Mineral Resource Estimate

Gossey Deposit, Essakane Mine, Burkina Faso

January 18, 2019

Prepared for:

IAMGOLD Corporation

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Mineral Resource Estimate – Gossey Deposit

Essakane Exploration SA, Burkina Faso

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1 SUMMARY

1.1 Introduction

IAMGOLD Corporation. ("IAMGOLD") appointed G Mining Services Inc. ("GMSI") to complete an independent Mineral Resource for the Gossey prospect. No previous Canadian National Instrument 43-101 Technical Report ("NI 43-101") has been issued on the property (Korizéna and Lao Gountouré permits).

The scope of this Technical Report mainly includes a Mineral Resource to feed into future mine planning activities and to assist in the targeting of extensions to mineralization along strike and at depth.

The 2018 Gossey Mineral Resource Estimate ("MRE") was prepared by Mr. James Purchase, P Geo. under the supervision of Mr. Réjean Sirois, P. Eng. ("QP").

GMSI believes the information used to prepare this Technical Report is valid and appropriate considering the status of the Project and the purpose of the Technical Report. The authors, by their technical review of the Project's exploration potential, confirm that the work program and recommendations presented in the Report are in accordance with NI 43-101 and Canadian Institute of Mining, Metallurgy and Petroleum Definition Standards for Mineral Resources and Mineral Reserves ("CIM Definition Standards").

1.2 Property Description, Location and Ownership

The Gossey Deposit is located within Essakane Exploration SA ("IAMGOLD") properties approximately 330 km northeast of Ouagadougou, capital of Burkina Faso. In total, there are seven exploration permits (1,093.19 km²) around the Essakane Mine Lease (Lao Gountouré 2, Gossey 2, Dembam 2, Korizéna, Gaigou, Gomo 2 and Alkoma 2). The Gossey Deposit is located on the Korizéna and the Lao Gountouré 2 permits about 12 km northwest of the Essakane Gold Mine ("EMZ").

As part of the exploration activities to discover potential satellite deposits around the EMZ, IAMGOLD has been conducting mineral exploration work since its acquisition in 2009.

1.3 Accessibility, Climate, Local resources, Infrastructure and Physiography

The Gossey prospect is located 12 km northwest of the EMZ and easily accessible from the mine site which is roughly 330 km from Ouagadougou. From the mine, the Gossey Deposit is accessible by a lateritic road passing through the Essakane village which is located about 4 km south of the prospect.

The Gossey Project climate is predominantly Sahelian with a unique rainy season from July to September and a long dry season from October to June. Temperatures can reach 45°C in April and 15°C in December. The most dominant wind direction is from the east to northeast between December and April.

The presence of the EMZ, close to the prospect, makes it possible to provide certain infrastructure needs (water, electricity, fuel, equipment, etc.) and manpower if necessary. The surrounding villages (Dori, Gorom-Gorom, Falagountou, Essakane site), have permanent commerce where most day-to-day necessities can be found.

The relief of the Gossey region is dominated by flat plains and slightly undulating plateaus. The landscape is dominated by sand dunes due to the strong circulation of the winds favoring the formation of a succession of dunes oriented generally East-West. The physiography of the region is characterized by sparse vegetation comprised mainly of thorny trees and grasslands.

Burkina Faso is crossed by three rivers; the Black Volta, the White Volta and the Red Volta. The northeast region which hosts the Gossey Deposit drains almost entirely into the Niger basin.

1.4 Geology Setting and Mineralization

The geology of the Gossey Deposit is characterized by a sedimentary sequence intercalated by intermediate to mafic igneous units. The sedimentary sequence is composed of fine to coarse grained quartz-arenites, quartz-feldspar sandstones and lithic sandstones, and laminated mudstone/siltstones, whereas the igneous rocks are composed of andesites, gabbro and gabbro-diorites with some variations to pyroxenites and amphibolites produced from magmatic segregations.

Structurally, the Gossey prospect is controlled by the Markoye fault especially its branch named Gossey-Korizéna shear zone. The Markoye Fault is a regional structure close to the prospect characterised by a predominantly NNE-SSW reverse directional sinistral shear corridor.

The mineralization is mainly hosted in sandstone to conglomeratic sedimentary formations along contacts with basic to intermediate intrusive dykes, and rarely within these intrusive units. The gold mineralization of the Gossey prospect is associated to a significant hydrothermal activity affecting the lithological units along the shear corridor during a second phase of deformation (“D2”).

1.5 Exploration, Drilling and Sampling

From 1995 to 2007, historical exploration work has been conducted on the Essakane district by previous owners. In 1995, 11 shallow Reverse Circulation ("RC") drill holes, totaling 545 m, were drilled over the Gossey Deposit area. In 2003, a second shallow RC drilling program with 81 RC holes totaling 5,907 m allowed to define two main gold mineralized zones over the prospect area. During the same period, seven additional RC shallow holes, totaling 505 m, were completed to the south to test the southern extensions of the Gossey mineralized system.

In 2006, four diamond drill ("DD") holes totaling 680 m were drilled to evaluate the mineral potential of the whole Essakane district area. The drilling program continued in 2007 with 12 shallow RC holes totaling 909 m drilled to test a few geochemical anomalies in the South of Gossey.

Since 2009, IAMGOLD (Essakane SA) have conducted several exploration activities on the Gossey Project, including a high resolution magnetic and radiometric airborne survey, gold panning pit sampling, Air Core drilling, DD, RC drilling and small-scale geological mapping. These exploration activities allowed to better define the ore body of the Gossey prospect and find extensions and satellite ore bodies to the North, South, East and West.

In 2011, a drilling program consisting of 9 RC holes (1,072 m) and 10 DD holes (2,508 m) was executed by IAMGOLD. This program resulted in the discovery of the Gossey-SE mineralized zone and the extension of the Gossey Main Zone. During the same year, 48 RC holes and 12 DD holes totaling respectively 5,723 m and 2,846 m successfully tested the southern extensions of the mineralized trend.

During the second quarter of 2017, an infill RC drilling program of 15,000 m was proposed and implemented to upgrade the classification of the resource at the Gossey Deposit.

In 2018, a second infill drilling program of 14,300 m commenced testing for strike extensions of the deposit, test grade continuity to a vertical depth of approximately 100 m and convert Inferred Resources into Indicated Resources.

For the RC sampling program, samples were collected every 0.5 m and weighed at the drill rig. Once transported to the Essakane mine site, a 1 m composite was formed by combining two 0.5 m samples. This was subsequently reduced in size through a 1-tier, 50:50 riffle splitter to produce a final split for the laboratory weighing around 5 kg, with a coarse reject preserved for archiving. The remaining material was discarded after a small portion was retained for the chip tray.

No diamond drilling has been undertaken during the 2017-2018 drilling campaigns.

1.6 Data Verification

On May 10th, 2018, drill hole information for the 2018 drilling program at the Gossey Project was provided to GMSI from Essakane geologists (Resource Development Team). GMSI imported the files into the original MS Access database used in the interim resource estimate using the Geovia® GEMS software.

A total of 1,106 drill holes were available for grade estimation. The following activities were performed during database validation:

- Validate total hole lengths and final sample depth data;
- Verify for overlapping and missing intervals;
- Check drill hole survey data for out-of-range or suspect down-hole deviations;
- Visual check of spatial distribution of drill holes;
- Validate lithology codes.

GMSI is comfortable with the data, analyses, QA/QC (2017-2018 drilling program) and geological interpretation presented by the IAMGOLD Essakane geologist. It was performed in a professional manner using the industry's best practices. GMSI believes the data is reliable for use in the estimation of Mineral Resources presented in this Technical Report.

1.7 Mineral Resource Estimate

This Mineral Resource Estimate was prepared by GMSI and dated May 25th, 2018.

The GEMS Gossey Project holds 1,016 exploration drill holes of different types covering the Gossey Deposit and its surroundings. The mineralization modelling and resource estimation reported herein focus on three mineralised bodies defined along a semi-continuous trend, where 97,959 m were drilled and assayed between 2003 and 2018. Three types of drill holes were used for the estimation (DD, RC and RC followed by DD).

Weathering and mineralization solids were generated for this resource estimate and based on the drilling database provided. Two weathering surfaces were generated: 1) base of saprolite and 2) base of transition. Due to the strong lithological control on gold mineralization at Gossey, GMSI built a lithology model based on provided grouped logging codes.

The interpolation technique selected for the Gossey Deposit is the Inverse Distance Cube (ID^3) method. Grade estimates were produced using the 2.5 m composites. Mineralized domains were considered as hard boundaries through each interpolation step. Each domain was estimated using only composites pertaining to the domain in question. Four interpolation passes were used iteratively to estimate the blocks for the Gossey Deposit.

To establish a mineral resource estimate, an open pit development scenario is the most adapted to the geology/geometry, tonnage and grade. The deposit model was imported into Whittle® to determine optimal pit shells based on the Lerchs-Grossman algorithm. The method works on a block model of the orebody, and progressively constructs lists of related blocks that should, or should not, be mined.

At this stage of the Project, all blocks classified as Indicated and Inferred were utilized in the pit optimization process, with a sensitivity analysis run on Indicated, Inferred and Potential Economic Mineralization ("PEM").

The Gossey Constrained Indicated Mineral Resource is estimated to a total of 10.4 Mt at an average grade of 0.87 g Au/t, totalling 291 k oz of gold (Table 1.1). The Gossey Constrained Inferred Mineral Resource is estimated at 2.9 Mt at an average grade of 0.91 g Au/t, totalling 85 k oz of gold.

Table 1.1: Open Pit Constrained Mineral Resource for Gossey – May 25, 2018

Weathering Profile	Cut-off Grade	Indicated			Inferred		
		Tonnage ('000 t)	Grade (g/t)	Gold (k oz)	Tonnage ('000 t)	Grade (g/t)	Gold (k oz)
Laterite & Saprolite	0.33 g Au/t	3,916	0.66	83	1,464	0.75	35
Transition	0.42 g Au/t	3,467	0.85	94	986	0.97	31
Fresh Rock	0.47 g Au/t	3,071	1.15	114	489	1.23	19
Total	**Varying**	**10,454**	**0.87**	**291**	**2,939**	**0.91**	**85**

1.8 Recommendations

The Gossey Deposit remains open to the northeast, where some of the best intersections of the 2018 drilling campaign were returned (23 m @ 1.18 g Au/t, 26 m @ 2.26 g Au/t and 14 m @ 1.17 g Au/t). There is scope for significant additional tonnage to be discovered along this highly prospective trend.

Although the Gossey Deposit is well-delineated to the south, there remain excellent prospects of finding mineralization beneath the existing Gossey Village. GMSI also provides the following recommendations:

- Increase the proportion of DD (currently 14%) within the constrained mineral resource to increase confidence in the gold grades and provide more bulk density data;
- Periodically review the RC drill sample splitting procedure to ensure it is followed effectively
- A budget of 1.0 M$ is proposed to drill the northeast extensions of the deposit.

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2 INTRODUCTION

2.1 Background

The Gossey prospect has been subjected to significant on-ground exploration since 2009 when the greater Essakane Project was acquired by IAMGOLD Corporation (“IAMGOLD”). Before this acquisition, the Gossey region (located 12 km northwest of the Essakane Mine Site) was explored by BHP Minerals and Orezone Gold Corporation (“OGC”) who conducted early-stage surficial exploration and identified many anomalies and artisanal workings.

IAMGOLD has conducted significant exploratory and resource drilling at Gossey with the aim of outlining significant satellite oxide resources to feed into the processing plant at the Essakane Mine Site. Drilling is now at a sufficient density and quality to allow the calculation of a maiden Mineral Resource Estimate.

2.2 Scope

IAMGOLD retained GMSI to complete an independent Mineral Resource for the Gossey Prospect. No previous Canadian National Instrument 43-101 Technical Report has been issued on the property (Koriziéna and Lao Gountouré permits).

The scope of this Technical Report mainly includes a Mineral Resource to feed into future mine planning activities, and to assist in the targeting of extensions to mineralization along strike and at depth.

2.3 Qualified Persons and Site Visits

Mr. Réjean Sirois P. Eng. (“QP”) visited the site from March 27th to March 31st, 2018 to review the drilling program and liaise with the on-site geologist to discuss sampling, QA/QC and geological interpretations.

3 RELIANCE ON OTHER EXPERTS

The authors have written this Technical Report using existing information gathered from previous geological reports, drilling reports and historical exploration reports provide by IAMGOLD Corporation. A full list of references is provided in Section 27 which lists the sources of information.

