correlation with increasing amounts of sulfides and quartz veining along the strongly foliated corridors (Figure 7.10). The sulfides occur as trace to 3% disseminated pyrite. Distal alteration, bordering the sericite zones, is marked by weak to moderate chlorite and weak hematite alteration. Chlorite-hematite alteration also occurs throughout the different units. Overall, the mineralization at Kien displays some of the stronger alteration found on the property, but not the highest overall grades.

Figure 7.10 - Kien Mineralized Intersection (46.65-51.35 m) from Drill Hole DH-18-02A



The mineralization is defined by traces to 2% of disseminated pyrite within a deformed and sericitized interval characterized by the intercalation of graphite-rich black shale, laminated tuff and feldspar porphyritic granodiorite.

The deposits of the Kuere Trend (Kueredougou Main, Kueredougou West, Diosso South) and the Kueredougou North zone are hosted along a regional shear zone. The richer gold zones occur in highly foliated and sericitized rocks with trace fuchsite, 3 to 5% quartz veining and up to 2-3% disseminated fine pyrite (Figure 7.11). Trace amounts of arsenopyrite and albite are locally observed in these zones. In the deposits along the Kuere Trend, stronger alteration and quartz vein content does not always reflect higher grades.

Figure 7.11 - Diosso South Mineralized Intersection (109.4-116.4m) From Drill Hole DH-18-07



The interval shows a deformation zone characterized by a foliated volcanoclastites unit with sericite and carbonate alteration injected by quartz and carbonate veinlets.

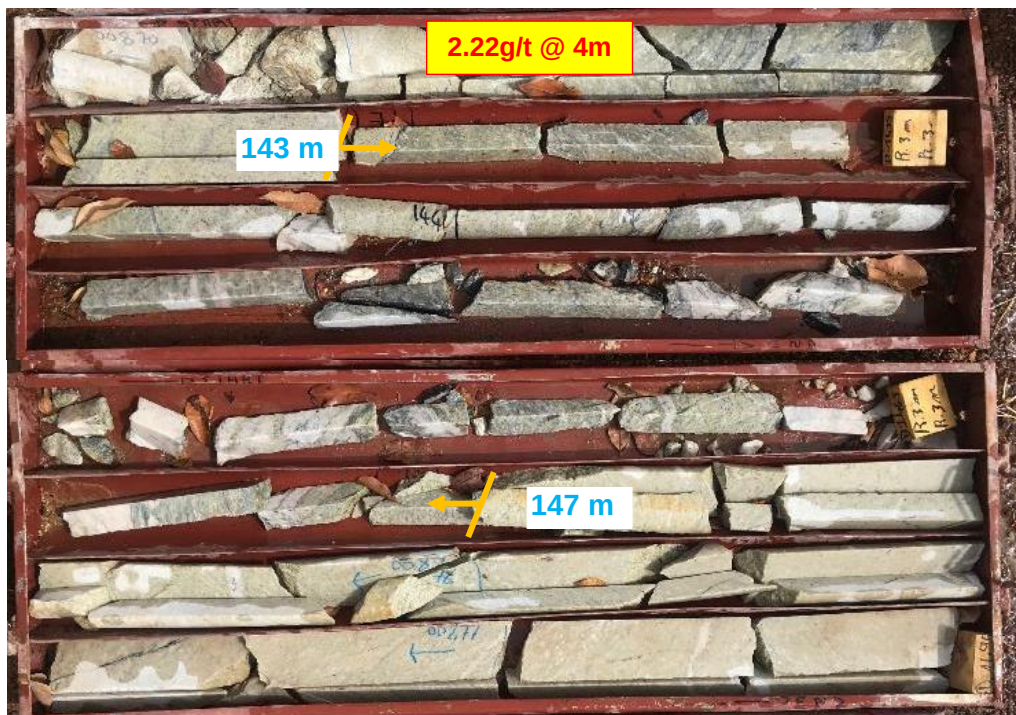
The Karangosso deposit is characterized by weak to strong sericite and silica alteration in association with trace to 3% disseminated pyrite. Tourmaline is present as an accessory phase forming black crystals or masses. The gold-rich zones (Figure 7.12) are mainly hosted in the alkali granitoid intrusions associated with quartz vein-rich intervals, strong sericite alteration and 2-3% of disseminated pyrite.

The Serakoro 1 West mineralization is hosted within metric shear zones that crosscut the granodioritic intrusive. Gold-bearing shear zones present weak to moderate sericite and silica alteration and contain up to 2% disseminated pyrite (Figure 7.13).

Koure East Sulfide Zone mineralization is hosted by metric-scale shear zones in association with strong sericite alteration and silicification, quartz veins and 2 to 3% pyrite and arsenopyrite. This zone is the only area on the property where arsenopyrite is commonly found as the dominant sulfide phase.

Kueredougou West Trend Zone is situated on a splay of the main Kuere Trend. More work is necessary to characterize this occurrence.

Figure 7.12 - Karangosso Mineralized Intersection (143-147 m) from Drill Hole DH-18-12A



The mineralization is associated with quartz veins hosted into a strong sericitized and deformed felsic porphyry dyke. 2 to 3% of pyrite disseminated and in quartz veins.

Figure 7.13 - Serakoro 1 West from Mineralized Intersection (86.1-90.3 m) from Drill Hole DH-18-11



The gold-bearing mineralization is hosted into a well deformed feldspar porphyry granodiorite associated to sericite alteration and silicification with up to 2% pyrite.

7.5.2 BANTOU DOMAIN

The gold mineralization associated with the Bantou domain differs markedly from its Karankasso counterpart. With the exception of the Tankoro zone, the other occurrences; Bantou, Bantou Nord and Bantou Proximal do not appear to have a structural component playing a significant role on the emplacement of the mineralization.

Bantou deposit mineralization is hosted in both cherts and BIFs along a N025° strike (Figure 7.14) although it is distinct for both settings. In the brecciated cherts, pyrite from trace to 20%, occurs disseminated or in quartz veins (Figure 7.15A) whereas in the BIF, stratiform pyrite in trace and up to 20% is found in bands parallel to the bedding (Figure 7.15B). Locally, galena and sphalerite occur associated with the mineralized bands.

The alteration is dominated by moderate to strong silicification mainly affecting the chert unit whereas a weak to strong hematization characterizes the BIF alteration. The gold mineralizing events at Bantou seem to have formed according to 2 distinct episodes. In the cherts, high gold grades occur where massive silicification levels constrain the chert either at the base or the top of the unit. While in the BIFs, higher grades mineralization shows a direct correlation to magnetite-enriched zones.

Figure 7.14 - Cross Section (NW-SE) of Bantou Mineralization

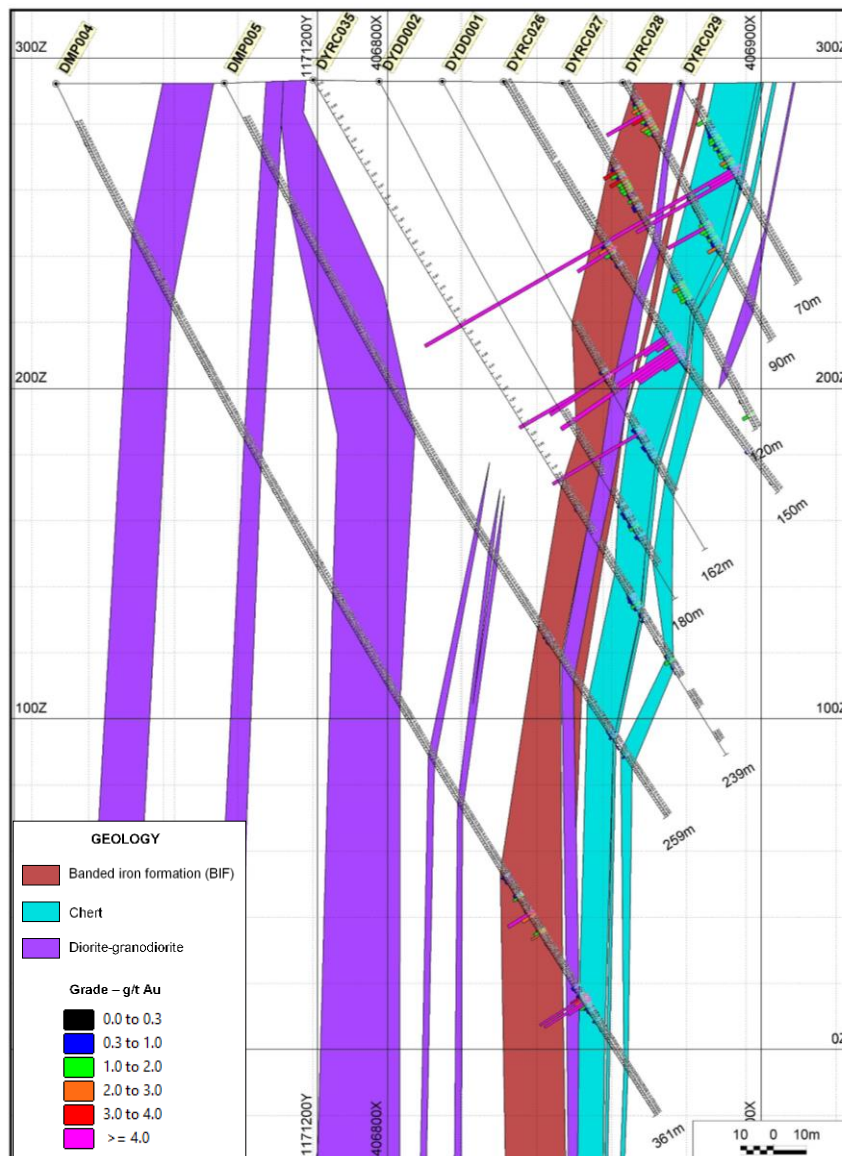
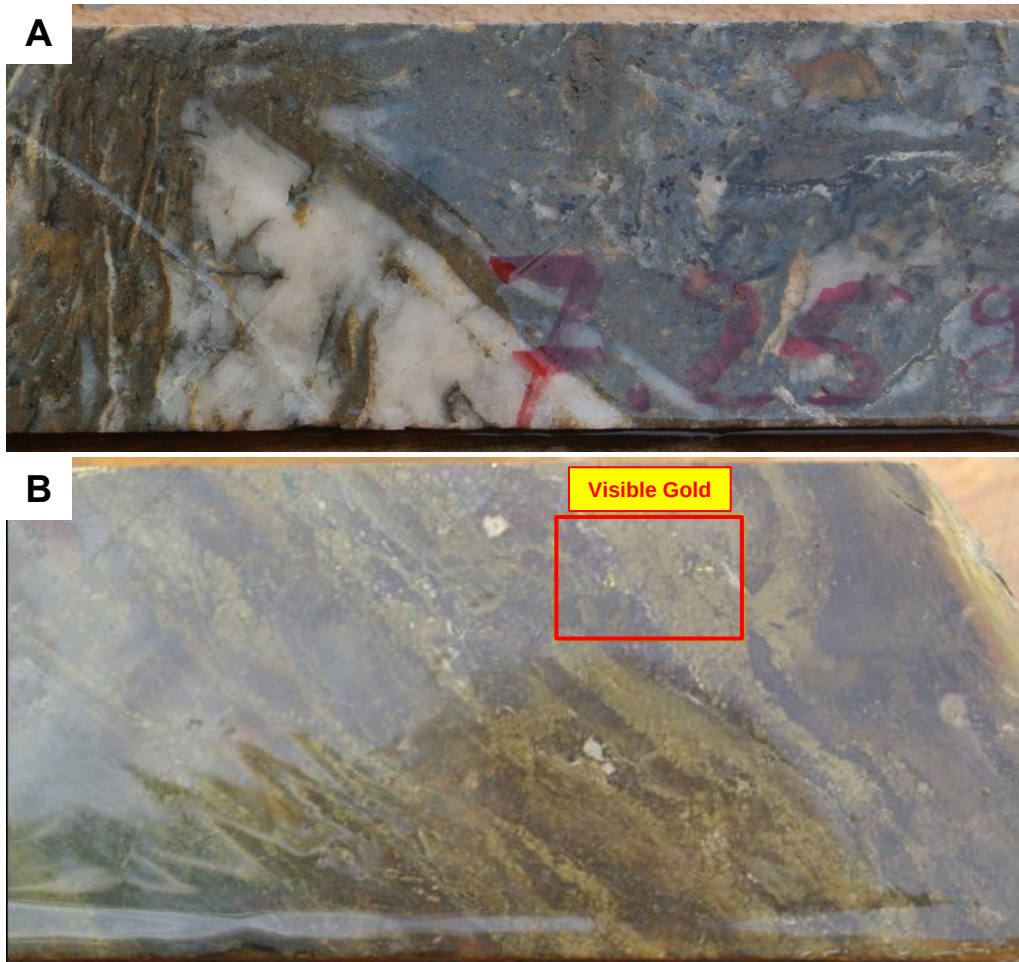


Figure 7.15 - Core Samples from the Bantou Mineralization



- A) Semi-massive pyrite crosscutting the chert bedding, intersection with 7.25 g/t Au (DYDD006 – 98.8 m);
B) Visible gold in semi-massive zone parallel to the BIF bedding, intersection with 39.9 g/t Au (DYDD004 – 142.2 m).

Bantou Nord mineralization occurs in association with 1 to 5% of fine disseminated pyrite in the intermediate to mafic volcanic rocks and in the diorite-granodiorite dykes (Figure 7.16). It is not restricted to the sericitized units, higher gold grades also occur in the chlorite- and magnetite-rich zones. Chalcopyrite is found locally but shows no correlation to gold grades. The host rocks are affected by weak to strong sericite alteration, minor silicification and disseminated tungsten-rich carbonate (scheelite). Distal chlorite and magnetite alterations occur outside of the sericite halo while moderate to strong hematite alteration occurs locally, distal to the mineralization.

Bantou Proximal mineralization is characterized by 1-3% of fine disseminated pyrite associated with weak to moderate sericite alteration and secondary silicification. The mineralization is hosted in volcanoclastic sequences and in medium-grained diorite-granodiorite intrusives. Unlike at Bantou

and Bantou Nord, deformation does not appear to play a significant role in controls of the mineralization at Bantou Proximal.

Tankoro mineralization occurs as network of quartz veinlets with trace to 3% fine disseminated pyrite in feldspar porphyritic felsic dykes. Proximal to the main shear structure, the rock assemblage shows strong sericite and silica alterations. Gold is also present in the sedimentary units where quartz veins and disseminated pyrite are observed.

Figure 7.16 - Bantou Nord Mineralized Intersection (56.2-60.6m) from Drill Hole DYDD018



Trace to 2% of fine disseminated pyrite within the weak sericited and chloritized contact between the volcanic rocks and the diorite.

8 DEPOSIT TYPES

The Bantou permit group is located on the prolific Birimian Gold Province that hosts several world-class gold deposits distributed throughout West Africa, notably in Ghana, Mali, Burkina Faso, Ivory Coast and Senegal. Examples of these large deposits include Obuasi (20 million oz Au) in Ghana and Sadiola (8 million oz Au) and Morila (5.9 million oz Au) in Mali.

Orogenic deposits are characterized by a mineralization associated with shear zones either in either quartz veins or with sulfides. These make up the most common type of primary mineralization in Birimian gold deposits. The following is a classification that distinguishes between the main types of gold deposits in West Africa (Milesi *et al.*, 1989).

1. Gold associated with sulphides in tourmalinised turbidites; pre-orogenic deposits (Loulo in Mali);
2. Gold with disseminated sulphides and associated hydrothermal alteration in tholeiitic volcanic rocks; syn-orogenic deposits (Yaouré in Ivory Coast; Syama in Mali);
3. Gold-bearing paleoplacer quartz pebble conglomerates; syn-orogenic deposits (Tarkwa, Damang, Iduaprem in Ghana);
4. Mesothermal, epigenetic, shear zone hosted quartz veins (lode or stockwork) with gold-bearing arsenopyrite; tardi-orogenic deposits (Ashanti type);
5. Obuasi, Prestea, Konongo and Aféma in Ghana);
6. Mesothermal, epigenetic, shear zone hosted quartz veins (lode or stockwork) with native gold and traces of polymetallic sulphides commonly exhibiting evidence of hydrothermal alteration; tardi-orogenic deposits (Sabodala in Senegal; Poura in Burkina Faso; Kalana in Mali).

Secondary gold occurrences originating from supergene processes have been classified by Castaing *et al.* (2003) as:

- Alluvial and eluvial placers: commonly mined by artisanal gold panels.
- Colluvial and residual concentration: transported gold nuggets and gold enriched horizon below the laterite duricrust.

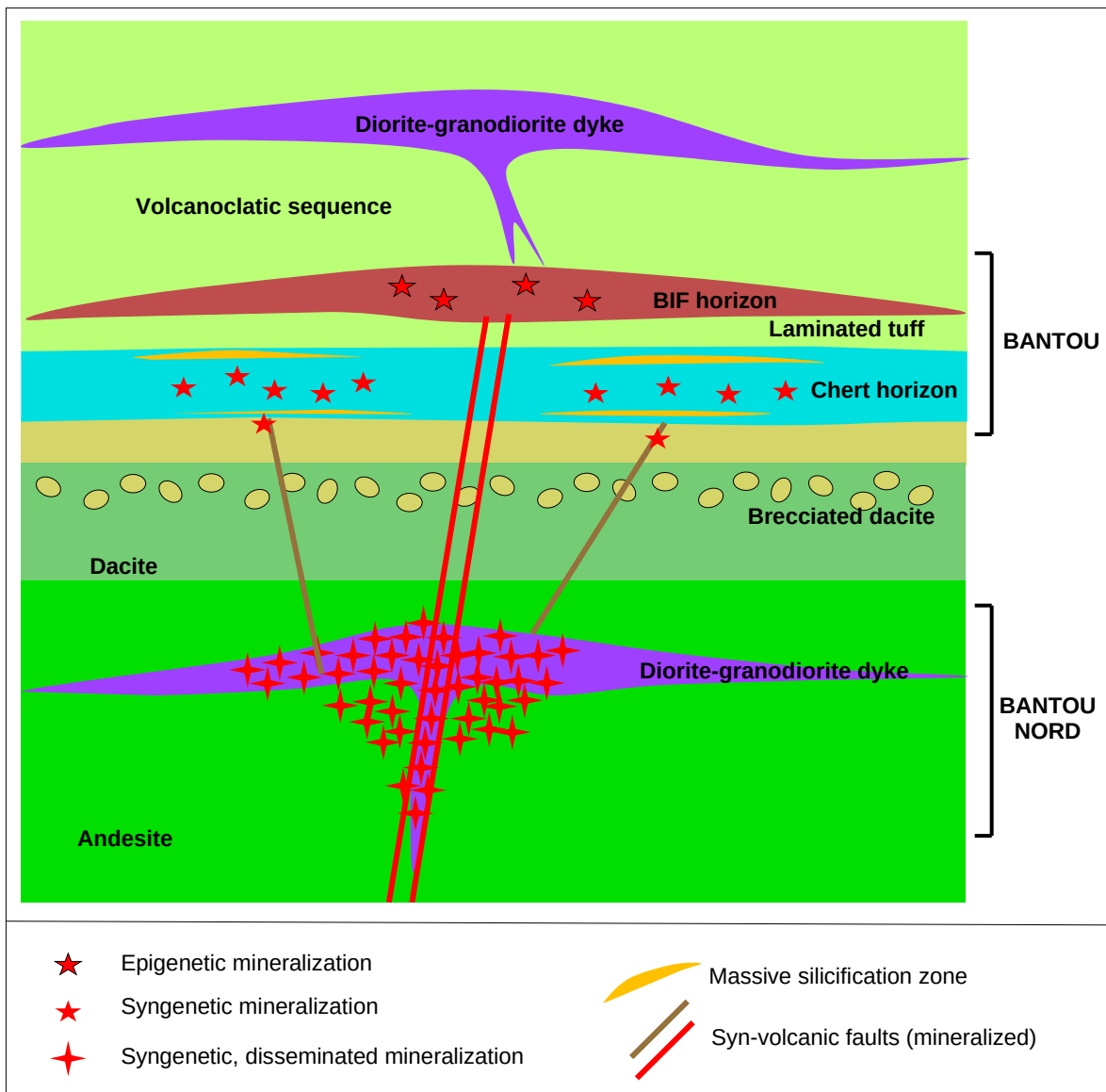
The gold deposits of the Karankasso domain have been ascribed to mesothermal, orogenic shear-hosted and hydrothermal type deposits. This mineralization type is typical of Birimian terrains. Karankasso is not the only such occurrence in the Houndé greenstone belt and others include the Wona deposit in Burkina Faso, also property of SEMAFO. Further geological characterization appears necessary to better qualify the mineralization model.

The Bantou mineralization is interpreted as of gold-rich volcanogenic type but also shows a distinctive magmatic signature. The deposit would most likely classify as straddling the syngenetic and epigenetic boundary (Figure 8.1). The mineralization bears characteristics of both suggesting that different processes have affected the rocks most likely the result of a mineralizing system that has evolved through time. The mineralization in the hangingwall indicates syngenetic processes responsible for the precipitation of gold in the BIF horizon. While the mineralization on the footwall implies epigenetic processes having caused the alteration and fracturing at the base and top of the chert horizon resulting in an influx of mineralizing fluids circulating. These are interpreted as being late hydrothermal processes post chert deposition but early in the mineralization event. According to Gaboury (2019), both mineralization types might be related to a single event with brecciation and replacement affecting the chert and deposition through hydrothermal vents in the overlying BIF.

Bantou Nord mineralization is currently believed to result from the same hydrothermal system responsible for the Bantou deposit formation (Gaboury, 2019). The mineralization observed suggests that Bantou Nord represents a lower crustal level of the same volcano-magmatic system, where dykes correspond to feeders for the hydrothermal fluids (Figure 8.1). The deposit bears many characteristics of porphyry style mineralization including lack of structural controls and no direct correlation to alteration.

Bantou Proximal and Tankoro are prospects on the Bantou district in earlier stage of exploration. The Bantou Proximal gold occurrence presents characteristics that appear similar to the mineralization described at Bantou Nord and may also be related to the same volcano-magmatic system. While, the Tankoro mineralization may be classified as mesothermal and epigenetic consisting of quartz stringers and veins crosscutting the feldspar porphyry dykes. The rheological contrast between the dykes and the deformed metasedimentary rock sequence resulted in the fracturing of the dykes during shearing events enabling fluid circulation and thus the gold-bearing quartz vein.

Figure 8.1 - Bantou And Bantou Nord Proposed Mineralization Model



9 EXPLORATION

9.1 Bantou Exploration

Regional soil and rock chip sampling programs were commenced by Orbis in 2012 and expanded to permit scale mapping and rock chip sampling during the 2013 and 2014 field seasons. Property mapping and soil sampling was completed by SEMAFO between 2017 and 2019 and the results of the mapping are discussed in Section 7.

An extensive soil campaign was initiated in 2012 and completed in 2013 using a 800 m by 100 m grid spacing and closing-in on anomalies on a tighter 200 m by 50 m mesh. Orbis defined many large-scale high order (+20 ppb Au) gold-in-soil anomalies on the Dynikongolo exploration permit, including the area surrounding the Bantou deposit, as well as on the Safia, Tankoro and Bantou West prospects. The Bantou soil anomaly covered an area of 5 km by 2 km and included multiple zones of higher-order anomalism. Many exploration targets within the Bantou perimeter and elsewhere on the permit remain to be fully tested. Figure 9.1 outlines the results of the soil sampling showing several significant anomalies surrounding the Bantou deposit.

The results of rock chip samples (>0.1 g/t Au) across the Dynikongolo license are presented in Figure 9.2. There is a good correlation between the rock chip sample anomalies and the soil geochemical results. The artisanal workings found on the project coincide with some the anomalies highlighted by both surveys.

In 2010, Airborne geophysics (magnetic and radiometric) covered the entire exploration license, Figure 9.3 presents a contoured map of the results from the first vertical derivative of the magnetic field. In addition, ground IP surveys were conducted over three separate areas at Bantou, Safia and Tankoro between November 2012 and April 2014. In 2019, SEMAFO initiated another ground IP survey to cover the gap left between the Safia and Bantou grids; Figure 9.4 presents the global contoured IP chargeability results.

Orbis excavated 5 trenches in the Bantou area between February 2011 and March 2011, each averaging approximately 66 m long. The trenches were hand dug to an approximate depth of 1.5 m and chip samples were collected at 1 m intervals along the sidewalls, close to the base of the trench. The 5 trenches returned significant anomalous gold intersections, but thicknesses rarely exceeded two metres. One significant exception was obtained in trench DYTR005, which produced an intersection of 4.00 m at 1.06 g/t Au (horizontal width; not true width) based on a lower cut-off grade of 0.5 g/t Au.

An extensive drilling program was undertaken in 2013 and included 32 reverse circulation (“RC”) drill holes and 10 diamond (“DD”) drill holes mostly near the known Bantou artisanal mining site. This program was successful in confirming the significance of the Bantou anomaly. A few additional drill holes were completed at Bantou in 2014 but the bulk of the program focused on regional exploration

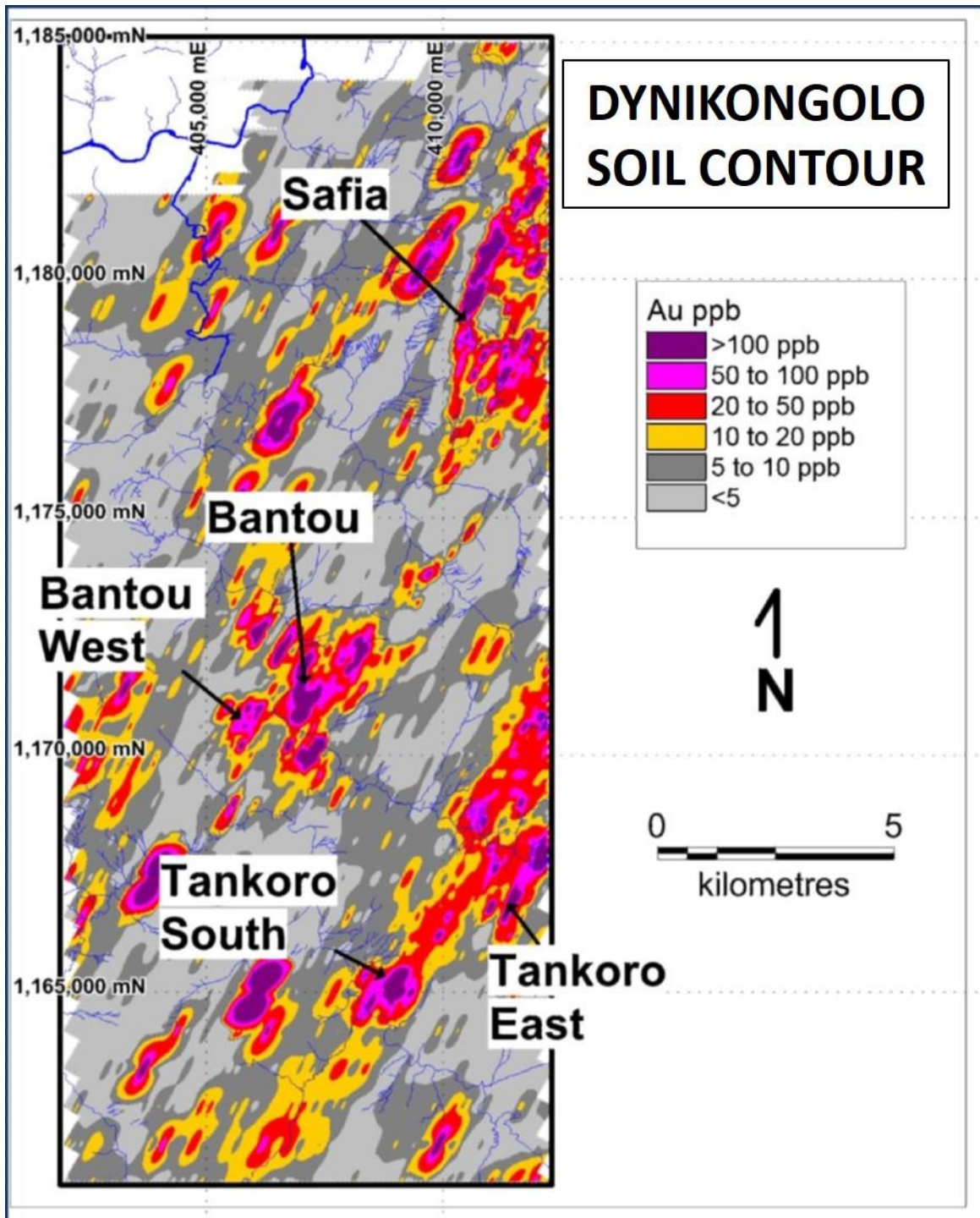
over the entire license. 4 DD holes were added by SEMAFO in the Summer 2017 before an intensive RC drilling program extending for most of 2018 and 2019.

2018 has seen some 2,659m of DD (mostly multi-purpose drilling at Bantou) and 21,619 m of RC largely on a regional exploration program around the Bantou deposit. In 2019, a total of 5,103 m of DD and 65,138 m of RC were achieved on the Dynikongolo license. Most of the DDs were carried-out on the depth extension of the Bantou zone but a few exploration holes were drilled to confirm promising results obtained during previous drilling on Bantou Nord and Bantou Proximal. The aggressive RC program was initially aimed at regional exploration but encouraging results obtained at Bantou Nord and Bantou Proximal rapidly changed the focus towards defining resources on both.

Table 9.1 - SEMAFO Drilling Summary on Dynikongolo License

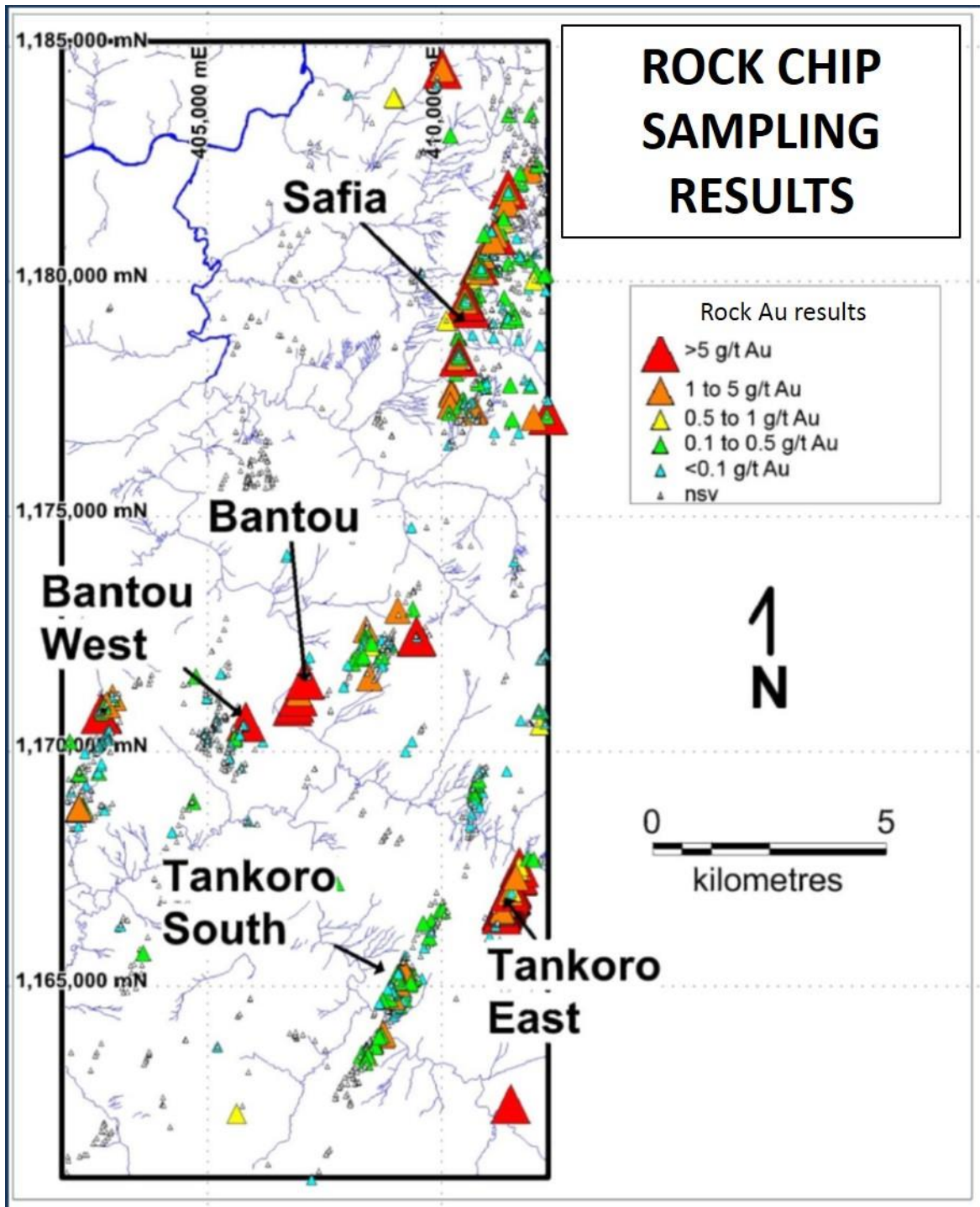
Year	DD	RC	Total
2017	1,218	0	1,218
2018	2,659	21,619	24,278
2019	5,103	65,138	70,241
Total	8,980	86,757	95,737

Figure 9.1 - Dynikongolo Exploration – Soil Anomaly



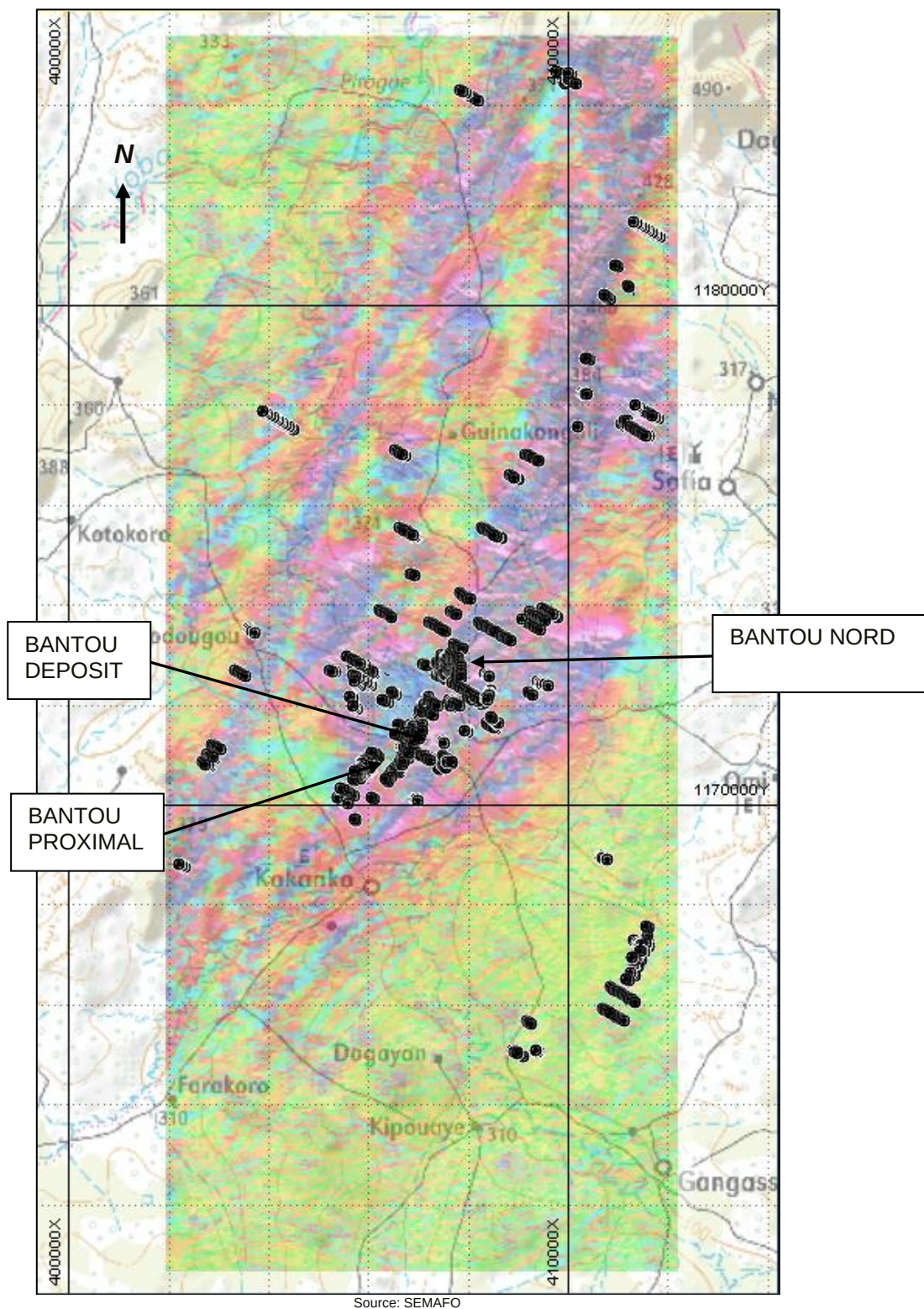
Source: SEMAFO

Figure 9.2 - Dynikongolo Exploration - Rock Chip Sample Results



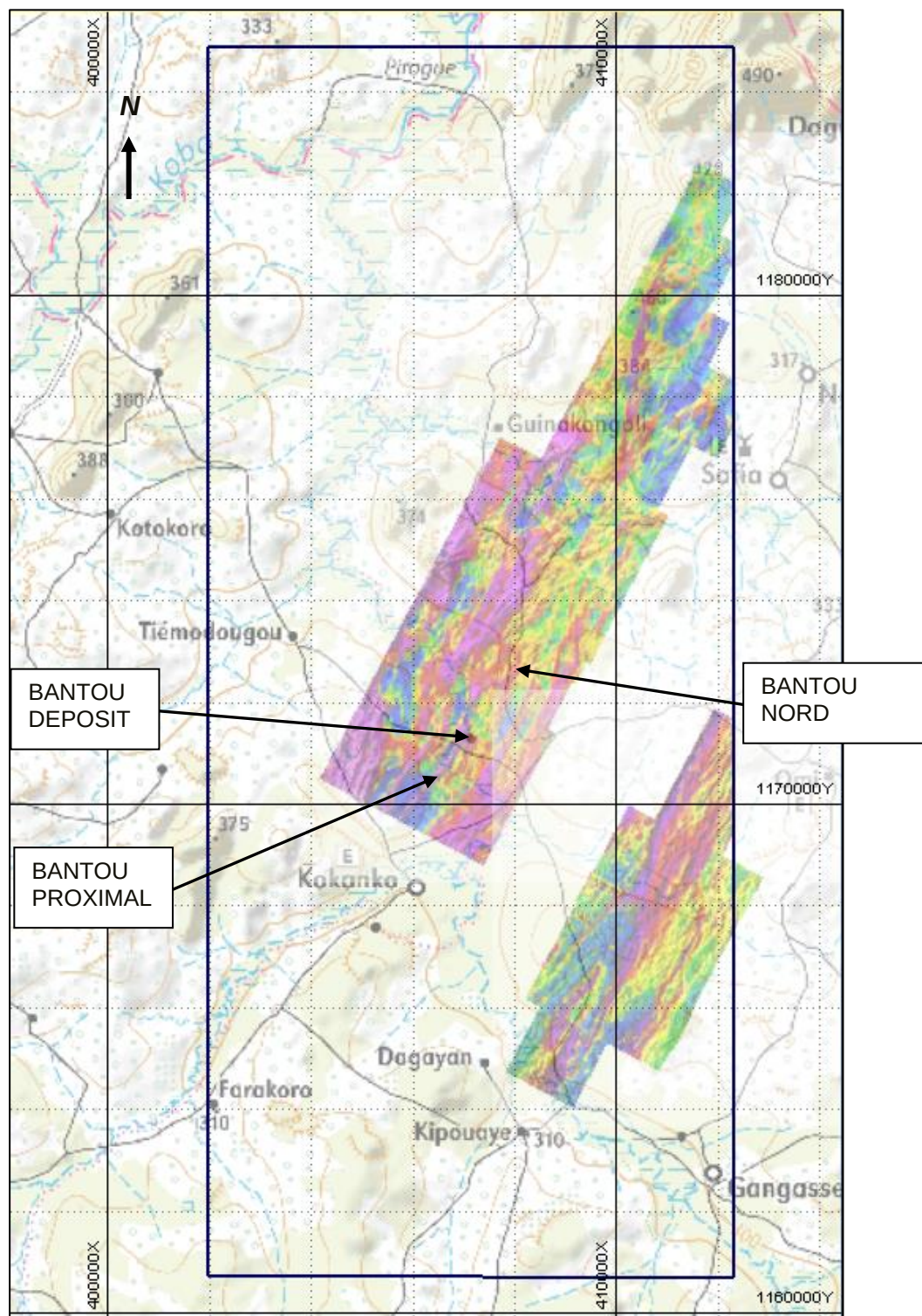
Source: SEMAFO

Figure 9.3 - Dynikongolo Exploration - Airborne Geophysics (1VD)



Source: SEMAFO

Figure 9.4 - Dynikongolo Exploration - IP Chargeability Contours



Source: SEMAFO

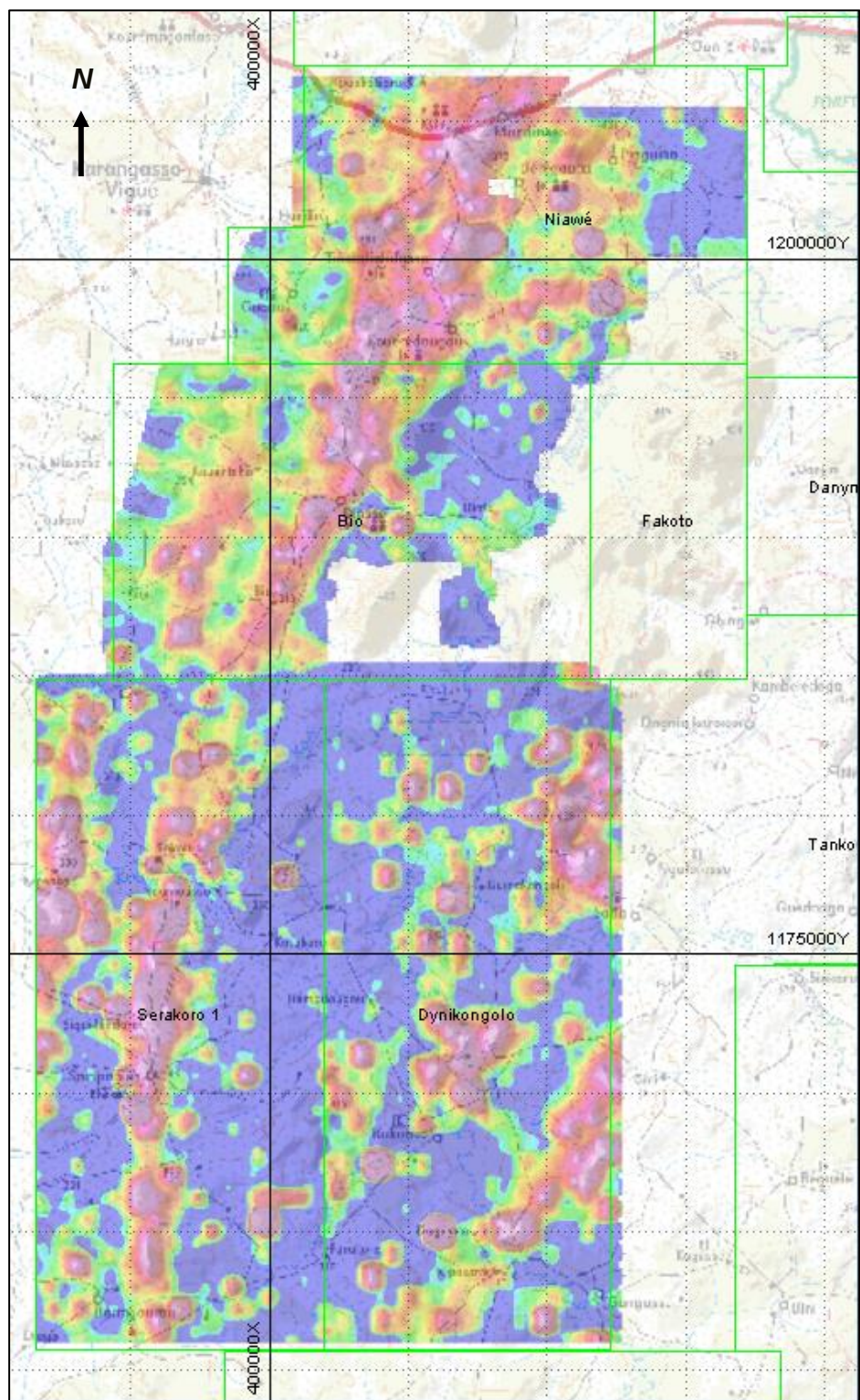
9.2 Karankasso Exploration

Regional soil and rock chip sampling programs were initially carried-out by Delta Gold between 1997 and 2001, followed by Goldbelt between 2005 and 2007 and Avion from 2010 until 2011. Sarama and Savary continued exploration between 2012 and 2016. These surveys represent a total of 25,684 samples collected, covering most of the exploration licences at a spacing of 400 m by 50 m. Figure 9.5 shows the combine soil results for the Bantou and Karankasso projects.

Airborne geophysics (magnetic and radiometric) was initiated by Avion in 2010 over the current Niawé and Bio licences. Serakoro 1 was later covered in 2015 by Savary; Figure 9.6 presents the calibrated magnetics (analytical signal) for the Bantou and Karankasso projects. In addition, some ground IP surveys were conducted between 2010 and April 2011, over the main structural trends of the Bio and Niawé licences. Savary extended the IP coverage by completing additional surveys over small areas almost yearly, Figure 9.7 presents the ground geophysics chargeability results.

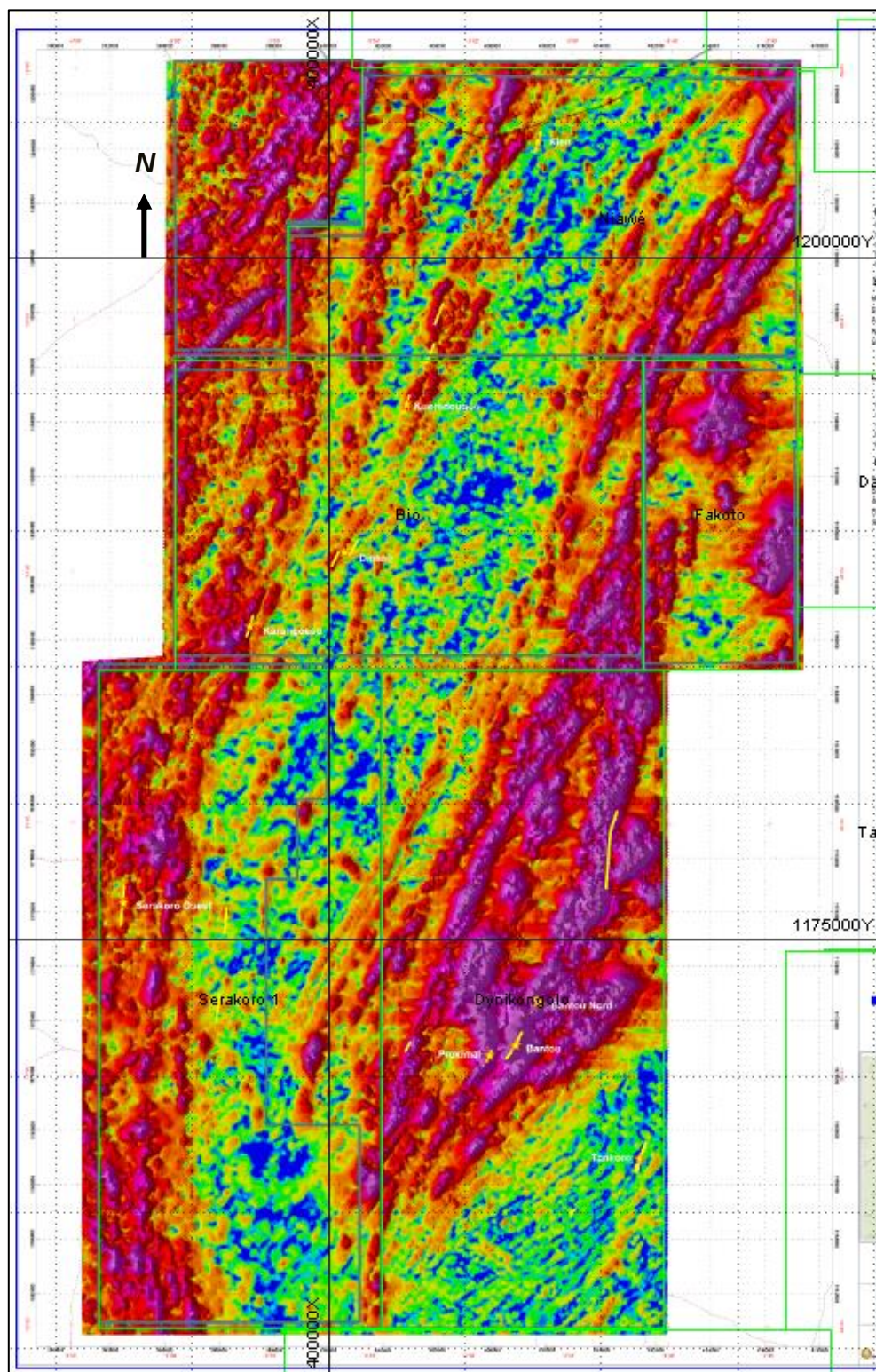
Finally, the property has been subjected to numerous drilling programs by Avion, Delta Gold, Goldbelt and Sarama prior its acquisition from Savary in April 2019. Previous owners reported a combined total of 442 rotary air blast ('RAB') holes (13,503 m), 411 AC holes (13,209 m), 242 RC holes (22,035 m) and 12 DD holes (2,130 m). Savary completed 351 AC holes for 16,823 m, 495 RC holes totalling 56,794 m and 36 DD holes for 5,912 m, first on Bio and Niawé starting in 2012 and then on Serakoro 1 from 2015. Drilling by SEMAFO from July to November 2019 added 149 RC holes totalling 17,969 m. The 2019 drilling campaign was focused on regional exploration to test new targets. The location of the drillings can be seen on Figure 9.8.

Figure 9.5 - Bantou – Karankasso Combined Soil Anomaly



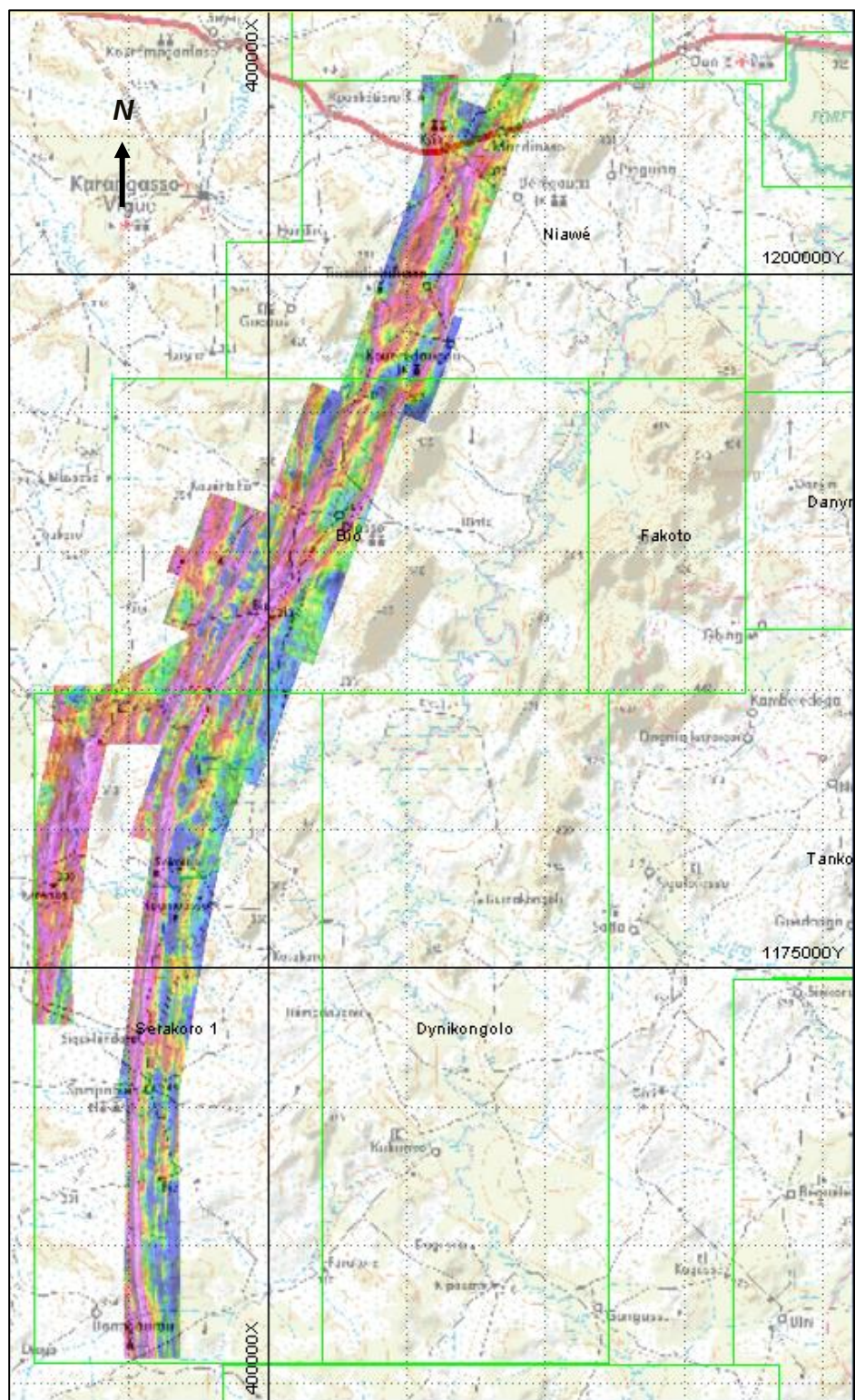
Source: SEMAFO

Figure 9.6 - Bantou – Karankasso Combined Airborne Geophysics (VD1)



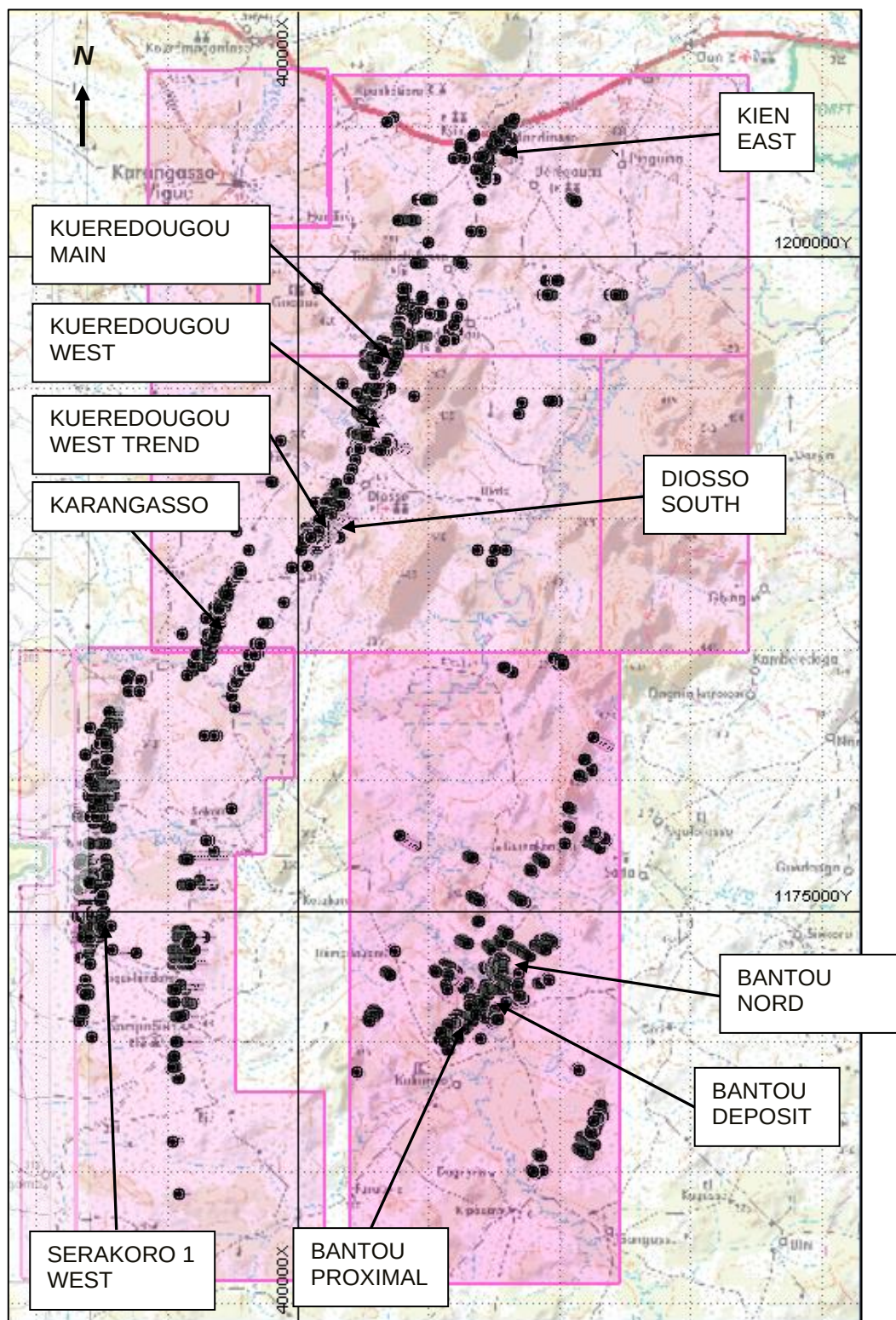
Source: SEMAFO

Figure 9.7 - Karankasso Exploration Ground Geophysics



Source: SEMAFO

Figure 9.8 - Bantou - Karankasso Drilling Location



Source: SEMAFO

10 DRILLING

Drilling at Bantou was performed using a combination of RC and diamond drilling. The diamond drill holes completed by Orbis were pre-collared using RC drilling down to approximately 20 m above the interpreted top of mineralisation. Diamond tails (HQ diameter) were used to complete the holes. These are recorded as multi-purpose (MP) holes in the database. The 2018 drill program by SEMAFO was carried out exclusively through core drilling using HQ diameter down to fresh and competent rock (average depth 75 m) and oriented NQ diameter core for the remainder of the hole.

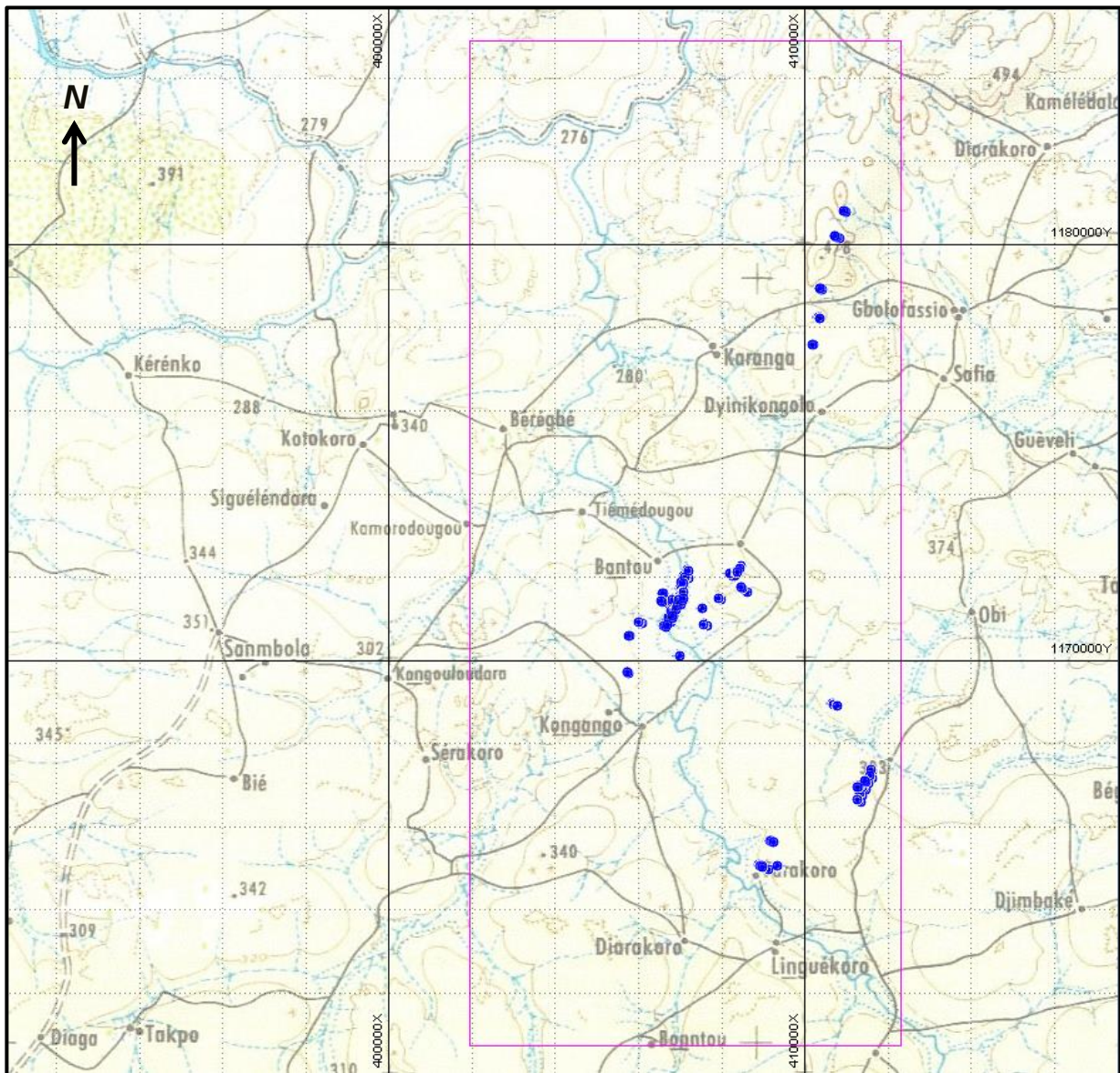
The total dataset comprises 163 drill holes, of which 66 were used for the Bantou resource estimate. Of these, 4 were drilled by SEMAFO in 2017 while the remaining holes were drilled by Orbis between 2010 and 2014. Table 10.1 summarizes the drilling information for the Dynikongolo exploration license and a collar location plan is provided in Figure 10.1.

Table 10.1 - Dynikongolo License Drill Hole Details

Drill type	Number of holes	Pre-collar total length (m)	Diamond tails total length (m)	Average total depth (m)	Total length (m)
Diamond	4	-	1,218.0	304.50	1,218.0
Multi-purpose	11	1,077.4	937.5	183.17	2,014.9
RC	148	14,626.0	-	98.82	14,626.0
Total	163	15,703.4	2,155.5	109.56	17,858.9

The 2017 drilling program by SEMAFO consisted in a small DD campaign aimed at confirming the “at depth” extension of the Bantou zone as well as to initiate metallurgical testing on the mineralized zones. The highlights of this program were the confirmation of the “at depth” continuity of the Bantou Zone and the positive metallurgical results.

Figure 10.1 – Drill Hole Collar Location Plan for the Dynikongolo License



Source: SEMAFO

10.1 Sampling Techniques

10.1.1 RC DRILL HOLE SAMPLING

For RC drilling conducted until 2013 by Orbis, material from the RC drilling was collected every 1 m into a poly bag directly from the cyclone on the drill rig. The bags were pre-labelled with the hole ID, “metre from” and “metre to”. The sample was then weighed to estimate the drilling recovery. The magnetic susceptibility was also measured using a KT-10 magnetic susceptibility meter. Three (3) readings were recorded in the field logging template and the average of the three (3) used. A small

sample of chips from each 1 m drilling run was removed with a sieve, washed and placed in labelled chip trays for future reference.

Starting from hole DYRC035 in 2014, the samples were composited to 4 m. A riffle splitter was used to split the 1 m samples to an approximate weight of 500 g resulting in an approximate 2 kg composite sample representing a 4 m interval of drilling. Sample tickets were placed into a poly bag and the hole ID and sample depth recorded on the remaining ticket stub. The riffle splitter was cleaned after each sample with a brush. Quality control samples, including reference materials, field duplicates and blanks were also submitted with these samples.

The split 2 kg samples were placed in a poly bag and transported to camp to await shipment to the SGS laboratory in Ouagadougou. The original 1 m drill bags from each hole were transported directly after splitting and arranged in order by depth drilled at the bag farm.

The assay results from the 4 m composites were used by Orbis to select 1 m intervals for re-sampling. A threshold of 0.25 g/t Au was used to flag 4 m composite samples for the second phase of assaying. The 4 m composite samples either side of the identified mineralized section were also split to bracket potential mineralization. A riffle splitter was used to split the 1 m sample to an approximate 2 kg to 3 kg sample. This was placed in a pre-labelled polythene bag. A corresponding sample ticket was placed in each bag and the hole ID and depth recorded on the stub remaining in the ticket book. The riffle splitter was cleaned after each sample. Quality control samples were also submitted with these samples.

Records of sampling show that 2013 to 2014 RC samples were collected dry 79% of the time.

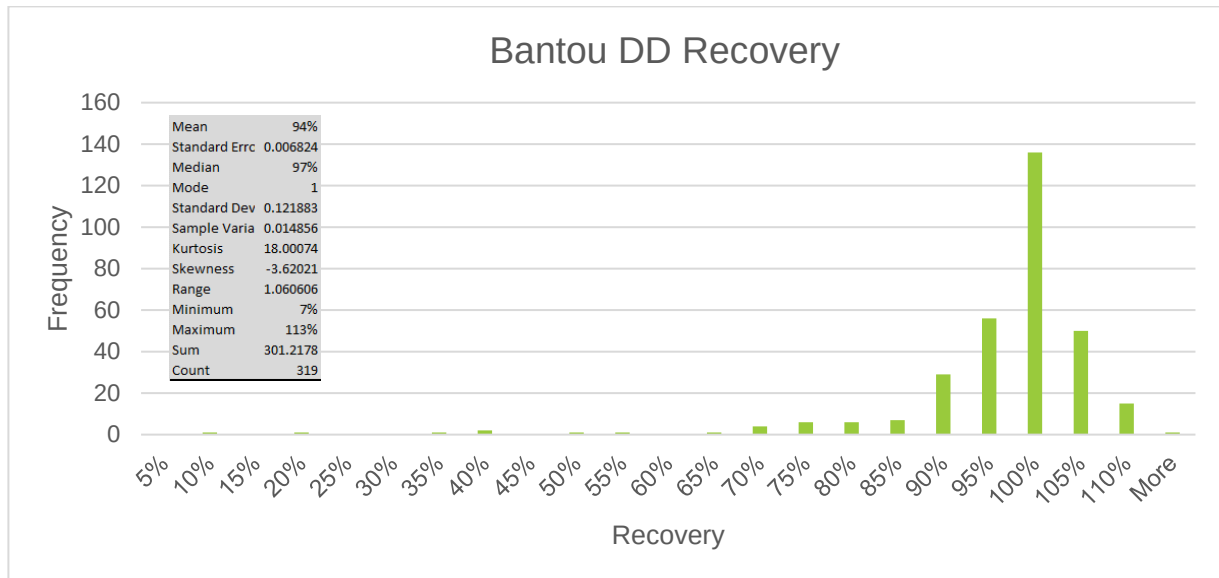
10.1.2 DIAMOND DRILL HOLE SAMPLING

Diamond core samples was either sampled on a maximum of 1.2 m intervals or to the lithological/alteration/mineralization boundaries, with a minimum sample length of 0.2 m. The core was cut in half lengthwise using a diamond saw and the sampled half core placed in a plastic bag and labelled with the hole ID and depth. A sample ticket labelled with the hole ID and depth was also placed in the bag. Quality control samples were also submitted with these samples.

10.2 Drill Sample Recovery

Drilling recovery for diamond core has been reviewed to ensure appropriate core length was recovered. The global recovery for diamond drill core is acceptable, with an average recovery of 94.4% for drill core in Figure 10.2.

Figure 10.2 - Histogram of Core Recoveries



Source: SEMAFO

Weights of RC material have not been recorded by Orbis until DYRC035, thereafter the weight of every metre interval was recorded in the field logging template. No RC recoveries have been calculated as it is theoretically irrelevant as it strictly reflects on volume and bulk density.

10.3 Logging

Drill core and RC chips were logged according to lithology, alteration, sulphide percentage, vein composition and percentage, and structures. Prior to 2013, logging was handwritten on a template and manually entered into the database; however, from 2013 all logging was entered directly into Micromine Geobank Mobile using portable tablets. The logging geologist used a library of geology codes to log in order to minimize subjectivity. RC chips were logged at the drilling site, whilst the diamond core was transported to the shed in camp for detailed logging. A set of field photographs of the core trays were also taken at this time.

10.4 Location Data and Survey Methods

10.4.1 DATA SPACING AND DISTRIBUTION

The dominant drill hole spacing at the Bantou deposit is approximately 80 m along strike (210°) by 25 m along dip (75°).

10.4.2 LOCATION OF DATA POINTS

Most of the drill hole collars, beside six (6) RC holes for which the concrete collar monument was removed by the population and the last four (4) DD holes completed by SEMAFO, were surveyed using a LEICA TCR 307 Total Station system ("DGPS"). Data from the instrument was downloaded

directly to a laptop and processed using Leica Survey Office software. Data was processed in COVADIS by the contractor.

The Total Station System has a reported accuracy of 3.54 mm horizontally and vertically. The coordinate system basis used is WGS84 Zone 31N.

For the drill hole collars that were not surveyed with the DGPS, a handheld GPS was used to determine the horizontal coordinate and the vertical coordinate have been corrected with the digital terrain model obtained from the airborne survey.

10.4.3 DOWNHOLE SURVEYS

Pre-2017 drill holes were surveyed downhole using a Reflex EZ-shot electronic surveying tool. Both the azimuth and dip were recorded at 30 m intervals (approximately) downhole, after a first measure within the PVC casing at around 6m. Magnetic susceptibility readings were taken by the Reflex EZ-shot device to indicate if the azimuth readings were being materially distorted by magnetic minerals. Few readings have been rejected or corrected based on anomalous magnetic susceptibility. Readings with apparent errors were re-taken. The Reflex EZ-shot camera has an accuracy of $\pm 0.5^\circ$ when measuring azimuth and $\pm 0.2^\circ$ when measuring dip angle.

The 2017 drill holes were all surveyed downhole using a Reflex GYRO electronic surveying tool. Both the azimuth and dip were recorded at 5 m intervals (approximately) downhole. The Reflex GYRO system is not affected by magnetic interference from either the drill rods or magnetic minerals. The accuracy of the Reflex GYRO system is reportedly $\pm 0.5^\circ$ when measuring azimuth and $\pm 0.2^\circ$ when measuring dip angle.

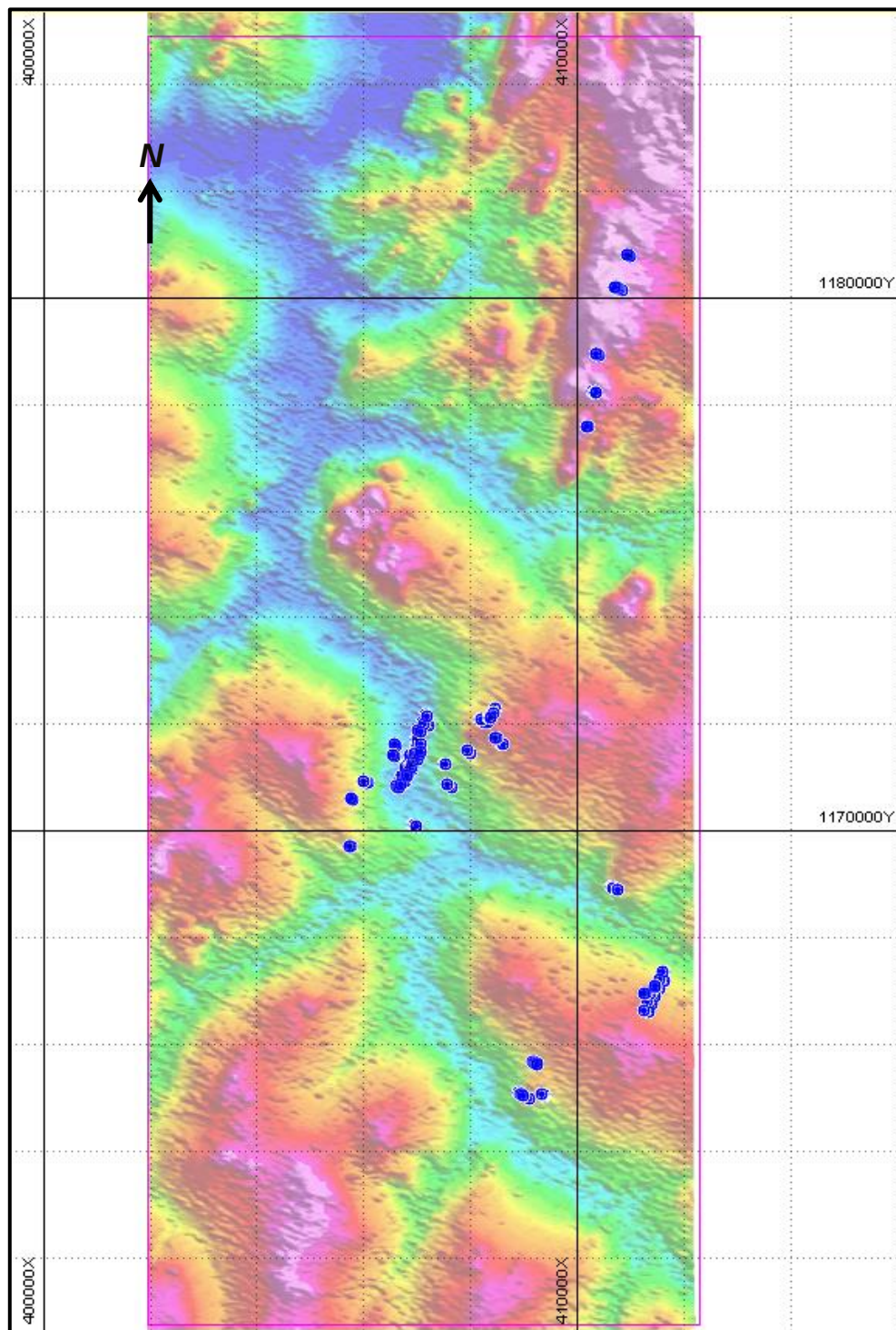
10.4.4 ORIENTATION OF DATA IN RELATION TO GEOLOGICAL STRUCTURE

As the deposit is oriented 208° with a dip of 75° , all but two (2) drill holes were drilled at an azimuth of 118° , of which 78% were drilled with a dip of -60° . The maximum dip used is -70° and the minimum -55° . Additionally, two (2) holes were drilled at an orientation of 298° , from the eastern side of the artisanal pit. All drill holes were aligned to be near-perpendicular to the orientation of the mineralization.

10.4.5 TOPOGRAPHY

A digital terrain model (DTM) for the Dynikongolo exploration license was produced by Geotech when they conducted the airborne geophysics over the property as shown in Figure 10.3. The data was digitally acquired from the helicopter electronic navigation system (DGPS) and altimeter. The accuracy reported is ± 1 m both horizontally and vertically.

Figure 10.3 - DTM produced from the 2010 Airborne Geophysical Survey



Source: SEMAFO

11 SAMPLE PREPARATION, ANALYSIS AND SECURITY

The following sections combine the information provided by Savary, the previous owner of the Karankasso JV Project, and SEMAFO, the current owner.

11.1 Sample Preparation

11.1.1 SAVARY

RC chip sampling was conducted at one metre intervals, with each interval split into two (2) 2-3 kg samples with the use of a riffle splitter. The other sample was retained at site. One sample was tagged with a unique sample number and sent for analysis. A representative portion of each interval, for each hole, is archived in RC chip trays stored at the exploration site.

HQ and NQ-sized core was logged and photographed before sampling. Sample length ranged from 0.3 m to 2.0 m depending on geological controls. The core was sawn in half lengthwise. One half of the core was sealed into a numbered plastic sample bag and submitted for analysis. The remaining half core is retained in core boxes at the secure logging facility at site.

Drill core and RC/AC samples were submitted to three different laboratories in Ouagadougou between 2012 and 2019 with 69.7% being assayed at the SGS laboratory. Approximately 3.5% of the samples were assayed at the ActLabs laboratory, and 26.8% were sent to the BIGS laboratory.

SGS operates according to ISO 17025 standards and institutes a full Quality Assurance/Quality Control (QA/QC) program consisting of insertion of blanks, standard reference material, repeats and reject splits which in total account for up to 25% of all determinations conducted.

Actlabs' Quality System is accredited to international quality standards through the International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 17025 (ISO/IEC 17025 includes ISO 9001 and ISO 9002 specifications) with CAN-P-1758 (Forensics), CAN-P-1579 (Mineral Analysis) and CAN-P-1585 (Environmental) for specific registered tests by the SCC. The accreditation program includes ongoing audits, which verify the QA system and all applicable registered test methods. Actlabs is also accredited by the National Environmental Laboratory Accreditation Conference (NELAC) program and Health Canada.

BIGS laboratory has certification under ISO-17025 which is specific for analysis laboratories (and inclusive of document controls like ISO-9001). The installation of this certification with the SANAS group was completed in 2009.

Samples received at SGS were dried, crushed to 75% or 85% passing 2 mm and then split to 1.5 kg by riffle splitter. The sample was then pulverized to 85% or 95% passing 75 µm or 106 µm.

Samples received at the Actlabs facility were crushed to 90% passing a minus 10 mesh, mechanically split to obtain a representative sample and then pulverized to at least 95% passing 105 µm. Gold content was determined by fire assay with AAS finish.

Samples received at BIGS were jaw crushed to <3mm and divided with a rotary splitter to give two portions, one of which is retained. The remainder of the crushed sample was pulverised in an LM2 pulveriser unit for enough time for the product to conform to >95% of the pulverised product having a particle size <75µm.

11.1.2 SEMAFO 2018-2019

Reverse circulation samples are collected from every 1-metre drill run in pre-labelled plastic bags directly from the cyclone on the drill rig. Approximately 30 kg to 40 kg of material is reduced using a tiered riffle splitter to obtain a subsample of about 2 kg which is packed in a poly bag. Sample tickets are placed into each poly bag, and the hole ID and sample depth recorded on the remaining ticket stub. The riffle splitter is cleaned after each sample with a brush. A second split of the same size is kept on-site for reference, and the rest of the RC-sampled material discarded. A small sample of chips from each 1-m interval is removed with a sieve, washed and placed in labelled chip trays for logging and future reference. RC samples are collected dry 99% of the time. Sample bags are then transported to SEMAFO BF mine site facilities for crushing and pulverizing. Quality control samples, including reference materials and blanks, are also submitted with these samples.

Diamond core samples are collected on a maximum of 1.2-m intervals or to the lithological/ alteration/mineralization boundaries, with a minimum sample length of 0.2 m. Core is cut in half lengthwise using a diamond saw, and the sampled half core placed in a plastic bag and labelled with the hole ID and depth. A sample ticket labelled with the hole ID and depth is also placed in the bag. Quality control samples, including reference materials and blanks are also submitted with these samples. The other half is kept for reference in core storage shelters at the exploration camp.

All samples are sent for crushing, pulverizing and assaying to:

- (i) SEMAFO mine's site laboratory facilities at Mana ("SMF BF") owned and operated by SEMAFO. The laboratory is not accredited, but regularly participates in international proficiency testing programs. The laboratory acted as referee lab for the annual check assay as part of the quality control process.
- (ii) ALS Minerals Services laboratories in Ouagadougou, Burkina Faso, or Yamoussoukro in Côte d'Ivoire. These independent laboratories do not have recognized accreditation, but are part of the ALS Group of laboratories that operates under a global quality management system under ISO 9001:2008, and participates in international proficiency testing programs.

Samples received at SMF BF are prepared, crushed, and pulverized independently from the mine grade control samples, on a different set of equipment in a separate building. The samples are first

registered, ordered and weighed before being dried for between 8 and 10 h depending on moisture. Every ± 2 kg sample is crushed to 70% passing 2 mm (-10 mesh) and quartered to get a first 250-g split of crushed material. The remaining 1.75 kg is returned to the Bana exploration camp and core shack near Nyafé for reference. The 250-g riffle split is pulverized to 85% passing 75 μ m (200 mesh) and quartered to get a 50-g split. The remaining pulp (± 200 g) is returned to the Bana exploration camp. All preparation equipment is flushed with barren material prior to the commencement of each run. Cleaning of equipment (e.g., crushers and pulverisers) is by compressed air between each sample.

RC and core samples received at ALS-OU are first registered, ordered and then weighed. Samples are oven-dried at a nominal 100°C for up to 12 hours depending on the material. The whole sample is crushed to 70% passing 2 mm. One in 50 samples is screened to ensure 70% passing 2 mm. The crushed sample is split for pulverization using a rotary or riffle splitter. The remaining material is stored as a coarse reject. A 250g split of the 2mm material is then pulverized to 85% passing 75 μ m in a bowl and puck pulveriser. One in 20 samples is screened to ensure 85%, passing 75 μ m. The 250 g sub-sample is collected (by scooping) and conditioned for assay. The remaining material (pulp reject) is returned to the original bag (or a plastic bag if the original is not suitable) and stored. All preparation equipment is flushed with barren material prior to the commencement of the job. Cleaning of equipment (e.g. crushers and pulverisers) is by compressed air and carried out between each sample.

11.2 Analytical Techniques

11.2.1 SAVARY - PRIMARY ANALYSIS

Most samples submitted to SGS in Ouagadougou were analysed for gold using fire assay with the gold content determined by Atomic Absorption Spectroscopy ("AAS"). The samples were assayed by fusing a 50 g sample with a litharge-based flux followed by cupellation, dissolving the prill in aqua regia and determining the gold content by AAS. Samples returning gold values greater than 3 g/t Au were re-analyzed by fire assay with a gravimetric finish. Samples returning gold values greater than 10 g/t Au were re-analyzed by metallic screening. In 2012, some of the samples were analyzed using fire assay, solvent extraction, with an AAS finish, which was a trace-grade analytical technique.

Samples submitted to ActLabs were analyzed for gold using fire assay with an AAS finish. A 50 g sub-sample was mixed with flux and silver as a collector in a fire clay crucible. The mixture was preheated at 850°C, intermediate at 950°C and finish 1060°C. The lead button cupelled at 950°C to recover the silver (dore bead) and gold. The entire dore bead was dissolved in aqua regia and the gold content was determined by AAS.

For samples submitted to BIGS in Ouagadougou, a 50 g sub-sample was mixed with a litharge-based flux and fused at 1050°C. The resultant lead button was cupelled at 950°C and the residual

precious metal prill was dissolved in aqua regia and diluted to a known volume. The gold concentration of the solution was determined by flame AAS.

The methods employed at each laboratory are listed in Table 11.1.

Table 11.1 - List of Methods by Laboratory

Lab	Methods	Results
SGS	FAE505 = 50 g fire assay, solvent extraction, AA finish, trace-grade FAS505 = 50 g fire assay, AA finish, ore-grade FAG505 = 50 g fire assay, GRAV finish FAS30K = 500 g metallics screening, fire assay, ICP/AA/GRAV finish	Au = original Au(R) = re-run of original sample (pulp) Au(S) = prep duplicate
ActLabs	FA-AA = 50 g fire assay, AA finish	Au = original AuRep = re-run of original sample (pulp) AuDup = prep duplicate
BIGS	FPF-500 = 50 g fire assay, AA finish	Au = original AuR = re-run of original sample (pulp) AuPR = prep duplicate

It is of DRA/Met-Chem's opinion that the analytical techniques are appropriate.

11.2.2 SEMAFO – PRIMARY ANALYSIS

Samples submitted at SMF BF are analysed using 50-g fire assay procedure with an AA finish with a detection lower detection limit of 0.01 ppm gold. Samples grading over 15 ppm gold are re-assayed using a 50-g fire assay procedure with gravimetric finish.

Gold content was determined at the ALS laboratories in Ouagadougou, Burkina Faso, or Yamoussoukro in Côte d'Ivoire using a standard 50g fire assay procedure with atomic absorption by spectrometry ("AAS") finish with a detection lower detection limit of 0.01ppm gold and upper detection limit of 100ppm gold. A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6mg of gold-free silver and then cupelled to yield a precious metal bead. The bead is digested in 0.5ml dilute nitric acid in the microwave oven. 0.5ml concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 10ml with de-mineralized water, and analysed by atomic absorption spectroscopy against matrix-matched standards.

11.3 Quality of Assay Data and Laboratory Tests

11.3.1 SAVARY

11.3.1.1 Internal Laboratory Quality Assurance and Quality Control

SGS undertake an internal QA/QC process involving standards, blanks and duplicates.

At SGS, each analysis batch consists of 84 samples, of which 10 are QC samples, comprising four (4) reference materials, two (2) duplicates (taken before crushing), two (2) pulp duplicates, one (1) blank (pulp) and one (1) coarse blank. The acceptance criteria for QC samples are statistically controlled and control charts are used to monitor accuracy and precision. Data that falls outside the control limits are investigated and repeated as necessary. Additionally, up to 5% of the pulps and/or coarse duplicates were analysed.

ActLabs operates under a quality system that covers all aspects of operation from analysis to transportation and storage and includes regular external audits. The laboratory inserts up to 10% control samples that are used to monitor accuracy and contamination. It also includes the analysis of preparation and pulp duplicates.

At BIGS, laboratory control samples were inserted every 10 to 15 samples and several samples were analysed as preparation or pulp duplicates. Pulps and coarse duplicates are also analysed as part of the regular routine.

11.3.1.2 Assay Reports

All assay reports from the primary assay laboratories (SGS, BIGS, and ActLabs) were submitted to Savary and its consultants as digital data files and as PDF certificates.

Between 2012 and 2019, a total of 66,127 samples were submitted to the laboratories: 46,080 (69.7%) samples were sent to SGS (2012 – 2015); 2,299 (3.5%) samples were sent to ActLabs (2015); and 17,478 (26.8%) samples were sent to BIGS (2018 – 2019). These counts include control samples and field duplicates.

11.3.1.3 Certified Reference Materials

Between 2012 and 2019, 24 different Certified Reference Materials (“CRMs”) were inserted in the sampling sequence by Savary. The CRMs (pulps) were purchased from CDN Resources Laboratories Ltd (“CDN Labs”) and Geostats Pty Ltd (“Geostats”). The samples were inserted at a rate of one in every 20 samples in 2012, and one in forty to sixty after. Details of the standards are given in Table 11.2. The CRMs ranged from 0.054 g/t Au up to 20.23 g/t Au.

Table 11.2 - CRM Details

CRM ID	Source	Mean (g/t Au)	SD (g/t Au)
G310-6	Geostats	0.650	0.040
G995-1	Geostats	2.750	0.180
GLG901-3	Geostats	0.054	0.007
CDN-GS-P1A	CDN Labs	0.143	0.004
CDN-GS-P4C	CDN Labs	0.362	0.018
CDN-GS-P4E	CDN Labs	0.493	0.029
CDN-GS-P5D	CDN Labs	0.643	0.026
CDN-GS-P5E	CDN Labs	0.655	0.031
CDN-GS-P7J	CDN Labs	0.722	0.036
CDN-GS-P8E	CDN Labs	0.827	0.039
CDN-GS-1K	CDN Labs	0.867	0.049
CDN-GS-1P5R	CDN Labs	1.81	0.07
CDN-GS-1T	CDN Labs	1.08	0.05
CDN-GS-2R	CDN Labs	2.03	0.07
CDN-GS-2S	CDN Labs	2.38	0.08
CDN-GS-3L	CDN Labs	3.18	0.11
CDN-GS-3T	CDN Labs	3.05	0.095
CDN-GS-4E	CDN Labs	4.19	0.095
CDN-GS-5K	CDN Labs	3.84	0.14
CDN-GS-5M	CDN Labs	3.91	0.3
CDN-GS-5Q	CDN Labs	5.64	0.175
CDN-GS-10E	CDN Labs	9.59	0.265
CDN-GS-10F	CDN Labs	10.3	0.19
CDN-GS-20B	CDN Labs	20.23	0.545

During the exploration phases the results were vetted by Savary or its consultants periodically using various techniques in Microsoft Excel. If a CRM result fell outside three (3) standard deviations from the mean, then it was investigated. If the adjacent samples were insignificant, then the batch results were accepted into the database as is. Otherwise, the batch was reanalysed, the results re-vetted, and the accepted results were passed into the project database.

For the purposes of this Report, the CRM results currently in the database were evaluated using a Microsoft Access query that flagged results as PASS or FAIL. These results were checked against adjacent samples to ensure their suitability.

Although the standards are not matrix matched, DRA/Met-Chem considers them appropriate for assessing laboratory analytical accuracy with respect to Bantou mineralization.

a. CRM Results – 2012 to 2017 SGS

Between 2012 and 2017, a total of 1,445 CRM samples were submitted with primary samples to the SGS laboratory in Ouagadougou (Table 11.3, Figure 11.1). It is assumed by DRA/Met-Chem that following a strict QA/QC procedures; the results were vetted, sample mix-ups were resolved, and results that were true failures in area of significant mineralization were re-analysed.