Information for Sections 4, 5, 6, 7, 8 and 9 was mainly obtained from the 2017 drilling report *“Rapport de Synthèse 2017, Prospect Korizéna”* by Marc Desire Valea, Théophile Paré et Hermann Traoré. This report was written in the style of a Canadian National Instrument 43-101 report and was provided to GMSI by Essakane SARL representatives (operating subsidiary of IAMGOLD Corporation).

Information for Sections 10 and 11 was conveyed to GMSI in the form of an end-of-campaign QA/QC report, which contained all related QA/QC data for the Gossey Prospect.

Sections 12, 14, 25 and 26 were written by GMSI and outline steps taken to verify the data during the March 2018 site visit, and the subsequent Mineral Resource Estimation. GMSI has also made several recommendations to advance the Project in Section 26.

4 PROPERTY DESCRIPTION AND LOCATION

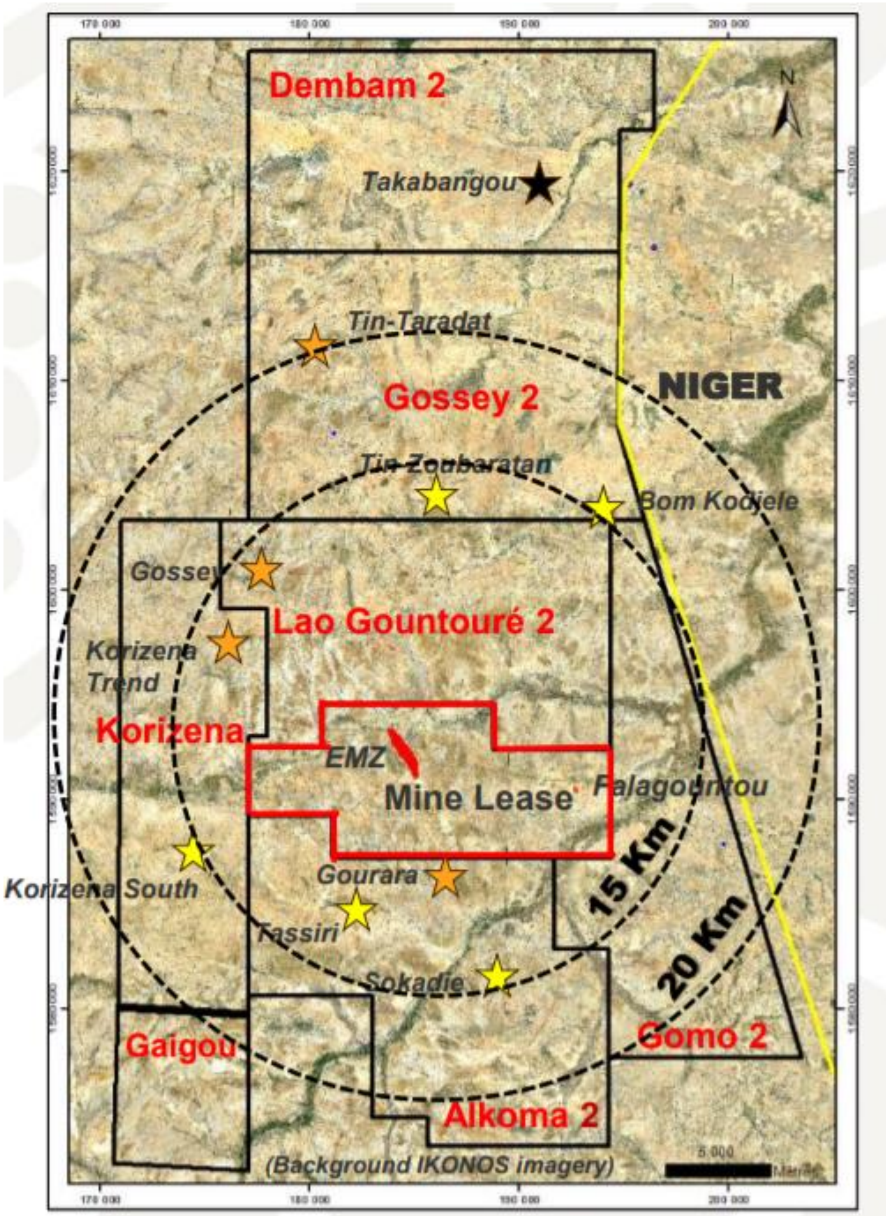
Burkina Faso is a landlocked country in West Africa and is located in between latitudes 10° and 15° North and longitudes 2° East and 5° West. The country covers an area of about 274,000 km^2, has an estimated population of more than 18 million people and is surrounded by six countries: Mali to the north; Niger to the east; Benin to the southeast; Togo and Ghana to the south; and Ivory Coast to the southwest (Figure 4.1).

Figure 4.1: Location of Burkina Faso (IAMGOLD Corp. 2018)

The Gossey Deposit is located inside the Essakane Exploration SARL properties in northeastern Burkina Faso (Figure 4.1). The Essakane Exploration SARL permits are located about 330 km northeast of the capital Ouagadougou. The permits straddle the boundary of the Oudalan and Seno provinces in the Sahel region of Burkina Faso and are situated 42 km east of the nearest large town and the provincial capital of Oudalan, Gorom-Gorom.

There are seven exploration permits (1,093.19 km^2 in total) around the Essakane Mine Lease, valid until November 2018. The exploration permits on the Gossey deposit area (Essakane District, Figure 4.2) are: Lao Gountouré 2, Gossey 2 and Dembam 2, north of the Essakane Gold Mine ("EMZ"), Koriléna in the west, Gaigou in the south-west and Gomo 2 in the east and Alkoma 2 in the South.

Figure 4.2: Essakane District Exploration Permits (IAMGOLD Corp. 2018)

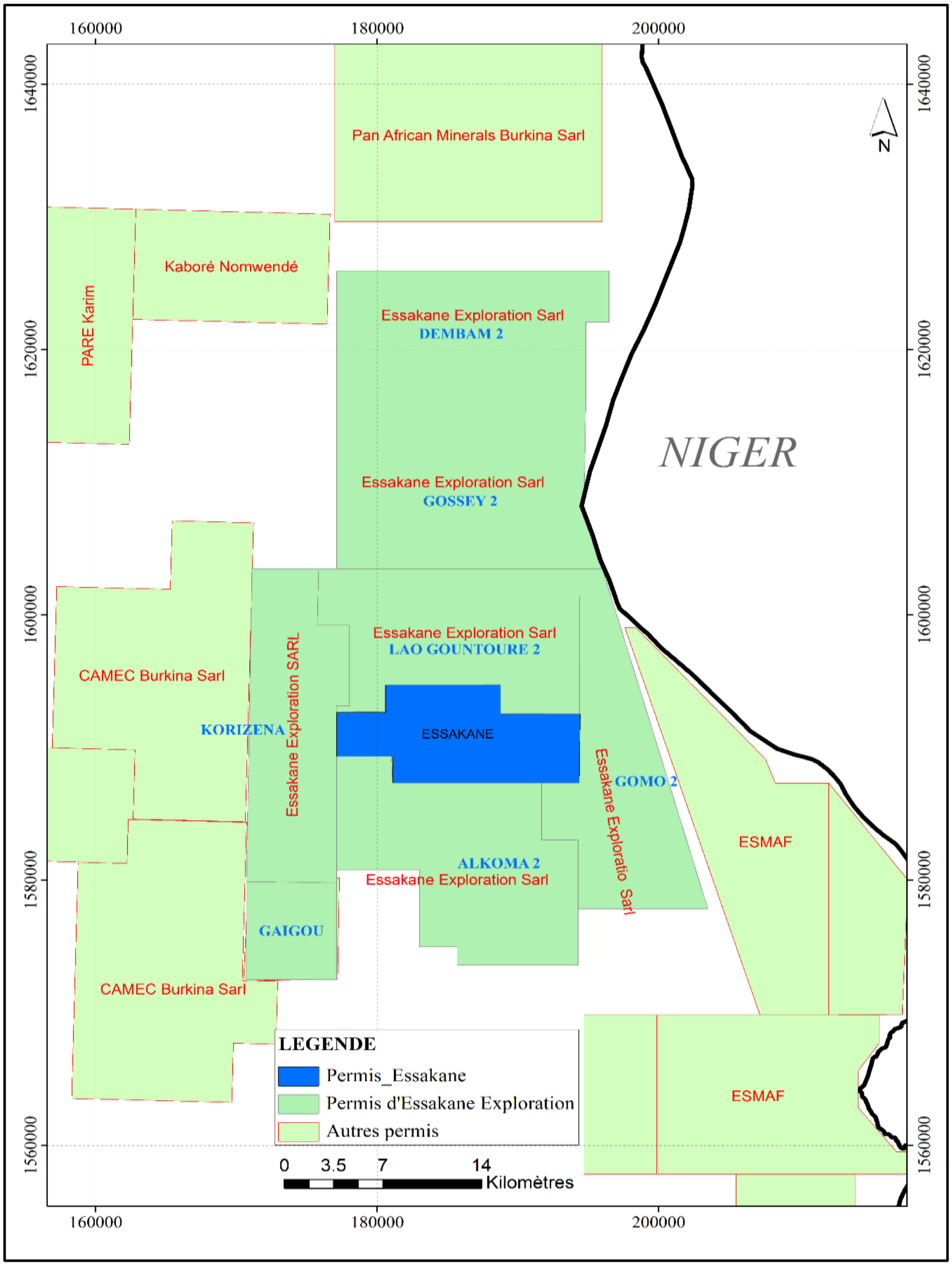


The Gossey Deposit (Figure 4.2) is located on the Korizéna and the Lao Gountouré 2 permits about 12 km northwest of the Essakane Gold Mine ("EMZ"). In 2017, exploration work covered an area centered about the coordinates of 175882E / 1596947N (WGS84, UTM, Zone 31 N) and extending over a width (East-West) of about 2 km and a length (north-south) of about 5 km.

The Korizéna permit with an area of 144.18 km^2 (Figure 4.3) is centered on the coordinate point 173663E / 1589377 N (WGS84, UTM, Zone 31 N) and covers a rectangular area to the west of the Essakane Exploitation Mine Lease held by Essakane SA. This eastern boundary is also shared with

Lao Gountouré 2 and Alkoma 2 exploration permits, both owned by Essakane Exploration SA. In the west it shares its limit with the exploration licenses held by Camec Burkina SARL. Areas to the north of the exploration permits are covered by Ebonoid granitoids and are unoccupied and to the south is the Gaigou permit (Figure 4.3).

Figure 4.3: Location of Exploration Permits for Essakane Exploration SA (IAMGOLD) and Neighboring Permits (Allou, B. & Pratas, M. 2017)



5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

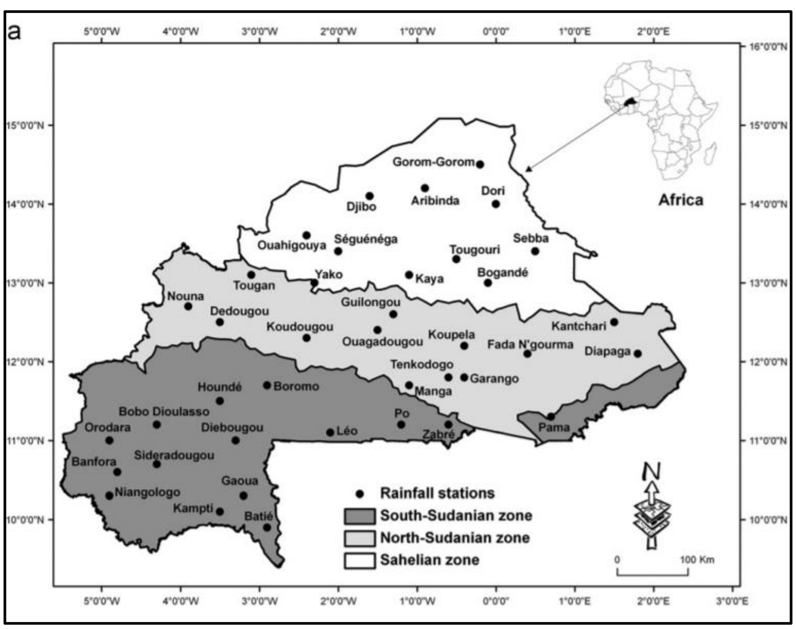
5.1 Accessibility

The Gossey prospect is located 12 km northwest of the Essakane Gold Mine and is easily accessible from the mine site. The Essakane mine (IAMGOLD Essakane SA), is located in the northeast of Burkina Faso and is roughly 330 km from Ouagadougou. It is accessible through a sealed road that connects Ouagadougou to Dori and an unsealed road from Dori. The Gossey Deposit is accessible from the mine by a lateritic road passing through the village Essakane. This road is well maintained but is limited to the Essakane village which is located about 4 km south of the prospect. Roads beyond the village may be impassable during the rainy season due to frequent flooding.