Table 11.3 - 2012 - 2017 CRM results assayed at SGS

CRMID	Certified		Count of Samples by Year						Total
	Mean	SD	2012	2013	2014	2015	2016	2017	Count
G310-6	0.650	0.040	62						62
G995-1	2.750	0.180	29		3				32
GLG901-3	0.054	0.007	22						22
CDN-GS-P4C	0.362	0.018						75	75
CDN-GS-P4E	0.493	0.029						13	13
CDN-GS-P5D	0.643	0.026					48	58	106
CDN-GS-P7J	0.722	0.036						45	45
CDN-GS-P8E	0.827	0.039					34	72	106
CDN-GS-1K	0.867	0.049		43	39	193		49	324
CDN-GS-2R	2.030	0.070						90	90
CDN-GS-3L	3.180	0.110					40	73	113
CDN-GS-5K	3.840	0.140		41	22	94			157
CDN-GS-5M	3.910	0.300					4	127	131
CDN-GS-5Q	5.640	0.175						19	19
CDN-GS-10F	10.300	0.190						49	49
CDN-GS-20B	20.230	0.545		5		96			101
All									1,445

Figure 11.1 - Individual CRM Control Chart Results Assayed at SGS





Source: Semafo

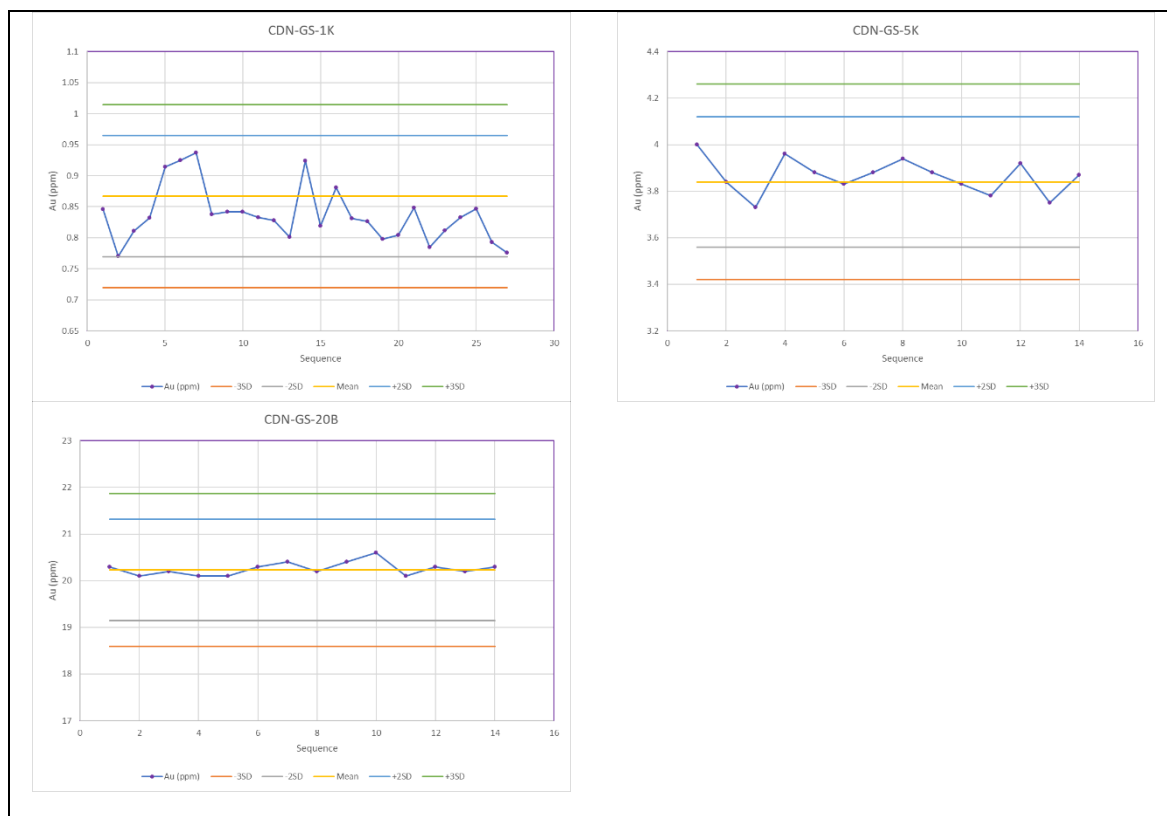
b. CRM Results – 2015 ActLabs

In 2015, a total of 55 CRM samples (Table 11.4 and Figure 11.2) were submitted with primary samples to the ActLabs laboratory in Ouagadougou. Results were vetted and sample mix-ups were resolved. There were no analytical failures.

Table 11.4 - 2015 CRM Results Assayed at ActLabs

CRMID	Certified		Count of Samples by Year						Total Count
	Mean	SD	2012	2013	2014	2015	2016	2017	
CDN-GS-1K	0.867	0.049				27			27
CDN-GS-5K	3.840	0.140				14			14
CDN-GS-20B	20.230	0.545				14			14
All									55

Figure 11.2 - Individual CRM Control Chart Results Assayed at ActLabs



Source: Semafo

The results of the CRM assays for the 2015 drilling show reasonable analytical accuracy is being achieved by both SGS and ALS for all grade ranges, with no evidence for analytical bias.

c. CRM Results – 2018 to 2019 BIGS

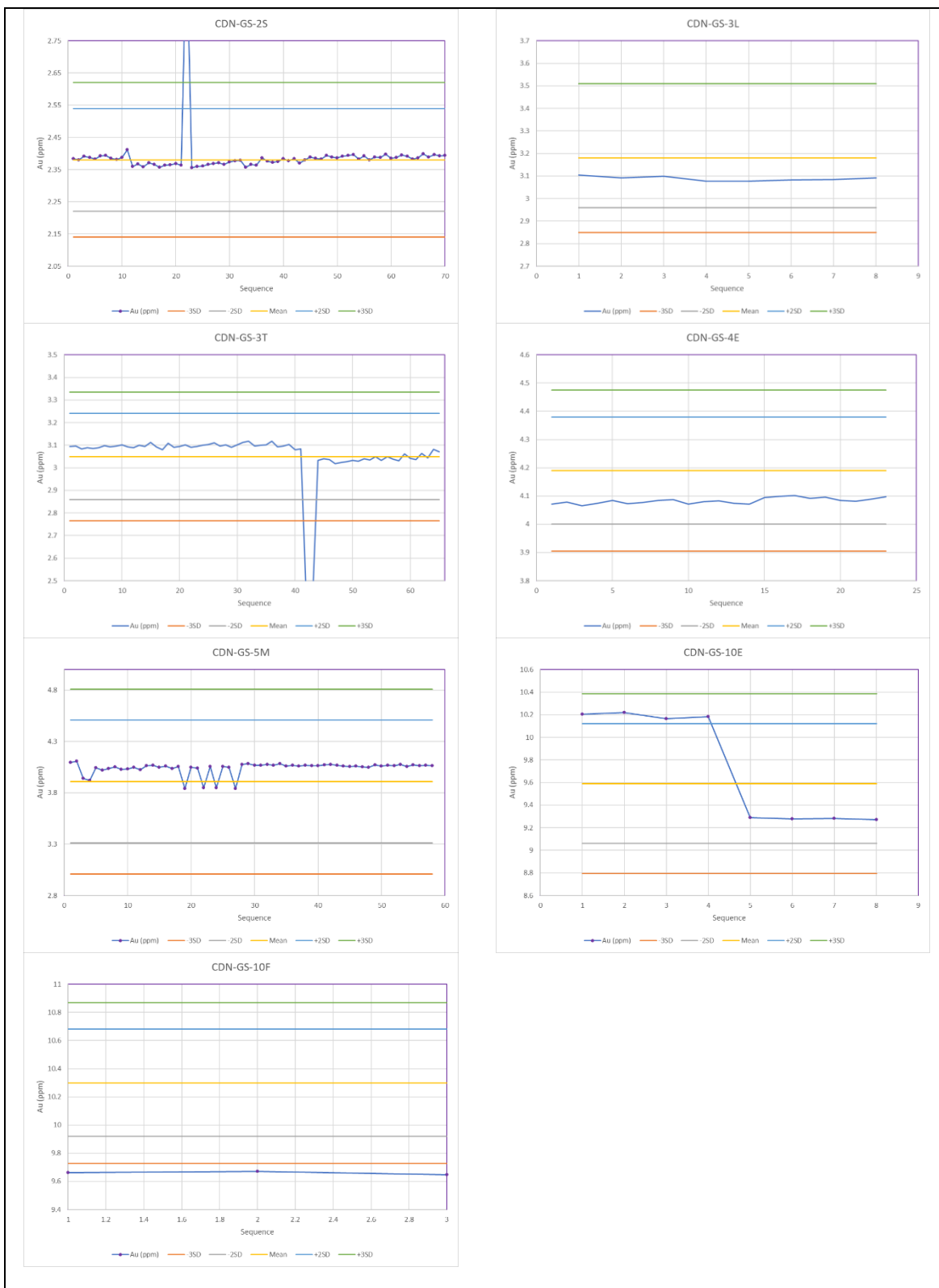
In 2018 and 2019, a total of 548 CRM samples (Table 11.5 and Figure 11.3) were submitted with primary samples to the BIGS laboratory in Ouagadougou. It is assumed by DRA/Met-Chem that following a strict QA/QC procedures; the results were vetted and sample mix-ups were resolved. Analytical failures were investigated, and the samples were re-analysed when appropriate.

Table 11.5 - 2012 - 2017 CRM results assayed at BIGS

CRMID	Certified		Count of Samples by Year		Total Count
	Mean	SD	2018	2019	
CDN-GS-P1A	0.143	0.004	33	22	55
CDN-GS-P4C	0.362	0.018	39		39
CDN-GS-P4E	0.493	0.029	73		73
CDN-GS-P5D	0.643	0.026	1		1
CDN-GS-P5E	0.655	0.031		2	23
CDN-GS-P7J	0.722	0.036	7		7
CDN-GS-P8E	0.827	0.039	1		1
CDN-GS-1K	0.867	0.049	13		13
CDN-GS-1P5R	1.81	0.07		20	20
CDN-GS-1T	1.08	0.05	49		49
CDN-GS-2R	2.03	0.07	28		28
CDN-GS-2S	2.38	0.08	45	25	70
CDN-GS-3L	3.18	0.11	8		8
CDN-GS-3T	3.05	0.095	43	22	65
CDN-GS-4E	4.19	0.095		23	23
CDN-GS-5M	3.91	0.3	29	29	58
CDN-GS-5Q	5.64	0.175	2		2
CDN-GS-10E	9.59	0.265		8	8
CDN-GS-10F	10.3	0.19	3		3
All					548

Figure 11.3 - Individual CRM Control Chart Results Assayed at BIGS





Source: Semafo

11.3.1.4 Blanks

Blanks samples were inserted into the sample stream at a rate of one in fifty samples for 2012, and at a rate of one in forty samples after 2013. The blank material was locally-sourced from Paleozoic non-mineralized sandstone.

The results were reviewed by Savary or its consultants periodically during the active drilling campaigns. A warning was triggered when the result for a sample was >0.08 ppm. If a sample was in a region of insignificant mineralization, then the result was passed into the database as is. Otherwise, if contamination was suspected, or if the warning occurred in areas of significant mineralization, then the batch was re-analysed.

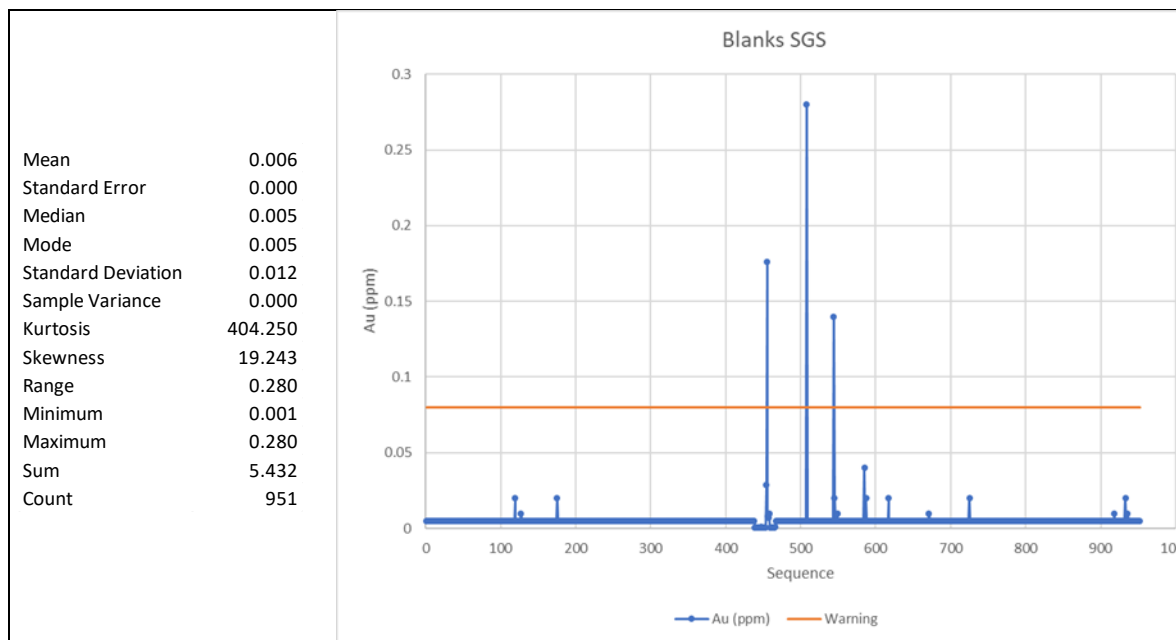
For the purposes of this Report, the results currently in the database were evaluated using an Access query that flagged samples as WARNING or PASS.

a. Blanks Results – 2012 to 2017 SGS

Between 2012 and 2017, 951 blank samples were submitted with the primary samples to SGS. The WARNING results still in the database have been referred to Savary for investigation. The results are shown in Figure 11.4.

Those batches were rerun and validated. The SGS results from the blanks for the 2012 to 2017 drilling data show no evidence for systematic contamination of samples at SGS during sample preparation or assaying.

Figure 11.4 - Blank Control Chart Results Assayed at SGS

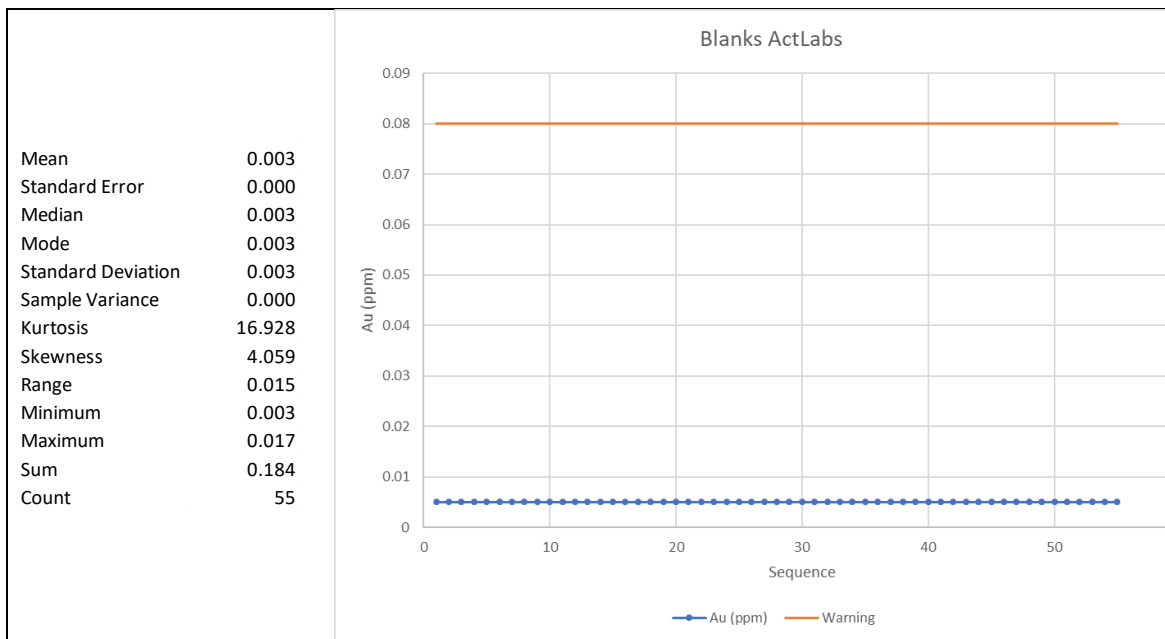


Source: Semafo

b. Blanks Results – 2015 ActLabs

In 2015, 55 blank samples were sent to ActLabs in sequences with the primary samples. There are no existing warnings and the results suggest that there was no significant contamination of samples during sample preparation and assaying. The results are shown in Figure 11.5.

Figure 11.5 - Blank Control Chart Results Assayed at ActLabs

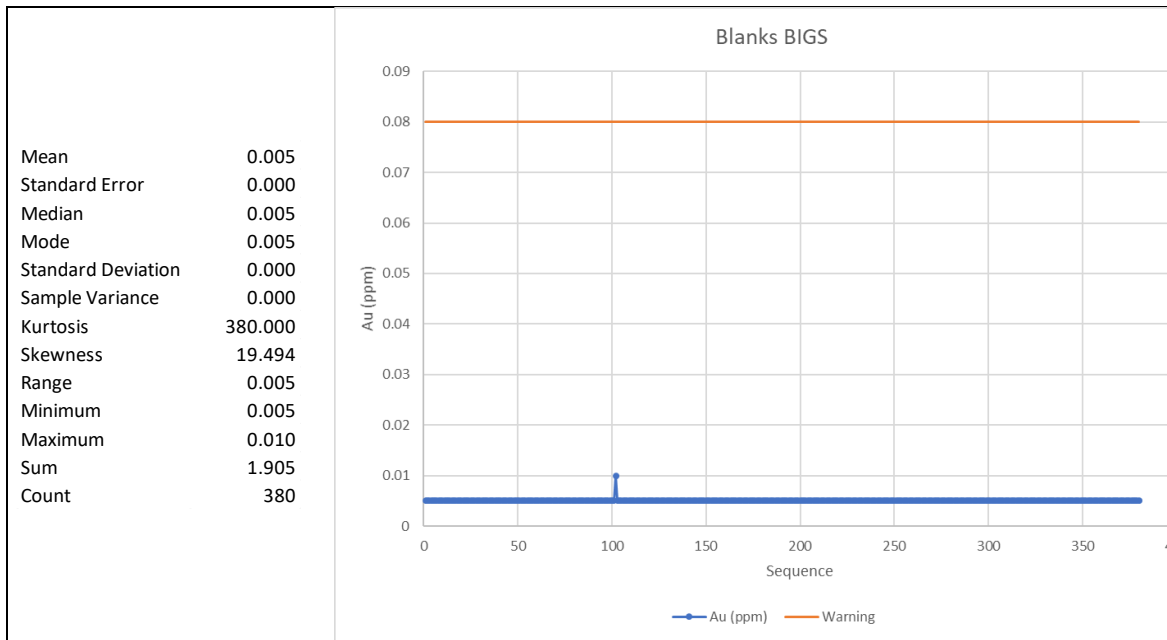


Source: SEMAFO

c. Blanks Results – 2018 to 2019 BIGS

In 2018 and 2019, 380 blank samples were sent to BIGS in sequence with the primary samples. There are no existing warnings and the results suggest that there was no significant contamination of samples during sample preparation and assaying. The results are shown in Figure 11.6.

Figure 11.6 - Blank Control Chart Results Assayed at BIGS



Source: SEMAFO

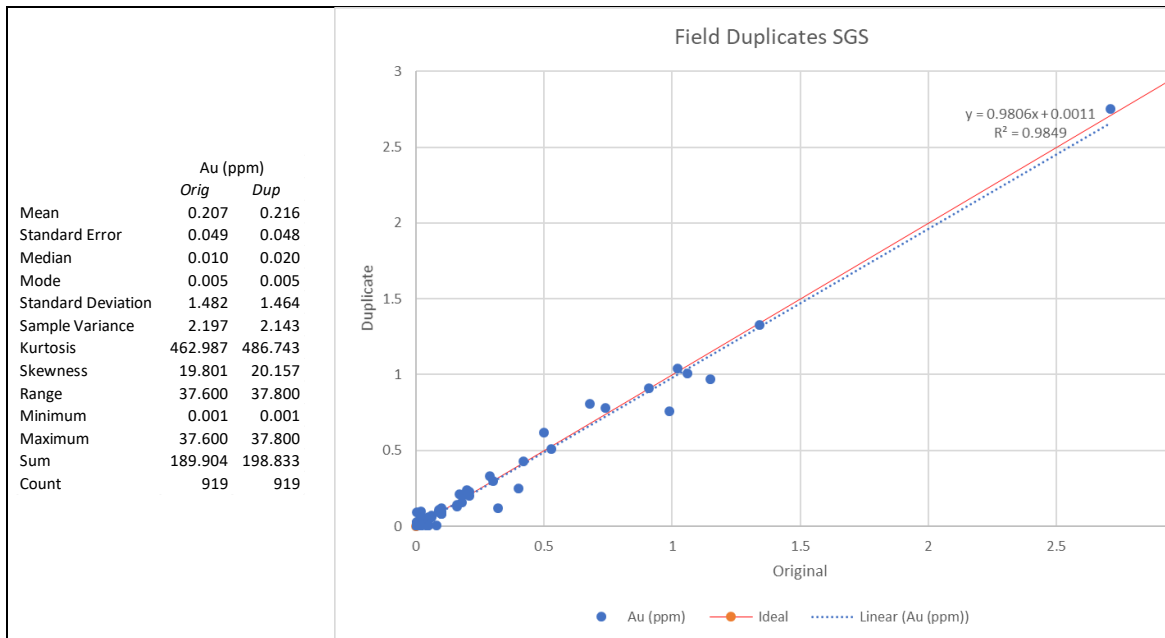
11.3.1.5 Field Duplicates

a. Field Duplicate Results – 2012 to 2017 SGS

The results for 919 duplicate pairs of RC and core samples submitted to SGS between 2012 and 2017 were plotted on an XY plot (Figure 11.7). The correlation coefficient (R^2) measures the relationship between the movement of two samples, with a value of 1.0 considered ideal correlation. For SGS, the R^2 value of 0.98 suggest good agreement between the original and duplicate sample. There is good and even scatter about the ideal trendline, and there is a slight bias toward the original result.

However, 46.2% of the results (based on original sample) are less than detection, and 80.8% of the results have <0.1 ppm Au; therefore, there is not good representation of pairs with higher gold concentrations.

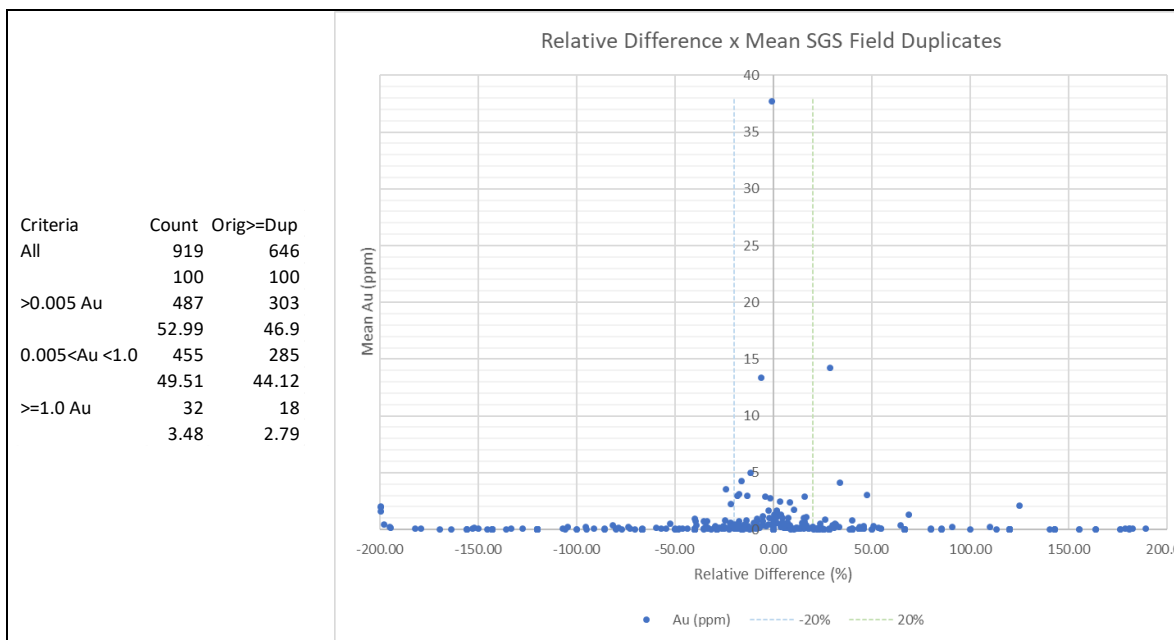
Figure 11.7 - Original vs. Field Duplicate – XY Plot SGS



Source: Semafo

A percent relative difference versus mean plot was used to assess the precision and bias of the field duplicates. This plot allows the precision and bias to be assessed in each grade range. Figure 11.8 indicates no significant bias exists between the sample populations at different grade ranges and that the precision is reasonable.

Figure 11.8 - Original vs. Field Duplicate – Relative Difference vs Mean Plot (SGS)



Source: SEMAFO

A variety of graphical techniques, including absolute percent difference vs mean (rolling average), and mean versus half percent absolute difference charts were used to try to determine the precision on the field duplicate. There were too few pairs for a meaning Thompson-Howarth chart.

It is not possible to determine any meaningful degree of precision for these samples because half of the results are near or less than the detection limit, and most of the samples are <0.1 ppm Au. However, while field duplicates generally have lower precisions than duplicates from rejects or pulps, RC chips, which comprise most of the samples, are more homogeneous than core.

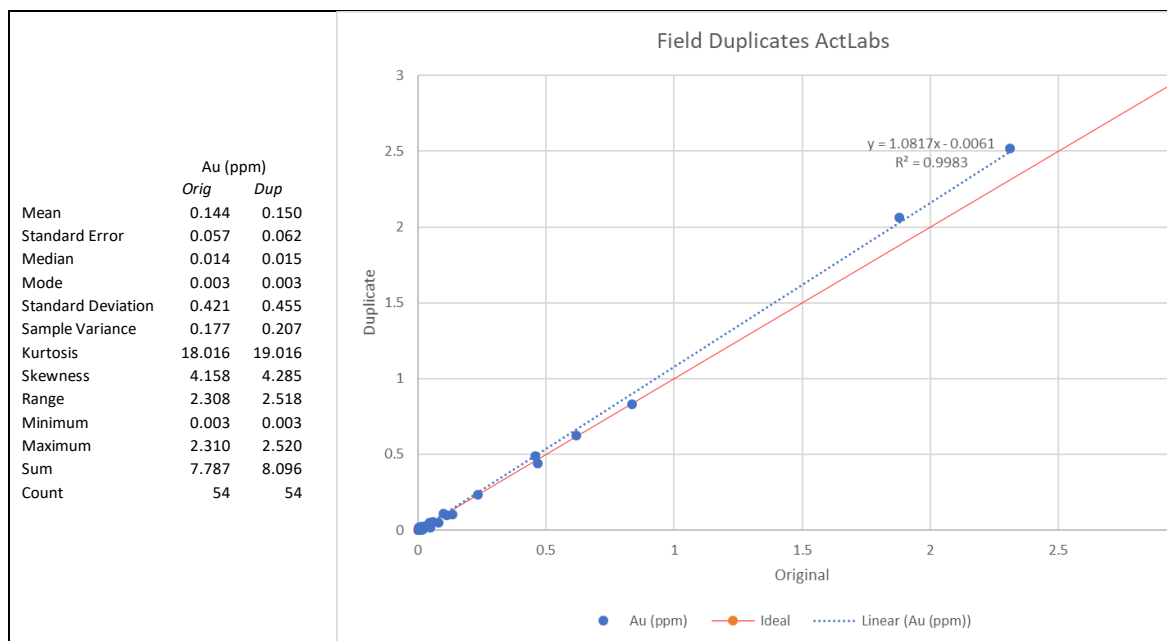
Overall, the populations compare reasonably well, with few outliers at higher grades. DRA/Met-Chem considers there is no evidence to suggest that the primary sample varies significantly from the duplicate sample and that reasonable precision was achieved during the sampling and assaying process for the RC and core samples.

b. Field Duplicate Results – 2015 ActLabs

The results for 54 duplicate pairs of RC and core samples submitted to ActLabs in 2015 were plotted on an XY plot (Figure 11.9). For ActLabs, the R^2 value of 0.998 suggests excellent agreement between the original and duplicate sample.

There are too few duplicate pairs to meaningfully determine precision.

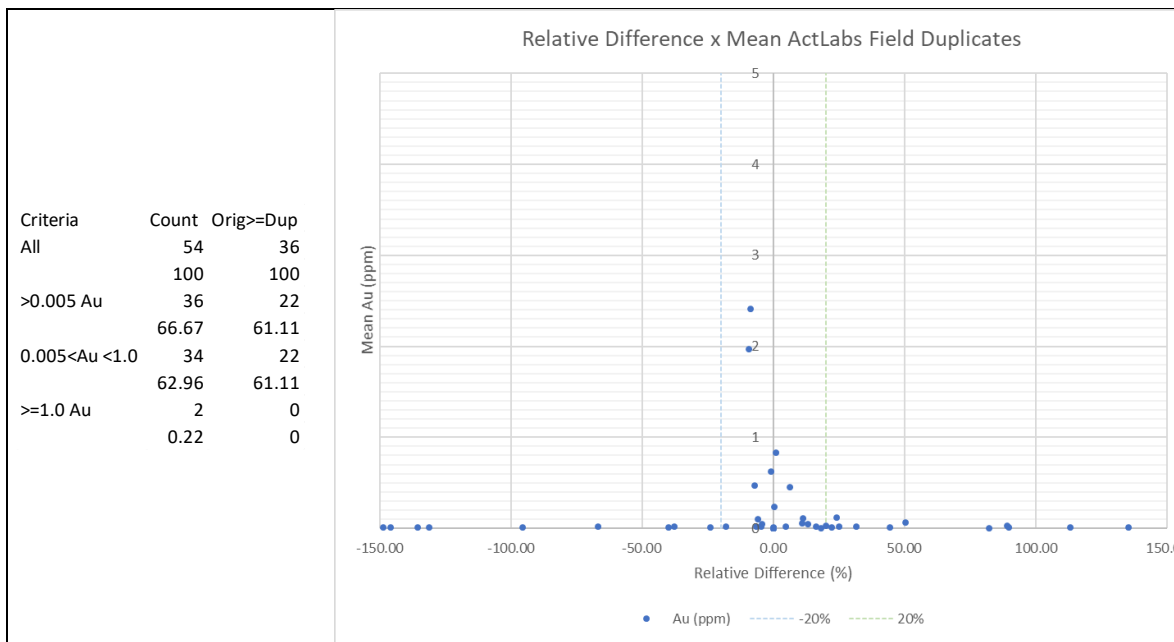
Figure 11.9 - Original vs. Field Duplicate – XY Plot ActLabs



Source: Semafo

A percent relative difference versus mean plot was used to assess the precision and bias of the field duplicates. This plot allows the precision and bias to be assessed in each grade range. Figure 11.10 indicates no significant bias exists between the sample populations at different grade ranges and that the precision is reasonable.

Figure 11.10 - Original vs. Field Duplicate – Relative Difference vs Mean Plot (ActLabs)



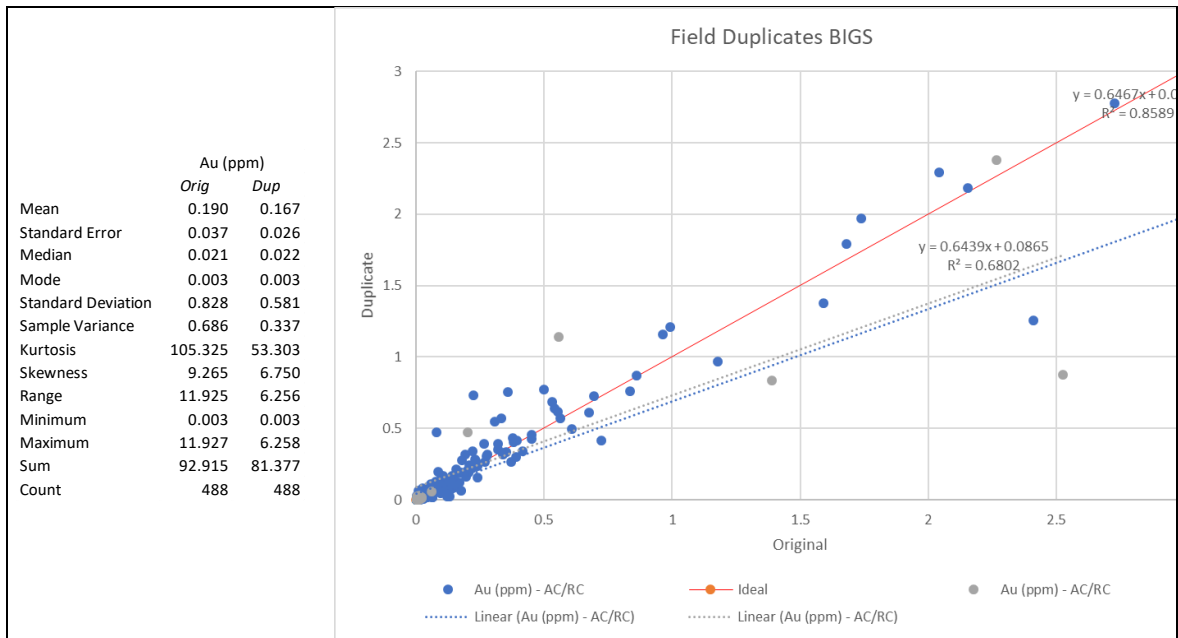
Source: SEMAFO

c. Field Duplicate Results – 2018 to 2019 BIGS

The results for 488 duplicate pairs of RC and core samples submitted to BIGS in 2012 and 2017 were plotted on an XY plot (Figure 11.11). The correlation coefficient (“R²”) measures the relationship between the movement of two samples, with a value of 1.0 considered ideal correlation. For BIGS, the R² value for RC samples of 0.86 suggests less than ideal agreement between the original and duplicate sample. the R² value for core samples of 0.64 suggests decreased correlation between the original and duplicate sample, which is common in samples of core where the gold might be more nuggety. For all samples, there is even but wide scatter about the ideal trendline, and there is a bias toward the original result.

However, 79.1% of the results have <0.1 ppm Au; therefore, there is not good representation of pairs with higher gold concentrations.

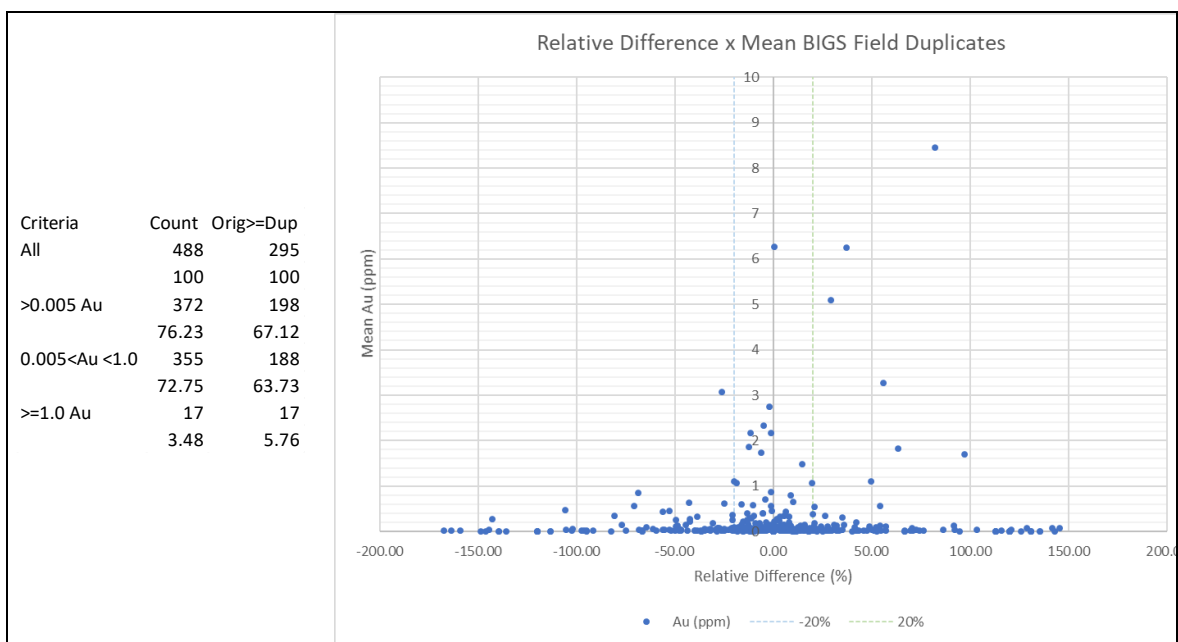
Figure 11.11 - Original vs. Field Duplicate – XY Plot BIGS



Source: Semafo

A percent relative difference versus mean plot was used to assess the precision and bias of the field duplicates. This plot allows the precision and bias to be assessed in each grade range. Figure 11.12 indicates that a positive bias exists between the sample populations at higher concentrations.

Figure 11.12 - Original vs. Field Duplicate – Relative Difference vs Mean Plot (BIGS)



Source: SEMAFO

A variety of graphical techniques, including absolute percent difference vs mean (rolling average), and mean versus half percent absolute difference charts were used to try to determine the precision on the field duplicate. There were too few pairs for a meaning Thompson-Howarth chart.

It is not possible to determine any meaningful degree of precision for these samples because half of the results are near or less than the detection limit, and most of the samples are <0.1 ppm Au. However, while field duplicates generally have lower precisions than duplicates from rejects or pulps, RC chips, which comprise most of the samples, are more homogeneous than core.

Overall, the populations compare moderately well, with several outliers at higher grades. DRA/Met-Chem considers there is no evidence to suggest that the primary sample varies significantly from the duplicate sample and that reasonable precision was achieved during the sampling and assaying process for the RC and core samples.

11.3.2 SEMAFO

QA/QC programs are in place to ensure the reliability and trustworthiness of exploration data. These generally include periodic verification of various aspects of the exploration program such as drilling, surveying, sampling and assaying, data management, and database integrity. More specifically, analytical control measures involve internal and external laboratory control measures implemented to address the following:

- Monitor the precision and accuracy of the sampling, preparation, and assaying;
- Prevent sample mix-up;
- Monitor potential sample contamination.

Drill program design, QA/QC and interpretation of results is performed by SEMAFO qualified persons employing a QA/QC program consistent with NI 43-101 and industry best practices. An internal quality control and quality assurance program is in place throughout the sampling program, using blank samples (“blanks”), certified reference materials (“CRM”), field duplicates and lab replicates. Approximately 5% of sample pulps are sent to secondary laboratories for assay checks. In addition, both analytical laboratories provide their own internal QA/QC process. QA/QC results are reviewed by the company’s QP on a quarterly basis and an annual summary report is published which include the referee lab results.

11.3.2.1 Internal Laboratory QA/QC

The SMF BF internal QA/QC process involves standards, blanks and duplicates. Each analysis batch consists of 25 samples, of which 20 are client samples and 5 are QC samples, comprising one reference material, one duplicate (taken before crushing), two pulp duplicates, one blank (pulp). SMF BF also participates in regular round robin programs to monitor for bias. A minimum of 5% additional

pulp check assays are performed on all batches (depending on the number of anomalies present within a given batch). Assay reports from the mine laboratory are submitted as digital data files.

ALS-O internal QA/QC process involves standards, blanks and duplicates. Each analysis batch consists of 84 samples, of which 78 are client samples and 6 are QC samples, comprising two (2) reference material, one (1) duplicate (taken before crushing), two (2) pulp duplicates, one (1) blank (pulp). Additional pulp check assays are performed on all batches (depending on the number of anomalies present within a given batch). Assay reports from the primary laboratory are submitted as digital data files and as PDF certificates.

11.3.2.2 Assay Reports

All assay reports from SMF BF and ALS-O were submitted to SEMAFO as digital data files (excel format) and as PDF certificates.

A total of 73,114 samples were sent to SMF BF and 14,652 samples to ALS-O for a grand total of 87,766 new samples, excluding control samples and field duplicates, were inserted to the exploration database since 2017.

11.3.2.3 Certified Reference Materials

Systematic insertion of control standards is used as the primary method of controlling assay quality as reported from the laboratory. They are submitted with samples for assay to identify assay problems with specific sample batches and possible long-term biases in the overall dataset.

Since 2017, 34 different CRMs were inserted in the sampling sequence by SEMAFO. All CRMs (pulp) but three were purchased from ROCKLABS Limited for a variety of gold grade ranges suitable for this type of deposit. They were inserted at a rate of one in every 20 samples. Details of the standards are given in Table 11.6. The CRMs range from 0.459 g/t Au up to 18.17 g/t Au.

CRM results are analyzed by examining control charts and by assessing the location of the CRMs within the sample batch. Sample falling outside of acceptable rejection limits are investigated and resubmitted for re-assay, if deemed necessary. Although the standards are not matrix matched, SEMAFO considers them appropriate for assessing laboratory analytical accuracy with respect to Bantou mineralization types.

Table 11.6 - CRM Details for Bantou / Bantou Nord Deposits

CRM	Source	Expected Gold Grade (g/t Au)	One Standard Deviation (g/t Au)	95% Confidence Level (g/t Au)
OREAS209	Ore Research & Exploration Pty Ltd	1.58	0.044	±0.03
OREAS214	Ore Research & Exploration Pty Ltd	3.03	0.082	±0.04

CRM	Source	Expected Gold Grade (g/t Au)	One Standard Deviation (g/t Au)	95% Confidence Level (g/t Au)
OREAS252	Ore Research & Exploration Pty Ltd	0.674	0.022	±0.019
OxD127	Rocklabs	0.459	0.012	±0.004
OxE150	Rocklabs	0.658	0.016	±0.005
OxF125	Rocklabs	0.806	0.02	±0.006
OxF142	Rocklabs	0.805	0.019	±0.006
OxG104	Rocklabs	0.925	0.021	±0.006
OxG98	Rocklabs	1.017	0.019	±0.006
OxH122	Rocklabs	1.247	0.031	±0.009
OxH139	Rocklabs	1.312	0.024	±0.006
Oxi121	Rocklabs	1.834	0.05	±0.014
Oxi138	Rocklabs	1.86	0.038	±0.011
OxJ120	Rocklabs	2.365	0.063	±0.017
OxJ137	Rocklabs	2.416	0.069	±0.020
OxJ95	Rocklabs	2.337	0.057	±0.018
OxK110	Rocklabs	3.602	0.053	±0.023
OxK119	Rocklabs	3.604	0.105	±0.029
OxK136	Rocklabs	3.753	0.083	±0.024
OxN117	Rocklabs	7.679	0.207	±0.060
SE101	Rocklabs	0.606	0.013	±0.004
SE68	Rocklabs	0.599	0.013	±0.004
SE86	Rocklabs	0.595	0.015	±0.005
SF85	Rocklabs	0.848	0.018	±0.006
SG66	Rocklabs	1.086	0.032	±0.009
SG84	Rocklabs	1.026	0.025	±0.008
SH82	Rocklabs	1.333	0.027	±0.007
Si81	Rocklabs	1.79	0.03	±0.008
SJ80	Rocklabs	2.656	0.057	±0.016
SJ95	Rocklabs	2.789	0.054	±0.016
SK78	Rocklabs	4.134	0.138	±0.040
SK94	Rocklabs	3.899	0.084	±0.024
SL61	Rocklabs	5.931	0.177	±0.057
SP73	Rocklabs	18.17	0.42	±0.120

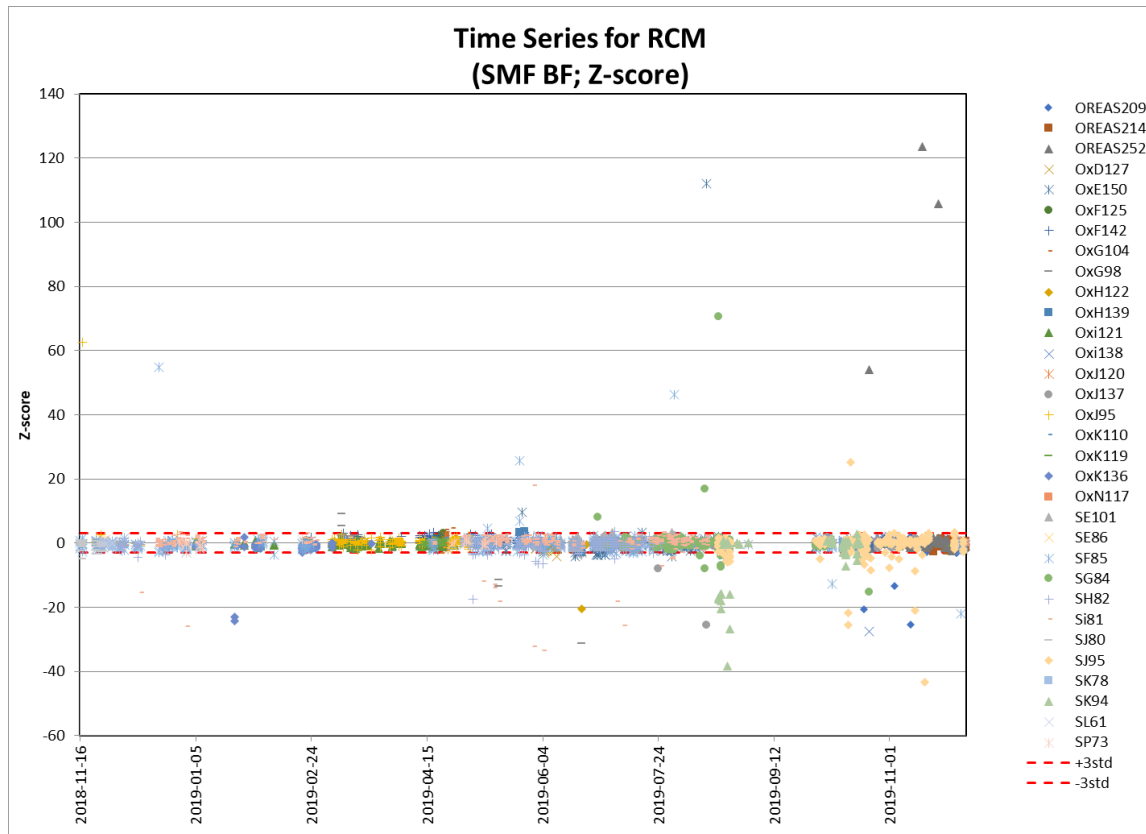
a. CRM Results – SMF BF

A total of 4,364 CRM samples were submitted with primary samples to the SEMAFO mine site laboratory. Of that total, 167 CRM fell outside the 3-standard deviation (SD) criterion, giving a rate of failure of 4%. Some of the failures were attributed to mislabelled standards and this was addressed. Reruns were successfully performed on some of the failed batches where deemed significant, but the remaining batches were maintained as is in the database because of insignificant results. The results are summarized in Table 11.7 and shown in Figure 11.13.