5.2 Climate

The climate in Burkina Faso is tropical with a rainy season in the summer months due to the African monsoon, and a dry season in winter. In the north, the rainy season is very short and less intense resulting in an arid climate. In the south, the rainy season is prolonged and supports a savannah environment. Based on average annual rainfall, the country is subdivided into three main climatic zones (Figure 5.1), the Sahelian zone in the north (300-600 mm/y), the Sudano-Sahelian zone (north-Sudanian zone) in the center (600-900 mm/y) and the southern Sudanian zone (south-Sudanian zone) to the south (900-1200 mm/y).

Figure 5.1: Climatic Zones in Burkina Faso. (Lodoun, T & Others, 2013)



The Gossey Project climate is predominantly Sahelian with a unique rainy season from July to September where annual rainfall rarely exceeds 600 mm (Figure 5.2) and a long dry season from October to June. Temperatures can reach 45°C in April and 15°C in December (Figure 5.3). The most dominant wind direction is from the east to northeast between December and April. Winds coming from the southwest to the west represent the northward advance of the intertropical front carrying rain between May and June.

Figure 5.2: Spatial Distribution of Average Annual Rainfall in Burkina Faso (2007-2009) (Yameogo, 2011)

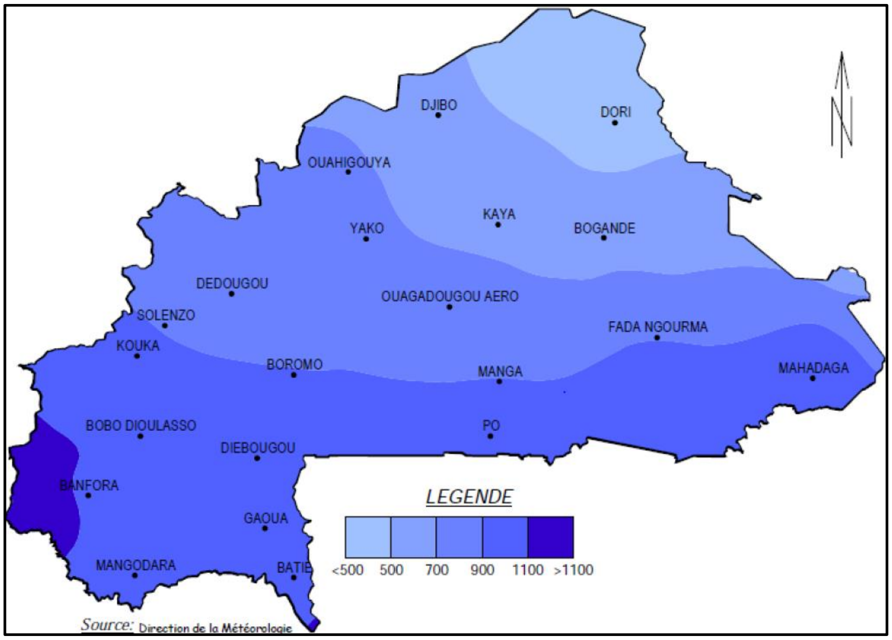
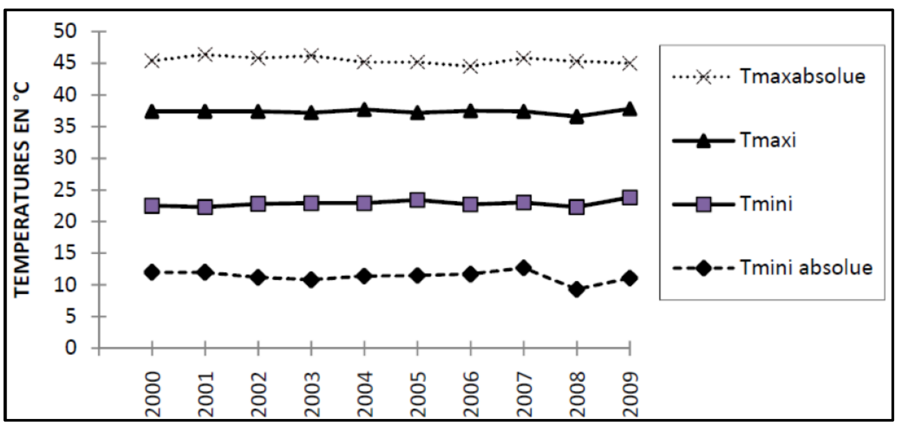


Figure 5.3: Temperature Evolution at Dori (2000-2009) (Yameogo 2011)



5.3 Local Resources and Infrastructure

The presence of the Essakane Gold Mine close to the prospect makes it possible to provide certain infrastructure needs (water, electricity, fuel, equipment, etc.) and manpower if necessary.

The surrounding villages (Dori, Gorom-Gorom, Falagountou, Essakane site) have permanent commerce where most day-to-day necessities can be found.

The Gossey village borders the gold deposit to the northwest and has been constantly growing during the past few years as exploitation of the artisanal workings has grown. Satellite settlements have also grown towards the southwest and northeast of the deposit, and artisanal mining continues north along-strike of the deposit.

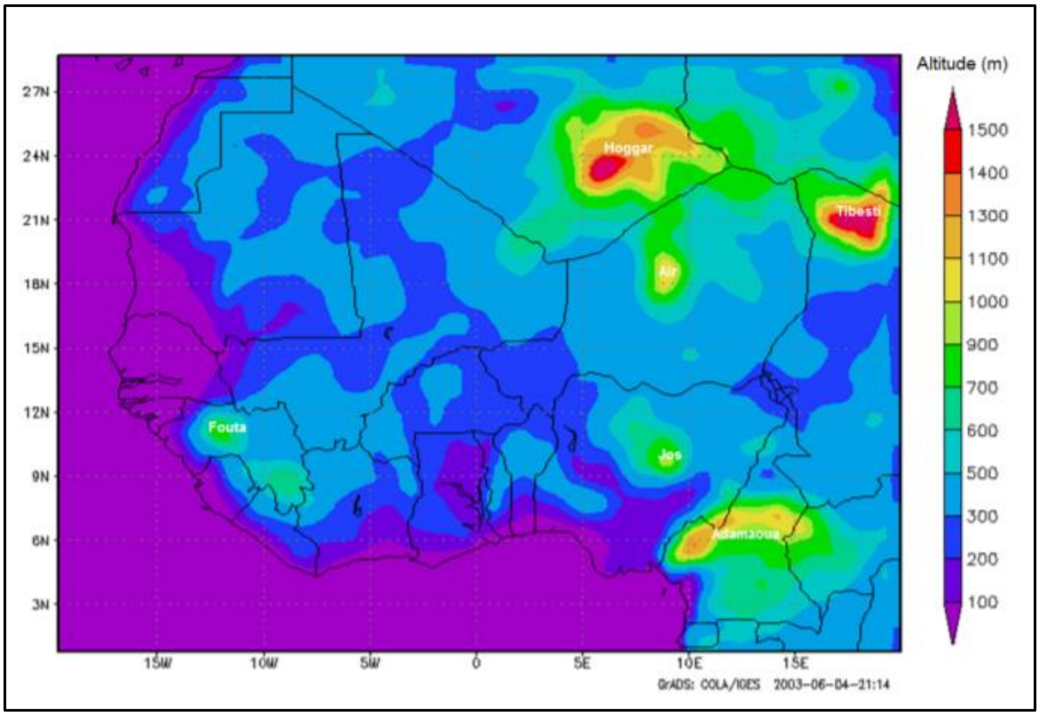
Although it is possible to access the prospect to conduct exploration activities most of the year, it becomes very difficult during the rainy season (mainly August and September) due to localised flooding.

5.4 Topography, Vegetation and Hydrography

The topography of West Africa is characterized by a relatively flat relief with an average altitude of less than 500 m (Figure 5.4). The rugged topography of West Africa favors the formation of large regional basins including the third largest river in Africa, the Niger River (Figure 5.5).

The relief of the Gossey region is dominated by flat plains and slightly undulating plateaus. The project area and specifically the area surrounding the Essakane Mine Site are characterized by relatively flat terrain sloping gently towards the Gorouol River. The weak slopes and low-lying areas vary between 250 and 300 m elevation. The landscape is dominated by sand dunes due to the strong circulation of the winds favoring the formation of a succession of dunes generally oriented east-west.

Figure 5.4: Topographic Map of West Africa (Grandin, 1973)

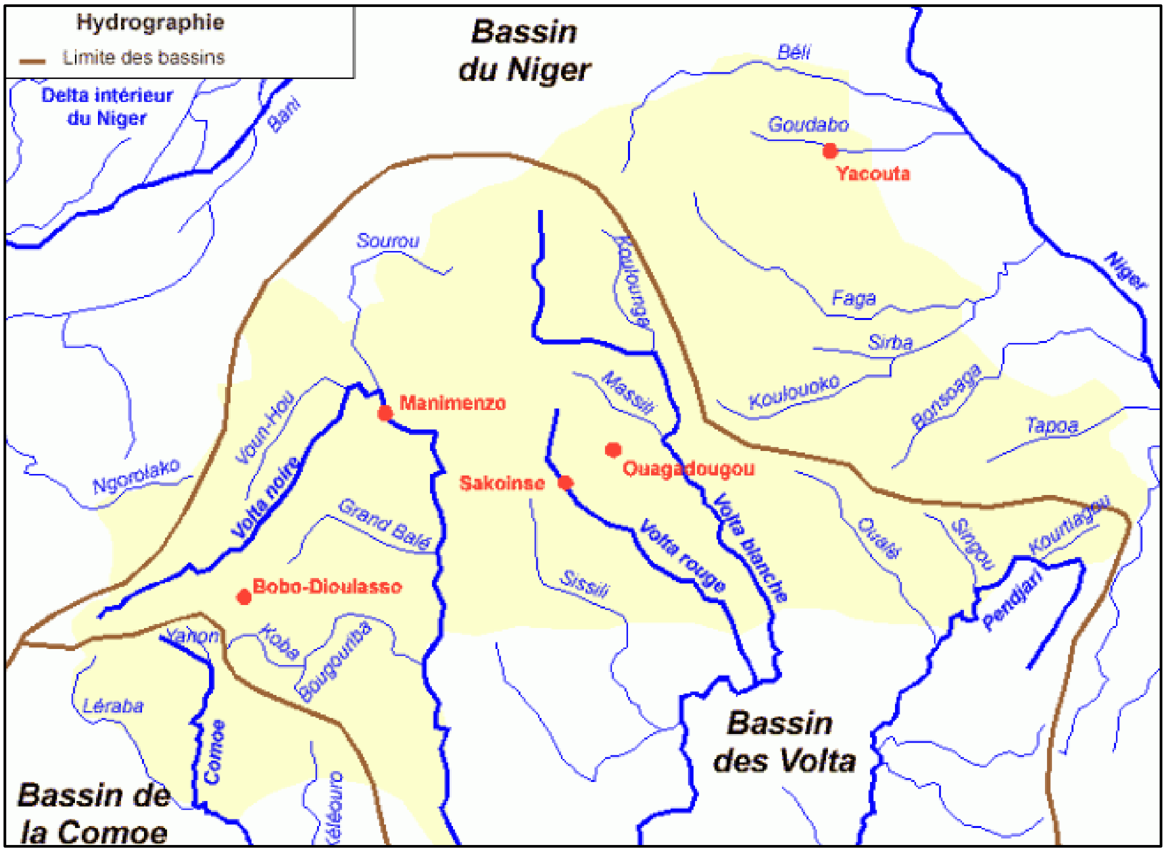


The physiography of the region is characterized by sparse vegetation comprising of mainly thorny trees and grasslands.

Burkina Faso is crossed by three rivers; the Black Volta (or Mouhoun), the White Volta (Nakambé) and the Red Volta (Nazinon) (Figure 5.5).

The northeast region (which hosts the Gossey Deposit) drains almost entirely into the Niger basin which represents 27% of the country's surface. The main rivers, which include Béli, Gorouol and Feildegasse and their tributaries, are dry during the dry season.

Figure 5.5: Hydrography of Burkina Faso (WordPress, 2016)

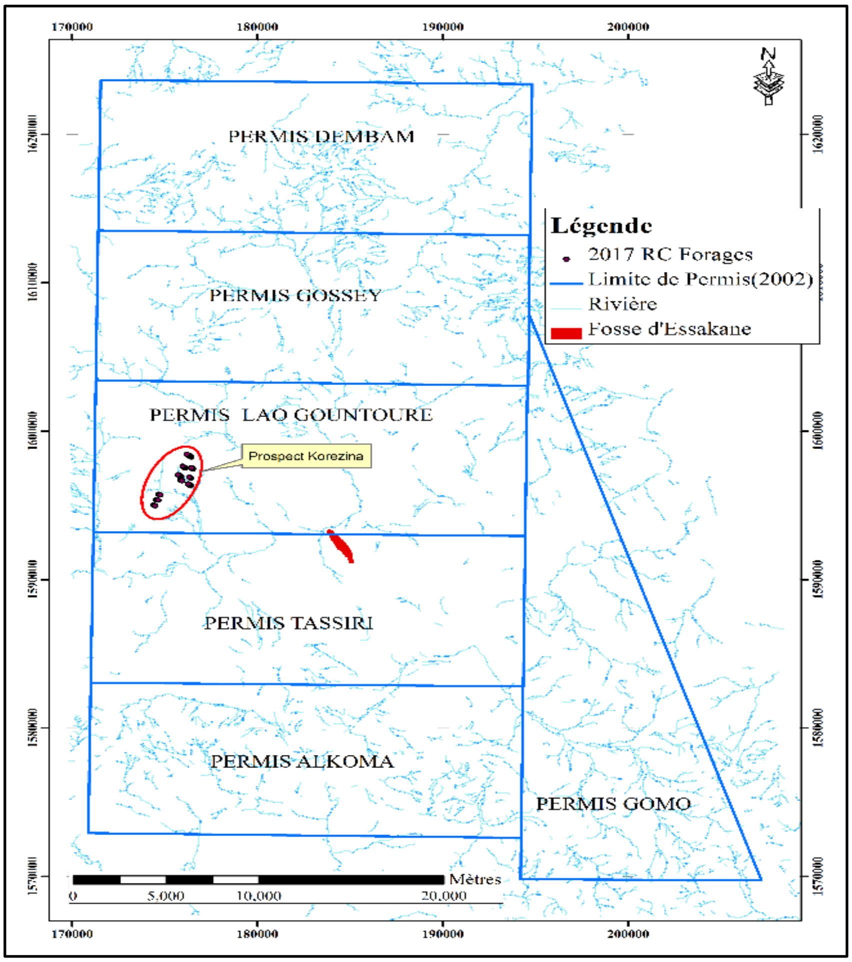


6 HISTORY

6.1 Permits and Ownership

The Gossey gold deposit and all the surrounding permits have been the subject of mineral exploration since the 1970s. In some cases, the limits of these permits have evolved. The Gossey Deposit was originally located within the Lao Gountouré permit (Figure 6.1), which was subsequently renamed Lao Gountouré 2 and then Korizéna, from November 2006 (Figure 6.2).

Figure 6.1: Localisation of Gossey Deposit Exploration Permits (as of 2002). (Allou, B. & Pratas, M., 2017)



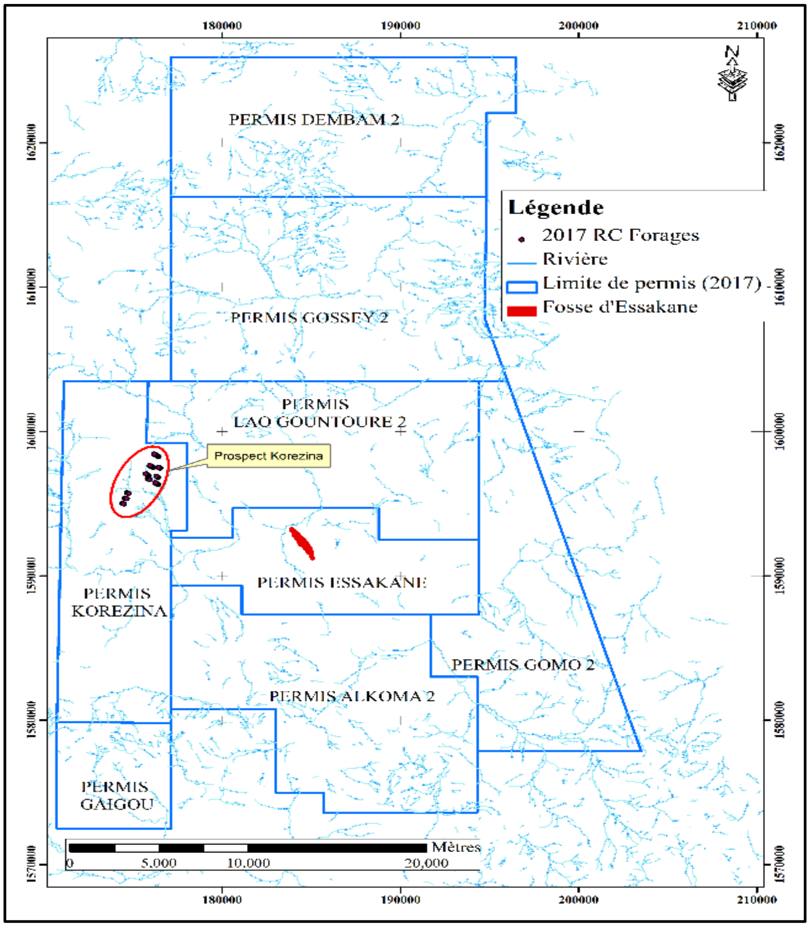
From 1986 to 1992, the Burkina Bureau of Mines and Geology ("BUMIGEB") carried out 1:50 000 mapping of the Essakane zone, geochemical prospection for gold and base metals at the regional scale, and evaluation of the surficial gold deposits exploited by artisanal miners.

In July 2000, the Lao Gountouré permit was awarded to the Coronation International Mining Corporation (“CIMC”) by the Ministry of Energy and Mines. In September of the same year, CIMC entered into a joint venture agreement with Ranger Minerals Ltd (“RM”).

At the end of June 2001, Ranger Minerals withdrew from the joint venture agreement in the area covered by the permits.

On July 22, 2002, Orezone Resources Inc. (“ORZ”) and CIMC merged their activities. On July 19, 2002, Goldfields Ltd. enters into a joint venture (“JV”) with ORZ. In November 2006, the Korizéna permit was awarded to ORZ by the Ministry of Energy and Mines (Figure 6.2).

Figure 6.2: Localisation of Gossey Deposit (also referred to as Korizéna) and Exploration Permits (as of 2017). (Allou, B. & Pratas, M., 2017)



In October 2007, Goldfields decided to withdraw from the JV with ORZ. ORZ continued to work on socio-economic studies for the mine development in addition to regional reconnaissance.

IAMGOLD entered the Project in late-2008 by acquiring ORZ.

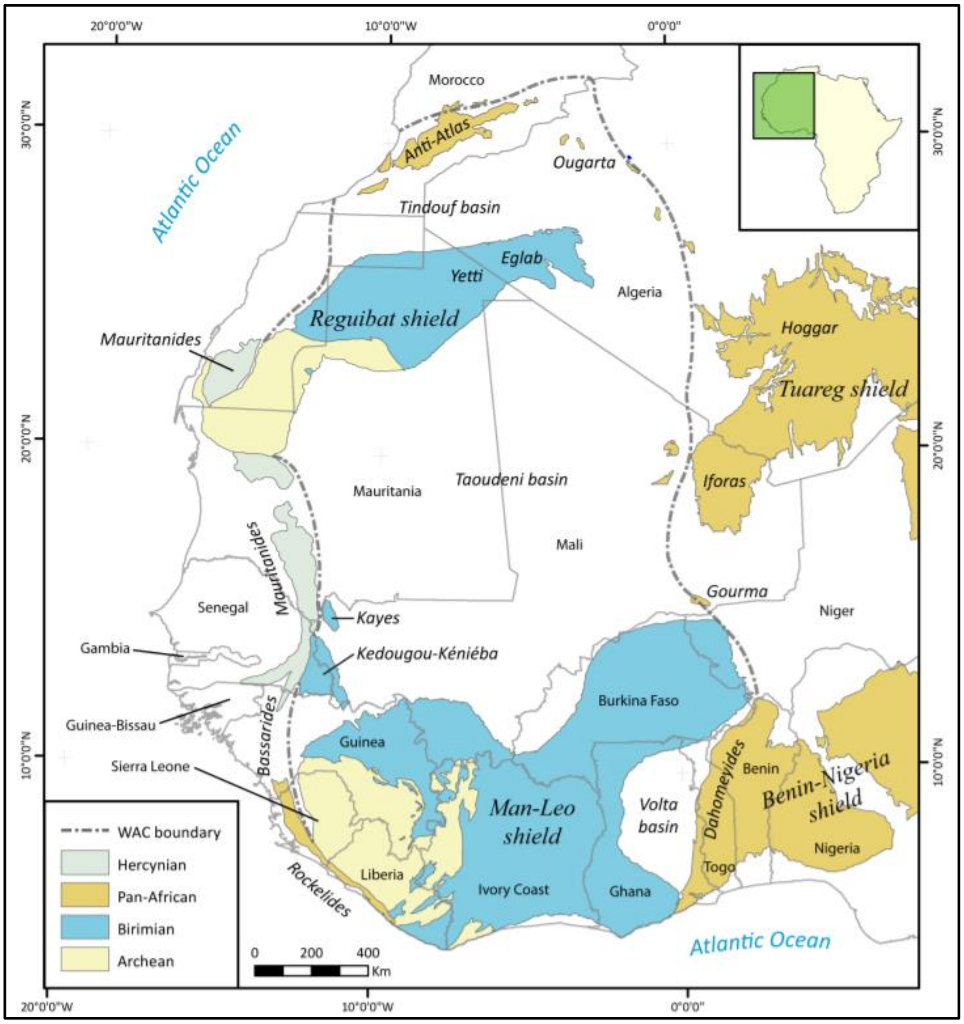
7 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

7.1.1 West African Craton

The West African Craton ("WAC") is a vast portion of Precambrian crust (~4,500,000 km^2) stable since 1,700 Ma. It is located in the western part of Africa and bounded on all sides by more recent mobile belts mainly of Pan-African age, such as the Anti-Atlas to the North and the Hercynian belts "The Mauritanides" on the western edge (Figure 7.1).

Figure 7.1: Simplified Tectonic Map of the West African Craton (Grenholm, M., 2014)



The Archean and Paleoproterozoic basement of the WAC is exposed in two principal Precambrian domains: the northern Réguibat shield, the southern Man shield (also called Man-Leo Shield) and in the west-central Kedougou-Kéniéba and Kayes inliers (Figure 7.1).

The rocks of the Réguibat shield include Tonalite-Trondhjemite-Granodiorite ("TTG") rocks series, migmatitic orthogenesis, metavolcanics and metasedimentary rocks with ironstones, marbles, ultramafic units and amphibolites. For the Man shield, the oldest component consists of bended TTG gneiss (>3.0 Ga) overlain by greenstone belts.

The sedimentary units pertain to three main basins: Tindouf, Taoudéni and Volta. In its central part, the West African Craton is largely unconformably overlain by the late Proterozoic to Palaeozoic sediments from the Taoudéni Basin. The Taoudéni basin is the largest basin and is made of six sub-basins.

The West African Craton consists of lower to middle Proterozoic formations. Its geological and structural form was shaped during two major orogenic events: Liberian (3.0-2.4 Ga) and Eburnean (2.4- 1.6 Ga).

The Liberian orogeny corresponds to a tectono-metamorphic event that lasted 150 Ma (Caen-Vachette 1986) which folded and metamorphosed the Catarché formation (3,300-3,140 Ma). Evidence of this can be found in the western part of the Réguibat Ridge and the Domain Kénéma-Man (Man Shield). Elsewhere, they are only preserved as relics with later orogenies having erased the traces of the Liberian Orogeny.