Table 11.7 - 2018-19 CRM Results Assayed at SMF BF

CRM	COUNT	OBSERVED				ACCEPTED		FAILURES			
		Mean	S.D.	Min.	Max.	Count	Rate	Count	Below 3StdDev	Above 3StdDev	Rate
OREAS209	200	1.57	0.12	0.46	1.68	197	98.5%	3	3	0	1.5%
OREAS214	34	2.99	0.09	2.81	3.14	34	100.0%	0	0	0	0.0%
OREAS252	210	0.71	0.26	0.62	3.39	207	98.6%	3	0	3	1.4%
OxD127	88	0.45	0.01	0.41	0.47	85	96.6%	3	3	0	3.4%
OxE150	241	0.65	0.12	0.59	2.45	229	95.0%	12	9	3	5.0%
OxF125	29	0.82	0.02	0.79	0.87	28	96.6%	1	0	1	3.4%
OxF142	163	0.82	0.02	0.78	0.87	160	98.2%	3	0	3	1.8%
OxG104	21	0.95	0.03	0.86	1.02	17	81.0%	4	1	3	19.0%
OxG98	55	1.01	0.10	0.42	1.19	50	90.9%	5	3	2	9.1%
OxH122	3	1.04	0.37	0.61	1.27	2	66.7%	1	1	0	33.3%
OxH139	187	1.30	0.04	1.18	1.40	175	93.6%	12	10	2	6.4%
OxI121	210	1.82	0.03	1.75	1.89	210	100.0%	0	0	0	0.0%
OxI138	88	1.85	0.12	0.82	1.94	87	98.9%	1	1	0	1.1%
OxJ120	10	2.38	0.07	2.24	2.51	10	100.0%	0	0	0	0.0%
OxJ137	190	2.40	0.14	0.66	2.54	188	98.9%	2	2	0	1.1%
OxJ95	266	2.37	0.22	2.21	5.91	265	99.6%	1	0	1	0.4%
OxK110	1	3.68		3.68	3.68	1	100.0%	0	0	0	0.0%
OxK119	65	3.61	0.07	3.36	3.71	65	100.0%	0	0	0	0.0%
OxN136	100	3.64	0.27	1.75	3.90	97	97.0%	3	3	0	3.0%
OxN117	8	7.68	0.08	7.50	7.80	8	100.0%	0	0	0	0.0%
SE101	134	0.61	0.01	0.59	0.65	132	98.5%	2	0	2	1.5%
SE86	7	0.61	0.01	0.60	0.62	7	100.0%	0	0	0	0.0%
SF85	548	0.84	0.07	0.45	1.84	535	97.6%	13	8	5	2.4%
SG84	261	1.03	0.12	0.65	2.79	252	96.6%	9	6	3	3.4%
SH82	378	1.32	0.04	0.86	1.43	360	95.2%	18	17	1	4.8%
SI81	514	1.79	0.11	0.78	2.33	490	95.3%	24	18	6	4.7%
SI80	37	2.60	0.08	2.38	2.70	34	91.9%	3	3	0	8.1%
SI95	221	2.75	0.26	0.45	4.15	193	87.3%	28	26	2	12.7%
SK78	2	4.01	0.06	3.96	4.05	2	100.0%	0	0	0	0.0%
SK94	58	3.57	0.69	0.67	4.13	42	72.4%	16	16	0	27.6%
SL61	10	5.92	0.08	5.79	6.07	10	100.0%	0	0	0	0.0%
SP73	25	18.08	0.41	16.96	18.71	25	100.0%	0	0	0	0.0%

Figure 11.13 - CRM Control Chart (Z-Score) Results Assayed at SMF BF



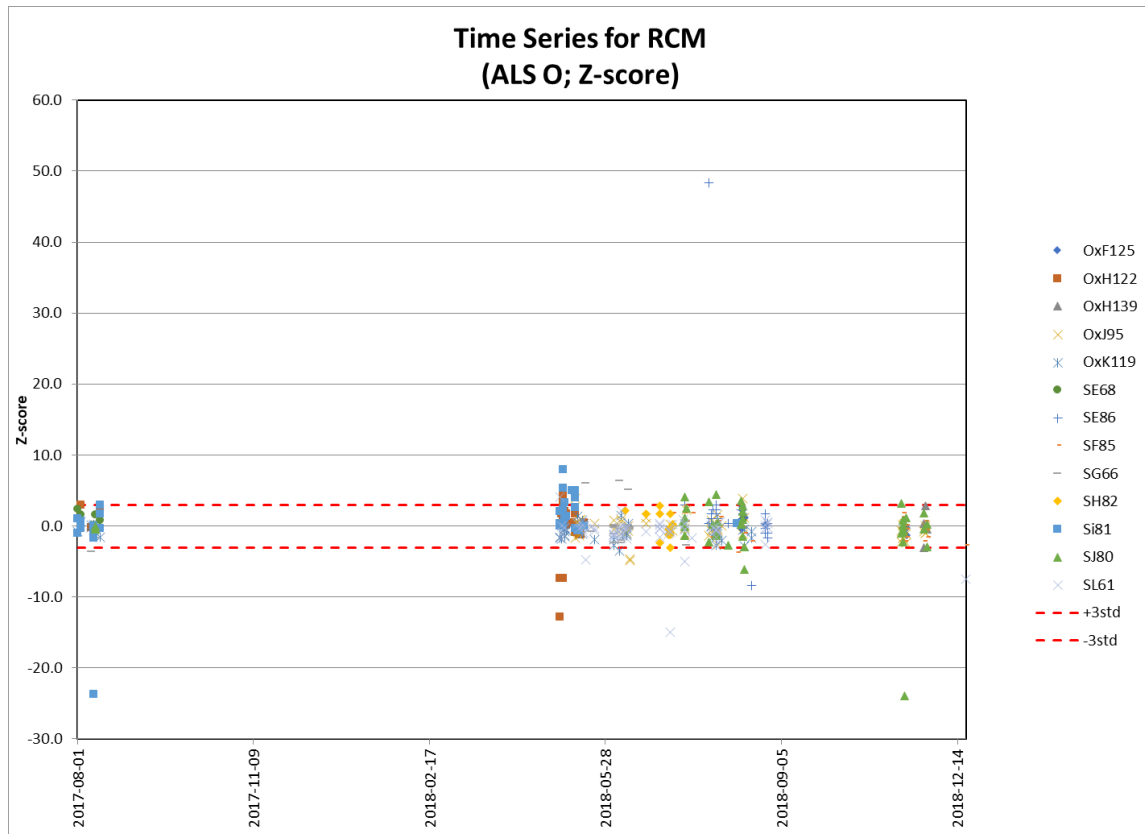
b. CRM Results – ALS-O

Between 2017 and 2018, a total of 400 CRM samples were submitted with primary samples to the ALS laboratories. Initially, 38 (or 10%) failed the initial 3 SD control limits and reruns were requested by SEMAFO. Reruns were successfully performed on some the failed batches and the remaining batches were maintained as is in the database because of insignificant results. The results are summarized in Table 11.8 and shown in Figure 11.14.

Table 11.8 - 2017-2018 CRM Results Assayed at ALS-O

COUNT	OBSERVED				ACCEPTED		FAILURES			
	Mean	S.D.	Min.	Max.	Count	Rate	Count	Below 3StdDev	Above 3StdDev	Rate
9	0.82	0.03	0.78	0.86	9	100.0%	0	0	0	0.0%
28	1.24	0.11	0.85	1.39	22	78.6%	6	3	3	21.4%
4	1.31	0.06	1.24	1.38	4	100.0%	0	0	0	0.0%
61	2.32	0.08	2.06	2.56	57	93.4%	4	2	2	6.6%
47	3.52	0.11	3.23	3.76	46	97.9%	1	1	0	2.1%
8	0.61	0.01	0.59	0.63	8	100.0%	0	0	0	0.0%
32	0.62	0.13	0.47	1.32	30	93.8%	2	1	1	6.3%
32	0.84	0.03	0.78	0.90	31	96.9%	1	1	0	3.1%
23	1.08	0.08	0.97	1.29	19	82.6%	4	1	3	17.4%
12	1.34	0.05	1.25	1.41	11	91.7%	1	1	0	8.3%
34	1.81	0.14	1.08	2.03	27	79.4%	7	1	6	20.6%
39	2.63	0.25	1.29	2.91	32	82.1%	7	2	5	17.9%
71	5.78	0.40	3.28	6.66	66	93.0%	5	4	1	7.0%

Figure 11.14 - CRM Control Chart (Z-Score) Results Assayed at ALS-O



CRM assay results show that reasonable analytical accuracy is being achieved at the SEMAFO mine site laboratory and ALS-O laboratory for all grade ranges, with no evidence for analytical bias.

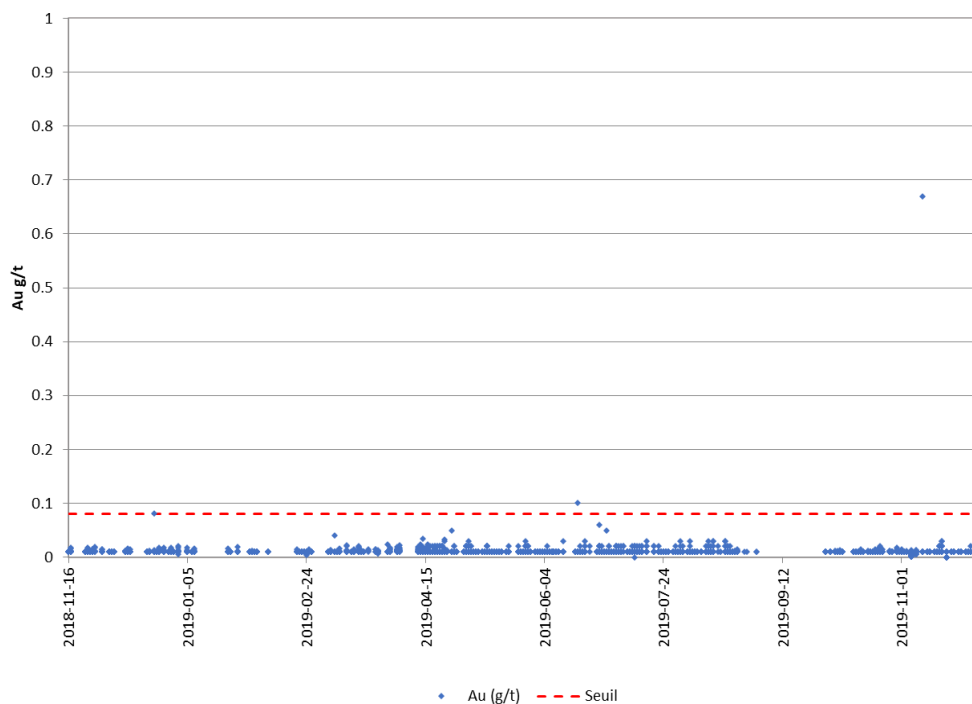
11.3.2.4 Blanks

Blank material is submitted to the laboratory with samples to monitor possible contamination or sample cross-contamination caused when crushing or pulverizing equipment is not cleaned properly after mineralized samples are processed. A sandstone outcrop of the Taoudini Formation near the town of Bobo-Dioulasso is used to collect material to use as blank for the analyses. This material is considered appropriate.

a. Blanks Results – SMF BF

In 2018 and 2019, a total of 4,322 coarse blank samples were submitted with the primary samples to the SEMAFO laboratory. Throughout this period, only three samples failed the 0.08 ppm Au threshold as shown in Figure 11.15.

Figure 11.15 - SMF BF Results of Blank Sample Analyses, 2018-2019

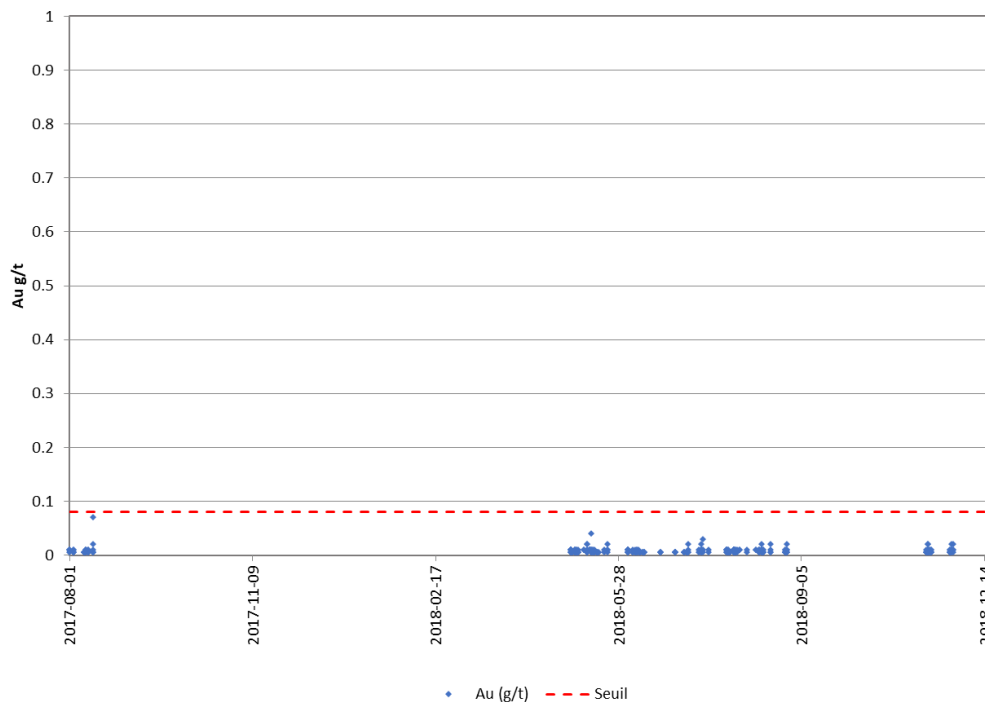


Those batches were rerun and validated.

b. Blanks Results – ALS-O

In 2017 and 2018, a total of 397 coarse blank samples were submitted with the primary samples to the ALS-O laboratory. There were no failures and results suggest that there was no significant contamination.

Figure 11.16 - ALS-O Results of Blank Sample Analyses, 2017-2018



11.3.2.5 Field/Laboratory Coarse Duplicates

Duplicates are used to verify the repeatability, the degree of precision of the analysis and to determine possible sampling bias. At SEMAFO, duplicates consist of $\frac{1}{4}$ drill core and RC laboratory coarse rejects selected at the end of each quarter, mainly driven by logistical considerations. Drill core duplicate analysis can provide an understanding of variability introduced by selecting one half of the drill core versus the other whereas RC laboratory coarse duplicates are used to verify the quality of the sample preparation.

Various plots are used to assess the results for pairs of duplicate samples. Scatter plots allow comparison of data pairs by assessing general dispersion and by identifying the presence of any outliers. A mean versus half relative difference plot is used to assess the precision and possible bias in each grade range. The mean of duplicate pairs is calculated along with the relative percentage difference between the two values, calculated as the difference divided by the mean multiplied by 100. The mean is then plotted against the relative difference for each sample pair. Precision plots are used to assess the repeatability (i.e., precision) of the duplicate results by plotting the average

of the duplicate results against the half absolute difference of the pair. The number of sample pairs plotting between 5%, 10%, 20%, and 100% difference lines are assessed as a measure of the precision of the results. As the grade approaches the detection limit of the analytical technique the precision, expressed as a percentage, decreases. A line of significance is typically plotted on the graph to exclude any results close to the detection limit to account for this. Quantile-quantile (QQ) plots are used to compare population distributions to assess potential bias. Relative percent difference and rank half absolute difference (HARD) plots evaluate the differences in per cent between pairs.

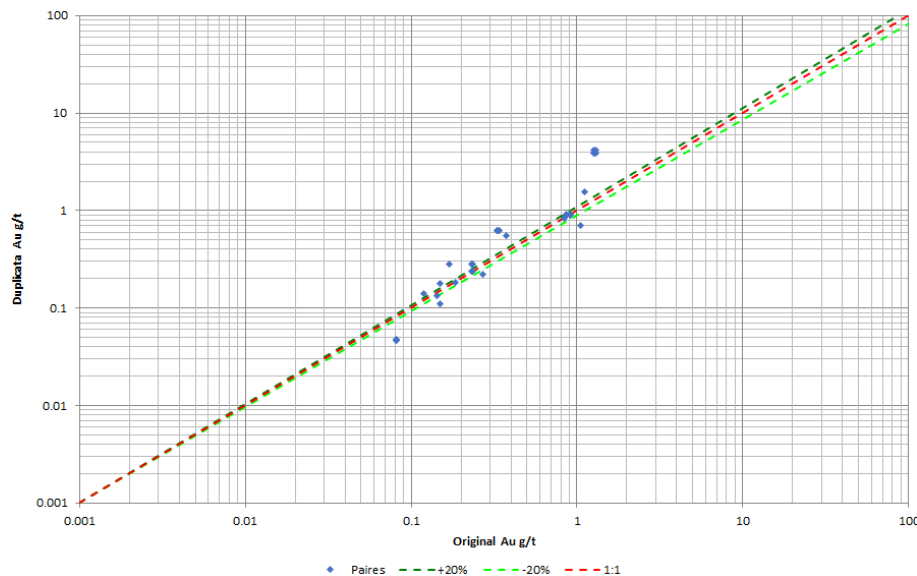
The results are summarized below. Detailed results including relative precision charts are in Appendix A.

a. Field Duplicate Results – SMF BF

In 2018 and 2019, there were a total of 31 RC laboratory coarse duplicates, 70 quarter core duplicates submitted to the SEMAFO laboratory.

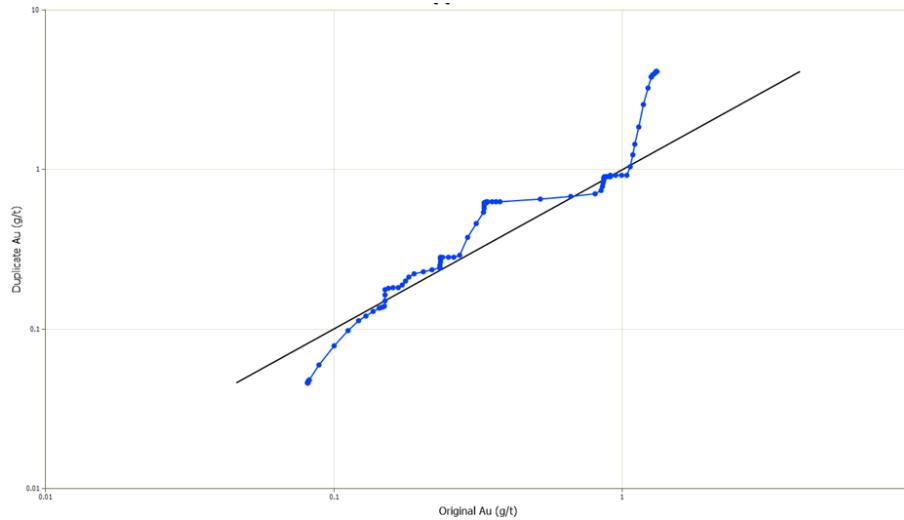
The scatter plot of RC laboratory coarse duplicate samples shows a fair correlation ($R=0.8491$) but given the small size of the population, pairs of samples showing larger difference will mislead the results (Figure 11.17).

Figure 11.17 - SMF BF RC Coarse Duplicates Bias Chart



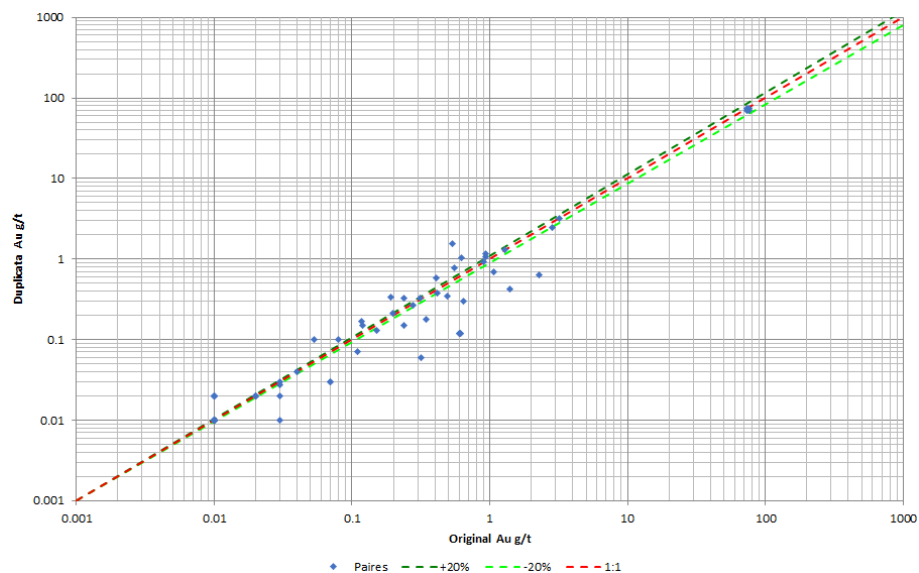
Rank half absolute difference (HARD) plots suggest that 42% of duplicate samples analyzed at SMF BF have HARD below 10%. This indicates that the quality of the sample preparation at the mine site laboratory is fair considering the small size of the population. However, QQ plots (Figure 11.18) and various statistical tests show that a slight bias is present in the data whereas duplicate assays are slightly overestimated compared to the original.

Figure 11.18 - SMF BF Coarse Duplicates QQ Plot



The scatter plot of quarter core field duplicate samples shows a good correlation ($R=0.9994$) with a larger spread for values below 1 g/t Au (Figure 11.19).

Figure 11.19 - SMF BF Quarter Core Duplicates Bias Chart



HARD plots (Figure 11.20 to Figure 11.22) suggest that 53% of duplicate samples analyzed at SMF BF have HARD below 10% but 66% below 20%. However, QQ plots and various statistical tests show no evidence of bias that could have been introduced by preferentially submitting the more mineralized half of the core for assay. Poor reproducibility of quarter core field duplicates is not unexpected for sampling mineralization characterized by coarse gold and may suggest that gold grades display nugget effect.

Figure 11.20 - SMF BF Quarter Core Duplicates HARD Plot

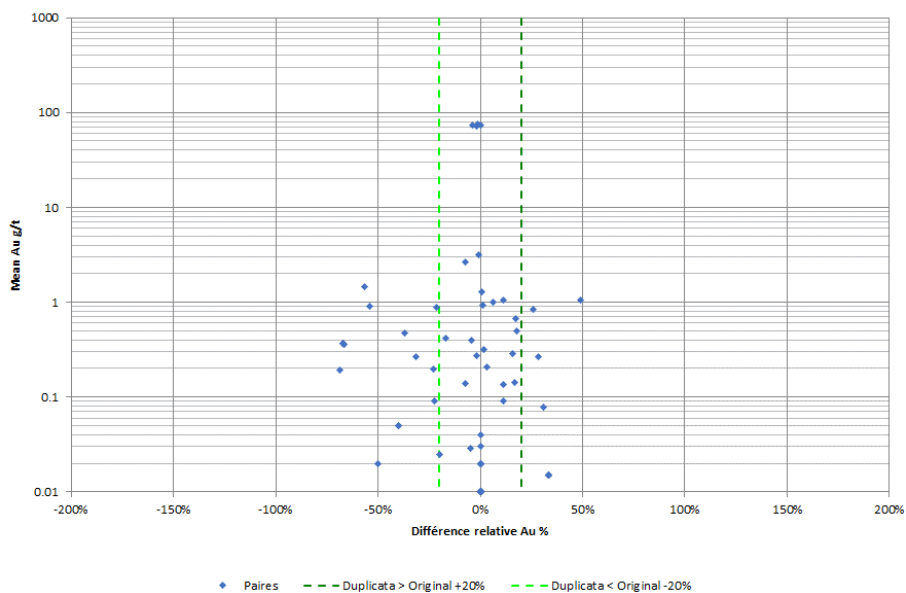


Figure 11.21 - SMF BF Quarter Core Duplicates Mean versus Half Absolute Difference Plot

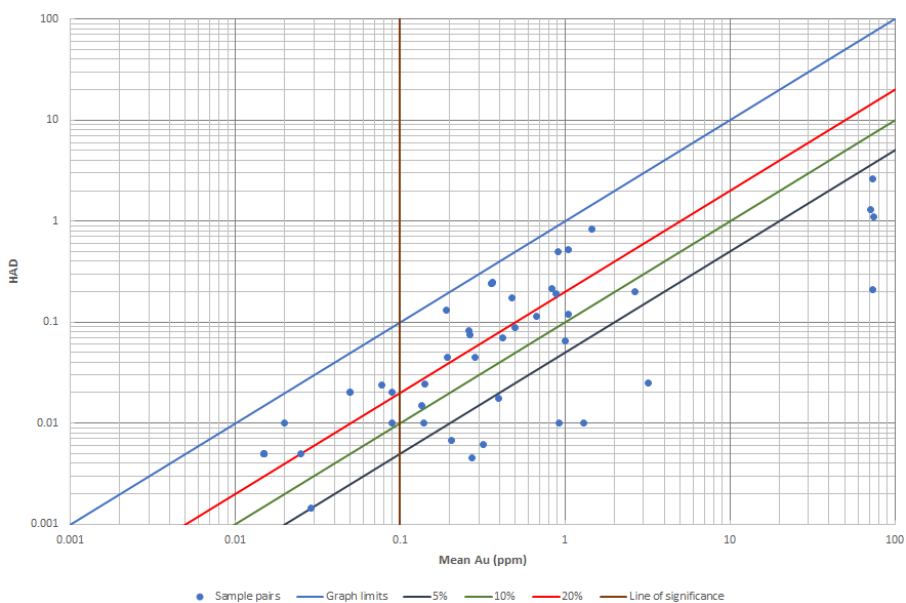
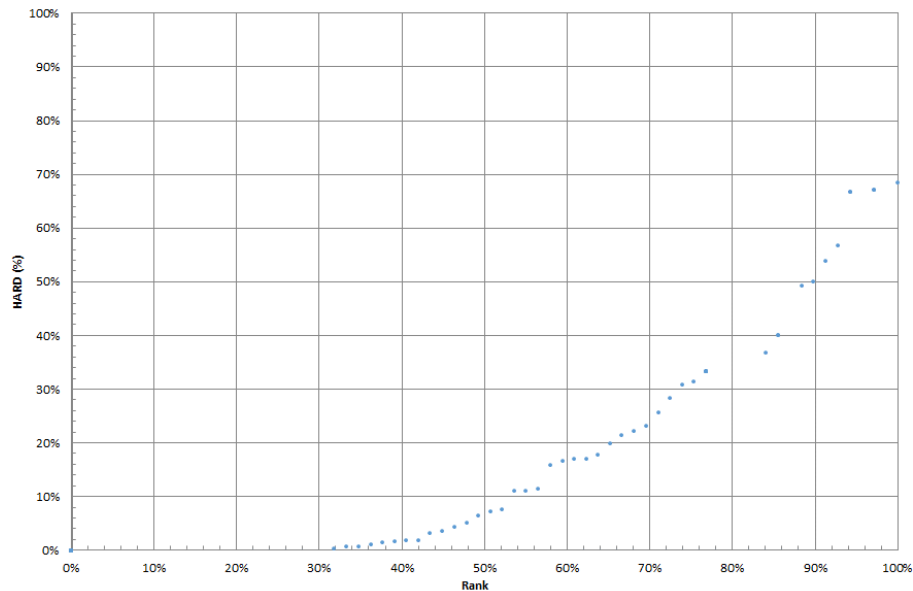


Figure 11.22 - SMF BF Quarter Core Ranked Half Absolute Relative Deviation Plot



Overall, the populations compare reasonably well with some spread in the data typical of gold deposits containing visible gold. SEMAFO considers that there is no evidence to suggest that the primary sample varies significantly from the duplicate sample and that reasonable precision was achieved during the sampling and assaying process.

b. Field Duplicate Results – ALS-O

In 2017-2018, there were a total of 62 ¼-core duplicate samples analyzed at ALS-O. The results are similar to those of SMF BF and are described below. Scatter plot of RC laboratory coarse duplicate samples shows a correlation of 1.000 with rare outliers. HARD plots suggest that 69% of duplicate samples analyzed at ALS-O have HARD below 10%. This indicates that the quality of the sample preparation at ALS-O is adequate. QQ plots and various statistical tests show no evidence of bias.

Overall, the populations compare reasonably well with some spread in the data typical of gold deposits containing visible gold particles. SEMAFO considers that there is no evidence to suggest that the primary sample varies significantly from the duplicate sample and that reasonable precision was achieved during the sampling and assaying process.

11.3.2.6 Umpire Laboratory Checks

At the end of each quarters, pulps of selected sample series assayed at the primary laboratory are sent to a secondary umpire laboratory to test the reliability of assaying results.

The results are summarized below. Detailed results including relative precision charts are in Appendix A.

a. SMF BF versus ALS-O (2018-2019)

In 2018 and 2019, a set of 215 oxide and 694 sulphide pulp duplicate samples originally assayed at SMF BF were submitted to ALS-O as an umpire check of results from the primary laboratory. The results are discussed below.

Scatter plot of oxide pulp duplicates shows a correlation of 0.7595 and HARD plot suggest that 76% of pulp duplicates analyzed at SMF BF and ALS-O have HARD below 10%. On the other hand, QQ plots and various statistical tests show that a slight bias is present in the data whereas duplicate assays are slightly underestimated compared to the original.

The scatter plot of sulphide pulp duplicates shows a correlation of 0.9918 and the HARD plot suggest that 87% of sulphide pulp duplicates analyzed at SMF BF and ALS-O have HARD below 10%. QQ plots show that a slight bias is present in the data within some grade intervals, but this is more pronounced over 10 g/t Au, where duplicate assays are underestimated compared to the original.

b. ALS-O versus SMF BF (2018)

In 2018, a set of 83 oxide and 275 sulphide pulp duplicate samples originally assayed at ALS-O were submitted to the SMF BF laboratory as an umpire check of results from the primary laboratory. The results are described below.

Scatter plot of oxide pulp duplicates shows a good correlation of 0.9859 and the HARD plot suggest that 70% of pulp duplicates analyzed at SMF BF and ALS-O have HARD below 10%. QQ plots and various statistical tests show that a slight bias is present in the data whereas duplicate assays are slightly overestimated compared to the original.

The scatter plot of sulphide pulp duplicates shows a good correlation of 0.9940 and the HARD plot suggests that 77% of sulphide pulp duplicates analyzed at SMF BF and ALS-O have HARD below 10%. QQ plots and various statistical tests show that a slight bias is present in the data whereas duplicate assays are slightly overestimated compared to the original.

11.4 Sample Security

11.4.1 SAVARY

Samples are processed and stored at the secured exploration site. Unauthorized personnel are not allowed access to the samples.

Transportation occurs on a regular basis with security guards. Personnel releasing the samples for shipment to the laboratory assume responsibility for the sample security and paperwork with recorded sample numbers accounted for prior to shipment to the laboratory.

11.4.2 SEMAFO

Samples are trucked from the field by SEMAFO personnel to the exploration camp. QA/QC samples are inserted by SEMAFO personnel into the sample stream at the exploration camp. Assay samples are placed in sealed and numbered plastic bags and delivered by batch by truck on a regular basis to the SEMAFO Mana mine site or to ALS-O laboratory in Ouagadougou.

Personnel releasing the samples for shipment to the laboratory assume responsibility for sample security and paperwork with recorded sample numbers accounted for prior to shipment to the laboratory. SMF BF and ALS-O personnel check the received samples against the paperwork and signs off on the receipt.

11.5 SEMAFO - Bulk Density

Density measurements were performed on core samples from the Bantou and Bantou Nord deposits.

The successive specific gravity measurement programs were performed either by SEMAFO technicians under geologists' supervision. Sample preparation and measurement conducted directly at the exploration camp site facilities used the water displacement method (weight in air divided by the difference between the weight in air and the weight in water). Samples were selected to be representative of the various facies present in the different deposits. Single pieces of core, averaging 10 cm in length, were selected and measured in each core box prior to splitting. Each sample was first dried in air, and then weighed in air using a conventional Ohaus SP402 Portable, Scout Pro balance. Subsequently, the sample was coated in wax and weighed in air and immersed and weighed in water. The scale has an under-hook and zero adjustment, so it can be used on a stand allowing the samples to be weighted dry on the platen and then reweighed in a cradle suspended in water underneath. After testing, each sample was carefully replaced at its original location in the core box. Specific gravity data were subsequently classified by rock and material type.

Specific gravity measurement results for the various rock facies were measured. For Bantou Nord, the results show the relation between the two main rock facies hosting the mineralization and their respective specific density. Therefore, a constant 2.78 value was assigned in the resource model for the fresh rock. Similarly, a constant 3.23 and 2.80 value were assigned for the fresh rock in the resource model for the BIF and the chert zones respectively at Bantou Nord.

Figure 11.23 - Bantou Nord Bulk Measurements

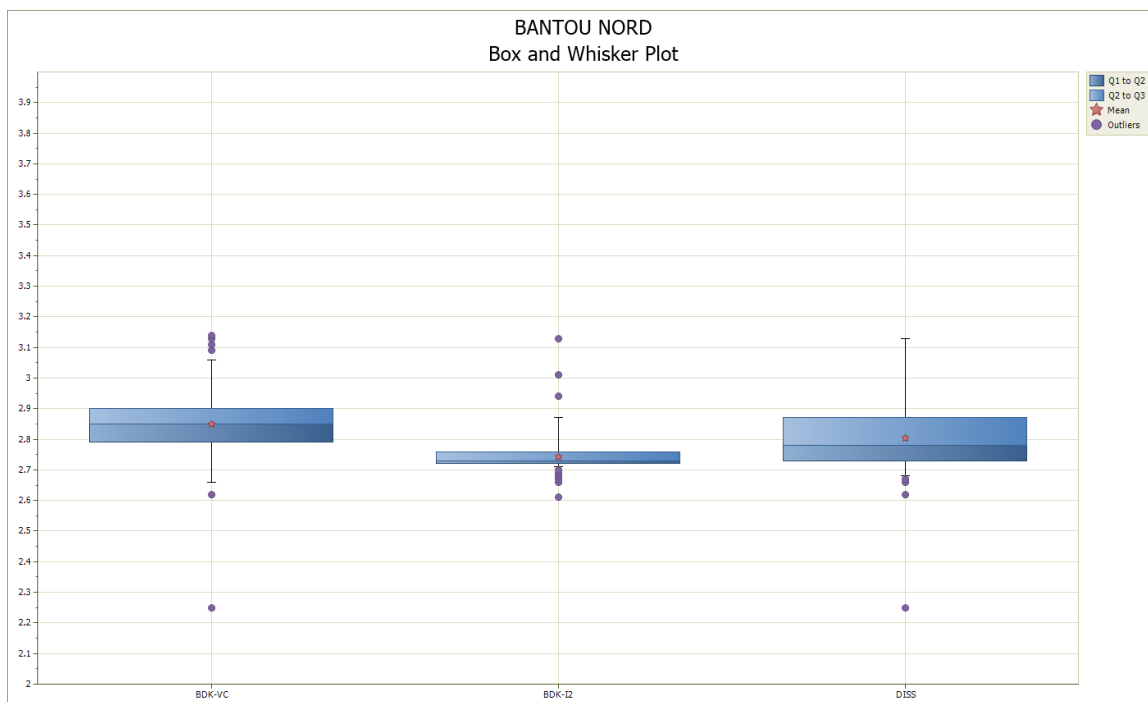
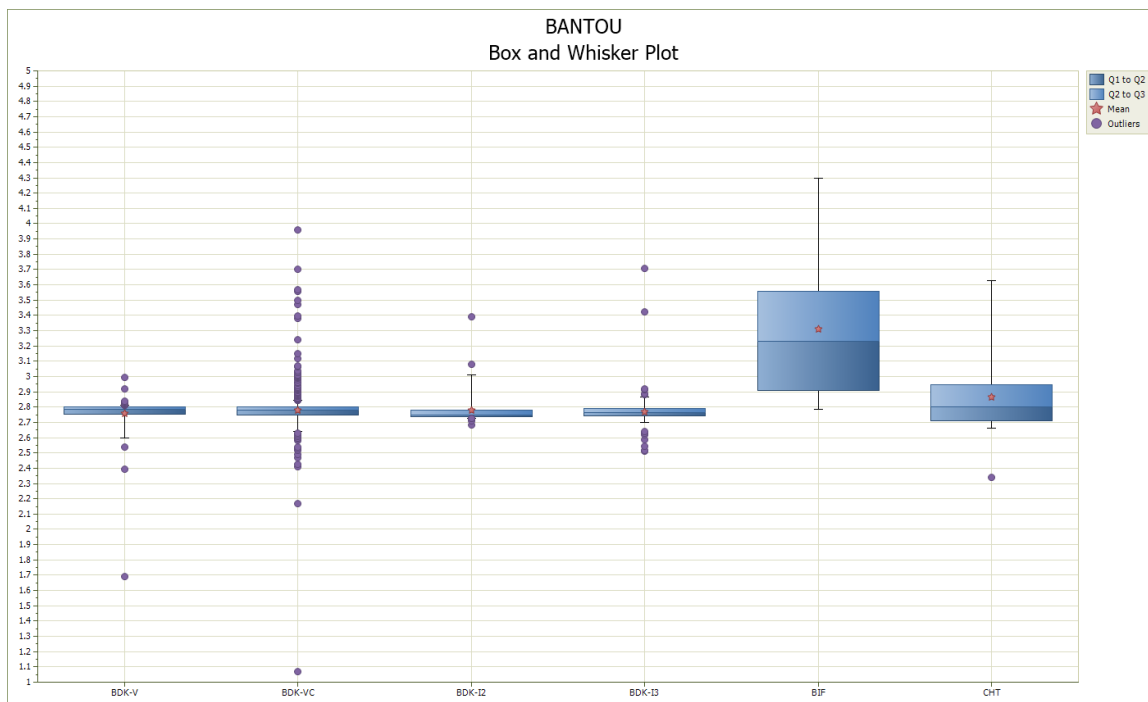


Figure 11.24 - Bantou Bulk Measurements



It is of DRA/Met-Chem's opinion that the equipment used and the procedure for measuring bulk density at Bantou are appropriate for mineral resource estimate.

11.6 Qualified Person's Opinion on Adequacy of Sampling

Assaying for gold was done at the SGS and BIGS laboratories in Ouagadougou. Based on the results of the QC samples from the Savary drilling the laboratories have achieved reasonable precision and analytical accuracy. ActLabs in Ouagadougou was also used in 2015 for a relatively small number of samples, with similar levels of precision and analytical accuracy achieved.

Reverse circulation and diamond drill sampling procedures are adequate for and consistent with the style of gold mineralization under consideration. Based on the QC sample results (i.e., samples inserted by SEMAFO into the sample stream), sampling conducted by SEMAFO has achieved reasonable precision and analytical accuracy.

Assaying for gold has primarily been completed at SEMAFO BF and at ALS-O. Based on the results of the QC samples, along with multiple inspections, this has achieved reasonable precision and analytical accuracy.

With all this said regarding the review of the sample preparation and analytical methods used by both Savary and Semafo, the following comments are applicable. Sample collection and preparation, analytical techniques, security and QA/QC protocols implemented at Bantou are consistent with standard industry best practices. Overall, the populations compare moderately well, with several outliers at higher grades. DRA/Met-Chem considers there is no evidence to suggest that the primary sample varies significantly from the duplicate sample and that reasonable precision was achieved during the sampling and assaying process for the RC and core samples.

In DRA/Met-Chem's opinion, the sampling and assay data are adequate and reasonable for use in Mineral Resource estimation.

12 DATA VERIFICATION

This Section has been written by Claude Bisailon, P.Eng., “Qualified Person” for DRA/Met-Chem in collaboration with Mr. Richard Roy, P.Geo., SEMAFO, VP Exploration. It summarizes all data verification that was done on the Bantou Property by SEMAFO, the current owner and Savary., the previous past owner

12.1 Introduction

As part of their exploration program, SEMAFO follows a strict set of procedures or guidelines from logging, sampling and security amongst various procedures. SEMAFO regularly submitted samples to laboratories as part of the sampling protocols described in Section 11. In addition to this, SEMAFO's team of local and international geologists and personnel follow strict logging and security procedures as detailed in the various sections of this report.

In the case of Savary, please refer to the P&E Mining Consultants' "Technical Report and Resource Estimate on the Karankasso Project", dated November 2015. The report details the site visit by Mr. Antoine Yassa, P.Geo., who visited the site for the purposes of completing a site visit and due diligence sampling. Savary also undertook a QA/QC program for all drilling undertaken between 2012 to 2015 drilling programs. QC protocol included the insertion of certified reference materials ("CRMs" or "standards"), a locally-sourced barren sandstone and field duplicates into every batch sent for laboratory analysis. Over the years, a series of laboratory certificates were examined for accuracy of data input in the database by both Savary and SEMAFO. Details of the QA/QC program are included in section 11 of this Report.

Since acquiring the Karankasso property from Savary, SEMAFO's team of geologists have visited and worked on the Karankasso site. The activities of Mr. Roy and his team while at the Bantou Project site (includes Karankasso's site location) essentially consisted of:

- General discussions on the procedures, progress and results of the ongoing drill program with SEMAFO personnel;
- Field trip, visit of several drill sites including the sites of the holes being drilled;
- Examination of selected core from the drilling programs;
- Spot check of drill hole GPS coordinates from the field vs database entry.
- Spot check of all the database entries;
- Visit of the facilities of the various laboratories.

As part of his visits, Mr. Roy regularly gave recommendations to both the SEMAFO logging and sampling crews on site reiterating the importance of adhering to the QA/QC program.

12.2 Site Visit

No site visit was done by a DRA/Met-Chem's QP at the Bantou site. This Report relies on information provided from SEMAFO personnel as described in the following sections.

Mr. Richard Roy, P. Geo., "Qualified Person", for SEMAFO has visited the Bantou and Karankasso Project site on numerous occasions with his last visit between the 16th and 20th of April 2019, as part of his responsibilities as SEMAFO VP Exploration. His observations and findings are crucial information required for DRA/Met-Chem to prepare an independent Technical Report compliant with the NI 43-101 standards.

12.3 Database Verification, Core Check

SEMAFO conducts a series of routine verifications to ensure the reliability of the electronic data, during the site visits and prior to generating the 3D block model. Spot checks were performed on the data from the within the master database. If minor errors are found, they are corrected by the SEMAFO geologists. As part of the acquisition of the Karankasso project, Semafo merged Savary's data within Semafo's database. This was performed with a prior Savary data integrity check to ensure Semafo's database integrity.

On the basis of this verification, DRA/Met-Chem believes the integrity of the database is sufficiently high and the data are adequate for the purpose or the resources estimation.

12.4 Conclusion

It is of DRA/Met-Chem's opinion that the data used is adequate and reasonable to support the estimation of mineral resources as presented in this Report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Preliminary internal and external metallurgical test work has been performed for Bantou Project. Internal metallurgical testing was carried out for the Bantou and Bantou Nord deposits, while one external (independent) metallurgical test work program on the Karankasso property.

13.1 Metallurgical Test Work

DRA/Met-Chem reviewed the metallurgical test work results for the Bantou Project, which included:

- SEMAFO Inc., “Lixiviation minerais Bantou” (“Bantou Ore Leaching”), dated July 2015, internal report prepared by SEMAFO Inc.;
- SEMAFO Inc., “Résultats des tests métallurgiques Bantou DY_MW-4 à 7” (“*Metallurgical Test Results for Bantou DY_MW-4 to 7*”), dated December 2017, internal report prepared by SEMAFO Inc.;
- SEMAFO Inc., “Projet Bantou - Test Métallurgique” (“*Bantou Project Metallurgical Test*”), dated January 2018, internal report prepared by SEMAFO Inc.;
- SEMAFO Inc., “Rapport sur les tests de récupération des minerais de Bantou” (“*Report of Recovery Tests on Bantou North Ore Recovery Test Report*”), dated March 2019, internal report prepared by SEMAFO Inc.;
- Bureau Veritas Minerals – Metallurgical Division, “Metallurgical Testing on Samples from the Karankasso Gold Project, Burkina Faso, West Africa”, dated June 2019, BV Minerals Project 1900701, prepared for Savary Gold Corp.

13.1.1 BANTOU DEPOSIT

Ten (10) samples from the Bantou Deposit were submitted for testing at the metallurgical laboratory at SEMAFO's Mana operation Burkina Faso, including three (3) samples in 2015 and seven (7) samples in 2017-2018. The objective was to determine the maximum recovery for various samples obtained using the standard testing conditions for the Mana flowsheet. The samples were composed of HQ and PQ drill core taken from drilling campaigns performed by the previous owner. The samples were taken from various mineralized intersections and the sample selection criteria were not specified.

All samples were stage crushed and homogenized before being tested to Mana's process flowsheet which is composed of an SABC grinding circuit followed by a CIL circuit with compressed air as an oxygen source. The Mana target grind size is 75 µm.

13.1.1.1 Bottle Roll Screening Tests without Lead Nitrate

During the 2015 testing, Bottle Roll Tests (BRTs) were performed on each sample at various 80% passing sizes (P_{80}). The following parameters were used:

- Initial NaCN concentration: 500 ppm;

- Initial pH: 10 to 11;
- Leach time: 30 h;
- P₈₀:
 - Sample “BANTOU 1” = 137, 70, 38 µm;
 - Sample “BANTOU 2” = 123, 66, 37 µm;
 - Sample “BANTOU 3” = 100, 69, 52 µm.

Gold recoveries varied from 82.1% to 91.6% for 5 of the 9 tests. All three (3) tests for BANTOU 2 and one (1) test for BANTOU 1 showed high cyanide consumption and low recoveries (12% to 46%) due to insufficient cyanide present. Grinding finer than ≈ 75 µm did not improve recovery.

13.1.1.2 Bottle Roll Screening Tests with Lead Nitrate

During the 2017-2018 testing, duplicate BRTs were performed on three (3) sample at various P₈₀'s. The following parameters were used:

- Initial NaCN concentration: 1000 ppm;
- Initial pH: 10 to 11;
- Initial lead nitrate concentration: 500 ppm
- Leach time: 30 h;
- Grind time and P₈₀ (the average measured P₈₀'s are shown):
 - Sample “DY_MW-4” = 125, 66, 48 µm for 10, 20, 30 min grind time, respectively;
 - Sample “DY_MW-5” = 212, 116, 82 µm for 5, 10, 15 min grind time, respectively;
 - Sample “DY_MW-6” = 150, 71, 52 µm for 10, 20, 30 min grind time, respectively;

Gold recoveries varied from 89.9% to 98.5% for 16 of the 18 tests. The two (2) tests for DY-MW-6 at 52 µm showed high cyanide consumption and recoveries around 20% due to insufficient cyanide present. Grinding to ≈ 75 µm have the highest recoveries for each sample.

13.1.1.3 Bottle Roll Tests with Lead Nitrate at Target Grind Size

During the 2015 and 2017-2018 testing, BRTs were performed on all ten (10) samples using lead nitrate and the following parameters:

Initial NaCN concentration: 1000 ppm;

- Initial pH: 10 to 11;
- Initial lead nitrate concentration: 500 ppm
- Leach time: 30 h;
- P₈₀ target: 75 µm (ranging from 70 to 79 µm).

The results of these tests are shown in Table 13.1. When using lead nitrate, average gold recoveries were above 95% for half of the samples, and over 90% for 7 of the 10 samples. For sample BANTOU 2, the average gold recovery was around 80% with the addition of lead nitrate compared to 47% without. For samples DY_MW-1 and DY_MY-7, average gold recoveries were 35% and 78%, respectively.

Diagnostic leaching of the residues of DY_MY-4 to 7 with aqua regia resulted in total gold recoveries of recoveries 99.6%, 99.6%, 96.4%, and 86.0%, respectively. These results indicate that some areas within the deposit are high in sulfides and other areas have nearly no gold locked within a silicate matrix.

Characterization work will be required to confirm the deportment of gold and the reason for variations in gold recoveries. Results indicate the presence of sulfides within the deposit as BRT gold recoveries were increased with the addition of lead nitrate and the presence of native gold due to assay variability and large reconciliation differences.

Table 13.1 – Bantou Deposit Bottle Roll Test Results at Target Grind Size

Sample, Test	Feed Grade, analyzed (Au g/t)	Feed Grade, calculated (Au g/t)	Residue Grade, analyzed (Au g/t)	Recovery, calculated	Recovery, analyzed	P ₈₀ (µm)	Final pH	Residual NaCN (ppm)
BANTOU 1, Test A	83.0	64.5	5.6	91.3%	93.2%	73	10.3	588
BANTOU 1, Test B	58.2	64.2	5.7	91.1%	90.2%	79	10.4	600
BANTOU 1, Avg.				91.2%	91.7%			
BANTOU 2, Test A	76.3	64.2	13.3	79.3%	82.6%	73	12.2	233
BANTOU 2, Test B	87.5	71.2	15.9	77.7%	81.9%	76	12.2	218
BANTOU 2, Avg.				78.5%	82.2%			
BANTOU 3, Test A	6.74	5.58	0.53	90.5%	92.1%	76	12.0	930
BANTOU 3, Test B	5.37	5.37	0.52	90.3%	90.3%	76	11.9	935
BANTOU 3, Avg.				90.4%	91.2%			
DY_MW-1, Test A	3.27	3.21	2.10	34.6%	34.7%	75	10.3	615
DY_MW-1, Test B	3.25	3.13	2.03	35.1%	35.3%	75	10.2	605
DY_MW-1, Avg.				34.9%	35.0%			
DY_MW-2, Test A	12.9	12.4	0.43	96.5%	96.5%	75	10.1	613
DY_MW-2, Test B	14.3	14.2	0.43	97.0%	97.0%	75	10.1	585
DY_MW-2, Avg.				96.8%	96.8%			
DY_MW-3, Test A	3.30	3.07	0.08	97.4%	97.3%	75	11.0	660
DY_MW-3, Test B	2.33	3.12	0.10	96.8%	96.9%	75	11.5	700
DY_MW-3, Avg.				97.1%	97.1%			
DY_MY-4, Test A	32.8	36.4	0.74	98.0%	97.7%	72	10.7	865
DY_MY-4, Test B	32.8	29.4	0.72	97.6%	97.8%	71	10.5	688
DY_MY-4, Avg.				97.8%	97.8%			

Sample, Test	Feed Grade, analyzed (Au g/t)	Feed Grade, calculated (Au g/t)	Residue Grade, analyzed (Au g/t)	Recovery, calculated	Recovery, analyzed	P ₈₀ (µm)	Final pH	Residual NaCN (ppm)
DY_MY-5, Test A	16.3	20.4	0.46	97.7%	97.2%	77	12.0	808
DY_MY-5, Test B	16.3	17.0	0.49	97.1%	97.0%	74	11.5	825
DY_MY-5, Avg.				97.4%	97.1%			
DY_MY-6, Test A	19.1	16.7	0.80	95.2%	95.8%	70	11.7	795
DY_MY-6, Test B	19.1	15.7	0.69	95.6%	96.4%	72	11.8	835
DY_MY-6, Avg.				95.4%	96.1%			
DY_MY-7, Test A	1.22	1.28	0.28	78.1%	98.6%	74	12.4	825
DY_MY-7, Test B	1.22	1.30	0.29	77.7%	76.7%	77	12.4	830
DY_MY-7, Avg.				77.9%	87.6%			

13.1.1.4 Size-by-Size Gold Analysis

During the 2017-2018 testing, four (4) samples were ground to a P₈₀ and submitted for size-by-size gold analysis. The percent gold and mass reporting to each size fraction are shown in Table 13.2.

The results shown the majority of the gold reports to the fractions less than 75 µm (-75+38 and -38 size fractions). For samples DY_MW-4 and 5, high gold concentration was measured in the coarser fractions (-300+212 and -212+150) which suggests a nuggeting effect is present in these samples.

Table 13.2 – Bantou Deposit Size-by-Size Gold Analysis

Size Fraction (µm)	Sample DY_MW-4		Sample DY_MW-5		Sample DY_MW-6		Sample DY_MW-7	
	Mass per fraction	Gold per fraction	Mass per fraction	Gold per fraction	Mass per fraction	Gold per fraction	Mass per fraction	Gold per fraction
+300	0.1%	0.4%	0.1%	0.2%	0.0%	0.0%	0.2%	0.2%
-300+212	0.5%	3.6%	0.7%	1.7%	0.6%	0.1%	1.0%	1.1%
-212+150	2.6%	15.9%	3.2%	7.4%	2.4%	0.5%	3.5%	4.0%
-150+106	6.9%	9.0%	7.8%	11.1%	7.0%	5.4%	7.4%	9.0%
-106+75	9.3%	21.2%	10.2%	17.4%	11.4%	12.5%	10.1%	18.0%
-75+38	17.4%	26.6%	16.9%	26.8%	20.9%	14.4%	19.0%	34.3%
-38	63.2%	23.4%	61.1%	35.5%	57.7%	67.1%	58.8%	33.4%

13.1.2 BANTOU NORD DEPOSIT

Three (3) samples from the Bantou Nord Deposit were submitted for testing at the metallurgical laboratory at SEMAFO's Mana operation Burkina Faso in 2019. The objective was to determine the maximum recovery obtained using the standard testing conditions for the Mana flowsheet. The samples were composed of drill core and the sample selection criteria were not specified.

Samples were stage crushed to 850 µm and homogenized before being ground to a P₈₀ of 75 µm. The grinding curves were determined for all samples and the results are shown in Table 13.3.

Table 13.3 – Bantou Nord Deposit Timed Grinding Results

Sample	Grind time (mins)	% passing 75 µm	P ₈₀	Grinding time at P ₈₀ =75 µm
Sample 1 (BAN_SU-VC)	10	68%	115	17 mins
	20	85%	67	
	30	93%	49	
Sample 2 (BAN_SU-13)	10	69%	109	16 min 25 sec
	20	86%	66	
	30	93%	52	
Sample 3 (BAN_OX)	10	62%	143	12 min 40 sec
	20	75%	89	
	30	92%	51	

For each sample, BRTs were performed with the following parameters:

- Initial NaCN concentration: 1000 ppm;
- Initial pH: 10.5 to 11.0;
- Initial lead nitrate concentration: 500 ppm;
- Leach time: 30 h;
- P₈₀: 75 µm, as per grinding times above;
- pH adjustments carried out during test.

The results of these tests are shown in Table 13.4. Average gold recoveries were calculated at 85.0%, 87.2%, and 90.1% for the three (3) samples. Diagnostic leaching of the residue with aqua regia resulted in an additional 7% to 13% of leachable gold. The remaining 2% to 3% was assumed to be locked in the silicate matrix. Characterization work will be required to confirm these results.

Table 13.4 – Bantou Nord Deposit Bottle Roll Test Results

Sample, Test	Feed Grade, analyzed (Au g/t)	Feed Grade, calculated (Au g/t)	Residue Grade, analyzed (Au g/t)	Recovery, calculated	Recovery, analyzed	Final pH	Residual NaCN (ppm)
BAN_SU-VC, Test A	1.50	1.63	0.25	85.0%	83.7%	10.8	898
BAN_SU-VC, Test B	1.48	1.60	0.24	84.9%	83.6%	10.6	893
BAN_SU-VC, Avg.				85.0%	83.7%		
BAN_SU-13, Test A	1.67	1.76	0.22	87.4%	86.7%	10.6	905

Sample, Test	Feed Grade, analyzed (Au g/t)	Feed Grade, calculated (Au g/t)	Residue Grade, analyzed (Au g/t)	Recovery, calculated	Recovery, analyzed	Final pH	Residual NaCN (ppm)
BAN_SU-I3, Test B	1.66	1.83	0.24	87.0%	85.6%	11.0	913
BAN_SU-I3, Avg.				87.2%	86.2%		
BAN_OX, Test A	2.41	2.58	0.27	89.6%	88.9%	10.6	925
BAN_OX, Test B	2.42	2.57	0.24	90.7%	90.1%	10.7	925
BAN_OX, Avg.				90.1%	89.5%		

13.1.3 KARANKASSO DEPOSIT

One (1) metallurgical test program including 26 composite samples from the Karankasso deposit was conducted by Bureau Veritas Minerals in 2019. The objectives were to perform chemical characterization of the samples and to determine metallurgical response the cyanidation process with or without gravity and flotation pre-concentration. The samples were composed of drill core and the sample selection criteria were not specified.

Before performing whole-ore cyanidation, the samples were stage crushed, homogenized, ground to a target P_{80} of 75 μm , and submitted for chemical characterization. The head grade of 26 composites tested varied from 0.013 to 18.35 g/t Au and averaged 2.84 g/t Au, while the sulfur content ranged from 0.11% to 2.2% and the organic carbon varied from 0.1% to 0.79%.

For each sample, BRTs were performed with the following parameters:

- Initial NaCN concentration: 1000 ppm;
- Initial pH: 10.5 to 11.0;
- Leach time: 2, 7, 24, 30, 48, 54, and 72 h for each test;
- P_{80} : 75 μm target size;
- pH adjustments carried out during test.

The results of these tests are shown in Table 13.5. Gold recoveries varied from 19.8% to 98.9% with 13 of the samples giving recoveries above 85% with these recoveries being achieved within 24

Composite #1 was subjected to two (2) additional tests:

- Gravity concentration followed by leaching at a P_{80} of 75 μm ; and
- Sulfide flotation followed by leaching at a P_{80} of 75 μm .

Both set of tests yielded total gold recoveries of 86.3% and 86.7%, respectively.

Six (6) composite samples were subjected to gravity concentration followed by sulfide flotation and leaching at a P_{80} of 75 μm . These tests showed an average improvement of 5% gold recovery compared to individual whole-ore cyanidation.

Table 13.5– Karankasso Deposit Bottle Roll Test Results

Test	Sample	C _{org} (%)	As (ppm)	P ₈₀ (μm)	Feed Grade, analyzed (Au g/t)	Feed Grade, calculated (Au g/t)	Residue Grade (Au g/t)	Recovery	NaCN (kg/t)	Lime (kg/t)
C1	Composite 1	0.37	534	62	1.32	1.41	0.72	48.7	2.8	0.62
C2	Composite 2	0.31	81	67	4.81	5.80	0.66	88.6	2.6	0.74
C3	Composite 3	0.30	96	68	5.16	4.19	0.64	84.7	2.8	0.56
C4	Composite 4	0.53	248	66	2.25	2.54	0.64	75.0	2.9	0.92
C5	Composite 5	0.39	71	61	0.65	0.93	0.09	90.8	2.7	0.92
C6	Composite 6	0.40	2381	59	2.08	2.22	1.3	39.5	2.8	0.76
C7	Composite 7	0.48	39	64	3.10	3.49	0.39	88.9	2.9	0.76
C8	Composite 8	0.46	939	67	1.30	1.42	1.1	19.8	2.8	0.56
C9	Composite 9	0.38	249	76	2.36	1.96	0.42	78.5	2.4	0.68
C10	Composite 10	0.48	138	82	1.22	1.57	0.34	78.2	2.7	0.60
C11	Composite 11	0.38	49	70	0.64	0.77	0.15	80.3	2.7	0.48
C12	Composite 12	0.33	66	65	0.89	0.92	0.15	83.5	2.4	0.60
C13	Composite 13	0.43	366	76	12.0	12.7	2.5	80.1	2.7	0.82
C14	Composite 14	0.46	94	67	1.16	1.26	0.26	79.8	2.6	0.84
C15	Composite 15	0.63	22	75	0.01	0.04	0.01	80.1	2.8	0.86
C16	Composite 16	0.36	107	66	1.92	2.41	0.51	78.8	2.6	0.66
C17	Composite 17	<0.02	1004	66	2.69	0.66	0.09	85.9	2.8	1.12
C18	Composite 18	0.73	406	59	0.93	0.91	0.91	N/A	2.8	0.78
C19	Composite 19	0.79	187	73	1.46	1.13	1.1	N/A	3.0	0.74
C20	Composite 20	0.09	24	66	0.75	1.02	0.11	89.5	2.5	0.48
C21	Composite 21	0.10	13	85	18.4	18.5	0.20	98.9	2.1	0.40
C22	Composite 22	0.10	193	71	0.79	1.02	0.06	94.2	2.1	0.40
C23	Composite 23	0.14	<5	77	0.42	0.55	0.06	88.9	2.4	0.76
C24	Composite 24	0.14	5	74	1.92	0.84	0.05	94.6	2.4	0.76
C25	Composite 25	0.09	<5	81	2.96	2.80	0.15	94.5	2.2	0.72
C26	Composite 26	0.13	7	81	1.50	1.38	0.10	92.5	2.2	0.32

13.2 Recommendations

For each deposit, it is recommended that point samples be prepared for testing to be used for a Preliminary Economic Assessment (PEA). The metallurgical testing is recommended to be performed at an independent lab. The following metallurgical testing is recommended to be performed for each sample:

- Chemical characterization including gold deportment and organic carbon;
- Physical characterization including standard grinding tests for SAG mill and ball mill sizing;
- Gravity concentration tests;
- Bottle roll test;
- Carbon loading tests.

14 MINERAL RESOURCE ESTIMATE

14.1 Introduction

The Mineral Resources for Bantou were estimated by SEMAFO's resource geologist. The resource estimate has an effective date of December 31, 2019 and supersedes any previous estimates done by previous property owners.

The resources estimate includes eight (8) different deposits, namely Bantou, Bantou Nord, Kueredougou West, Kueredougou Main, Diosso, Karangosso, Serakoro, Kien, and constitute the basis of the Bantou Project Mineral Resources.

The methodology and parameters used in the resources estimate are presented in the following sections.

14.2 Drill Hole Database Construction and Validation

SEMAFO database has been updated with all the Savary drill hole data. The current database is comprised of holes from the Orbis database (2010-2014), the Savary database (1997-2019) and the SEAMFO database (2017-2019). Normalisation to SEMAFO legend was also performed to integrate the various source of information into one single standardized database. Any new lithological descriptions derived from re-logging by SEMAFO of the RC chips from previous RC holes were incorporated into the database.

Drill hole exploration data is captured, validated, stored and managed using the Geobank data management system from Micromine. Several steps of validation of the database by field, project and GIS geologists are performed to check parameters discrepancies such as collar location and elevation, permitted minimum/maximum values, overlap and gaps in the lithologies or sample intervals, sample numbering. The Geobank module added a layer of validation during data transfer.

The data used for the resource estimate includes the results from RC and core drilling by Orbis, Savary and SEMAFO. A total of 467, RC, 43 MP, 50 core holes, and 64 AC/RAB directly associated with the Bantou, Bantou Nord, Kueredougou West, Kueredougou Main, Diosso, Karangosso, Serakoro, Kien deposits were used in the estimate (Table 14.1). The core holes pre-collared by RC drilling are referred to as MP (Multi-Purpose) holes.

Table 14.1 - Summary of Database Entries by Hole Type

Hole Type	Count	Cumulative Length (m)	Number of Assays	Sum of Assayed Length (m)
DDH	50	10,455	3,884	4,355
RC	467	55,626	47,598	49,004
MP	43	10,770	4,178	4,006
AC/RAB	64	2,638	2,121	2,677
TR	2	151	-	-
Total	626	79,640	57,781	60,042

14.3 Geological Modelling

All previous existing interpretation have been reviewed and updated by SEMAFO resource geologist to comply to SEMAFO standards.

Geology and mineralization were first interpreted in 2D from drill hole assay data on cross-sections 40 m to 100 m apart and plan views using 0.3 to 0.5 g/t Au cut-off grades applied to original (i.e., generally 1 m) assay intervals to delineate mineralized material. Some internal waste material may be included to provide continuity of the mineralized envelopes between sections. The outline of the polygons was digitized by snapping on the contacts of logged lithologies and gold assay data. Mineralized intervals were generated from each hole to ensure strings were snapped properly. Interpreted sectional outlines as well as mineralized intervals were exported into Leapfrog to create mineralized solids.

At Bantou, two (2) domains of gold mineralization were created to separate the high-grade from the lower-grade halo bracketing it within the chert and BIF zones. A cut-off grade of ≥ 0.3 g/t Au to ≤ 0.8 g/t Au was used to constrain the low-grade domains and a cut-off of >0.8 g/t Au was applied to delineate the high-grade domain, before the grade interpolation process. The grade estimation was constrained to within the two (2) mineralized envelopes (i.e. namely Low Grade (LG) and High Grade (HG)), in order to avoid smearing of values between the low- and high-grade mineralization and prevent the influence from the barren host rock or isolated values of adjacent mineralization on the estimation process.

Sub-horizontal alteration and oxidation surfaces are interpreted to divide the mineralized solids into various facies. The lateritic profile is very similar to the oxidation profile and generally consists of a hard-metallic cap below which extends a lateritic horizon (dubbed ATB clay) that may be locally mineralized. Between 20 to 40 m below that top surface, there is the saprolite/saprock contact surface and about 5 to 15 m below that is the saprock/fresh rock contact surface. Contacts are rather flat in most deposits. The depth of those contacts is derived from descriptions along drill holes and the corresponding control points are connected through a 3D model. The modelling of contact surfaces is essentially generated on individual east-west sections from holes within the section corridors; modelled surfaces may change abruptly from one section to the next. This indicates that

the interpreted contact surfaces may carry uncertainty. The main potential influence of interpreted contact surfaces on estimated resources is on tonnage (and metal content), because of the differences in density of the different horizons.

The Micromine software, Version 16.1 was used for the 2D interpretation while the 3D solids (i.e. wireframes) were generated with the Leapfrog software.

14.4 Samples in Mineral Zones and Capping

Wireframes of the mineralized envelopes are first filled with blocks or sub-blocks of the resource model, then samples that may influence the grade of those blocks are selected. Block or sub-block grades within a specific mineralized solid can only be interpolated from the grade of samples contained in that same solid, if they are close enough. Since the solids are narrow, except for Bantou Nord, it is important to check that 1) all valid samples within interpreted mineralized intercepts are selected (un-selected samples are excluded from the interpolation) and 2) all samples, including low or zero grade samples, are also selected within the mineralized intercepts (a revised interpretation of the mineralized boundaries may be needed if there are too many of them).

The selected samples are then capped to limit the influence of some of the extreme grade values. The study is based on log probability plot and drawing curves of % cumulated metal vs. % cumulated sample proportion. Finally, the original capped samples are transformed into fixed length 1m composites before they are used in block grade interpolation. This operation is performed using the compositing module in Datamine Software.

Table 14.2 shows statistics of original assays before and after capping within mineralized intercepts for the different deposits. Total length represents the sum of assayed intervals within the mineralized intercepts, which can be slightly different from the total length of mineralized intercepts due to lost core or missing assays. The assays below the detection limit were reset to a value equivalent to half the detection limit.

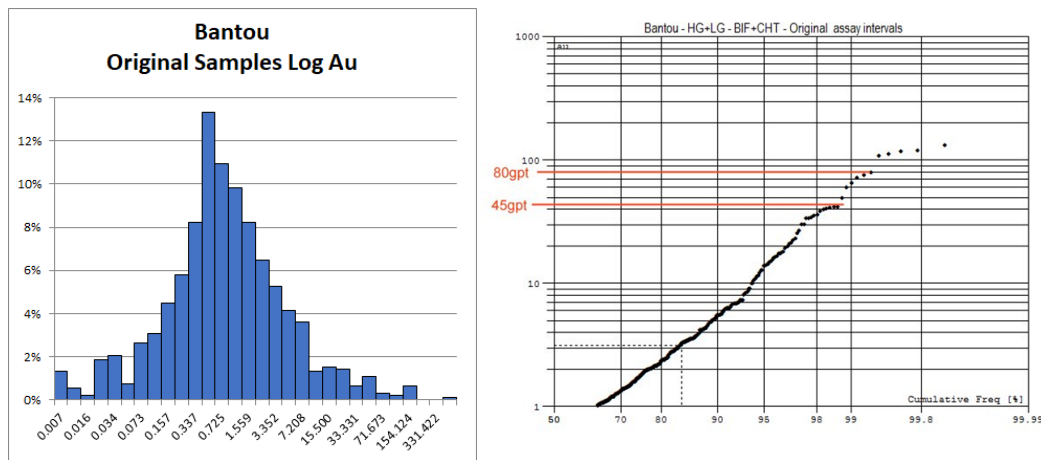
Table 14.2 – Gold Grade Statistics for Assay Intervals Within Bantou Deposit Mineralized Intercepts

Deposit	No. of samples	Total Length (m)	Average Grade Au (g/t)	Gold Cap Limit Au (g/t)	Average Capped Grade Au (g/t)	% Capped	% Gold Lost
Bantou	914	841	3.36	30 (LG) 80 (HG)	0.39 (LG) 5.88 (HG)	0.39 (LG) 1.34 (HG)	0 (LG) -8.7 (HG)
Bantou Nord	6,891	6,732	0.97	13	0.96	0.06	-1.4
Kueredougou West	437	548	1.45	20	1.42	0.23	-2.2
Kueredougou Main	470	471	3.03	20	1.86	1.70	-38.7
Diosso	828	915	1.58	15	1.51	1.33	-4.2
Karangosso	756	766	1.71	20	1.62	0.26	-5.3

Deposit	No. of samples	Total Length (m)	Average Grade Au (g/t)	Gold Cap Limit Au (g/t)	Average Capped Grade Au (g/t)	% Capped	% Gold Lost
Serakoro	743	766	1.38	15	1.15	0.54	-16.6
Kien	741	733	1.23	15	1.18	0.67	-3.8

At Bantou, there are 914 original assay intervals within the 235-hole intercepts within the mineralized solids of the LG and HG zones (see Table 14.3, above). Their gold values range from 0.01 g/t Au to 147 g/t Au with an average of 3.39 g/t Au. Total length of the mineralized intercepts totals 834.35 m, averaging 2.86 m. A 30 and 80 g/t Au cap limit has been applied to the LG and HG zones respectively, capping 1.39% of the samples and reducing the total gold quantity by 8.7% in the high-grade zone (see Figure 14.1).

Figure 14.1 - Cumulative Frequency Plot of Assay Samples at Bantou



Horizontal axis shows % sample below a grade limit on the vertical axis (with a log scale).

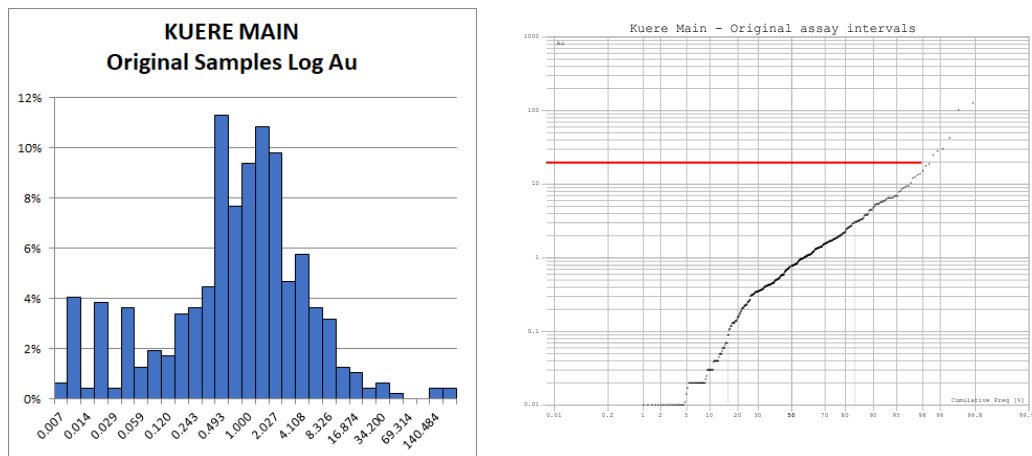
At Bantou Nord, there are 6,891 original assay intervals within the 162-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 75.71 g/t Au with an average of 0.97 g/t Au. Total length of the mineralized intercepts totals 6,761.9m, averaging 41.74 m. A 13 g/t Au cap limit has been applied, capping only 0.06% of the samples and reducing the total gold content by only 1.4%.

At Kuredougou West, there are 437 original assay intervals within the 131-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 37.7 g/t Au with an average of 1.45 g/t Au. Total length of the mineralized intercepts totals 547.55 m, averaging 4.18 m. A 20 g/t Au cap limit has been applied, capping only 0.23% of the samples and reducing the total gold content by only 2.2%.

At Kuredougou Main, there are 470 original assay intervals within the 113-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 200 g/t Au with an

average of 3.03 g/t Au. Total length of the mineralized intercepts totals 470.80 m, averaging 4.17 m. Capping at 20 g/t Au is applied to only 8 samples (1.7%) but reduces the total gold content by approximately 38.7%. Four (4) of those samples returned values over 100 g/t with represent a fair amount of the total metal content of the population.

Figure 14.2 - Cumulative Frequency Plot of Assay Samples at Kueredougou Main



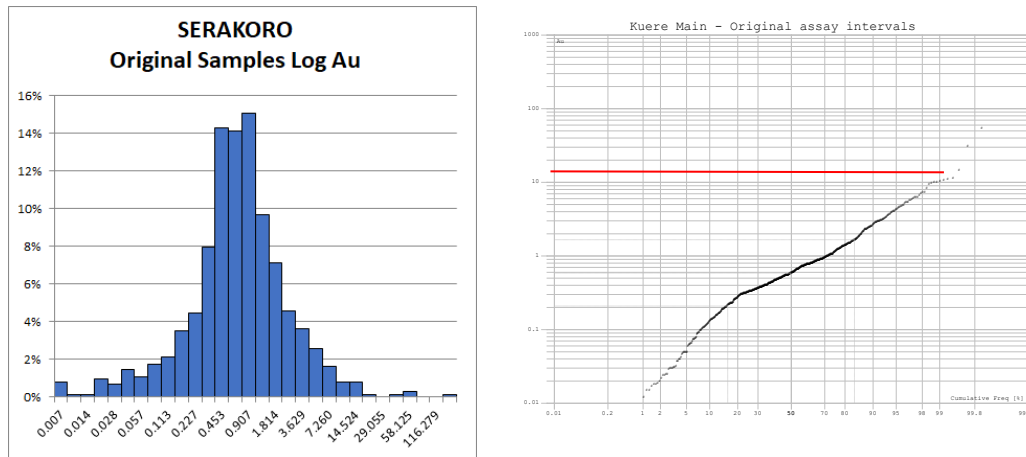
Horizontal axis shows % sample below a grade limit on the vertical axis (with a log scale).

At Diosso, there are 828 original assay intervals within the 219-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 36.25 g/t Au with an average of 1.58 g/t Au. Total length of the mineralized intercepts totals 915.27 m, averaging 4.18 m. A 15 g/t Au cap limit has been applied, capping 1.33% of the samples and reducing the total gold content by 4.2%.

At Karangosso, there are 756 original assay intervals within the 157-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 89.05 g/t Au with an average of 1.71 g/t Au. Total length of the mineralized intercepts totals 765.97 m, averaging 4.88 m. A 20 g/t Au cap limit has been applied, capping only two samples (0.26%) and reducing the total gold content by 5.3%.

At Serakoro, there are 743 original assay intervals within the 156-hole intercepts within the mineralized solids (see Table 14.2). Their gold values range from 0.01 g/t Au to 164.46 g/t Au with an average of 1.38 g/t Au. Total length of the mineralized intercepts totals 766.27 m, averaging 4.91 m. Capping at 15 g/t Au is applied to only 4 samples (0.54%) but reduces the total gold content by 16.6%. Those samples represent a fair amount of the total metal content of the population.

Figure 14.3 - Cumulative Frequency Plot of Assay Samples at Serakoro



At Kien, there are 741 original assay intervals within the 121-hole intercepts within the mineralized solids (see Table 14.2, above). Their gold values range from 0.01 g/t Au to 56.3 g/t Au with an average of 1.23 g/t Au. Total length of the mineralized intercepts totals 733 m, averaging 6.06 m. A 15 g/t Au cap limit has been applied, capping only 5 samples (0.67%) and reducing the total gold content by 3.8%.

14.5 Compositing and Geostatistical Analysis

Prior to grade interpolation, capped assay intervals within mineralized intercepts were composited into 1-m intervals for all deposits except Kueredougou West where composites are 2 m. The average gold grade of nearby sub-blocks was estimated from only nearby composites included in the same mineralized envelope. Compositing standardizes the length of assay intervals within the mineralized intercepts. The composite length is selected to reflect the average width (along the X axis) of blocks being interpolated. Thus, blocks can be interpolated from composites having a length that compares with the intercept length of an inclined hole within a block. This ensures that block grades will include some of the dilution of the drill hole intercepts within blocks and that the estimates above cut-off are realistic. Datamine adjusts the length of composites to the length of mineralized intercepts.

The composite lengths are summarized as follow:

- Bantou: 852 composites range from 0.5 m to 1.4 m with a mean of 0.992 m.
- Bantou Nord: 6,733 composites range from 0.97 m to 1.01 m with an average of 1.0 m.
- Kueredougou West: 295 composites range from 1 m to 2.11 m with an average of 1.853 m.
- Kueredougou Main: 470 composites range from 0.7 m to 1.1 m, averaging 1.0 m.
- Diosso: 912 composites range from 0.65 m to 1.38 m, averaging 0.998 m.
- Karangosso: 769 composites range from 0.6 m to 1.23 m averaging 0.995 m.
- Serakoro: 766 composites range from 0.65 m to 1.12 m averaging 1.0 m.

- Kien: 733 composites range from 0.55 m to 1.42 m with an average of 0.999 m.

Statistics of the capped composite grades are shown in Table 14.3., the average capped grade compares well with original assays top-cut average grade (see Table 14.2 above). For Kueredougou Main, the greater difference is explained by those 4 samples grading over 100 g/t.

Table 14.4 – Statistics of Composite Grades in Bantou Mineralized Zones

Deposit	No. of composites	Minimum Capped Grade Au (g/t)	Median Capped Grade Au (g/t)	Average Capped Grade Au (g/t)	Maximum Capped Grade Au (g/t)	CV of Capped Grades
Bantou	852	0.01	0.63	3.15	80	3.051
Bantou Nord	6,733	0.01	0.68	0.96	13	1.017
Kueredougou West	295	0.01	0.89	1.42	20	1.132
Kueredougou Main	470	0.01	0.77	1.86	20	1.797
Diosso	912	0.01	0.67	1.51	15	1.646
Karangosso	769	0.01	0.68	1.62	20	1.576
Serakoro	766	0.01	0.58	1.15	15	1.593
Kien	733	0.01	0.67	1.18	15	1.330

The spatial continuity of top-cut composites within mineralized solids of the various deposits was assessed with variograms or correlograms. A correlogram examines the decrease of the correlation (measured by a correlation coefficient from -1 to +1) of composite grades in any given direction as the distance between composites increases along that direction. Composite pairs in the appropriate direction +/- an “angular tolerance” are selected and classified into various distance bins based on a given lag along the direction being considered. A correlation coefficient is calculated for each bin from the pairs available in that bin. By graphing 1-correlogram, a curve is drawn showing increasing average grade differences between composites as the distance increases, which is like a traditional variogram. The sill of this “pseudo-variogram” is generally around 1.0 and it corresponds to a correlation coefficient of zero (i.e., no correlation between composite grades). Correlograms are generally preferred to traditional variograms since they are considered more robust with respect to outliers and non-stationary features such as trends and proportional effect (i.e., variability increasing with grade). Correlograms have been calculated but they are presented herein as variograms by graphing the function: 1-correlogram.

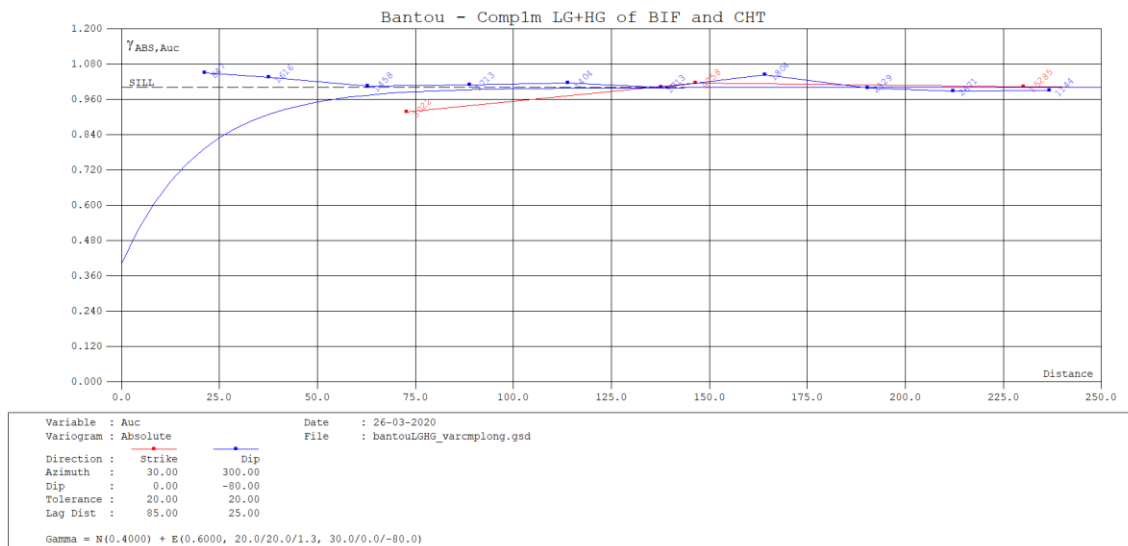
All variogram analysis and modelling were performed using the Geostat+, Version 2.0 module.

3D variograms of 1-m composite data for all deposits but Kueredougou West (e.g. 2-m composites) have been computed separately along horizontal strike direction and dip directions. Also, variograms along the drill hole direction (short distance variogram) were computed separately from those

computed along the average strike and dip directions (long distance variogram) to facilitate the interpretation.

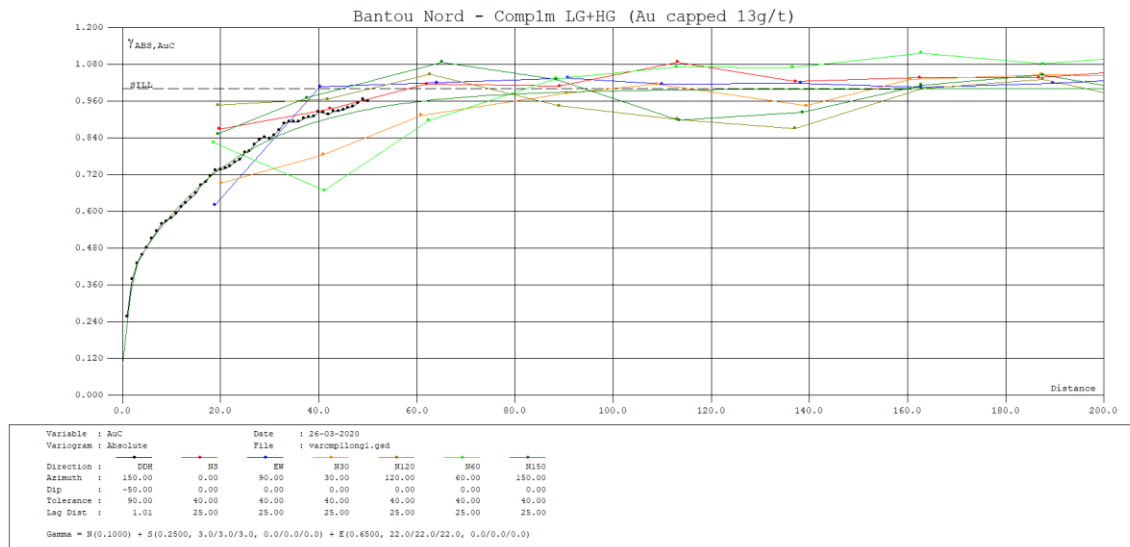
At Bantou, the short distance variogram is characterized by a relative nugget effect of 40% with a short range of 4.5 m. The variogram along the average dip of -80° to N300 and along strike (horizontal N030) displays a range of 60 m. The model is made one isotropic exponential component with ranges of 60 m. (see Figure 14.4).

Figure 14.4 – Variograms of 1 m Composites for Bantou (Short and Long)



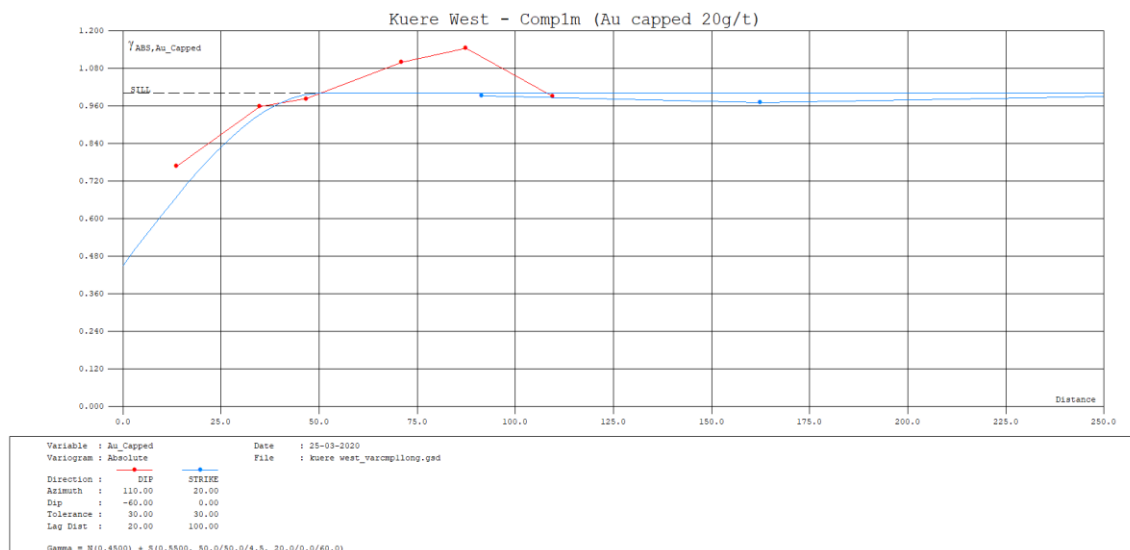
At Bantou Nord, the short distance variograms along the two-main directions of drilling (e.g. N120 and N180) are characterized by a very low nugget effect of 10% with ranges up to 60m, which are unusual for this type of gold deposits (see Figure 14.5). Even though variograms show some anisotropy in different directions, it is considered that the impact on the kriging results will be minimal. Consequently, an isotropic model was considered instead with a first spherical component with an amplitude of 0.25 and ranges of 3 m and a second exponential component with an amplitude of 0.65 and ranges of 66 m.

Figure 14.5 – Variograms of 1 m Composites for Bantou Nord (Short and Long)



At Kueredougou West (see Figure 14.6), the short distance variogram is characterized by a relative nugget effect of 35% with a short range of 5.5 m. The variogram along the average dip of -65° to N110 and along strike (horizontal N020) displays a range of 45 m. The model is made one isotropic spherical component with ranges of 45 m.