The Eburnean orogeny (2,500 – 1,600 Ma) or Eburnean cycle was a series of tectonic, metamorphic and plutonic events in what is now West Africa. During this period, the Birimian domain in West Africa was established.

The Eburnean Orogeny, described by Feybesse et al. (2006), formed as result of crustal shortening in a SE-NW direction. This was due to the closure of an oceanic basin that was situated between two Archaean cratons. The term "Birimian" refers to formations postdating the Liberian which formed during, or were affected by, the Eburnean event. The Birimian Supergroup is largely made up of volcanics, chemical sediments and greywacke units with siltstone interbeds. In comparison, the Tarkwa Group is classified as being predominantly conglomerate units with smaller sandstone and phyllite units. The Birimian is unconformably overlain by Tarkwa Group (~2,150-2,130 / 2,107-2,097 Ma).

Deformation during the Eburnean Orogeny lead to the creation of shear zones which trend NE-SW. Tshibubudze et al. (2009) described the Markoye Shear Zone and the Takabangou Shear Zone, which trend north-northeast and are steeply-east dipping. There were three phases of deformation:

1- The Tangaean Event, which is characterized by a north-west trending fold-thrust belt (2,170-2,130 Ma (Tshibubudze et al. 2009 & Hein. 2010);
2- The polycyclic Eburnean Orogeny, which involved continental collision with the orogenic front and associated shear zones in a north-northeast orientation (2,130-1,980 Ma, Feybesse and others. 2006);
3- The Wabo-Tampelse Event, which is characterized by dextral reverse thrusts and WNW-trending shears and folds (undated cf., Hein et al. 2004 & Hein, 2010).

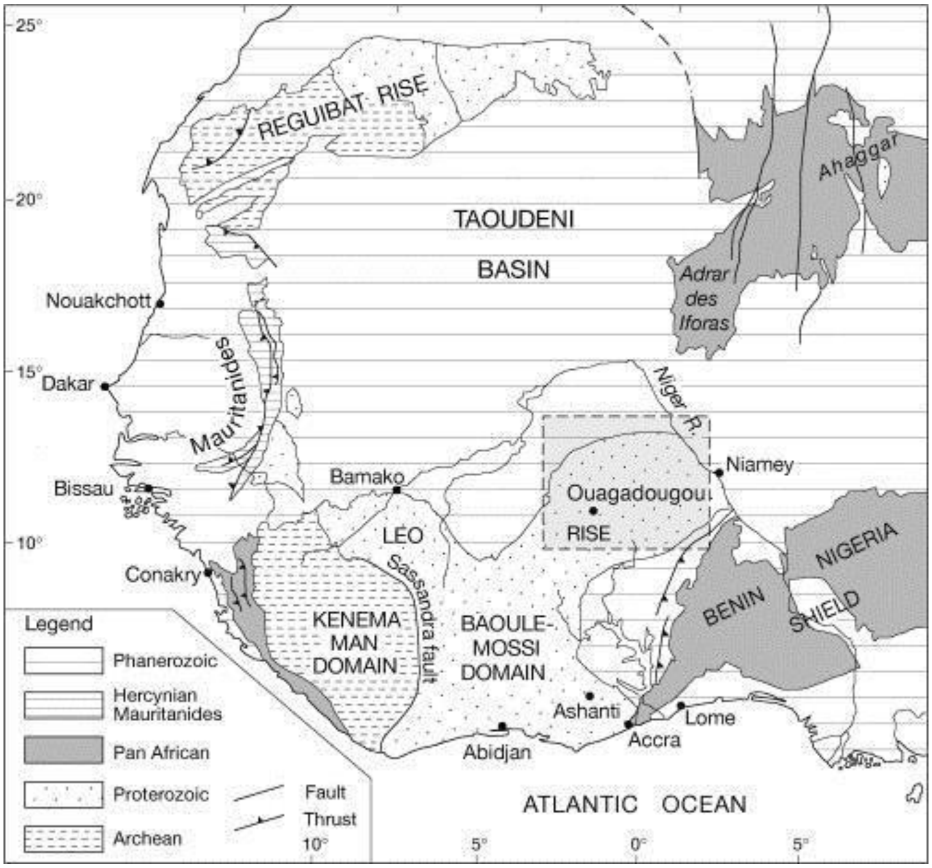
7.1.2 **Burkina Faso Geology**

The geological formations of Burkina Faso are dominated by the Baoulé-Mossi domain, and the eastern part of the Man shield (Figure 7.2). These formations are unconformably covered (in the west, the north and southeast extremity) by the recent sediments of the Taoudéni and Voltas Basins (Figure 7.1). In Burkina Faso, the West African Craton consists of crystalline and crystallophyllous rocks (80%) distributed in two main stratigraphic systems:

- The Archaean outcrops in the form of panels composed largely of migmatites, gneisses and amphibolites, over which lie the greenstone belts of the early Proterozoic age.
- The Birimian corresponds in this sector to formations sedimentary, volcano-sedimentary and weakly metamorphosed volcanic rocks (greenschists) deposited in type I and II furrows (Bessoles. 1977). The Eburnean orogeny deforms these assemblages and locally affects the Birimian formations. Many granitic plutons intrude these formations. The Tarkwa Group defined in Ghana as a supra-birimian group, would correspond to continental deposits. It is mainly represented by arkoses, conglomeratic greywackes, tuffaceous sandstones rising rapidly towards the summit to clay schists interspersed with quartzites or sandstones. Tarkwa Group is considered as the molasse superimposed on the Eburnean cycle. It is important to specify that the Tarkwa in Burkina Faso, compared to the Tarkwa type defined in Ghana, is essentially sedimentary.

The Taoudéni Basin, which covers the crystalline and crystallophyllous rocks to the north, comprises a sandstone series with schistosity and calcareous dolomitic intercalations (west of the basin) and a limestone-dolomitic complex (in the north). In the east, the sandstone formations of the Volta Basin have been affected by pan-African orogeny.

Figure 7.2: Simplified Geological Map of the West African Craton (Beziat, 2008)



Absolute dating on the "late" dolerite intrusions, observed in the cover formations and intersecting the Archean basement and the Birimian domain, gives them an age of 250 Ma (K/Ar).

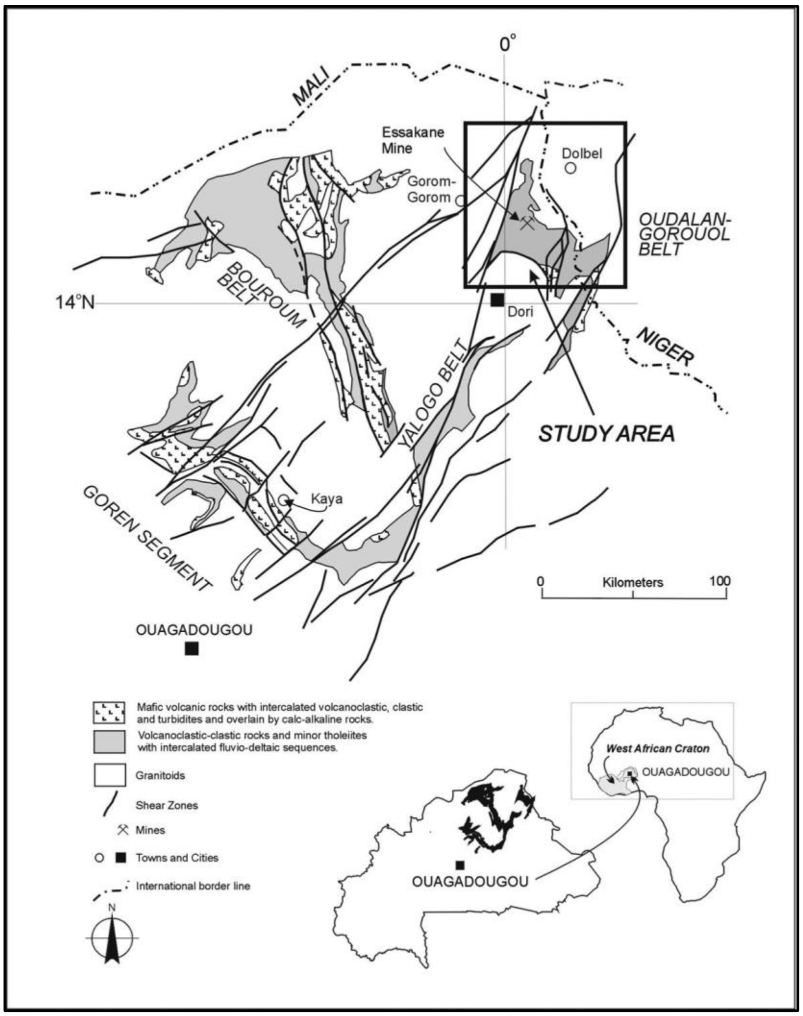
7.1.3 Oudalan-Gorouol Greenstone Belt

The Oudalan-Gorouol Greenstone Belt ("OGGB") is composed of rocks that are largely composed of supracrustal, island-arc derived sediments including thick greywacke sequences. These were deposited in a deltaic-shelf environment on the margin of a back-arc basin. Regional low-middle greenschist metamorphism is shown by the pervasive presence of chlorite, epidote and minor muscovite and is suggested to be a result of large TTG pluton emplacement that occurred syn-tectonically with the Eburnean Orogeny.

The OGGB forms part of the Paleoproterozoic as the Baoulé-Mossi domain of the WAC and hosts gold deposits at Essakane, Gossey, Korizéna, and Falagountou in North-East Burkina Faso, and Kossa goldfield in Niger.

The Gossey Project permits cover part of the Birimian volcano-sedimentary belt of the OGGB located in North-East Burkina Faso (Figure 7.3). This belt is composed of volcanic and volcano-sedimentary rock formations of intermediate to basic composition, on which several sequences of clastic sedimentary rocks (flysch type) occur. All these formations are traversed by gabbro, diorite dykes and by granitic batholiths belonging to the TTG series. On these Birimian formations lie detrital sedimentary rocks of continental margins composed of polygenic conglomerates and arkosic sandstones. The nature of the lower lithological contact of these rocks remains unclear. For some authors (Milesi et al. 1989 & Castaing et al. 2003), it is discordant and associated with the large family of Tarkwa Group rocks, but for others (Tshibubudze et al. 2009) these rocks cannot be associated with the Tarkwa formations by their different nature and by the absence of lithological discordance in contact with the Birimian rocks.

Figure 7.3: Greenstone Belts of the Oudalan-Gorouol, Bouroum, Yalago & Goren (Tshibubudze & Hein, 2013)



All these sedimentary, volcano-sedimentary and volcanic formations are traversed by late dolerite dykes oriented west-northwest to north-northwest and dated for the oldest at 1,631 ± 250 Ma (Cournede. 2010).

All rocks in the region except late dolerites have been metamorphosed into greenschist facies. Higher degrees of metamorphism (hornfels and amphibolite facies) are observed near large plutons (such as Dori Batholith).

The structural fabric of the region suggests that it has undergone more than one phase of deformation. Large folds of kilometric wavelength with NNW-bearing fold axes resulting from compression NNE-SSW are named D1 and are associated with a pre-Eburnean orogeny named Tanguéenne (Tshibubudze et al. 2009).

These folds are refolded by a second generation with NNE-axes and result from a NNW-SSE compression named D2 which are associated with the Eburnean orogeny (Rogers. 2001 & Tshibubudze et al. 2009). A third phase of deformation, called D2 or D3 results in the formation of an axial plane schistosity (fold to length metric wave) and EW oriented crenulation. This deformation phase is characterized by NS compression at NNW-SSE.

The OGGB is bounded and/or crosscut by several major north-northeast to northeast trending shear zones including the steeply east-dipping Markoye Shear Zone (western margin of the OGGB), Tin Takanet-Bellekcire Shear Zone, Dori Shear Zone, Kargouna Shear Zone, Takabougou Shear Zone, and Bom Kodjelé Shear Zone (transects the centre of the OGGB).

7.2 Local Geology

The Korizéna prospect is situated about 10 km west from the Essakane deposit and is the southern continuity of the Gossey Deposit. Both have similar geology. For the purposes of this Technical Report, the Korizéna and Gossey prospects form the same mineralised trend.

The geology of the Gossey Deposit includes sequences of detrital sedimentary rocks (quartz-arenites, quartz-feldspathic sandstones, fine to microconglomeratic lithic sandstones with polygenic clasts, lithic sandstones with pelitic fragments, greywackes, argillites/ graphitic siltstones) interbedded with igneous rocks (gabbro, diorite, gabbro-diorite, andesite) mainly arranged as sills and dykes (Allou et al. 2013). Structurally, this prospect is controlled by the Markoye fault especially its branch named Gossey-Korizéna shear zone. The Markoye Fault is a regional structure close to the prospect characterised by a predominantly NNE-SSW reverse directional sinistral shear corridor. The main deformation structures observed on this corridor are schistosity and shear planes. The effect of weathering makes it very difficult to measure these in the field. These measurements were mainly carried out on the oriented core and confirmed that the schistosity planes were parallel to the stratification. A more detailed analysis of these planes (stratification and schistosity) by zone reveals a progressive flexure of the orientations, going from the NNE-SSW with dipping average (60°E) in the north, towards the NE-SW with a dip subvertical and slightly inclined westwards to the south (Allou and Al. 2013). In addition to this schistosity, other structures are observed: asymmetrical sheared quartz veins (boudins), tension veins arranged in echelon and sigmoid clasts. This corridor is also marked by quartz veins of decametric size and oriented from N10° to N40°. Sometimes these veins are parallel to the shear corridor and have a brecciated structure characterized by crushed quartz taken from siliceous cement.

7.3 Mineralization

Between 2010 and 2012, several regional geochemistry campaigns using vertical Air Core drilling were carried out on the Koriźena permit. The shape of the gold geochemical anomaly circumscribes perfectly the shear zone and seems to follow the flank of the anticline further north of the prospect at Tin Taradat (Figure 7.4). Following this geochemistry, several Reverse Circulation ("RC") and Diamond Drilling ("DD") campaigns have defined better this mineralization on the Gossey deposit and the Koriźena prospect (Allou et al., 2013) (Figure 7.5).

From composites made with a cut-off grade of 0.4 g/t over a minimum of 3 m and a maximum dilution thickness of 3 m, areas of great interest from the mineralization point of view could be delimited (Figure 7.6). These mineralized bodies), are organized as lenses of quartz veins stockworks (millimetric to centimetric), and quartz-carbonates associated with pyrite, arsenopyrite and more rarely pyrrhotite. These lenses are subvertical or slightly inclined to the east, with hectometer lengths and of metric to decametric thicknesses. These mineralized structures follow a main direction of N10°, and a secondary direction of N35°.

The mineralization is mainly hosted in sandstone to conglomeratic sedimentary formations along contacts with basic to intermediate intrusive dykes, and rarely within these intrusive units. Gold mineralization is also associated with quartz-veins (brecciated, banded, sheared and as boudins) systems present in and highly silicified zones and accompanied by sulfides.

The alteration associated with gold mineralization is underlined by sulphides (pyrite ± Arsenopyrite), tourmaline (locally) and silicification of varying intensity. The gold mineralization of the Gossey prospect can be associated with the second phase of deformation ("D2") during which there was reactivation of the pre-existing structures, generation of new structures and then fluid injections in the different zones of weaknesses. The quartz veins and the alteration observed are the result of this hydrothermal circulation.

Following mineralogical analyzes by optical microscopy, electron microscopy and Mineral Liberation Analyzer ("MLA") carried out on core samples from the Gossey-Korizéna project by COREM, most of the interstitial gold (with traces of silver) was observed in the quartz grains edges and sulphides such as pyrite, arsenopyrite and pyrrhotite. Many grains of gold occluded in these minerals are also observed. The size of the gold grains observed is variable (< 5µm and from 10 to 30 µm).

Figure 7.4: Gold Geochemical Anomaly Map in the Gossey Deposit (Allou, B. & Pratas, M., 2017)

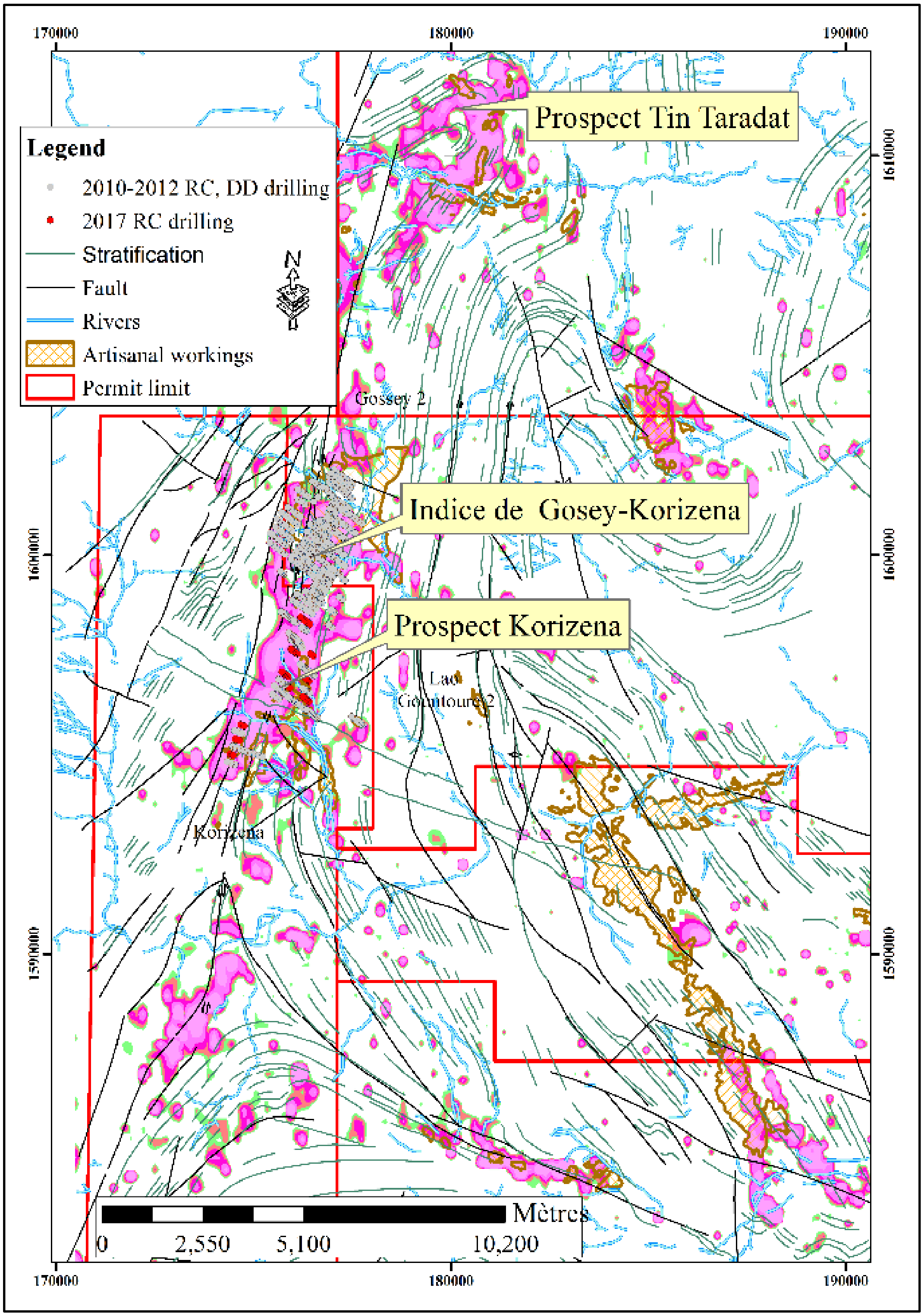


Figure 7.5: Zoom on the Geochemical Anomalies Map of the Gossey-Korizéna Area (Allou, B. & Pratas, M., 2017)

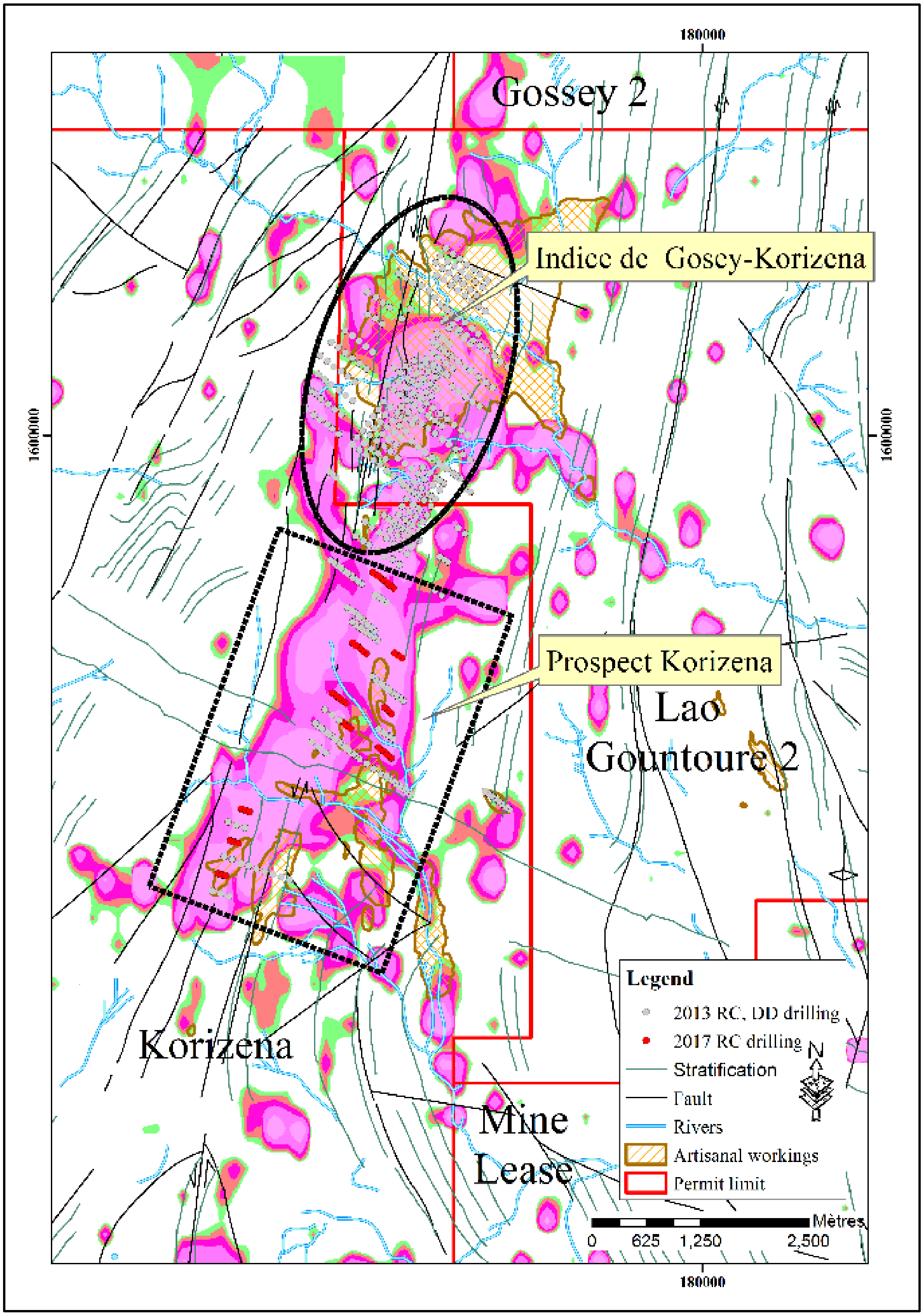
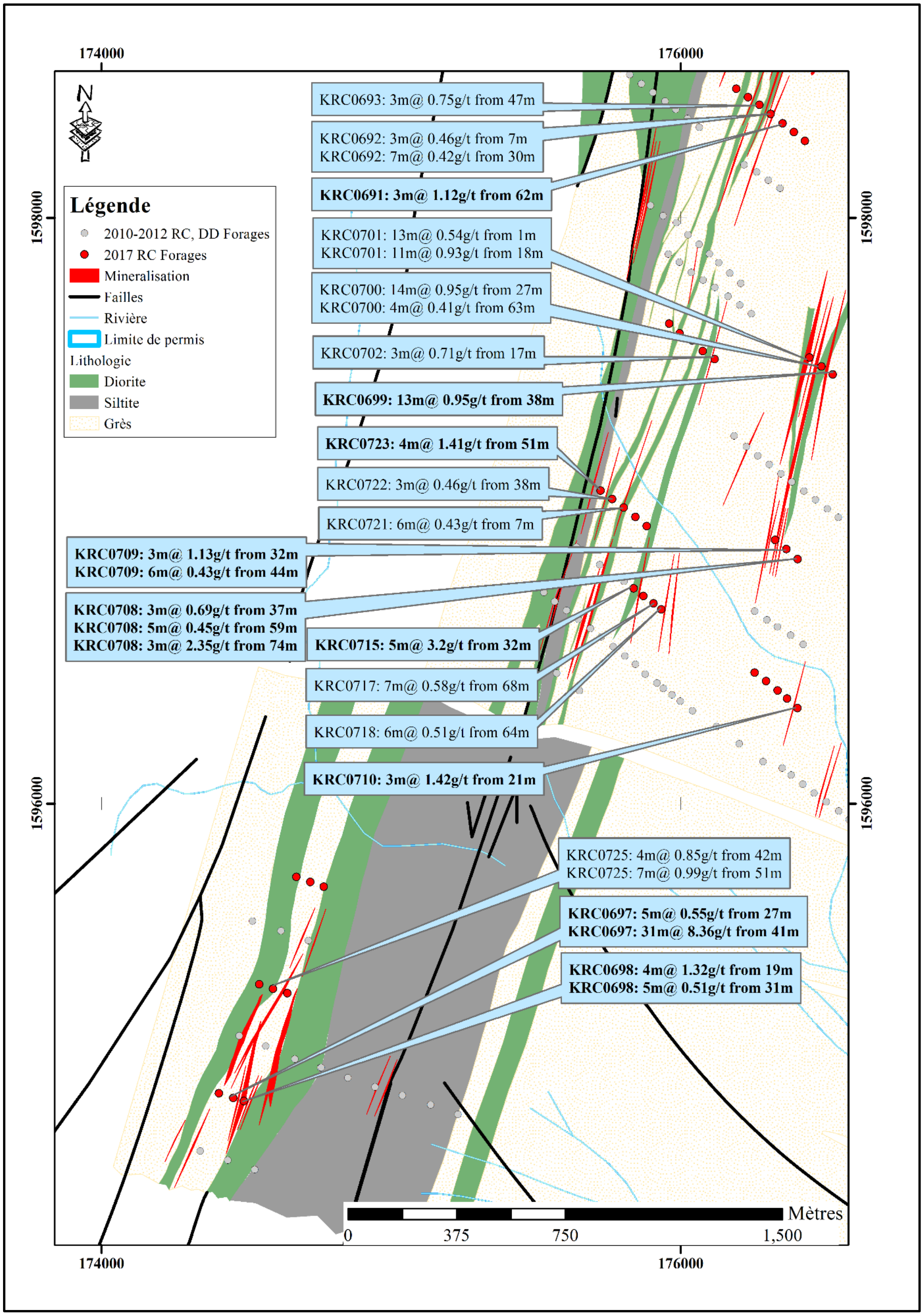