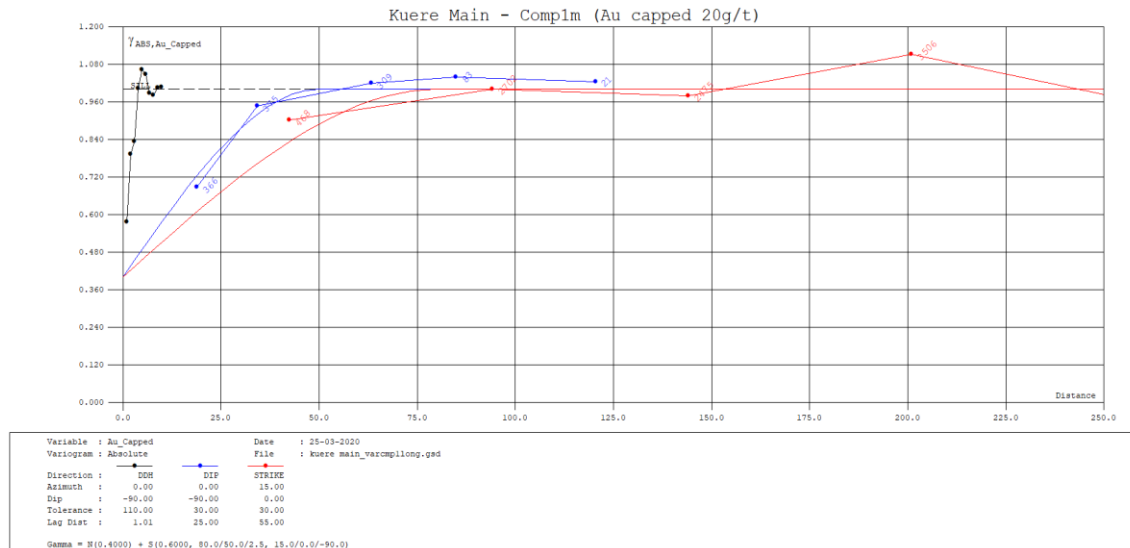
Figure 14.6 – Variograms of 1 m Composites for Kueredougou West (Short and Long)



At Kueredougou Main (see Figure 14.7), the short distance variogram is characterized by a relative nugget effect of 40% with a short range of 2.5 m. The variogram along strike (horizontal N015) displays an 80 m range and along the vertical plane, the variogram displays a shorter range of 50 m.

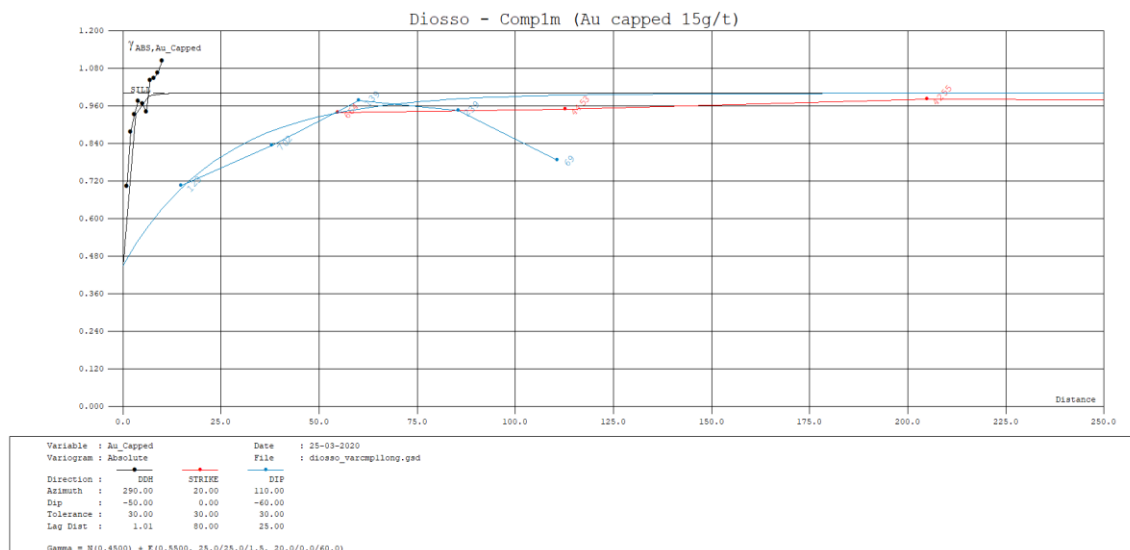
The model is made of a one anisotropic spherical component with a long range of 80 m, intermediate range of 50m and a short range of 2.5 m.

Figure 14.7 – Variograms of 1 m Composites for Kueredougou Main (Short and Long)



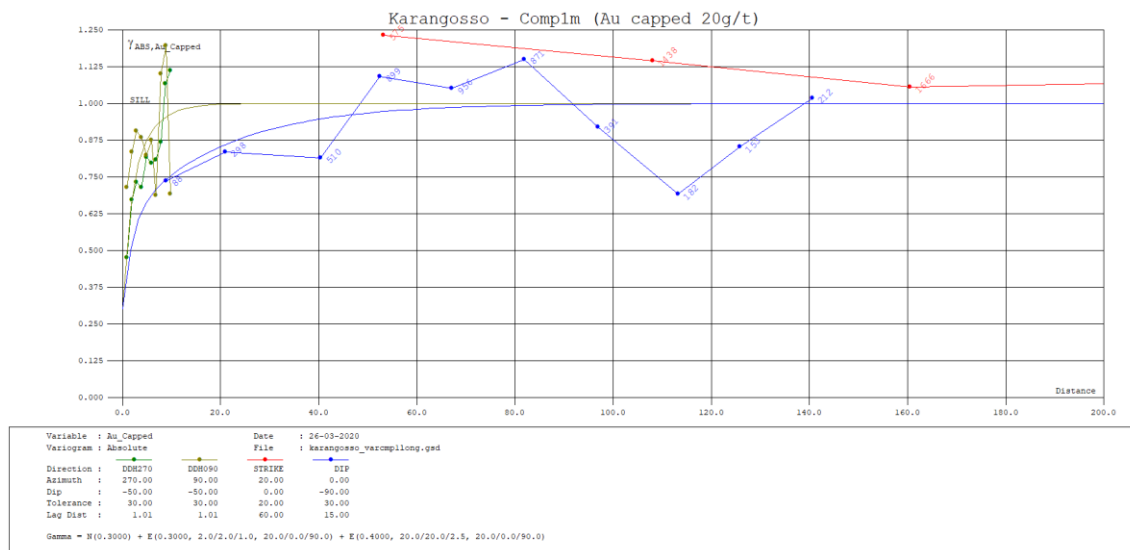
At Diosso (see Figure 14.8), the long and intermediate ranges are within an inclined plane dipping - 65° to N110. The short distance variogram is characterized by a relative nugget effect of 45% with a short range of 5.5 m. The variogram along the average dip of -65° to N110 and along strike (horizontal N020) displays a range of 75 m. The model is made one isotropic exponential component with ranges of 75.

Figure 14.8 – Variograms of 1 m Composites for Diosso (Short and Long)



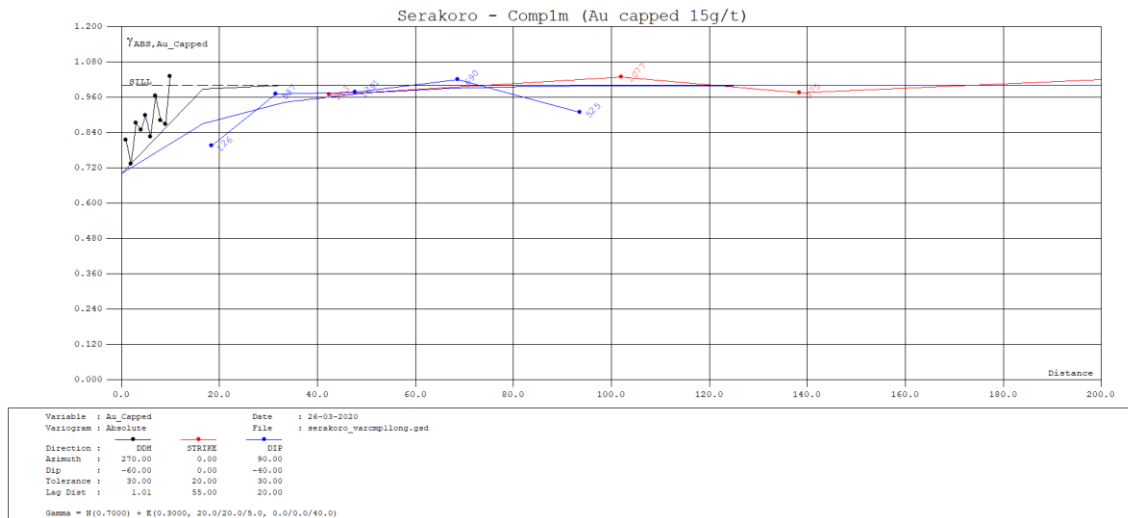
The Karangosso mineralized structures show a general N020 direction but the drilling was done on E-W sections, generally 110m apart with some intermediate sections at 50m. On those E-W sections, drilling was done along two different azimuths, N090 and N270. Short distance variograms do not show a good match between the two drilling directions. This anisotropy can be explained by the fact that the average composite grades of N090 drilling is 1.69 g/t whereas the average composite grades of the N270 drilling is 1.54 g/t. It was decided to model those variograms with the same nugget effect with two exponential components of the same amplitude but with different ranges (see Figure 14.9). The short distance variogram is characterized by a relative nugget effect of 30%. The first component is exponential with an amplitude of 0.3 and a range of 6m in all the directions of the average plane (N020/90). The second component is also exponential with an amplitude of 0.4 with the same anisotropy but with long ranges of 60m and a short range of 7.5m.

Figure 14.9 – Variograms of 1 m Composites for Karangosso (Short and Long)



At Serakoro (see Figure 14.10), the short distance variogram is characterized by a relative nugget effect of 70% with a short range of 15 m. The variogram along strike (horizontal NS) and along the average dip of -40° to N090 displays a 60 m range. The model is made of one isotropic exponential component with ranges of 60 m.

Figure 14.10 – Variograms of 1 m Composites for Serakoro (Short and Long)



The Kien mineralization seems to define a folded structure. To better assess spatial continuity, 1m-composites were grouped in two separate domains, namely, NS and N040 (see Figure 14.11 and Figure 14.12). In the NS domain, which contains most of the data and where drill spacing is tighter, the long and intermediate ranges are within an inclined plane dipping -35° to N090. The short distance variogram is characterized by a relative nugget effect of 30% with a short range of 6 m. The variogram along the average dip of -35° to N090 and along strike (horizontal NS) displays a range of 45 m. The model is made one isotropic spherical component with ranges of 45 m. In the N040 domain, the long and intermediate ranges are within an inclined plane dipping -45° to N130. The short distance variogram is characterized by a relative nugget effect of 30% with a short range of 3 m. The model is made one isotropic spherical component with ranges of 45 m.

Figure 14.11 – Variograms of 1 m Composites for Kien, NS Domain (Short and Long)

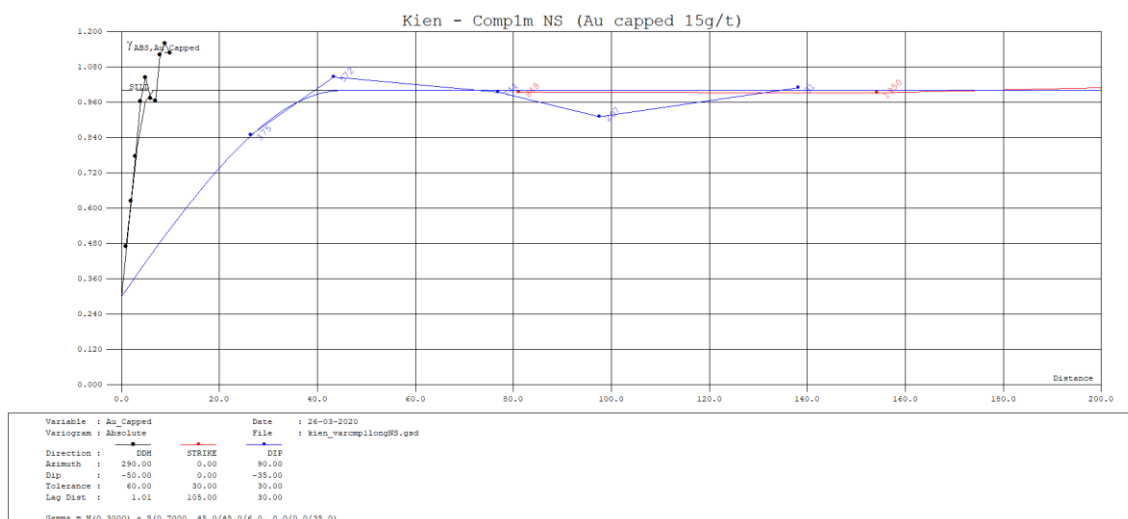


Figure 14.12 – Variograms of 1 m Composites for Kien, N040 Domain (Short and Long)



Based on the variogram study, the search ellipsoid parameters determined for grade interpolation.

14.6 Density

Bulk densities used for the estimation of the resource varies from 1.98 g/cm³ to 2.8 g/cm³ based on weathering. The assigned bulk densities are those reported by Savary for the Kueredougou West, Kueredougou Main, Diosso, Karangosso, Serakoro and Kien deposits; and density determinations by SEMAFO's geologists for Bantou and Bantou Nord deposits.

The information on oxidation contained in the drill hole database for all the holes was used to generate a surface at the interface at the top of the Transitional Zone and the Fresh Zone to cut the portions of the blocks extending into the weathered portion of the laterite profile.

14.7 Resource Block Modelling

Block models were created using Datamine® software package. Unique block models were created for each single deposit with different parent block size. Splitting of the parent block into sub-cells was done by using the parameter MAXDIP in Datamine. The degree of splitting is made dependant on the dip of the wireframe. By setting MAXDIP to 0° and SPLITS to 3 allow all parent cells that are intersected by the wireframe to be divided into 8 sub-cells in Y and Z, with different minimum sub-block size along X, Y and Z. Parent cells were estimated using a discretization of 3 m by 3 m by 3 m in the X, Y, and Z dimensions, respectively.

Some block models were rotated to the East to coincide with the general orientation of the mineralized structure. The coordinates of the origin correspond to the rotated model. Parameters are presented in Table 14.3.

Table 14.3 – Bantou Block Models Parameters

Block Model	Rotation	Parent Block Size (m)			Block Grid Origin		
		X	Y	Z	X	Y	Z
Bantou	30°	2.5	5	5	406,200	1,170,500	-280
Bantou Nord	-	5	5	5	407,300	1,172,400	0
Kueredougou West	20	2.5	10	5	401,800	1,192,400	150
Kueredougou Main	15	2.5	20	10	403,300	1,195,800	150
Diosso	20	2.5	10	5	399,800	1,188,900	150
Karangosso	25	5	10	10	396,600	1,186,100	50
Serakoro	-	5	20	10	391,450	1,170,650	150
Kien	-	2.5	5	5	406,850	1,202,800	125

Block sizes were selected based on the width of the mineralization, the drill pattern and a Selective Mining Unit (SMU).

14.8 Grade Interpolation Methodology

Average block or sub-block grades were interpolated from nearby composites within their respective mineralized solid. Block grade interpolation was estimated by Ordinary Kriging (OK). The different variogram models used for kriging have been presented in a previous section.

The procedure is run in several passes with search conditions (size of search ellipsoid, minimum data in search ellipsoid) relaxed from one pass to the next until most blocks within the mineralized solid are interpolated. Interpolation conditions such as the ellipsoid orientation and size as well as the min/max number of data used in the ellipsoid may vary between deposits. Search parameters used to interpolate block grades are listed in Table 14.4.

Table 14.4 – Search Parameters for Block Grade Interpolation of Bantou Deposits

Deposits	RotY (°)	RotZ (°)	Rmax (m)	Rmin (m)	MinH	MinC	MaxC
Bantou	-80	30	60	4.5	3 3 2	7 7 4	25 25 25
Bantou Nord	0	0	66	66	3 3 2	7 7 4	25 25 25
Kueredougou West	60	20	125	25	3 3 2	7 7 4	25 25 25
Kueredougou Main	90	15	80	15	3 3 2	7 7 4	25 25 25
Diosso	60	20	125	25	3 3 2	7 7 4	25 25 26

Deposits		RotY (°)	RotZ (°)	Rmax (m)	Rmin (m)	MinH	MinC	MaxC
Karangosso		90	20	65	15	3 3 2	7 7 4	25 25 27
Serakoro		-40	90	125	40	3 3 2	7 7 4	25 25 27
Kien	NS	-35	90	125	25	3 3 2	7 7 4	25 25 27
	AZ040	45	-40	225	35	3 3 2	7 7 4	25 25 27

RotY = rotation counterclockwise around Y

RotZ = rotation clockwise around rotated Z

Rmax = max search radius (along rotated Z i.e. dip).

Rint = intermediate search radius (along rotated Y i.e., strike).

Rmin = minimum search radius (along rotated X i.e., across dip+strike).

Min H = minimum number of holes with composites in each interpolation pass (SVOL from 1 to 3 or 4).

MinC = minimum number of composites in each interpolation pass (SVOL from 1 to 3 or 4).

MaxC = maximum number of composites retained in search ellipsoid (closest to block centre).

The basic search ellipsoid (SVOL=1) is defined to accommodate 1) the mineralized envelope geometry and 2) at least three composites in a minimum of two different drill holes. If there are not enough composites in that basic ellipsoid, radii of the next search ellipsoid (SVOL=2) are extended 1.5 to 2 times those of the basic ellipsoid. For the third pass (SVOL=3), radii are 1.25 to 2 times those of the second ellipsoid. If there are no composites in that third ellipsoid, the block is not interpolated (SVOL=0).

Interpolation of blocks in each solid is limited to composites within the same solid. Within a given solid, a block or sub-block in any given mineralized material type may be interpolated from samples in a different mineralized material type which is appropriate since drill hole data tends to show that there is no abrupt change of mineralized zone geometry or grade as mineralized material type boundaries are crossed (i.e., from saprolite to saprock or from saprock to fresh rock).

Each block and sub-block are coded according to its position relative to the oxidation surfaces. Bulk density is assigned according to the mineralized material type of the block or the sub-block.

14.9 Resource Validation

The Mineral Resources is first assessed through a visual validation. The estimated blocks have been compared to the composite and raw assays grades, on sections, plans and in 3D view. The correlation is considered to be very good.

Then basic statistics of blocks are compared to the composites and assays used as input. The results from the descriptive statistics are presented in Table 14.5 to Table 14.7.

The comparisons show a good fit between the interpolated blocks (output of the resource model) and the composites (in/out of the model). As it could be expected, the ordinary krigging has a smoothing effect on the grade as it limits the range of extreme values.

Table 14.5 – Basic Statistical Parameters for Bantou, Bantou Nord and Kueredougou Main

Parameter	Bantou			Bantou Nord			Kueredougou Main		
	Assay	Comp.	Block	Assay	Comp.	Block	Assay	Comp.	Block
Count	914	852	3,182,905	6891	6733	732,120	470	470	146,851
Average	3.388	3.153	2.613	0.972	0.958	0.719	3.056	1.856	1.510
Median	0.610	0.633	0.443	0.680	0.683	0.624	0.765	0.769	1.244
Std Dev.	12.150	9.619	4.391	1.381	0.975	0.372	14.200	3.335	1.114
Variance	147.632	92.520	19.281	1.906	0.950	0.139	201.632	11.124	1.242
COV	3.586	3.051	1.680	1.420	1.017	0.518	4.646	1.797	0.738
Minimum	0.005	0.005	0.035	0.010	0.010	0.195	0.005	0.005	0.102
Maximum	148	80	47.799	76	13	7.334	200	20	14.534

Table 14.6 – Basic Statistical Parameters for Kueredougou West, Diosso, and Karangosso

Parameter	Kueredougou West			Diosso			Karangosso		
	Assay	Comp.	Block	Assay	Comp.	Block	Assay	Comp.	Block
Count	437	295	1,533,970	824	912	404,032	756	769	1,269,908
Average	1.477	1.417	1.275	1.638	1.506	1.660	1.731	1.617	1.466
Median	0.780	0.890	1.209	0.665	0.670	1.630	0.675	0.680	1.241
Std Dev.	2.465	1.604	0.579	3.229	2.479	0.937	4.091	2.549	0.854
Variance	6.075	2.574	0.336	10.427	6.145	0.878	16.740	6.496	0.729
COV	1.669	1.132	0.455	1.971	1.646	0.565	2.364	1.576	0.583
Minimum	0.005	0.005	0.156	0.005	0.005	0.142	0.010	0.005	0.167
Maximum	38	14	7.269	36	15	10.383	89.050	20	13.363

Table 14.7 – Basic Statistical Parameters for Serakoro and Kien

Parameter	Serakoro			Kien		
	Assay	Comp.	Block	Assay	Comp.	Block
Count	743	766	1,280,389	741	733	2,818,225
Average	1.506	1.152	1.141	1.293	1.180	1.158
Median	0.580	0.576	0.911	0.670	0.670	0.992
Std Dev.	6.922	1.834	0.726	2.778	1.570	0.705
Variance	47.919	3.364	0.528	7.715	2.463	0.497
COV	4.598	1.593	0.637	2.148	1.330	0.609
Minimum	0.010	0.005	0.149	0.010	0.005	0.135
Maximum	164.464	15	5.903	56.300	15	5.696

14.10 Resources Definitions and Classification

14.10.1 CIM GUIDELINES & DEFINITION

The guidelines from the latest (November 29, 2019) version of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards – For Mineral Resources and Mineral Reserves were followed in the resource classification: Selected items from the definitions are reproduced below as the full and official text is freely available on the CIM Website.

In addition to conformity with the guidelines adopted by CIM, the criteria used by SEMAFO's resource geologist for classifying the resources are based on the quality of the dataset and the certainty of continuity of geology and grade.

Definitions are from the Canadian institute of Mining, Metallurgy and Petroleum (CIM):

Mineral Resource

Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource.

A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth's crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.

The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently been defined by the consideration and application of technical, economic, legal, environmental, socio-economic and governmental factors. The phrase 'reasonable prospects for economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. A Mineral Resource is an inventory of mineralization that under realistically assumed and justifiable technical and economic conditions might become economically extractable. These assumptions must be presented explicitly in both public and technical reports.

Inferred Mineral Resource

An 'Inferred Mineral Resource' is that part of a Mineral Resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited

information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes.

Due to the uncertainty that may be attached to Inferred Mineral Resources, it cannot be assumed that all or any part of an Inferred Mineral Resource will be upgraded to an Indicated or Measured Mineral Resource as a result of continued exploration. Confidence in the estimate is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Inferred Mineral Resources must be excluded from estimates forming the basis of feasibility or other economic studies.

Indicated Mineral Resource

An 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Mineralisation may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.

Measured Mineral Resource

A 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough to confirm both geological and grade continuity.

Mineralisation or other natural material of economic interest may be classified as a Measured Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such that the tonnage and grade of the mineralization can be estimated to within close limits and that variation from the estimate would not significantly affect potential economic viability. This category requires a high level of confidence in, and understanding of, the geology and controls of the mineral deposit.

14.10.2 CLASSIFICATION

The mineral resource classification is based on certainty of geology and grades, which is, in most cases, related to the drilling density. As block grade is interpolated, resources in each block are automatically classified based on the interpolation run number (SVOL), run 1 being given more restrictive conditions than run 3. In the case of the Bantou project, all three (3) passes have been given the inferred category. Although the disseminated mineralization at Bantou Nord appears to be very homogeneous with a low nugget effect and significant ranges for gold deposits, all the resources were graded as Inferred Resources.

14.11 Mineral Resource Statement

To produce the final resource estimates, all mineralized material is first classified by mineralization type and category from the block models. Resources are that part of the mineral inventory that reflect a “reasonable prospect of economic extraction” of such resources as defined by the CIM Definition Standards for Mineral Resources and Mineral Reserves. This requirement implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade.

In the upper portion of deposits, the conceptual limit of economical extraction is an optimized pit shell with reasonable technical (maximum pit slopes, gold recovery) and economical (gold price, unit mining and processing costs) parameters. Unlike pit design shells for reserves, those for resources include the inferred blocks of the mineral inventory.

The optimized pit shells parameters are listed in Table 14.8 with the following comments:

- Maximum pit slope angle, mining recovery, dilution, royalties and sale costs are based on SEMAFO's experience in their current operation, as well as DRA/Met-Chem's experience on similar projects.
- Unit mining and processing costs used are outlined in Table 14.8.
- Unit costs for mining waste include an additional transportation cost to the waste pad. Unit costs for milling ore include general and administration (G&A) costs and a transportation cost to a mill.
- Gold recoveries ranges from 65% to 93%.
- Gold price is USD 1,500/oz.

Table 14.8 – Parameters for Resource Pit Optimization

Zone/Parameter	Bantou	Bantou Nord	Kueredougou West	Diosso	Karangosso	Serakoro	Kien
Max. Slope Angle OX	45°	45°	45°	45°	45°	45°	45°
Max. Slope Angle TR	45°	45°	45°	45°	45°	45°	45°
Max. Slope Angle SU	50°	50°	50°	50°	50°	50°	50°
Mining Mineralized Material OX (USD/t)	1.75	1.50	1.75	1.75	1.75	1.75	1.75
Mining Mineralized Material TR (USD/t)	2.25	2.00	2.25	2.25	2.25	2.25	2.25
Mining Mineralized Material SU (USD/t)	2.75	2.50	2.75	2.75	2.75	2.75	2.75
Mining Waste OX (USD/t)	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Mining Waste TR (USD/t)	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Mining Waste SU (USD/t)	2.50	2.50	2.50	2.50	2.50	2.50	2.50
Mining Dilution (avg.) (%)	10	5	10	10	10	10	10
Mining Metal Recovery (%)	95	95	95	95	95	95	95
Processing Metal Recovery OX (%)	87	87	65	80	93	80	80
Processing Metal Recovery TR (%)	87	87	65	80	93	80	80
Processing Metal Recovery SU (%)	87	87	65	80	93	80	80
Rehabilitation (USD/t)	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Milling Mineralized Material OX (USD/t)	17.30	16.30	23.00	23.00	23.00	23.00	26.00
Milling Mineralized Material TR (USD/t)	17.30	16.30	23.00	23.00	23.00	23.00	26.00
Milling Mineralized Material SU (USD/t)	17.30	16.30	23.00	23.00	23.00	23.00	26.00
Underground Cut-off Grade (g/t Au)	>2	-	-	-	-	-	-

Notes Milling cost of Mineralized Material includes G&A and transportation

The final estimated Inferred Mineral Resources is comprised of 1) open pit constrained Mineral Resources using cut-off grades ranging from 0.43 to 0.86 grams of gold per tonne; and 2) an underground Mineral Resources at Bantou using a cut-off of 2.0 g/t beneath the open pit surface. Table 14.9 presents the results from the resource estimate.

Table 14.9 – Bantou – Mineral Resource Estimate as of December 31, 2019

Deposits	Tonnage (Mt)	Grade (g/t Au)	Total Gold (x1,000 oz)
Bantou	2.26	5.98	434
Bantou Nord	36.11	0.90	1,101
Diosso	2.77	2.00	175
Karangosso	2.59	1.80	148
Kien	3.02	1.60	151
Kueredougou West	1.32	1.80	75
Serakoro	3.04	1.60	160
Total Inferred Resources	51.11	1.37	2,245

Notes:

- (1) The Mineral Resources in this press release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.
- (2) The Mineral Resources have been estimated using a gold price of USD 1,500/oz.
- (3) Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
- (4) The inferred mineral resource in this estimate has a lower level of confidence that applied to an indicated mineral resource and must not be converted to a mineral reserve. The quantity and grade of reported inferred mineral resources are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as indicated or measured mineral resources, and it is uncertain if further exploration will result in upgrading them to these categories.
- (5) The Bantou Property Mineral Resources Estimate was prepared by François Thibert M.Sc. geo., Directeur, Groupe Estimation Ressources et Réserves, Afrique de l'Ouest and SEMAFO's QP.
- (6) The Kueredougou Main deposit was excluded from the Mineral Resources Estimate because of extensive artisanal mining currently on-going.

15 MINERAL RESERVES ESTIMATE

This is a Mineral Resource Estimate Report, and as such, Mineral Reserves have not yet been estimated for the Bantou Project, as per NI 43-101 regulations.

16 MINING METHOD

This Section is not applicable to this Technical Report.

17 RECOVERY METHODS

This Section is not applicable to this Technical Report.

18 PROJECT INFRASTRUCTURE

This Section is not applicable to this Technical Report.

19 MARKET STUDIES AND CONTRACTS

This Section is not applicable to this Technical Report.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This Section is not applicable to this Technical Report.

21 CAPITAL AND OPERATING COSTS

To date no Preliminary Economic Assessment nor Preliminary Feasibility Study has been completed; thus, this Section is not applicable to this Technical Report.

22 ECONOMIC ANALYSIS

This Section is not applicable to this Technical Report.

23 ADJACENT PROPERTIES

The Bantou - Karankasso Permit Group comprised of the Dynikongolo, Serakoro 1, Bio, Fakoto, Niawé, Kelesso licenses is surrounded by other registered permits as shown in Figure 23.1. Most of the Western border of the South Houndé Belt is covered with claims that belong to either Endeavour Mining Corp., Acacia Mining Plc. or SEMAFO Inc. Other exploration companies in the area include Teranga Gold Corp., Sarama Resources Ltd, ACC Holdings and Centamin Plc. In the central and eastern part of the South Houndé Belt, many exploration licences are either expired or belonging to private owners.

Sarama's South Houndé Project consists of seven (7) exploration licenses totalling 814 km² located directly West of Dynikongolo. The main zones of interest in the South Houndé Project are the MM Zone and the MC Zone that form the continuity to the Tankoro Prospect on the Dynikongolo exploration license. On February 16, 2016, Sarama released an inferred mineral resource update highlighting the following: 43.0 Mt grading 1.50 g/t Au for 2.1 M ounces including 0.5 M ounces as oxide ore. Gold recovery is reported at 93% for the oxide, but the ore in the fresh rocks has been found to be refractory.

Roxgold Inc. recently reported some highly interesting results from their grass root project Boussoura, which includes 14.00m at 10.50 g/t at Galgouli and 10.70m at 18.10 g/t at Fofora.

The Golden Hill project consists of 3 exploration licenses 100% own by Teranga Gold Corp. which hold shear hosted mineralized zone within a package of mafic volcanics. The company released a mineral resource estimate dating November 30th, 2018 which includes 415,000 oz at 2.02 g/t in the indicated resource category and 644,000 at 1.68 g/t in the inferred. The resources calculation data or model have not been reviewed by Semafo.

In addition, Acacia completed three (3) earn-in agreements in the area, providing them exposure to approximately 2,800 km² in the South Houndé Belt.

Figure 23.1 - Adjacent Permit Boundaries

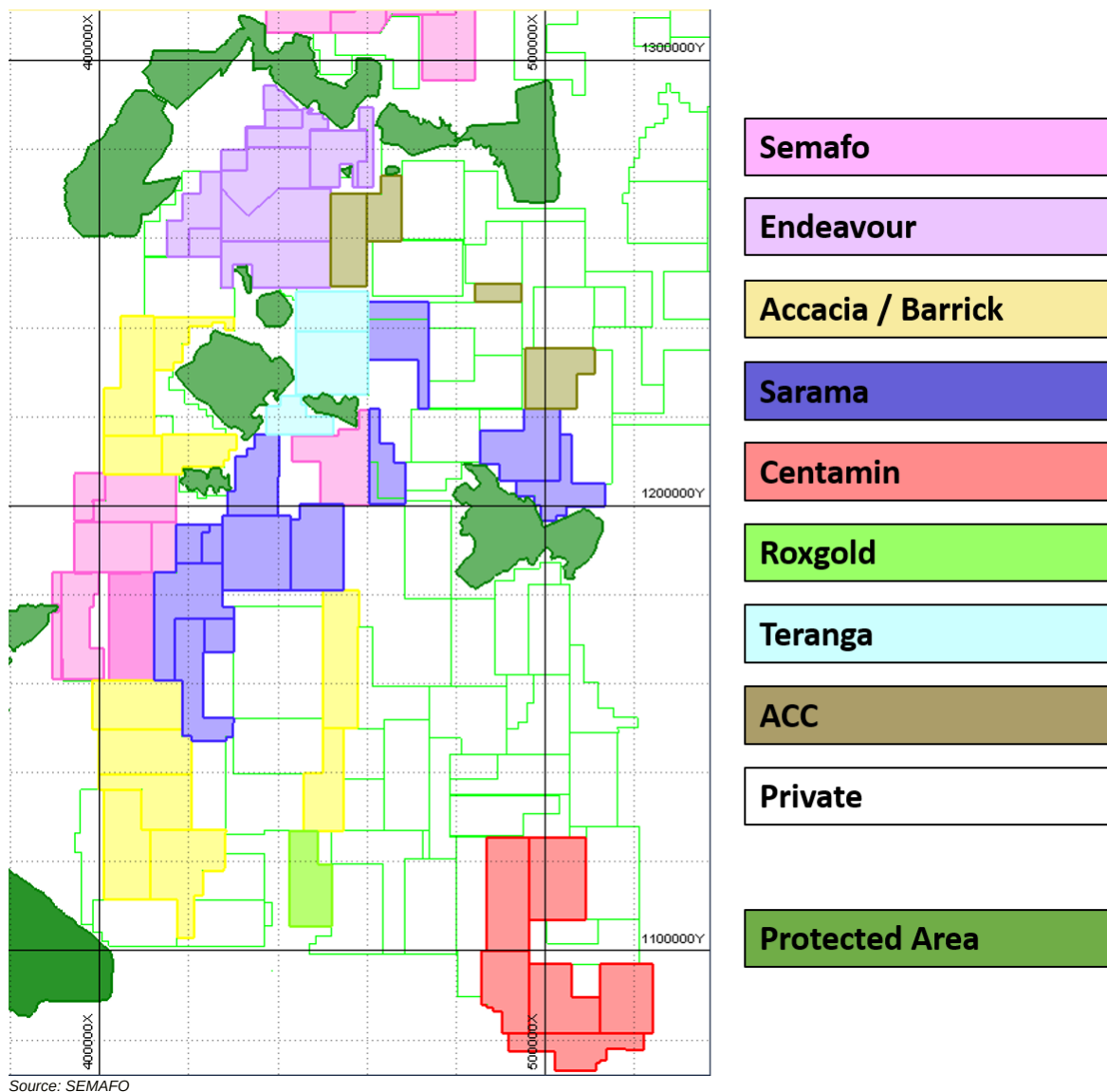


Figure 23.2 - South Hounde Project (Sarama)

Source: Modified from Sarama Resources Ltd. website

Figure 23.3 - MM Prospect Location Plan (Sarama)



Source: Sarama Resources Ltd. website

24 OTHER RELEVANT DATA AND INFORMATION

DRA/Met-Chem is not aware of any additional relevant data that might materially impact the interpretations and conclusions presented in this Technical Report.

25 INTERPRETATION AND CONCLUSIONS

25.1 Conclusions

The Bantou permit group is composed of six (6) contiguous exploration licences covering approximately 934 km² on the Western margin of the Houndé greenstone belt in southwest of Burkina Faso. The Dynikongolo permit where the Bantou and Bantou Nord deposits are located is 100% owned by Semafo, while the Karankasso Property, where the Karangosso, Dloso, Kueredougou and Kien deposits are located, is jointly owned by Semafo (80.09%) and Sarama (19.91%).

The Bantou permit group is located on the prolific Birimian Gold Province that hosts several world-class gold deposits distributed throughout West Africa, notably in Ghana, Mali, Burkina Faso, Ivory Coast and Senegal.

The gold deposits of the Karankasso domain have been ascribed to mesothermal, orogenic shear-hosted and hydrothermal type deposits. This mineralization type is typical of Birimian terrains. The Bantou mineralization is interpreted as of gold-rich volcanogenic type but also shows a distinctive magmatic signature. Bantou Nord mineralization is currently believed to result from the same hydrothermal system responsible for the Bantou deposit formation (Gaboury, 2019). The deposit bears many characteristics of porphyry style mineralization including lack of structural controls and no direct correlation to alteration.

Exploration on the Bantou Project property involved evaluation of areas of artisanal mining, airborne magnetic, radiometric and topographic surveys, regional soil and rock chip sampling programs to delineate regional gold mineralized structures. A combination of mapping, geochemical soil surveys, and IP surveys on identified structures has identified specific drill targets. Extensive drilling programs were undertaken over the years, and comprised of reverse circulation, air core and diamond drill holes has subsequently been successful in discovery and resource delineation.

This resource estimate is effective as of December 31st, 2019 and is based on a database with 626 drill holes with 79,640 samples. Based on open pit cut-off grades ranging from 0.43 to 0.86 g/t of gold, and an underground cut-off grade of 2 g/t for Bantou, the Bantou Project properties are estimated to contain an Inferred Resource of 51,110,000 tonnes at grade of 1.37 g/t Au for a total of 2,245,000 contained ounces of gold.

The mineral resources in this Report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. The quantity and grade of reported Inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these Inferred resources as an Indicated or Measured mineral

resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured mineral resource category.

25.2 Risk Evaluation

The risks affecting the economic and technical viability of the Project will be reduced as geotechnical and hydrogeological studies, more metallurgical testing, and engineering are undertaken during the next phase.

As for all mining projects, external risks beyond the control of the project such as the political situation in the Project region, commodity prices, exchange rates and government legislations are much more difficult to anticipate and mitigate.

Negative variance to these risks from the assumptions used to build the block model may have an impact on Mineral Resource Estimates.

26 RECOMMENDATIONS

26.1 Mining and Geology

It is recommended to increase the level of knowledge of the mineral resources of the Bantou Project with the implementation of a new drilling campaign. This campaign should aim at bringing the resource category to the Measured and Indicated level as much as possible, and also to increase the resource base at depth and along strike at some selected targets.

The Bantou deposit shows a significant amount of mineralized material below the Resource Pit Shell, so a drilling campaign aiming at testing the deep extensions should be undertaken.

26.2 Geotechnical

As the Bantou Project will move ahead into the next phases of development, more geotechnical test work and analysis will be needed. A geotechnical drilling program will have to be carried out, with the following objectives:

- Final pit slope angle assessment;
- Recommendation for stope dimensions for the UG targets;
- 2D/3D finite element analysis, and ground support recommendations for the development areas and the production stope.

26.3 Hydrogeology and Hydrology

A hydrogeological investigation program should take place, possibly at the same time than the next geotechnical drilling program (for assessment of the pit slope and stope stability). Pumping / dewatering hole could be designed at this point, if required.

Similarly, a hydrology assessment should take place as part of a potential PFS or DFS of the Bantou Project. This work is required to evaluate the rainwater contribution on the overall drainage. The hydrological data will be used to design the drainage system of the site, sediment ponds / sumps to collect the water and pumping / piping systems to remove the water from the open pit. Although the annual average rainfall is low, management of surface stormwater will be important due to large inter-year variability, potential for heavy rains periods during the wet month and relatively flat ground.

26.4 Process

26.4.1 TEST WORK

Additional metallurgical test work is recommended to be used for a Preliminary Economic Assessment (PEA). This work should be conducted on point samples from each deposit and should include chemical and physical characterization, gravity concentration tests, BRTs, and carbon loading tests.

Once the selected flowsheet is confirmed with testing, it is recommended that domain composites and point variability samples be prepared and tested with the selected flowsheet at the Prefeasibility Study (PFS) stage.

26.4.2 TRADE-OFF STUDIES

There are a number of Trade-Off Studies (TOS) that will need to be carried out prior to or during the PEA or PFS stage.

26.4.2.1 *Grinding using one large mill or two smaller ones.*

Since large variability in material hardness is expected in the mill feed, a trade-off study should be performed to investigate the most efficient method of absorbing these variations. Two (2) smaller mills will adapt to changes in material hardness easier than one large mill. Further, two (2) small mills are more energy efficient, but will have a larger Capex associated with them.

26.4.2.2 *Carbon-in-Leach versus Carbon-in-Pulp (CIL vs. CIP)*

CIL is the conservative approach of designing a gold operation. The CIL plant ensures that if preg-robbing (gold) particles are in the slurry the carbon adsorb the gold preferentially. However, this leads to a significant higher carbon inventory and lower gold loading on the carbon and thus, less efficiency during stripping. CIP entails the addition of CIP tanks after leaching has been completed. The inventory and wear of carbon is thus less. A CIL vs. CIP trade-off study is recommended for the next stage of the project to validate the Capex impact. If metallurgical test work shows that the material has preg-robbing properties, then this trade-off will likely point to CIL to avoid gold losses.

26.4.2.3 *Post Leach Thickener vs No Thickening*

Depending on size and proximity of the tailings dam, some plants with high discharge cyanide levels have a post-leach cyanide thickener following the leaching step. This would allow for reduced cyanide consumption.

26.5 Environment

It is recommended to perform the following work in connection with environmental activities:

- Extend soil and surface water surveys to select the best location for the tailing ponds, waste rock and overburden piles;
- Carry out a hydrogeological study to collect field data in order to estimate from groundwater flow modeling dewatering rates and impacts;
- Start the environmental studies required to support permitting requirement and to optimize the site layout;
- Identify environmental requirement for site closure and estimate the cost.

26.6 Proposed Work Program

To ensure the potential viability of the mineral resources, proposed activities to be undertaken in the next phase have been identified. These activities along with their estimated costs are shown in Table 26.1.

The definition drilling program would be designed to bring most of the Inferred Resource into the Indicated category, gain confidence in the in-pit resources and test the potential underground extensions, especially for the high grade zones (such as Bantou, Diosso, Karangosso, etc...)

Table 26.1 – Estimated Budget for Next Phase

Activities	Estimated Budget (\$)
Definition Drilling Campaign	10,000,000
Geotechnical and Hydrogeology Studies	500,000
Metallurgical Test Work Program	300,000
Environmental Studies	1,000,000
Pre-Feasibility Study	500,000
<i>Sub-Total</i>	<i>12,300,000</i>
Contingency (20 %)	2,460,000
Total	14,760,000

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28 ABBREVIATIONS

The following abbreviations may be used in this Report.