Figure 7.6: Prospect Korizéna with the Mineralized Intersections of the Last Drilling Campaign (2017) and an Interpretation of the Ore Bodies (Allou, B. & Pratas, M., 2017)



8 DEPOSIT TYPES

This section discusses prospects and deposits surrounding the Gossey Deposit and describes the various geological settings and mineralization styles found in the region.

8.1 Essakane Main Zone Deposit

The Essakane Maine Zone Deposit (“EMZ) t is a greenstone hosted orogenic gold deposit. Specifically, it is a quartz-carbonate stockworks vein deposit hosted by a folded turbidite succession of arenite and argillite. The original structural interpretation and gold settings have been confirmed by mining.

Gold occurs as free particles within the veins and also intergrown with arsenopyrite on vein margins or in the host rocks. Disseminated arsenopyrite in the host rock decreases away from the veins. The same relationship is seen away from lithological contacts, which generally show higher densities of bedding-parallel veining. Orientated diamond drill core by Essakane SA after the Pre-feasibility Study (“PFS”) showed that significant concentrations of gold with arsenopyrite can be found on the arenite – argillite lithological contacts in association with quartz veining or in veinlets of massive arsenopyrite. In weathered saprolite, the gold particles occur without sulphides. The gold is free–milling in all associations.

BHP was the first international mining company to explore the EMZ and believed the stockworks was bounded by a series of west-verging thrust faults. This interpretation, developed by D. Pohl in 1995 for BHP (copied from a Hellman & Schofield report for Ranger Minerals), was favored by geologists up to late 2005, at which time OGC changed the interpretation to an anticlinal fold (without thrust faults, Figure 8.1). The shortcoming of this thrust model was that it assumed continuity of mineralization within grade domains without having a firm geological basis. The thrust domain model was thus abandoned in August 2005 after further structural studies by ORZ. Subsequent core drilling by ORZ, oriented west – east and east – west, found no evidence of thrust faults. The PFS model was thus abandoned and all subsequent work has confirmed that the EMZ is an anticlinal fold with flexural slip between layers and brittle deformation within layers. The quartz veins fill brittle extension and shear deformation structures caused by the folding with at least two phases of quartz veining and gold mineralization.

Figure 8.1: Cross-Section Showing the 2005 PFS Thrust Model for the EMZ Mineral Deposit (Gignac, L., Glacken, I.M., Hawxby, J., Gignac, L-P., Bedell, P. 2008)

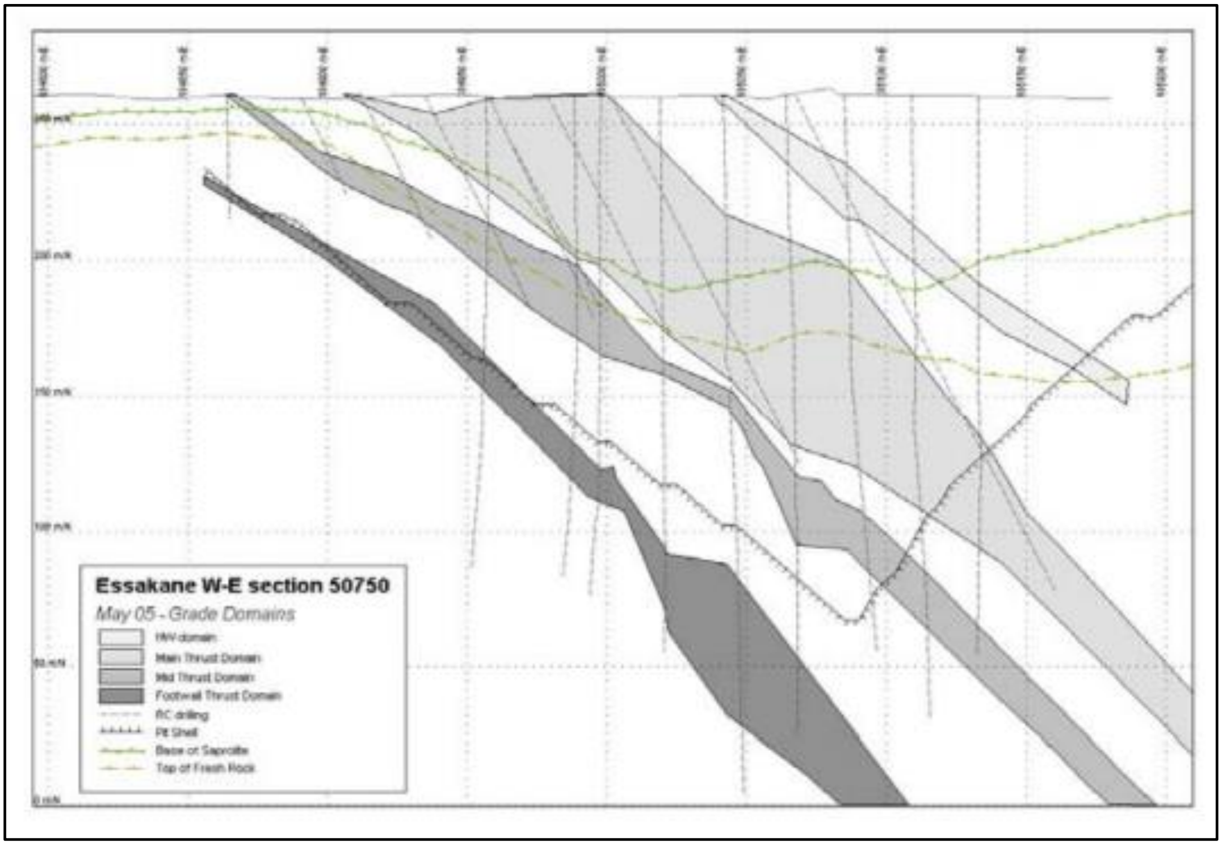
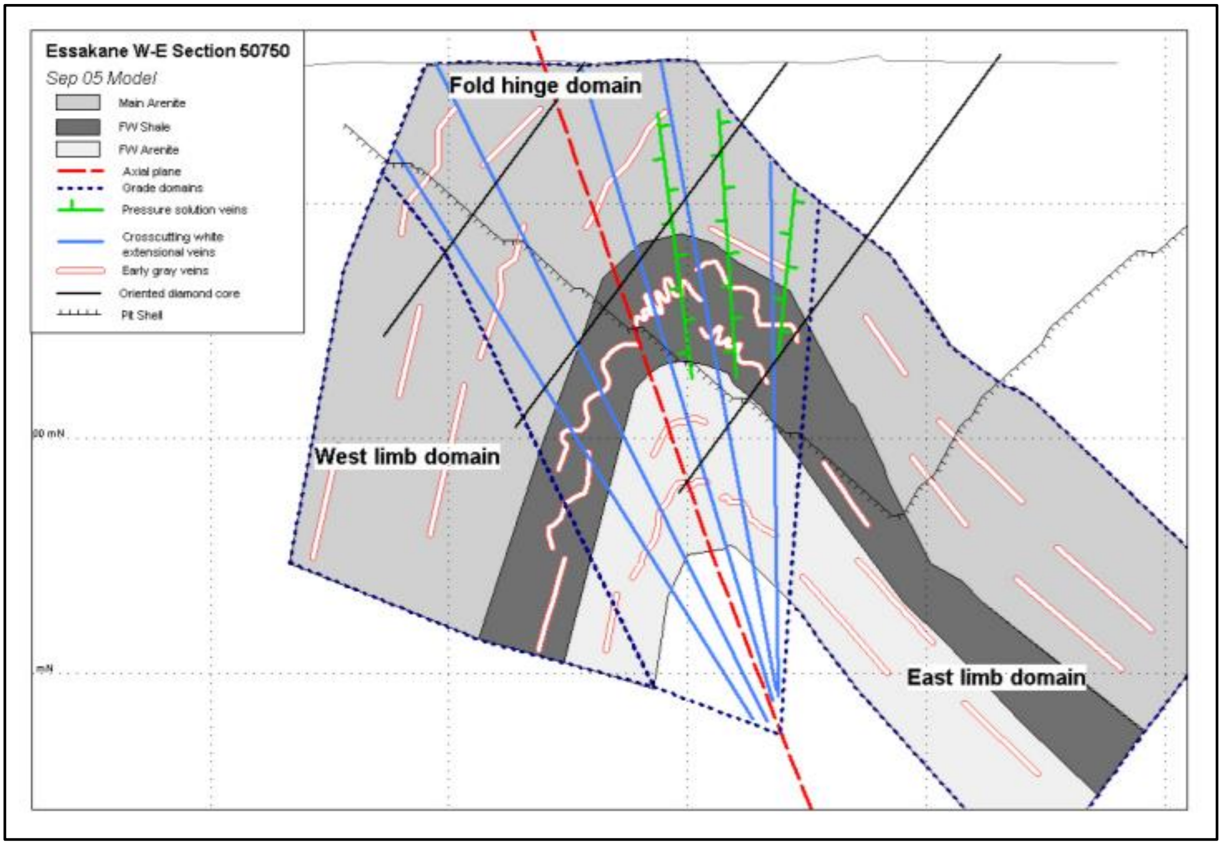


Figure 8.2 depicts the late 2005 geological fold model which has been improved with further drilling and now forms the basis of the 2007 Definitive Feasibility Study ("DFS") model. The fold is a northwest plunging anticline with a west verging axial plane and near vertical west limb. The fold axis plunges 10°north. The east limb dips at 30-50° to the east.

Figure 8.2: Cross-Section of the EMZ Fold Geological Model. (Gignac, L., Glacken, I.M., Hawxby, J., Gignac, L-P., Bedell, P. 2008)



The vein arrays in the EMZ are complex and consist of: (i) Early bedding parallel laminated quartz veins caused by flexural slip and showing ptygmatic folding; (ii) Late, steep extensional quartz veins as vein filling in extension and shear joints formed by the folding (three major vein sets have been mapped on surface); (iii) Axial - planar pressure solution cleavage (with pressure solution seams normal and parallel to bedding). The vein arrays occur in the east limb-, fold hinge- (or fold axis) and west limb- lithostructural domains. These domains form the basis of the DFS block model. The geology and economic potential of the EMZ is dominated by the persistent east limb main arenite. The top contact of the east limb domain is a sharp, sheared contact with no significant gold mineralization above it. The shearing appears to be bedding parallel, but some loss of vertical succession has occurred. The main arenite below this contact is the lower coarse-grained part of a Bouma cycle. The locus of bedding parallel deformation and alteration is within the east limb main arenite. Graphitic argillite occurs immediately above the contact. The deformation shifts into the hanging wall argillite unit to the north of the EMZ Deposit.

Mineralization has been confirmed to 270 m vertically below surface but the full depth extent in the fold hinge and east limb is unknown. The geometry of the fold hinge zone is an anticlinal flexure that is easily recognized in the surface trenches and oriented drill cores. The fold closure is sharp and the transition from east limb to west limb takes place over a few meters. In arenite, the position of the fold axis is generally marked by a breccia. In argillite, it is marked by tight kink structures and sheath folds with rapid transitions from east dipping footwall rocks to near-vertical west limb beds below the fold axial plane.

Hydrothermal alteration and meteoric weathering are pervasive through the east limb main arenite. Hydrothermal alteration is generally associated with quartz veining and gold mineralization in deformed main arenite. The alteration assemblage is sericite > carbonate > silica ± albite ± arsenopyrite ± pyrite. Disseminated tourmaline and rutile is found in accessory amounts. The main alteration minerals tend to occur in clearly defined veins and stringers. Arsenopyrite and pyrite occurs within and adjacent to quartz veins as well as disseminated throughout areas of wallrock alteration. Traces of chalcopyrite, pyrrhotite, galena and hematite occur with arsenopyrite. Minor amounts of tourmaline with rutile are found in the main arenite and in interbedded arenite stringers in the footwall argillite. Remobilized graphite can accompany tourmaline. The fine-grained argillites are strongly tourmalinized and have also been subjected to quartz, carbonate, sericite and quartz alteration. Fine needles of rutile generally accompany the tourmaline. Sulphide mineralization preferentially occurs in the coarser arenaceous layers. The deposit is characterized by multiple quartz and quartz – carbonate vein sets and stringers. Arsenopyrite and pyrite tend to be late and concentrated near the margins of the veins or in late crosscutting stringers. The paragenetic sequence of veining is thought to be:

1. Early quartz – carbonate – albite - (sericite) veins;
2. Quartz veins with tourmaline and pyrite containing gold;
3. Diffuse quartz – albite - carbonate veins with arsenopyrite;
4. Later tourmaline – rutile - arsenopyrite stringers with gold; and
5. Late skeletal pyrite and carbonate - quartz - pyrite stringers.

8.2 Falagountou West Deposit

The Falagountou deposit is an intrusive-hosted, orogenic style, gold deposit. Gold is commonly located within smoky quartz veins injected along the contact of the dioritic dyke and a sequence of fine-to-medium-grained detrital sediments. Gold is also disseminated into the host rock. At both Guessakado (artisanal pit area) and the Falagountou Southeast Zone, mineralization is prevalent at the contact of the intrusion and sedimentary rocks.

8.3 Falagountou East Deposit

Mineralization at Falagountou East is associated with intrusive rocks. Gold is present within a northwest striking and northeast dipping structure affecting the sedimentary sequence that is injected locally by dioritic intrusions.

8.4 Gossey Deposit

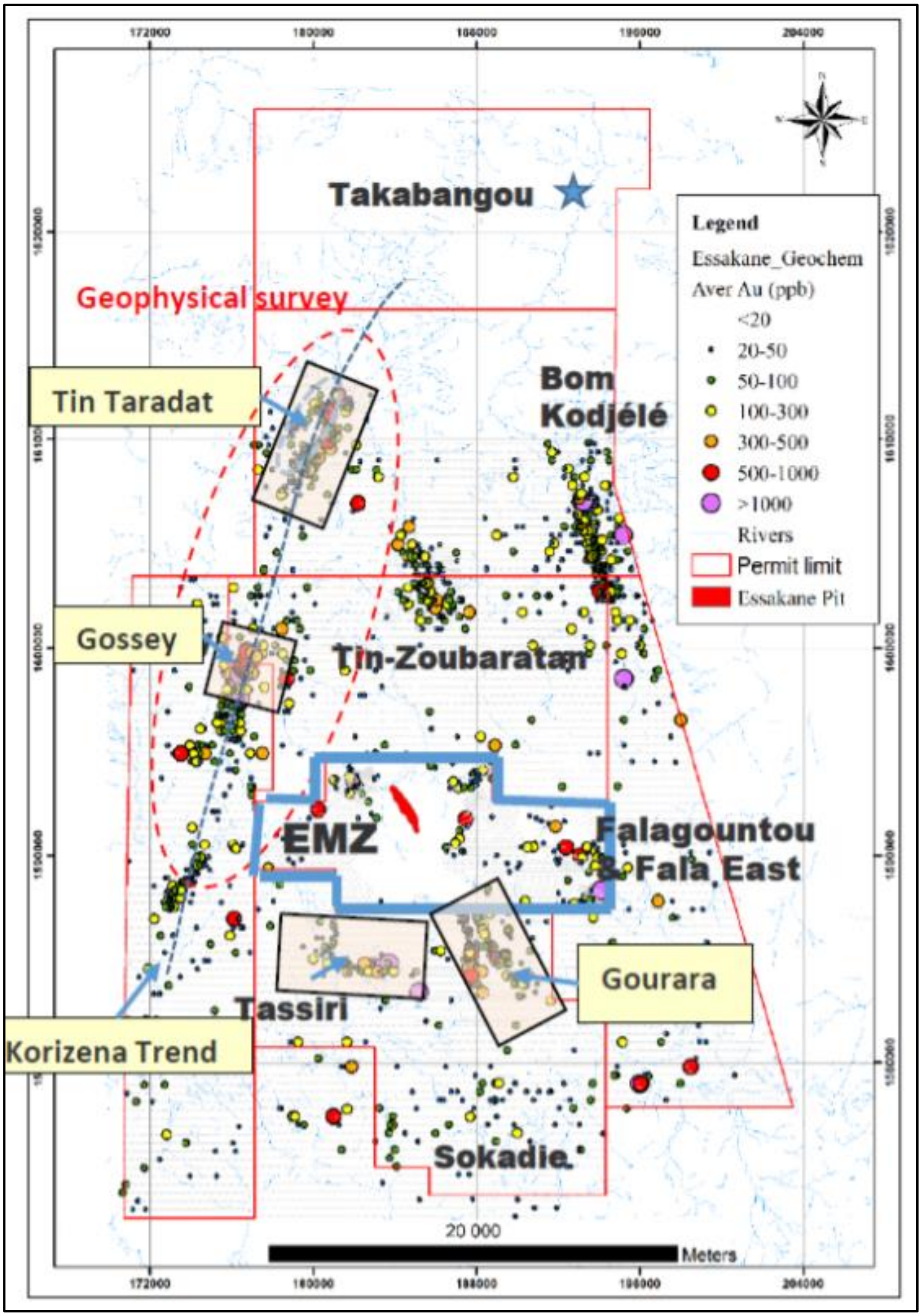
The Gossey gold deposit is also associated with intrusions and orogenic events similar to the styles observed at Falagountou. Gold mineralization is mainly concentrated in coarse sandstones, in microgranular granodiorite sills and along the contacts between intrusions (gabbro, diorite, granodiorite) and coarse sandstones. Gold mineralization intensifies in the hinge of the anticline, where stronger gold anomalies are found. Mineralization is associated with quartz ± carbonate veins and silicification zones. The accompanying sulphides of gold are mainly pyrite and arsenopyrite disseminated in the rock or associated with quartz veins (Kinda and Sawadogo, 2016).

8.5 Other Prospects

In addition to these deposits, several metalliferous showings are known in the region:

- The Tassiri prospect (Figure 8.3), located 14 km south of the Koriżéna prospect, is characterised by a stockwork of quartz veins located within folded and faulted structures with a N110° oriented fold axis. The host rock is a turbidite sequence characterized by an alternation of fine sandstone and siltstone layers.
- The Tin Taradat prospect (Figure 8.3) is located 12 km north of the Gossey prospect, where mineralization is mainly concentrated in a setting very similar to the Gossey Deposit. This prospect is currently the focus of an extensive exploration effort to investigate mineralization in the region.

Figure 8.3: Numerous Prospects Near Essakane (EMZ). (IAMGOLD Corp., 2017)



9 EXPLORATION

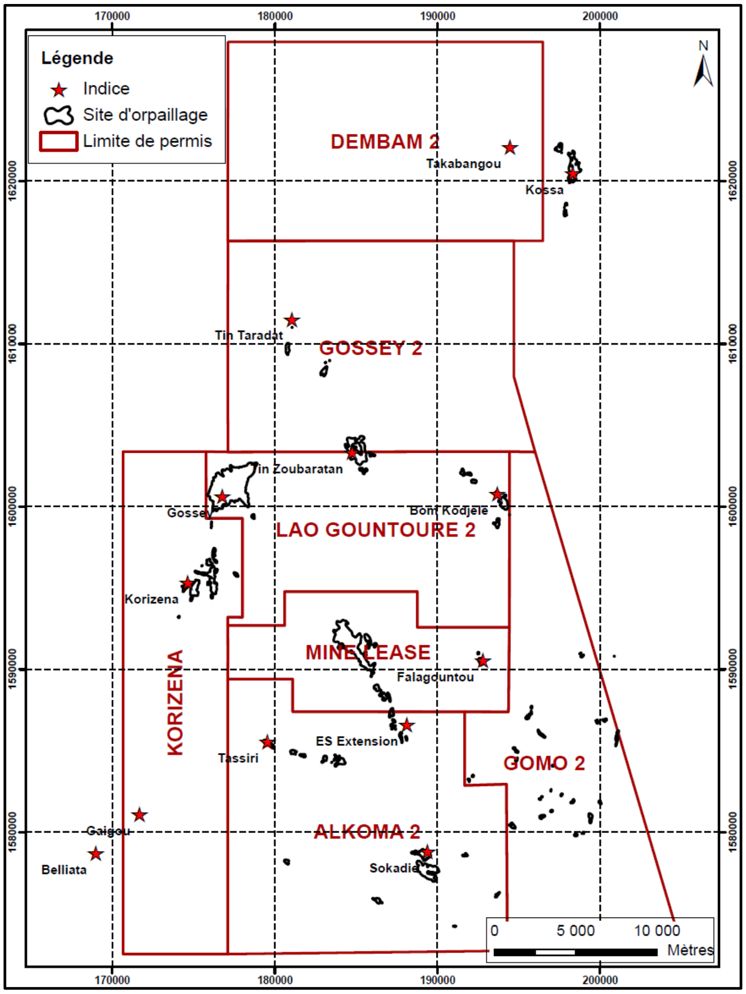
9.1 Exploration History

This section summarizes various activities carried out and related to the exploration of the Gossey Deposit. There have been no historical published resource estimates for the Gossey gold project.

9.2 BHP Minerals Exploration

The first exploration work by BHP Minerals concerning the Gossey Deposit commenced in 1995. In 2001, a geological and structural mapping was produced by Jamie Rogers on behalf of Rangers Minerals Ltd on the western part of the Lao Gountouré 2 permit and the northwestern end of the Korizéna permit (Figure 9.1).

Figure 9.1: Localisation of the Exploration and Mining Permits in the Gossey Deposit Area (Allou, B., et al. 2013)



In 2002, a geomorphological and geological interpretation was performed by Nick Locket & Associates, using Landsat seven images and aerial photographs. This was also followed by the production of a geomorphological and geological map at scale 1:50000.

9.3 Orezone Gold Corporation

During 2002-2003, Orezone Gold Corporation ("OGC") produced a systematic compilation of available geoscience data. Essential documents such as Landsat, Radarsat and SPOT images were acquired.

In 2004, additional geological and structural mapping was carried out by David Kerr for OGC on the Gossey-Korizéna structure and Sokadie, Falagountou and Tassiri prospects.

9.4 IAMGOLD