Abbreviation	Terms or Units
$\mu\text{g}/\text{m}^3$	Microgram per Cubic Metre
μm	Microns, Micrometre
'	Feet
"	Inch
\$	Dollar Sign
$\$/\text{m}^2$	Dollar per Square Metre
$\$/\text{m}^3$	Dollar per Cubic Metre
$\$/\text{t}$	Dollar per Metric Tonne
%	Percent Sign
% w/w	Percent Solid by Weight
¢/kWh	Cent per Kilowatt hour
°	Degree
°C	Degree Celsius
2D	Two Dimensions
3D	Three Dimensions
AAS	Atomic Absorption Spectroscopy
AI	Abrasion Index
Actlabs	Activation Laboratories Ltd.
AMSL	Above Mean Sea Level
ARD	Acid Rock Drainage
ASL	Above Sea Level
AWG	American Wire Gauge
az	Azimuth
bank	Bank Cubic Metre
BDF	Bulk Density Factors
BFA	Bench Face Angle
BIF	Banded Iron Formation
BIGS	BIGS Global Burkina

Abbreviation	Terms or Units
BOF	Basic Oxygen Furnace
BQ	Drill Core Size (3.65 cm diameter)
BRGM	<i>Bureau de recherches géologiques et minières</i>
BSG	Bulk Specify Gravity
BTU	British Thermal Unit
BUMIFOM	<i>Bureau minier de la France Outre-Mer</i>
BWI	Bond Ball Mill Work Index
CAD	Canadian Dollar
CAPEX	Capital Expenditures
CDE	Canadian Development Expenses
CDP	Closure and Decommissioning Plan
Ce	Cesium
cfm	Cubic Feet per Minute
CFR	Cost and Freight
Cg	Graphitic
CIF	Cost Insurance and Freight
CIL	Carbon in Leach
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIP	Carbon in Pulp
CI	Clay
CL	Concentrate Leach
cm	Centimetre
CNT	Conseil National de transition
Co	Cobalt
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
COG	Cut Off Grade
COV	Coefficient of Variation
CRM	Certified Reference Materials
CTAE	<i>Comité Technique d'Analyse Environnementale</i>
CTMP	<i>Centre de Technologie Minérale et de Plasturgie Inc.</i>
Cu	Copper
CWI	Crusher Work Index

Abbreviation	Terms or Units
d	Day
d/w	Days per Week
d/y	Days per Year
D2	Second Generation of Deformation
D3	Third Generation of Deformation
D4	Fourth Generation of Deformation
dB	Decibel
dBA	Decibel with an A Filter
DDH	Diamond Drill Hole
deg	Angular Degree
DEM	Digital Elevation Model
DGPS	Differential Global Positioning System
DMS	Dense Media Separator
DT	Davis Tube
DTM	Digital Terrain Model
DWI	Drop Weight Index
DWT	Drop Weight Test
DXF	Drawing Interchange Format
E	East
EA	Environmental Assessment
EAB	Environmental Assessment Board
EAF	Electric Arc Furnace
EBS	Environmental Baseline Study
EDS	Energy-dispersive X-ray spectroscopy
EHS	Environment Health and Safety
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EM	Electromagnetic
EMP	Environmental Management Plan
EOH	End of Hole
EP	Environmental Permit
EPA	Environmental Protection Agency

Abbreviation	Terms or Units
EPCM	Engineering, Procurement and Construction Management
EQA	Environmental Quality Act
ER	Electrical Room
ESBS	Environmental and Social Baseline Study
ESIA	Environmental and Social Impact Assessment
FA	Fire Assay
FOB	Free on Board
ft	Feet
g	Grams
G&A	General and Administration
g/l	Grams per Litre
g/t	Grams per Tonne
gal	Gallons
GCP	Ground Control Points
GCW	Gross Combined Weight
GEMS	Global Earth-System Monitoring Using Space
GOH	Gross Operating Hours
GPS	Global Positioning System
Gr	Granular
H	Horizontal
h	Hour
h/d	Hours per Day
h/y	Hour per Year
H ₂	Hydrogen
ha	Hectare
HDPE	High Density PolyEthylene
HF	Hydrofluoric Acid
HFO	Heavy Fuel Oil
HG	High Grade
HL	Heavy Liquid
hp	Horse Power

Abbreviation	Terms or Units
HQ	Drill Core Size (6.4 cm Diameter)
HVAC	Heating Ventilation and Air Conditioning
Hz	Hertz
I/O	Input / Output
ICP-AES	Inductively Coupled Plasma – Atomic Emission Spectroscopy
ICP-MS	Inductively Coupled Plasma – Mass Spectroscopy
ICP-OES	Inductively Coupled Plasma – Optical Emission Spectroscopy
ID	Identification
IDW	Inverse Distance Method
IDW2	Inverse Distance Squared Method
IFC	International Finance Corporation
In	Inches
IR	Infrared Radiation
IRA	Inter-Ramp Angle
IRR	Internal Rate of Return
IT	Information Technology
JORC	Joint Ore Reserves Committee
JV	Joint Venture
KE	Kriging Efficiency
kg	Kilogram
kg/l	Kilogram per Litre
Kg/t	Kilogram per Metric Tonne
kl	Kilolitre
km	Kilometre
km/h	Kilometre per Hour
kPa	Kilopascal
KSR	Kriging Slope Regression
kt	Kilotonne
kV	Kilovolt
kVA	Kilovolt Ampere
kW	Kilowatt

Abbreviation	Terms or Units
kWh	Kilowatt-hour
kWh/t	Kilowatt-hour per Metric Tonne
L	Line
l	Litre
l/h	Litre per hour
lbs	Pounds
LFO	Light Fuel Oil
LG	Low Grade
LG-3D	Lerchs-Grossman – 3D Algorithm
Li	Lithium
LIMS	Laboratory Information Management Systems
LIMS	Low Intensity Magnetic Separator
LPA	<i>Lumière polarisée analysée</i>
LPNA	<i>Lumière polarisée non-analysée</i>
LOI	Loss on Ignition
LOM	Life of Mine
LV	Low Voltage
m	Metre
m/h	Metre per Hour
m/s	Metre per Second
m ²	Square Metre
m ³	Cubic Metre
m ³ /d	Cubic Metre per Day
m ³ /h	Cubic Metre per Hour
m ³ /y	Cubic Metre per Year
mA	Milliampere
MCC	Motor Control Center
MEB	<i>Microscopie électronique à balayage</i>
mg/l	Milligram per Litre
MIBK	Methyl Isobutyl Ketone
min	Minute
min/h	Minute per Hour

Abbreviation	Terms or Units
Min/shift	Minute per Shift
ml	Millilitre
ML	Metal Leaching
MLA	Mineral Liberation Analyzer
mm	Millimetre
mm/d	Millimetre per Day
Mm ³	Million Cubic Metres
MMER	Metal Mining Effluent Regulation
MMU	Mobile Manufacturing Units
MOLP	Multiple Objective Linear Programming
MOU	Memorandum of Understanding
Mt	Million Metric Tonnes
Mt/y	Million of Metric Tonnes per year
MV	Medium Voltage
MVA	Mega Volt-Ampere
MW	Megawatts
MWh/d	Megawatt Hour per Day
My	Million Years
N	North
NAG	Non-Acid Generating
NaCN	Sodium cyanide
Nb	Number
NE	Northeast
NFPA	National Fire Protection Association
NGR	Neutral Grounding Resistor
Ni	Nickel
NI	National Instrument
Nm ³ /h	Normal Cubic Metre per Hour
NPV	Net Present Value
NQ	Drill Core Size (4.8 cm diameter)
NSR	Net Smelter Return
NTP	Normal Temperature and Pressure
NTS	National Topographic System

Abbreviation	Terms or Units
NW	North West
O/F	Overflow
OB	Overburden
OK	Ordinary Kriging
OPEX	Operating Expenditures
OREAS	Ore Research and Exploration Pty Ltd.
oz	Ounce (troy)
oz/t	Ounce per Short Ton
P&ID	Piping and Instrumentation Diagram
PAG	Potential Acid Generating
PAPs	Project Affected Persons
Pd	Palladium
PEA	Preliminary Economic Assessment
PF	Power Factor
PFS	Pre-Feasibility Study
PGE	Platinum-Group Element
PGGS	Permit for Geological and Geophysical Survey
ph	Phase (electrical)
pH	Potential Hydrogen
PIR	Primary Impurity Removal
PLC	Programmable Logic Controllers
PP	Preproduction
ppb	Part per Billion
ppm	Part per Million
PR	<i>Permis de recherche</i>
psi	Pounds per Square Inch
Pt	Platinum
P-T	Pressure-Temperature
PVC	Polyvinyl Chloride
QA/QC	Quality Assurance/Quality Control
QKNA	Quantitative Kriging Neighbourhood Analysis

Abbreviation	Terms or Units
QP	Qualified Person
RAP	Resettlement Action Plans
RCMS	Remote Control and Monitoring System
RER	Rare Earth Magnetic Separator
RMR	Rock Mass Rating
ROM	Run of Mine
rpm	Revolutions per Minute
RQD	Rock Quality Designation
RWI	Bond Rod Mill Work Index
S	South
S	Sulfur
S/R	Stripping Ratio
SAG	Semi-Autogenous Grinding
SANAS	South African National Accreditation System
Sc	Scandium
scfm	Standard Cubic Feet per Minute
SCIM	Squirrel Cage Induction Motors
SE	South East
sec	Second
SEM	Scanning Electronic Microscope
Set/y/unit	Set per Year per Unit
SG	Specific Gravity
SGS-Lakefield	SGS Lakefield Research Limited of Canada
SIR	Secondary Impurity Removal
SMC	SAG Mill Comminution
SNRC	<i>Système National de Référence Cartographique</i>
SPI	SAG Power Index
SPLP	Synthetic Precipitation Leaching Procedure
SPT	Standard Penetration Tests
SR	Stripping Ratio
SW	South West
SW	Switchgear

Abbreviation	Terms or Units
t	Metric Tonne
t/d	Metric Tonne per Day
t/h	Metric Tonne per Hour
t/h/m	Metric Tonne per Hour per Metre
t/h/m ²	Metric Tonne per Hour per Square Metre
t/m	Metric Tonne per Month
t/m ²	Metric Tonne per Square Metre
t/m ³	Metric Tonne per Cubic Metre
t/y	Metric Tonne per Year
Ta	Tantalum
TCLP	Toxicity Characteristic Leaching Procedure
TER	<i>Travail d'Études et de Recherches</i>
TIN	Triangulated Irregular Network
ton	Short Ton
tonne	Metric Tonne
ToR	Terms of Reference
TSS	Total Suspended Solids
U	Uranium
U/F	Under Flow
ULC	Underwriters Laboratories of Canada
USA	United States of America
USD	United States Dollar
USGPM	Us Gallons per Minute
UTM	Universal Transverse Mercator
V	Vertical
V	Volt
VAC	Ventilation and Air Conditioning
VFD	Variable Frequency Drive
VLF	Very Low Frequency
W	Watt

Abbreviation	Terms or Units
W	West
WAC	West African Archean Craton
WHIMS	Wet High Intensity Magnetic Separation
WHO	World Health Organization
WRA	Whole Rock Analysis Method
WSD	World Steel Dynamics
w/v	Weight/volume
wt	Wet Metric Tonne
X	X Coordinate (E-W)
XRD	X-Ray Diffraction
XRF	X-Ray Fluorescence
y	Year
Y	Y coordinate (N-S)
Z	Z coordinate (depth or elevation)
Zr	Zirconium

29 CERTIFICATE OF QUALIFIED PERSON

CERTIFICATE OF AUTHOR

To accompany the Report entitled “*NI 43-101 Technical Report – Mineral Resource Estimate for the Bantou Project*” which is effective as of December 31, 2019 and issue on April 3, 2020 (the “**Technical Report**”) prepared for SEMAFO Inc. (the “**Company**”).

I, *Jordan Zampini, P. Eng.*, Quebec, do hereby certify that:

1. I am a Process Engineer with Met-Chem, a division of DRA Americas Inc, with an office at 555 René-Lévesque Blvd. West, 6th Floor, Montréal, Canada;
2. I am a graduate from McGill University, Montreal, Quebec with a Bachelor of Materials Engineering (Metallurgy) in 2012;
3. I am a registered member of Ordre des ingénieurs du Québec (5028661) and I am a member of the Canadian Institute of Mining Metallurgy and Petroleum;
4. I have 8 years of experience as a metallurgical or process engineer. I have experience working on engineering studies of all levels from scoping to feasibility, as well as experience in detailed engineering. In addition, I have experience in test work supervision, data analysis, modelling, and simulation for many different resources/commodities. I have gained relevant experience participating in engineering studies for four (4) gold projects at various stages of development in USA, Canada, and Burkina Faso.
5. I have read the definition of “qualified person” set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101;
6. I have participated in the preparation of this Technical Report and am responsible for Section 13 and part of Sections 1 and 25 to 27;
7. I have not visited the property site.
8. I have had no prior involvement with the property that is the subject of the Technical Report.
9. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this Report;

10. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three (3) years from the Company, or any associated or affiliated companies;
11. I have read NI 43-101 and Form 43-101F1 and have prepared the Technical Report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3rd day of April 2020

"Original Signed and sealed"

Jordan Zampini, P. Eng.
Process Engineer

CERTIFICATE OF AUTHOR

To accompany the Report entitled “*NI 43-101 Technical Report – Mineral Resource Estimate for the Bantou Project*” which is effective as of December 31, 2019 and issue on April 3, 2020 (the “**Technical Report**”) prepared for SEMAFO Inc. (the “**Company**”).

I, *Claude Bisailon, P. Eng.*, Quebec, do hereby certify that:

1. I am Senior Geological Engineer with Met-Chem, a division of DRA Americas Inc. with an office at suite 600, 555 René-Lévesque Blvd. West, Montreal, Quebec, Canada;
2. I am a graduate from Concordia University in Montreal in 1991 with a B.Sc. in geology and from the Université Laval in Quebec City in 1996 with a B.Eng. in geological engineering;
3. I am a registered member of “*Ordre des Ingénieurs du Québec*” (#116407). I am also a registered engineer in the province of British Columbia (#25669). I am a Member of the Canadian Institute of Mining, Metallurgy and Petroleum;
4. I have worked as an engineer continuously since graduation from University in 1996. My relevant experience for the purpose of the Technical Report is:
 - a) Over 23 years of consulting in the field of Mineral Resource estimation, orebody modelling, mineral resource auditing and geotechnical engineering in Canada, the USA, Asia and South America.
 - b) Participated and/or supervised several Mineral Resource Estimates;
 - Bellechasse-Timmins Property Resource Estimate, Golden Hope Mines, August 2012;
 - Tijirit Property NI 43-101 Technical Report with Resource Estimate, Algold Resources Inc., August 2016;
 - NI 43-101 Technical Report for the Sakami Property, Matamec Explorations, October 2017.
 - c) Participation in the preparation of several NI 43-101 Technical Reports;
 - d) QP Review, audits, due diligence, interpretation of geoscientific data for several projects.
5. I have read the definition of “qualified person” set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101;

6. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
7. I have participated in the preparation of this Technical Report and am responsible for parts of Sections 1, 12, 14 and 25 to 27.
8. I have not visited the property site.
9. I have had no prior involvement with the property that is the subject of the Technical Report.
10. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this Report;
11. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three (3) years from the Company, or any associated or affiliated companies;
12. I have read NI 43-101 and Form 43-101F1 and have prepared the Technical Report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3rd day of April 2020

"Original Signed and sealed"

*Claude Bisailon, P. Eng.
Senior Geological Engineer*



CERTIFICATE OF AUTHOR

To accompany the Report entitled “*NI 43-101 Technical Report – Mineral Resource Estimate for the Bantou Project*” which is effective as of December 31, 2019 and issue on April 3, 2020 (the “**Technical Report**”) prepared for SEMAFO Inc. (the “**Company**”).

I, *François Thibert, MSc, P. Geo.* of Montréal (Québec) Canada, do hereby certify that:

- a) I am Manager, Estimate Group Resources and Reserves at the Company with an office located at 100 Alexis-Nihon Blvd, 7th floor, Saint-Laurent (Quebec) Canada H4M 2P3; I am the Corporation's “qualified person”;
- b) I am a graduate from HEC Montreal (Quebec) (Certificate in Project Management in 2010), University of Montreal (Quebec) (Master of Science (M.Sc.) in Igneous Petrology (1993) and Bachelor of Science (B.Sc.) in Geology (1987));
- c) I am a member in good standing (#1444) of the *Ordre des Géologues du Québec* (Order of Geologist of Quebec);
- d) I have worked as a geologist continuously since my graduation from university. I have more than 25 years' experience in mining exploration in gold, and base metal projects across Canada and worldwide. I have participated and supervised several mineral resource estimates for different exploration projects at various stages of exploration.
- e) I am a “Qualified Person” for purposes of National Instrument 43-101 (the “**Instrument**”);
- f) I have never visited the Bantou property;
- g) I have participated in the preparation of this Technical Report and am responsible for Sections 11 and 14 and parts of Sections 1 of the Technical Report;
- h) I am not independent of the Company as described in section 1.5 of the Instrument;
- i) I work for the Company and have prior and current involvement with the property that is the subject of the Technical Report;
- j) I have read the Instrument and the sections of the Technical Report that I am responsible for which have been prepared in compliance with the Instrument; and
- k) As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report that I am responsible for, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3th day of April 2020

“Original Signed and sealed”

François Thibert, MSc, P.Geo.
Manager, Estimate Group Resources and Reserves
SEMAFO Inc.



CERTIFICATE OF AUTHOR

To accompany the Report entitled “*NI 43-101 Technical Report – Mineral Resource Estimate for the Bantou Project*” which is effective as of December 31, 2019 and issue on April 3, 2020 (the “**Technical Report**”) prepared for SEMAFO Inc. (the “**Company**”).

I, *Richard Roy, P.Geo.* of Verdun (Québec) Canada, do hereby certify that:

- a) I am Vice-President, Exploration at the Company with an office located at 100 Alexis-Nihon Blvd, 7th floor, Saint-Laurent (Quebec) Canada H4M 2P3;
- b) I am a graduate from Concordia University (B.Sc. Geology, 1988);
- c) I am a member in good standing (#536) of the *Ordre des Géologues du Québec* (Order of Geologist of Quebec);
- d) I have worked as a geologist continuously since my graduation from university. I have over 30 years of experience in the base and precious metal mineral resource industry
- e) I am a "Qualified Person" for purposes of National Instrument 43-101 (the "**Instrument**");
- f) I visited the Bantou property between April 16 and 19, 2019;
- g) I have participated in the preparation of this Technical Report and am responsible for Sections 4 to 10 and 23 and parts of Sections 1, 12, and 25 to 27 of the Technical Report;
- h) I am not independent of the Company as described in section 1.5 of the Instrument;
- i) I work for the Company and have prior and current involvement with the property that is the subject of the Technical Report;
- j) I have read the Instrument and the sections of the Technical Report that I am responsible for which have been prepared in compliance with the Instrument; and
- k) As of the effective date of the Technical Report, to the best of my knowledge, information, and belief, the parts of the Technical Report that I am responsible for, contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3th day of April 2020

“Original Signed and sealed”

Richard Roy, P.Geo.
Vice-President, Exploration
SEMAFO Inc.

CERTIFICATE OF AUTHOR

To accompany the Report entitled “*NI 43-101 Technical Report – Mineral Resource Estimate for the Bantou Project*” which is effective as of December 31, 2019 and issue on April 3, 2020 (the “**Technical Report**”) prepared for SEMAFO Inc. (the “**Company**”).

I, *Patrick Pérez, P. Eng.*, do hereby certify:

1. I am Project Manager and Senior Mining Engineer with Met-Chem, a division of DRA Americas Inc, with an office at 555 René-Lévesque Blvd. West, 6th Floor, Montreal, Canada.
2. I am a graduate from “*Ecole Nationale Supérieure de Géologie de Nancy*”, in France, with a M.Sc. in Geological Engineering obtained in 2003.
3. I am a registered member of APEGS (Association of Professional Engineers and Geoscientists of Saskatchewan), membership #16131.
4. I have worked as a Senior Mining Engineer or Project Manager continuously since my graduation from university. I have been employed since my graduation in 2003. I have gained relevant experience on deposits similar to the Bantou Project, including:
 - a) Work on gold mining operations and projects hosted in Birimian greenstone belt formations in West Africa, in both Open Pit and Underground environment;
 - b) I have also participated and supervised several mineral resource estimates or engineering studies for different projects at various stages of development. Hands-on experience for gold in Ivory Coast, Mali, Burkina Faso, and Canada;
 - c) Design, supervision and implementation of mining programs;
 - d) Review, audits, interpretation of geoscientific data;
 - e) Experience in on several projects in weathered terranes under tropical conditions (West Africa and New Caledonia); and
 - f) Participation in the preparation of parts of NI 43-101 compliant Technical Reports.
5. I have read the definition of “qualified person” set out in the National Instrument 43-101 and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfil the requirements to be an independent qualified person for the purposes of NI 43-101;

6. I am independent of the issuer applying all of the tests in section 1.5 of NI 43-101.
7. I have participated in the preparation of this Technical Report and am responsible for Sections 2, 3, and 24 and parts of Sections 1 and 25 to 27.
8. I have not visited the property site.
9. I have had no prior involvement with the property that is the subject of the Technical Report.
10. I have no personal knowledge as of the date of this certificate of any material fact or change, which is not reflected in this Report;
11. Neither I, nor any affiliated entity of mine, have earned the majority of our income during the preceding three (3) years from the Company, or any associated or affiliated companies;
12. I have read NI 43-101 and Form 43-101F1 and have prepared the Technical Report in compliance with NI 43-101 and Form 43-101F1; and have prepared the report in conformity with generally accepted Canadian mining industry practice, and as of the date of the certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Dated this 3rd day of April 2020

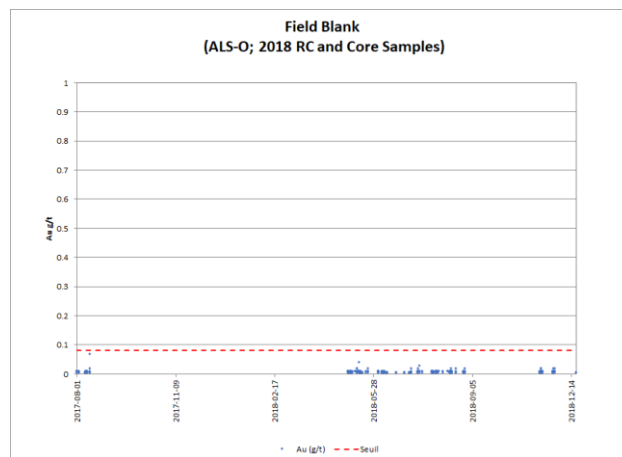
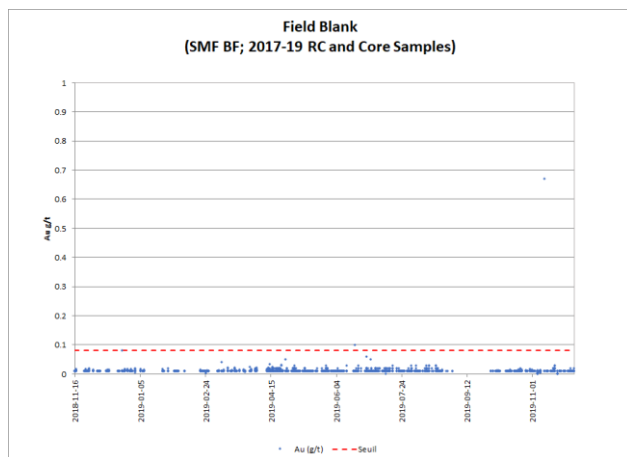
"Original Signed and sealed"

Patrick Pérez, P. Eng.
Project Manager

Appendix A – *Analytical Quality Data and Relative Precision Charts*

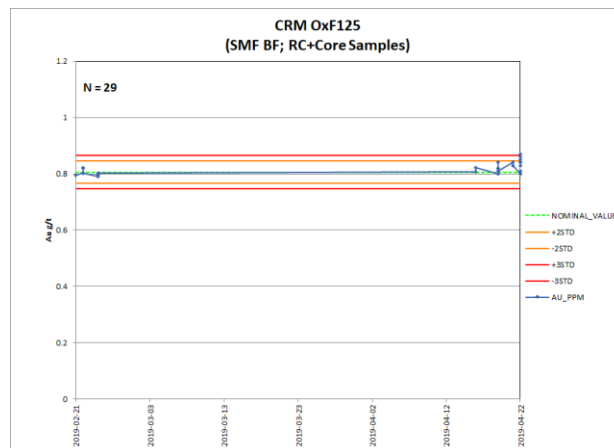
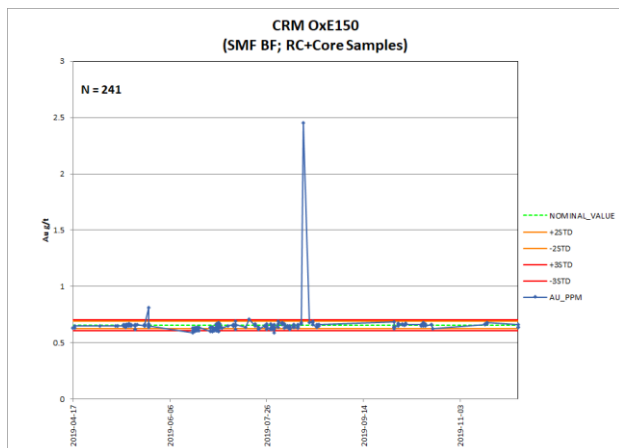
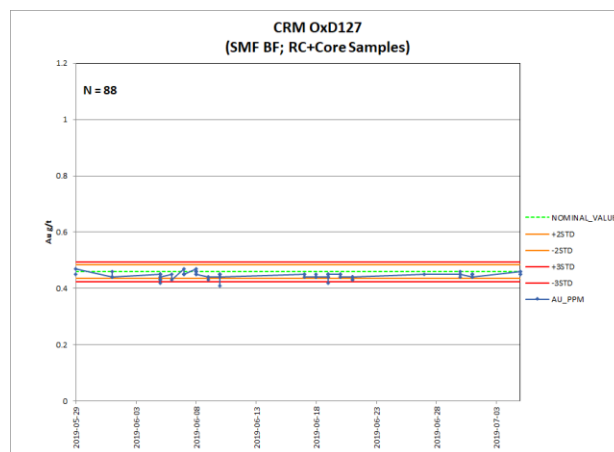
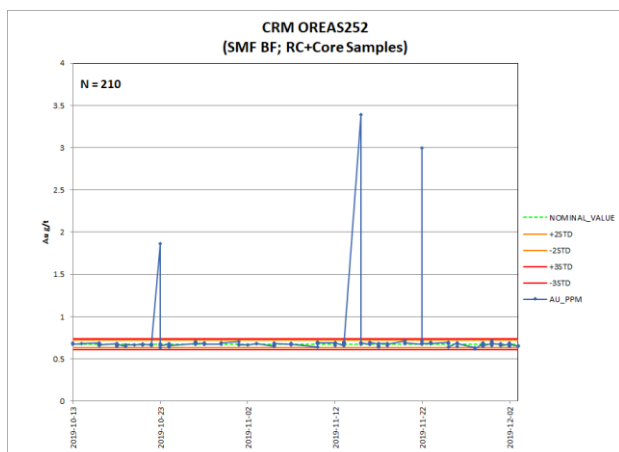
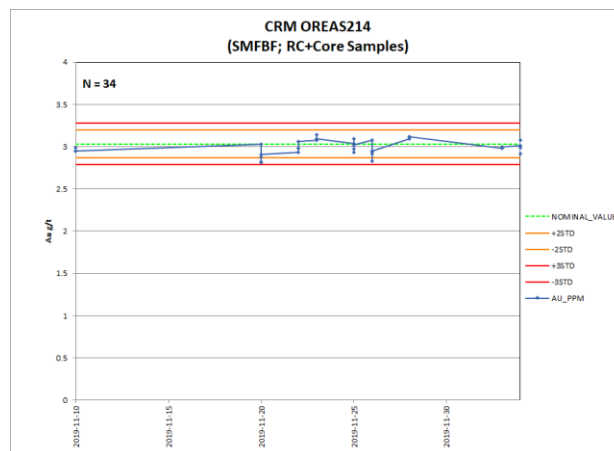
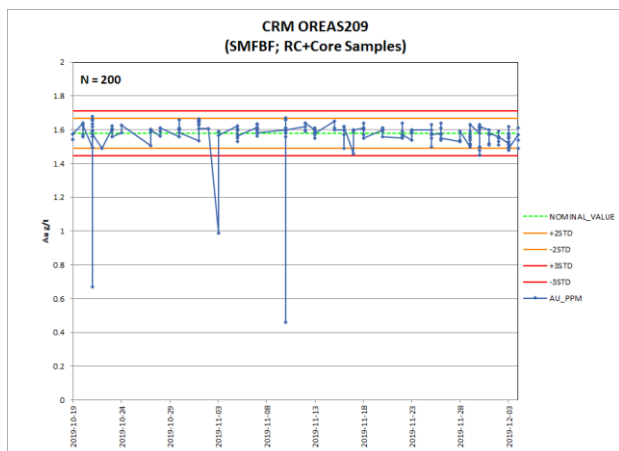
Time series plots for field blanks assayed by SMF BF and ALS-O (2017-2019)

Project	Bantou	Statistics	SMF BF	ALS-O
Data Series	2017-2019 Blanks	Sample Count	4,322	397
Data Type	RC and Core Samples	Detection Limit	0.01	0.01
Commodity	Au in gpt	StdDev	0.011	0.005
Laboratory	SMF BF, ALS-O	Data mean	0.011	0.007
Analytical method	Fire assay – AAS finish	Upper limit (0.08ppm)	0.1%	0%
Detection Limit	0.01gpt (Au)			



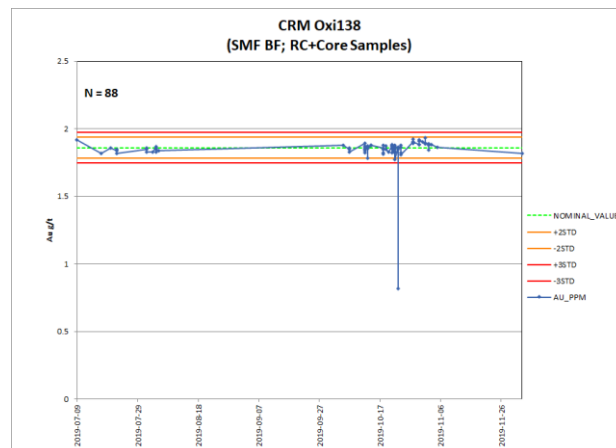
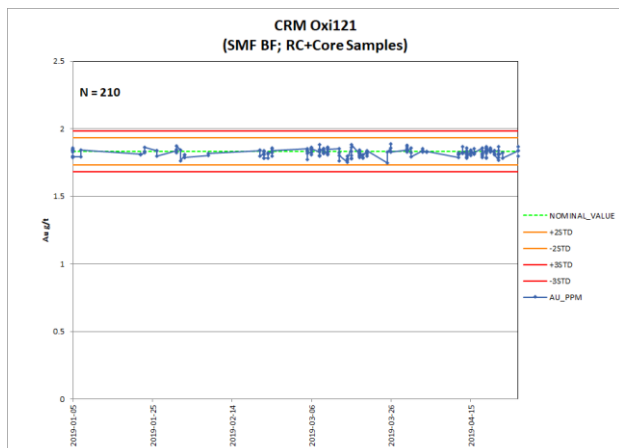
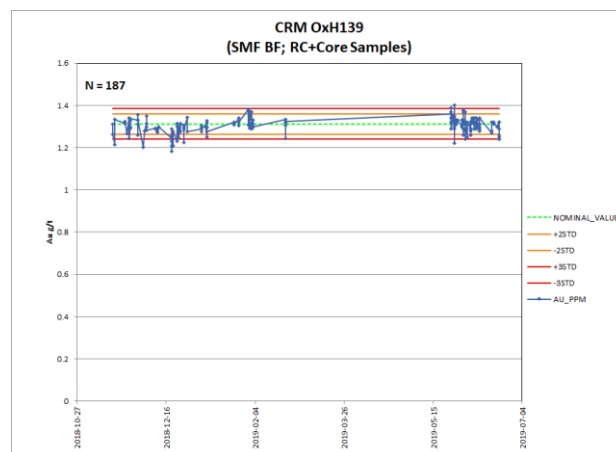
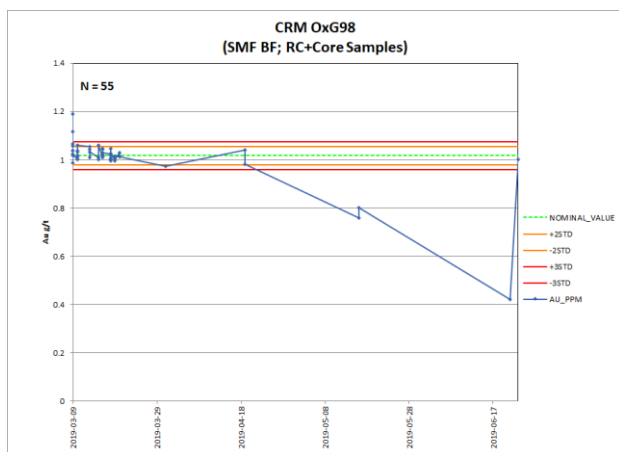
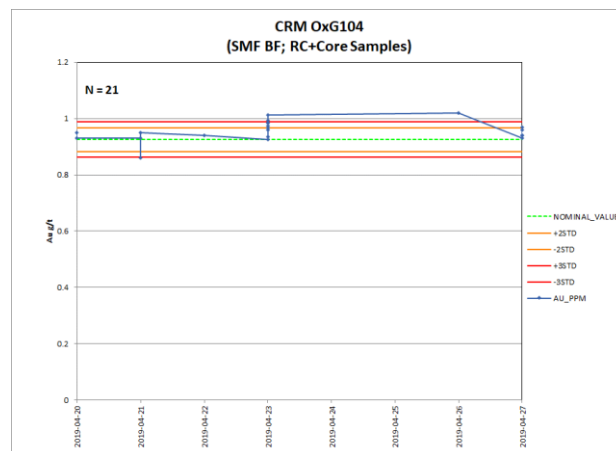
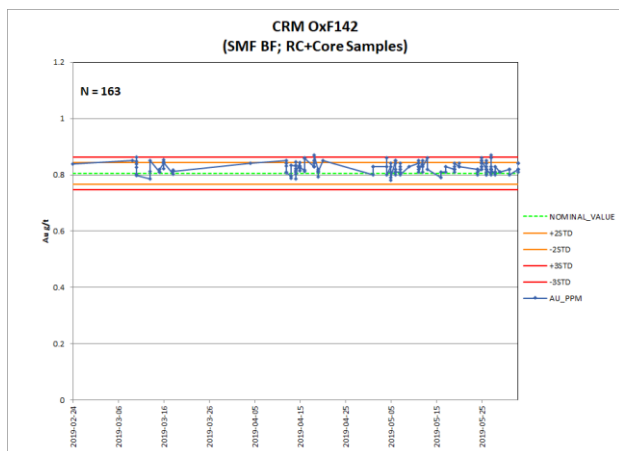
Time series plots for certified reference materials assayed by SMF BF (2018-2019)

Project	Bantou	Statistics	209	214	252	OxD127	OxE150	OxF125
Data Series	2018-19 Standards	Sample Count	200	34	210	88	241	29
Data Type	RC and Core Samples	Expect. Value	1.58	3.03	0.674	0.459	0.658	0.806
Commodity	Au in gpt	StdDev	0.044	0.082	0.022	0.012	0.016	0.02
Laboratory	SMF BF	Data mean	1.57	2.99	0.71	0.45	0.65	0.82
Analytical method	Fire assay – AAS finish	Outside 3SD	1.5%	0%	1.4%	3.4%	5%	3.4%
Detection Limit	0.01 gpt (Au)	Below 3SD	3	0	0	3	9	0
		Above 3SD	0	0	3	0	3	1



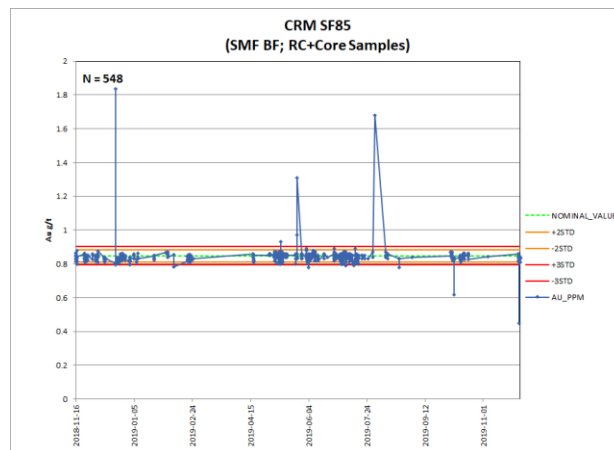
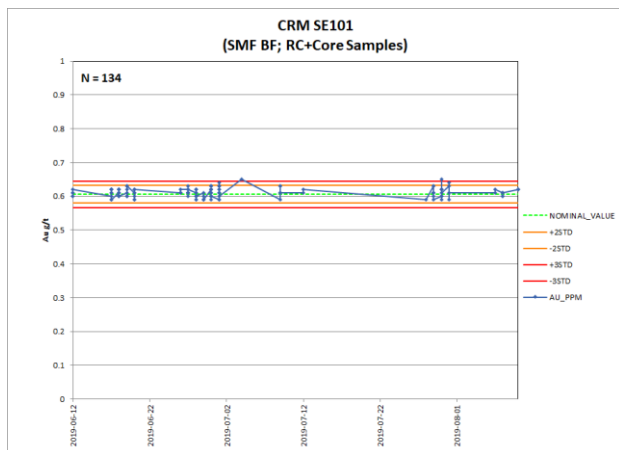
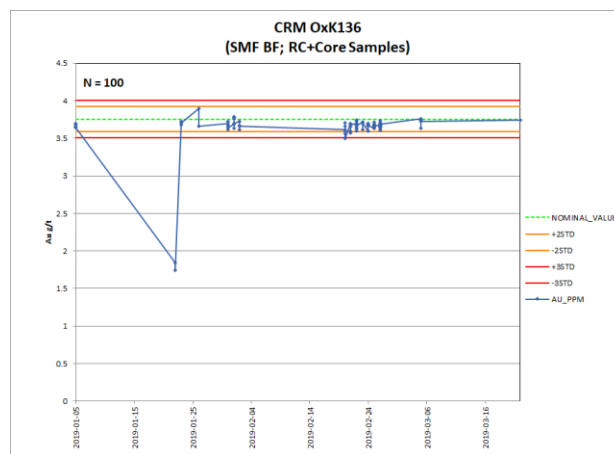
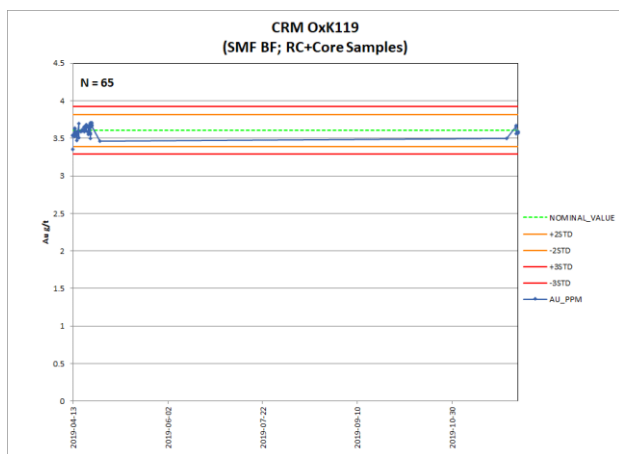
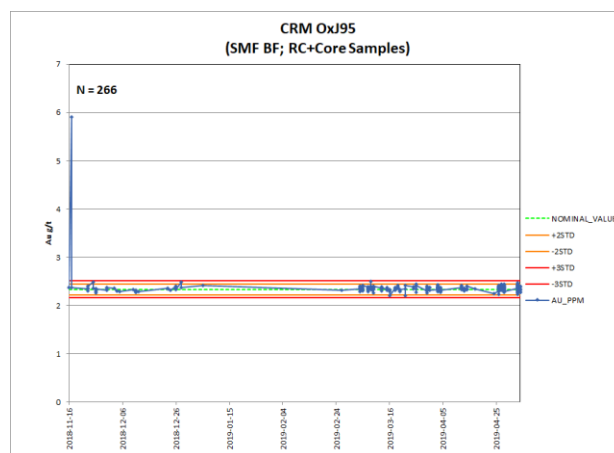
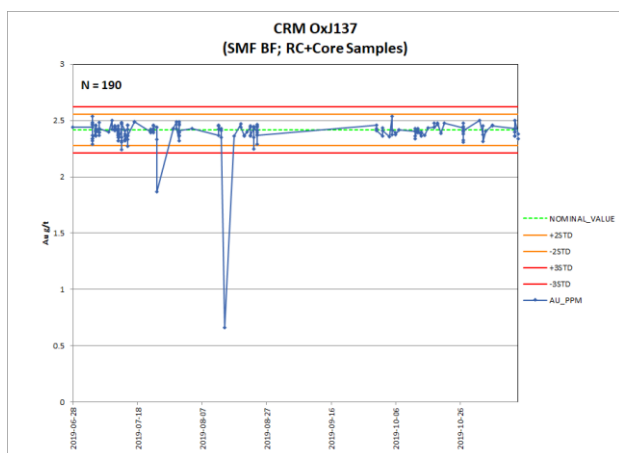
Time series plots for certified reference materials assayed by SMF BF (2018-2019)

Project	Bantou	Statistics	OxF142	OxG104	OxG98	OxH139	Oxi121	Oxi138
Data Series	2018-19 Standards	Sample Count	163	21	55	187	210	88
Data Type	RC and Core Samples	Expect. Value	0.805	0.925	1.017	1.312	1.834	1.86
Commodity	Au in gpt	StdDev	0.019	0.021	0.019	0.024	0.05	0.038
Laboratory	SMF BF	Data mean	0.82	0.95	1.01	1.30	1.82	1.85
Analytical method	Fire assay – AAS finish	Outside 3SD	1.8%	19%	9.1%	6.4%	0%	1.1%
Detection Limit	0.01 gpt (Au)	Below 3SD	0	1	3	10	0	1
		Above 3SD	3	3	2	2	0	0



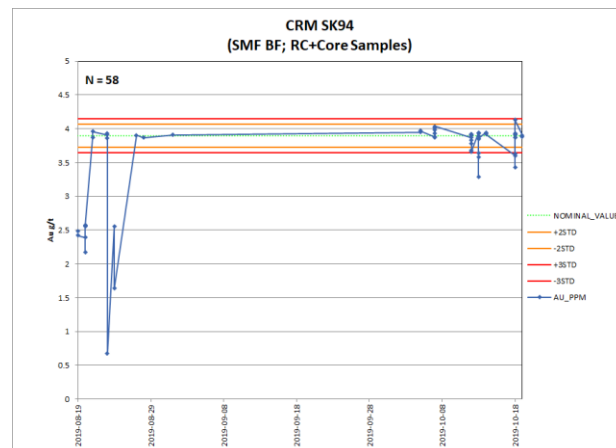
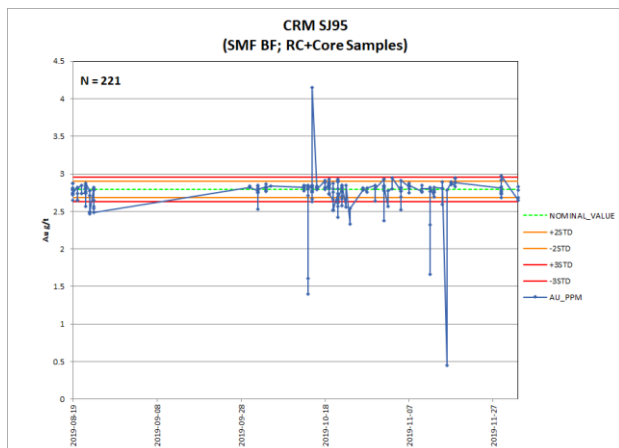
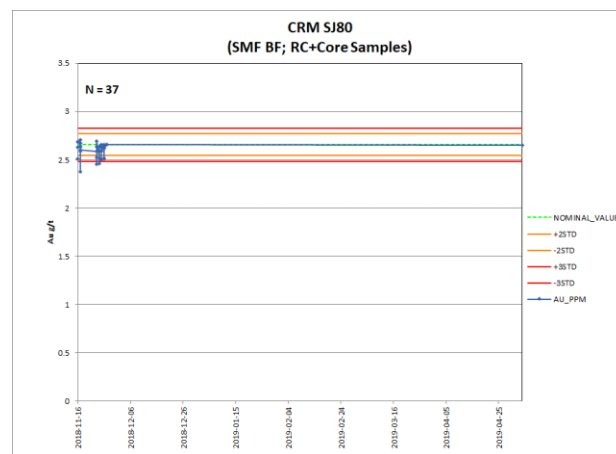
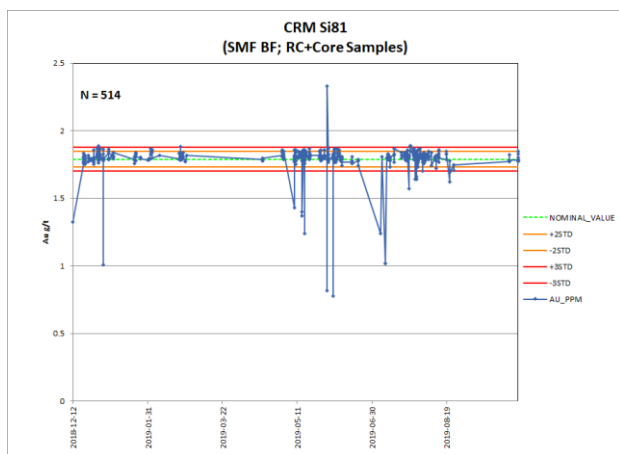
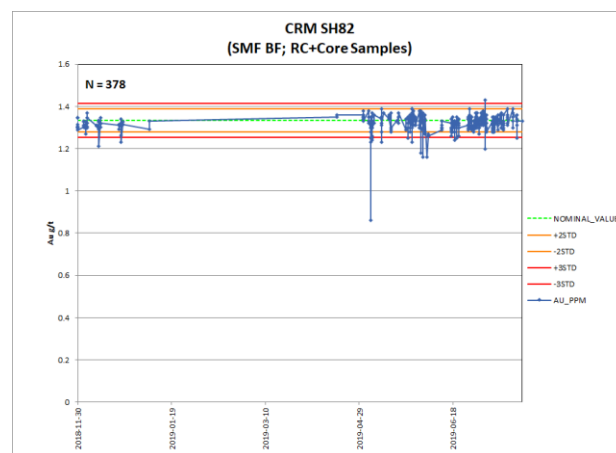
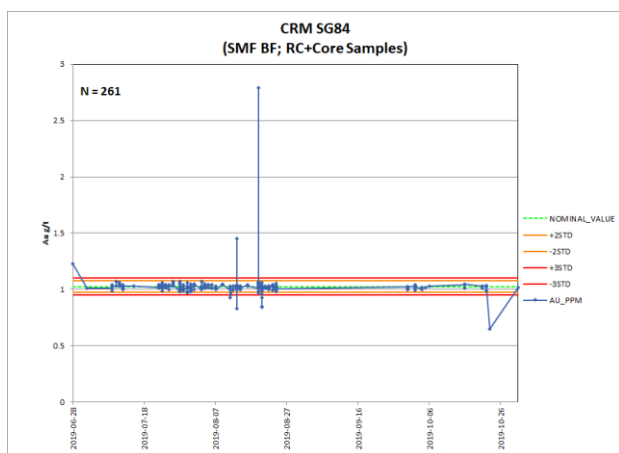
Time series plots for certified reference materials assayed by SMF BF (2018-2019)

Project	Bantou	Statistics	OxJ137	OxJ95	OxK119	OxK136	SE101	SF85
Data Series	2018-19 Standards	Sample Count	190	266	65	100	134	548
Data Type	RC and Core Samples	Expect. Value	2.416	2.337	3.604	3.753	0.606	0.848
Commodity	Au in gpt	StdDev	0.069	0.057	0.105	0.083	0.013	0.018
Laboratory	SMF BF	Data mean	2.40	2.37	3.61	3.64	0.61	0.84
Analytical method	Fire assay – AAS finish	Outside 3SD	1.1%	0.4%	0%	3%	1.5%	2.4%
Detection Limit	0.01 gpt (Au)	Below 3SD	2	0	0	3	0	8
		Above 3D	0	1	0	0	2	5



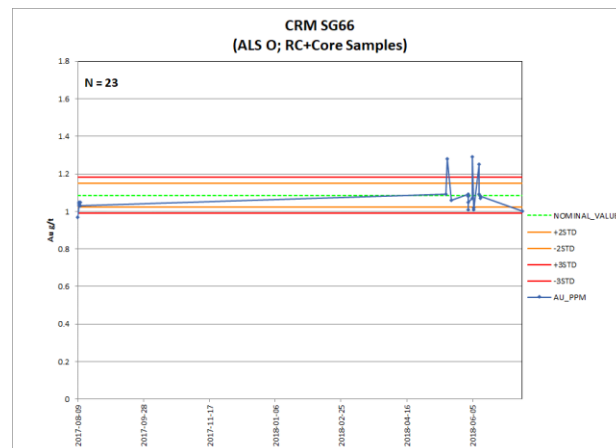
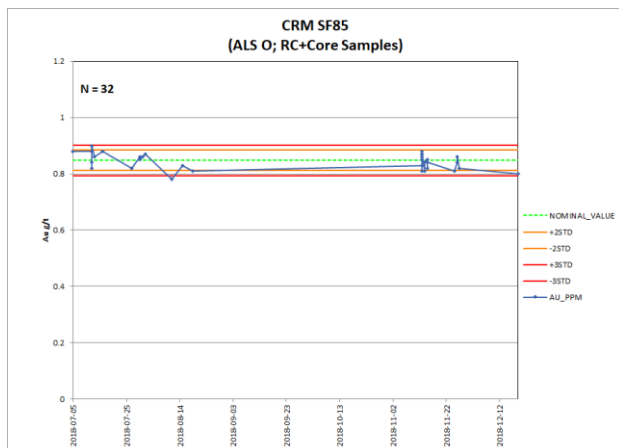
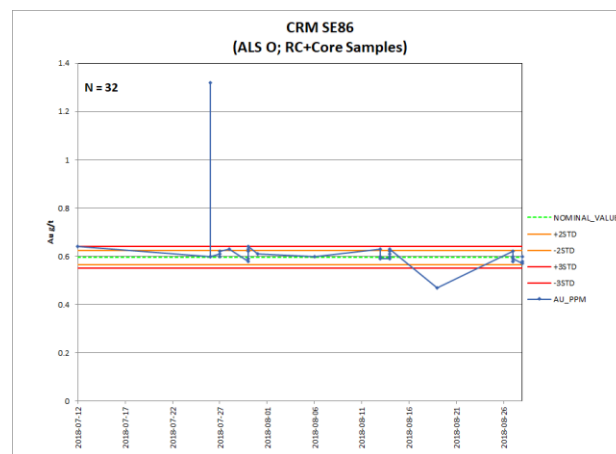
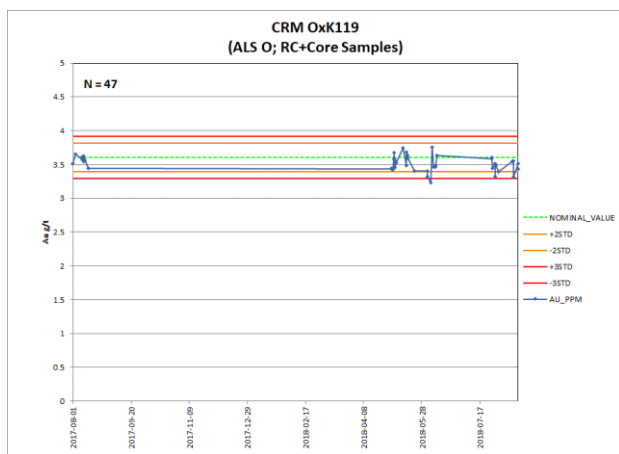
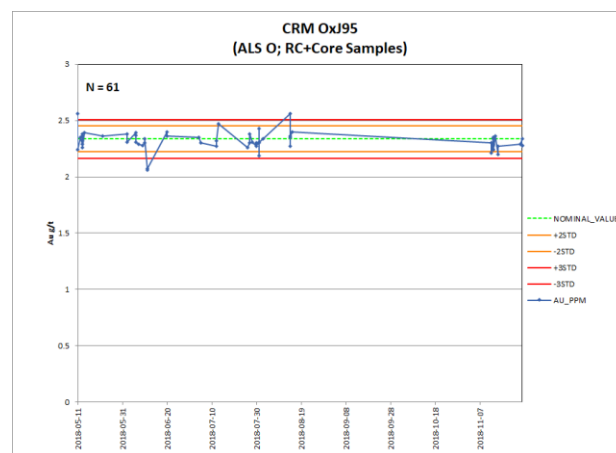
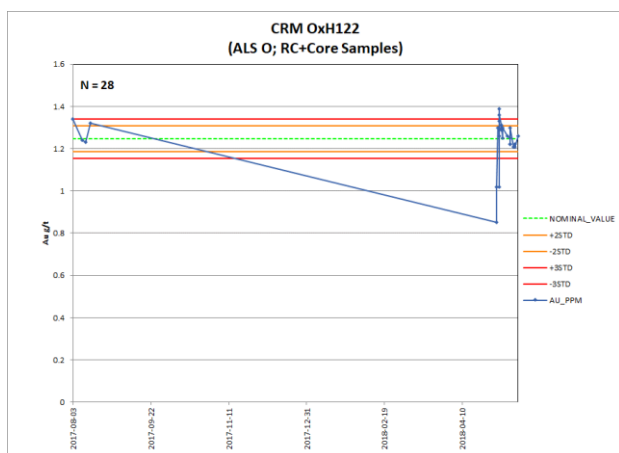
Time series plots for certified reference materials assayed by SMF BF (2018-2019)

Project	Bantou	Statistics	SG84	SH82	Si81	SJ80	SJ95	SK94
Data Series	2018-19 Standards	Sample Count	261	378	514	37	221	58
Data Type	RC and Core Samples	Expect. Value	1.026	1.333	1.79	2.656	2.789	3.899
Commodity	Au in gpt	StdDev	0.025	0.027	0.03	0.057	0.054	0.084
Laboratory	SMF BF	Data mean	1.03	1.32	1.79	2.60	2.75	3.57
Analytical method	Fire assay – AAS finish	Outside 3SD	3.4	4.8	4.7	8.1	12.7	27.6
Detection Limit	0.01 gpt (Au)	Below 3SD	6	17	18	3	26	16
		Above 3SD	3	1	6	0	2	0



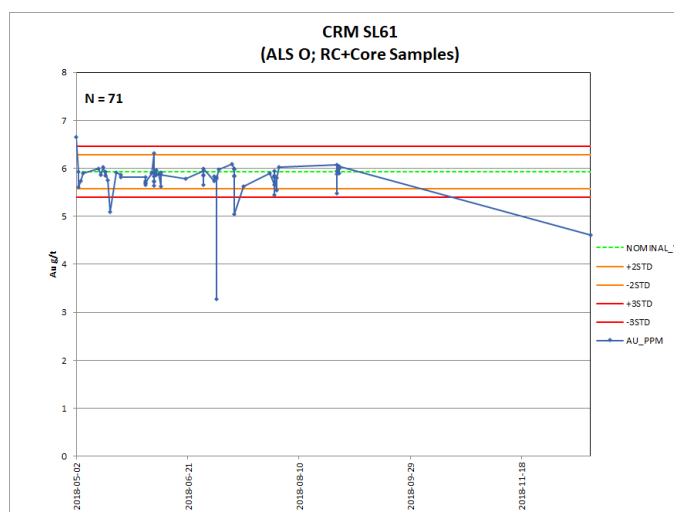
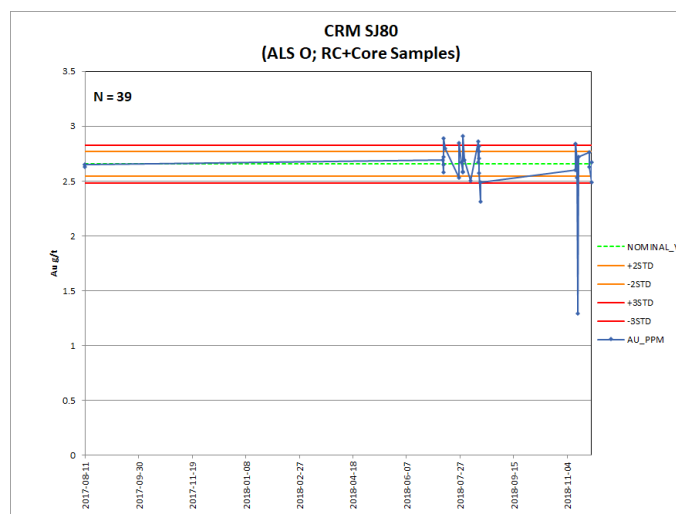
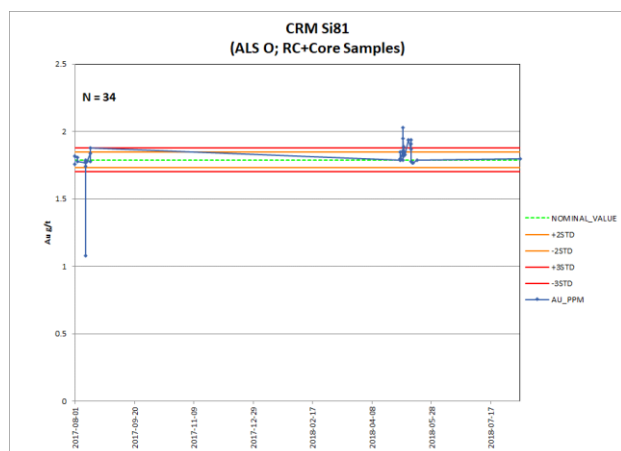
Time series plots for certified reference materials assayed by ALS-O (2017-2018)

Project	Bantou	Statistics	OxH122	OxJ95	OxK119	SE86	SF85	SG66
Data Series	2018-19 Standards	Sample Count	28	61	47	32	32	23
Data Type	RC and Core Samples	Expect. Value	1.247	2.337	3.604	0.595	0.848	1.086
Commodity	Au in gpt	StdDev	0.031	0.057	0.105	0.015	0.018	0.032
Laboratory	ALS-O	Data mean	1.24	2.32	3.52	0.62	0.84	1.08
Analytical method	Fire assay – AAS finish	Outside 3SD	21.4%	6.6%	2.1%	6.3%	3.1%	17.4%
Detection Limit	0.01 gpt (Au)	Below 3SD	3	2	1	1	1	1
		Above 3SD	3	2	0	1	0	3



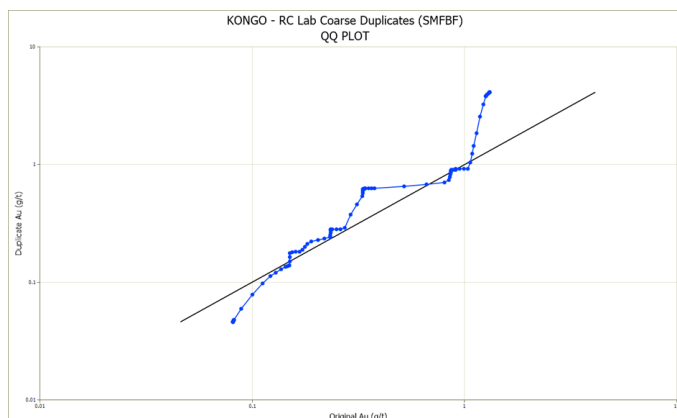
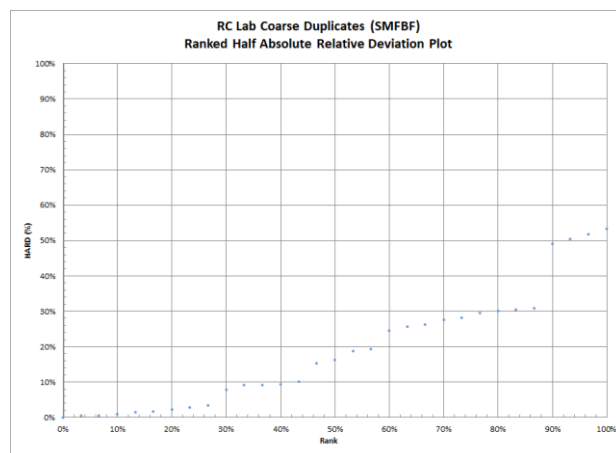
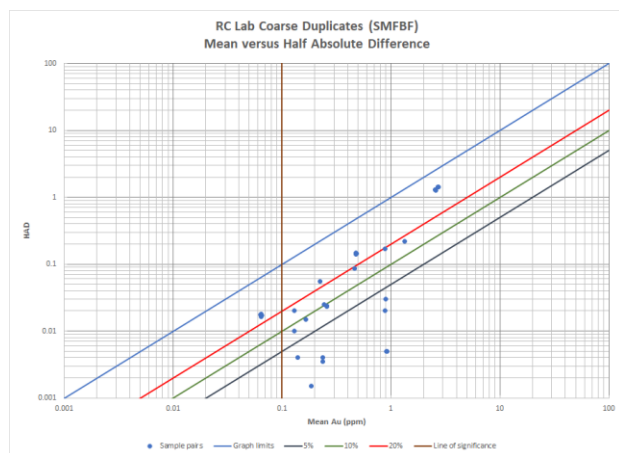
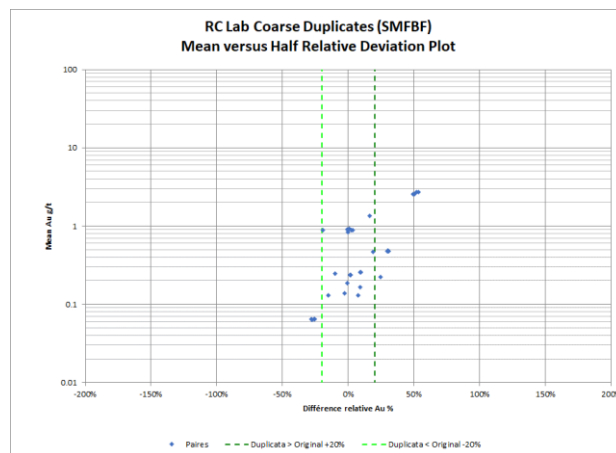
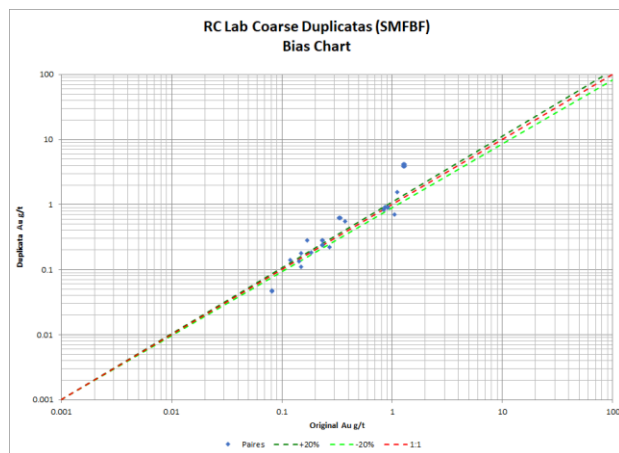
Time series plots for certified reference materials assayed by ALS-O(2017-2018)

Project	Bantou	Statistics	Si81	SJ80	SL61
Data Series	2018-19 Standards	Sample Count	34	39	71
Data Type	RC and Core Samples	Expect. Value	1.79	2.656	5.931
Commodity	Au in gpt	StdDev	0.03	0.057	0.177
Laboratory	ALS-O	Data mean	1.81	2.63	5.78
Analytical method	Fire assay – AAS finish	Outside 3SD	20.6%	17.9%	7%
Detection Limit	0.01 gpt (Au)	Below 3SD	1	2	4
		Above 3SD	6	5	1



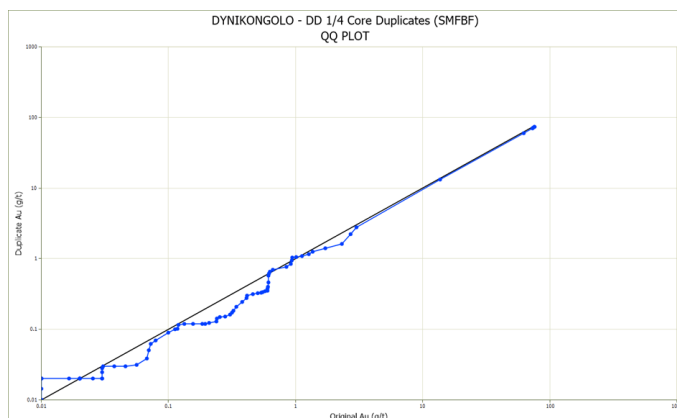
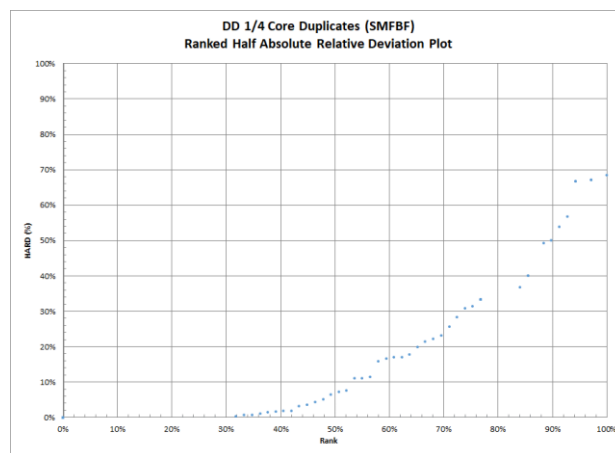
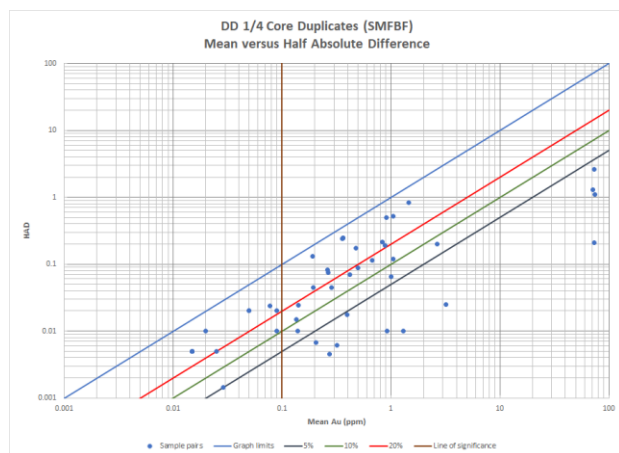
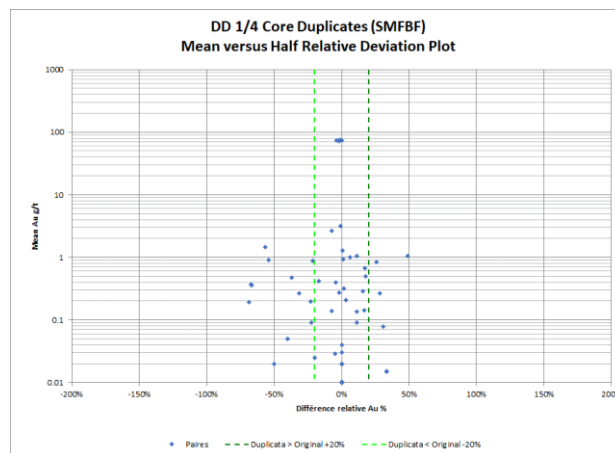
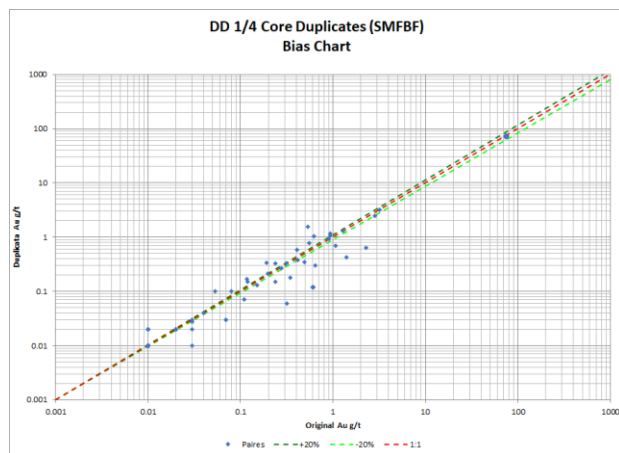
Bias charts and precision plots for RC lab coarse duplicates assayed by SMF BF (2018-19)

Project	Bantou	Statistics	Original	Lab Duplicates
Data Series	2018-19 Coarse Lab Dups	Sample Count	31	31
Data Type	RC Samples	Minimum Value	0.08	0.05
Commodity	Au in gpt	Maximum Value	1.31	4.13
Analytical method	Fire assay – AAS finish	Data mean	0.51	0.91
Detection Limit	0.01 gpt (Au)	Median	0.33	0.55
Original Dataset	Original Assays	Standard Error	0.08	0.23
Paired Dataset	Lab Duplicate Assays	Correlation Coefficient	0.8491	
		Pais ≤ 10% HARD	41.9%	



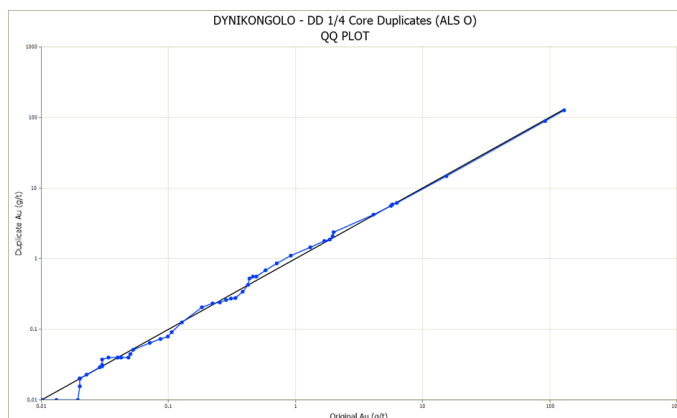
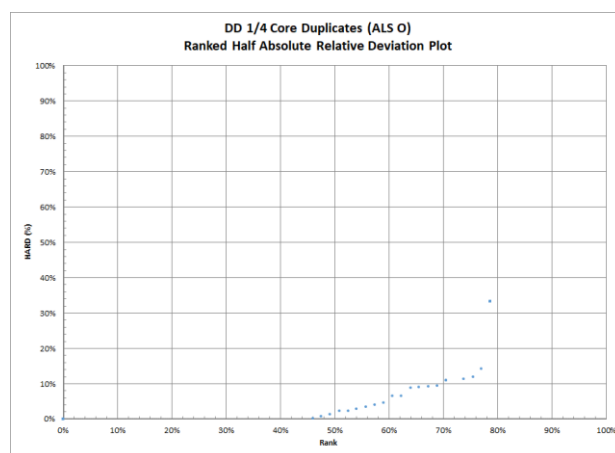
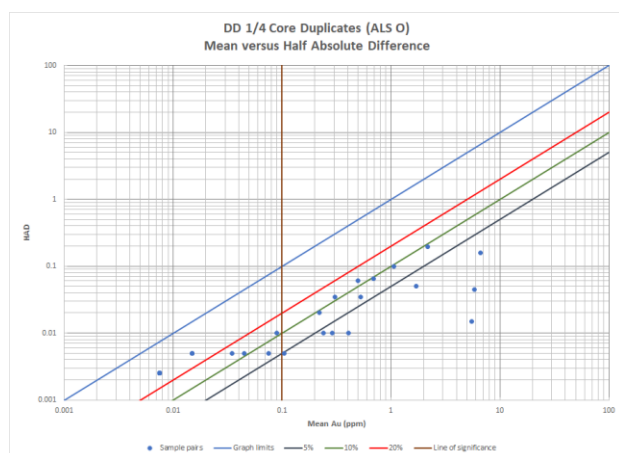
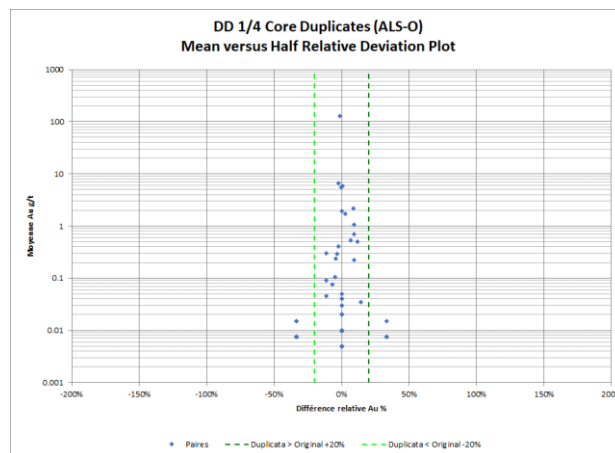
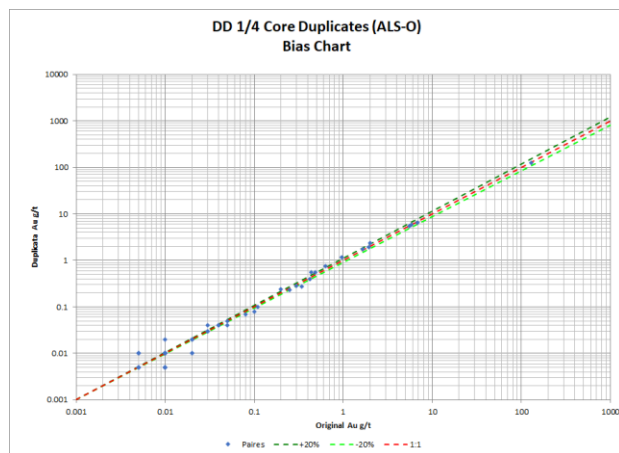
Biais charts and precision plots for DD quarter core duplicates assayed by SMF BF (2018-2019).

Project	Bantou	Statistics	Original	Lab Duplicates
Data Series	2018-19 Field Dups	Sample Count	70	70
Data Type	Core Samples	Minimum Value	0.01	0.01
Commodity	Au in gpt	Maximum Value	75.66	73.45
Analytical method	Fire assay – AAS finish	Data mean	4.60	4.40
Detection Limit	0.01 gpt (Au)	Median	0.11	0.10
Original Dataset	Original Assays	Standard Error	2.07	2.00
Paired Dataset	Field Duplicate Assays	Correlation Coefficient	0.9994	
		Pais ≤ 10% HARD	52.9%	



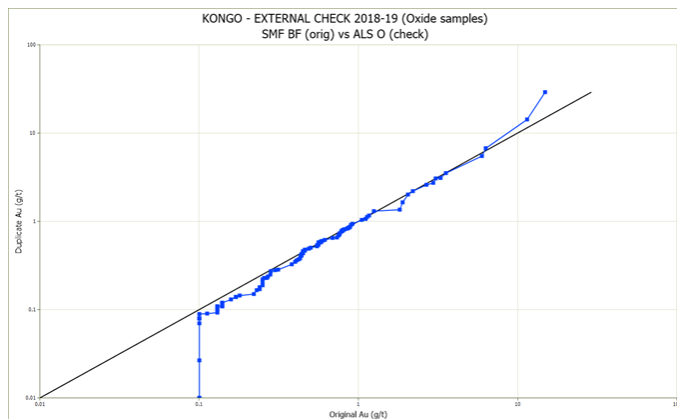
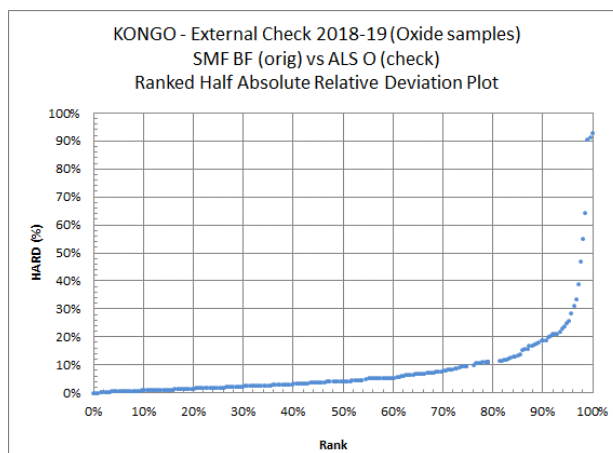
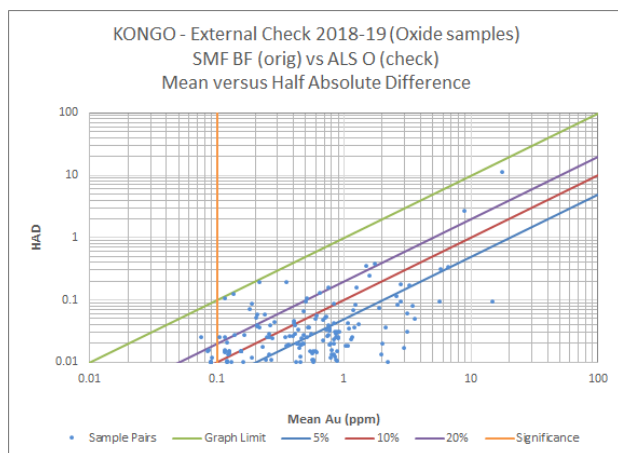
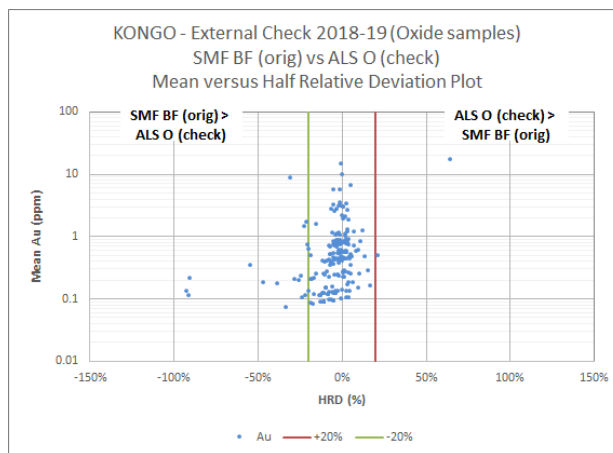
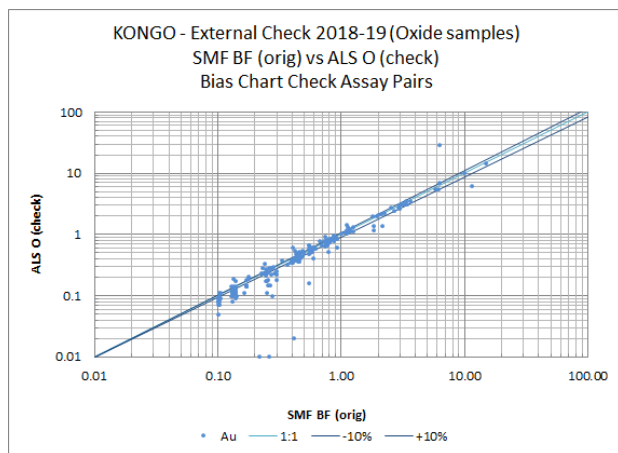
Biais charts and precision plots for DD quarter core duplicates assayed by ALS-O (2017-2018).

Project	Bantou	Statistics	Original	Lab Duplicates
Data Series	2018-19 Field Dups	Sample Count	62	62
Data Type	Core Samples	Minimum Value	0.005	0.005
Commodity	Au in gpt	Maximum Value	130.00	126.50
Analytical method	Fire assay – AAS finish	Data mean	2.56	2.51
Detection Limit	0.01 gpt (Au)	Median	0.01	0.01
Original Dataset	Original Assays	Standard Error	2.10	2.04
Paired Dataset	Field Duplicate Assays	Correlation Coefficient	1.0000	
		Pais ≤ 10% HARD	69.4%	



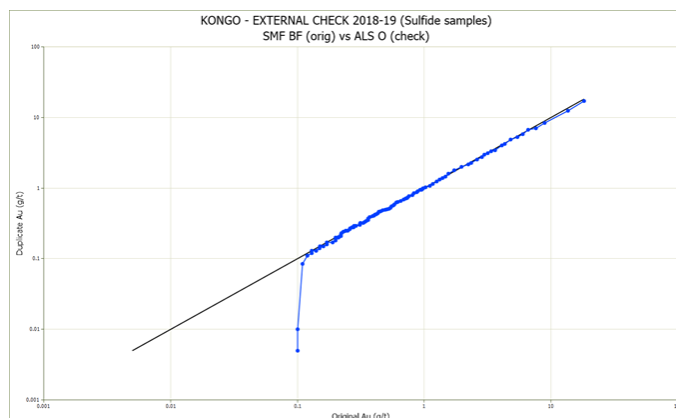
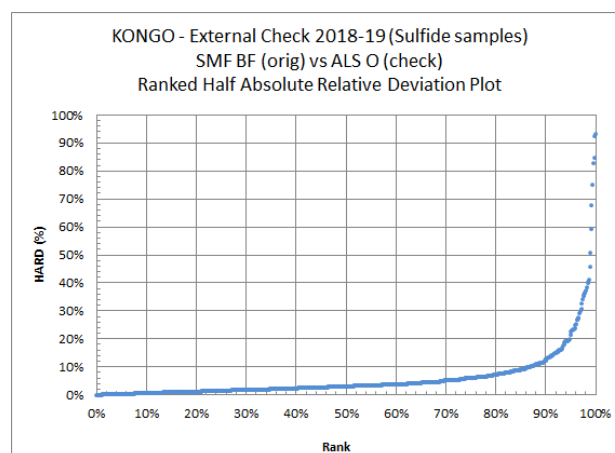
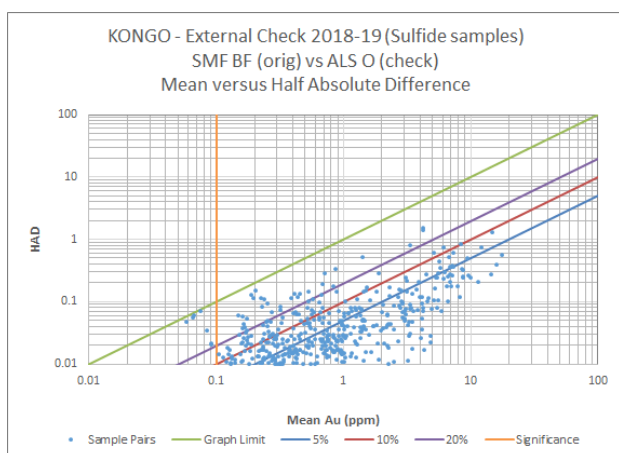
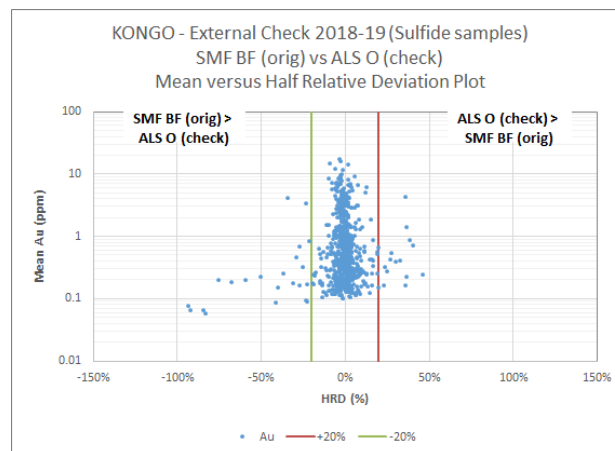
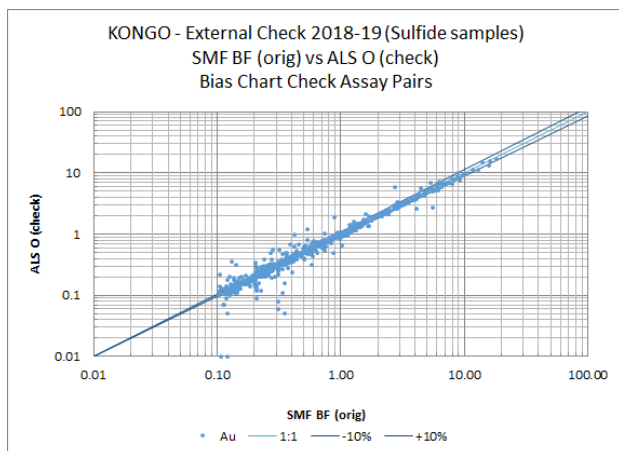
Bias charts and precision plots for oxide samples assayed at SMF BF and ALS-O (2018-19)

Project	Bantou	Statistics	SMF BF (orig)	ALS-O (check)
Data Series	2018-19 Lab Pulp Duplicates	Sample Count	215	215
Data Type	RC and Core Samples	Minimum Value	0.10	0.01
Commodity	Au in gpt	Maximum Value	14.84	29.00
Analytical method	Fire assay – AAS finish	Data mean	0.93	0.97
Detection Limit	0.01 gpt (Au)	Median	0.46	0.46
Original Dataset	Original Assays	Standard Error	0.12	0.17
Paired Dataset	Lab Pulp Replicate Assays	Correlation Coefficient	0.7595	
		Pais ≤ 10% HARD	76%	



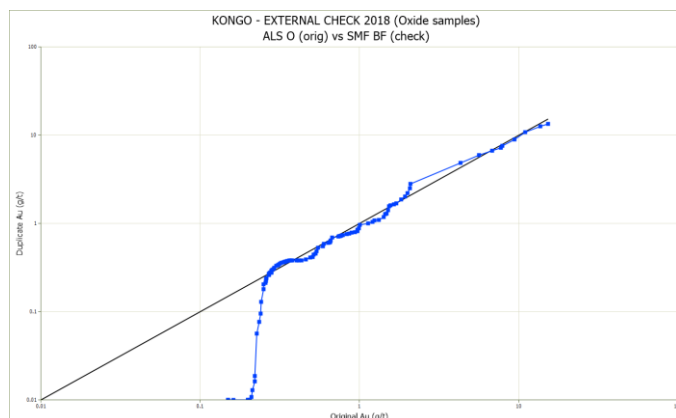
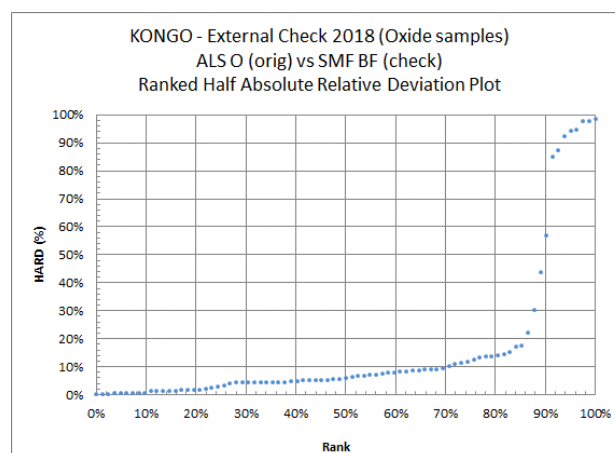
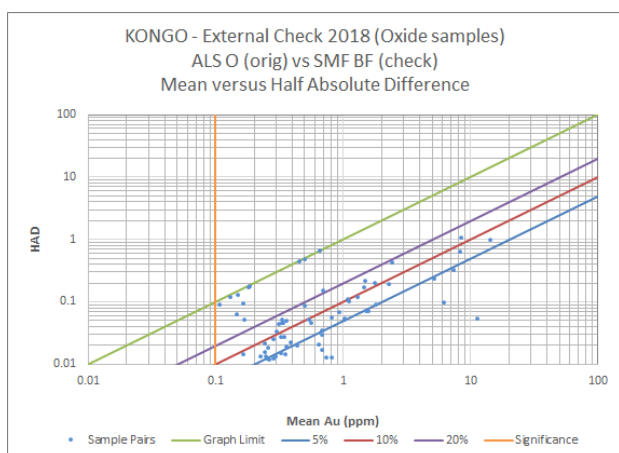
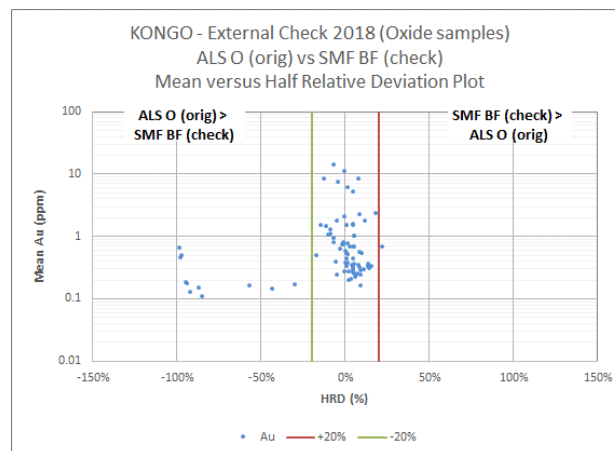
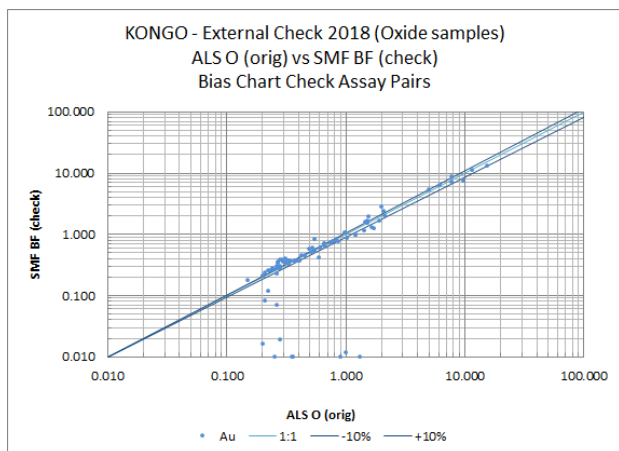
Biais charts and precision plots for sulfide samples assayed at SMF BF and ALS-O (2018-19)

Project	Bantou	Statistics	SMF BF (orig)	ALS-O (check)
Data Series	2018-19 Lab Pulp Duplicates	Sample Count	694	694
Data Type	RC and Core Samples	Minimum Value	0.10	0.01
Commodity	Au in gpt	Maximum Value	18.13	17.00
Analytical method	Fire assay – AAS finish	Data mean	1.29	1.27
Detection Limit	0.01 gpt (Au)	Median	0.48	0.49
Original Dataset	Original Assays	Standard Error	0.08	0.08
Paired Dataset	Lab Pulp Replicate Assays	Correlation Coefficient	0.9918	
		Pais ≤ 10% HARD	87%	



Biais charts and precision plots for oxide samples assayed at ALS-O and SMF BF (2018)

Project	Bantou	Statistics	ALS-O (orig)	SMF BF (check)
Data Series	2018 Lab Pulp Duplicates	Sample Count	83	83
Data Type	RC and Core Samples	Minimum Value	0.15	0.01
Commodity	Au in gpt	Maximum Value	15.27	13.32
Analytical method	Fire assay – AAS finish	Data mean	1.36	1.29
Detection Limit	0.01 gpt (Au)	Median	0.51	0.42
Original Dataset	Original Assays	Standard Error	0.28	0.27
Paired Dataset	Lab Pulp Replicate Assays	Correlation Coefficient	0.9859	
		Pais ≤ 10% HARD	70%	



Biais charts and precision plots for sulfide samples assayed at ALS-O and SMF BF (2018)

Project	Bantou	Statistics	ALS-O (orig)	SMF BF (check)
Data Series	2018 Lab Pulp Duplicates	Sample Count	275	275
Data Type	RC and Core Samples	Minimum Value	0.01	0.01
Commodity	Au in gpt	Maximum Value	130.00	140.94
Analytical method	Fire assay – AAS finish	Data mean	3.13	3.35
Detection Limit	0.01 gpt (Au)	Median	0.70	0.74
Original Dataset	Original Assays	Standard Error	0.71	0.81
Paired Dataset	Lab Pulp Replicate Assays	Correlation Coefficient	0.9937	
		Pais ≤ 10% HARD	77%	

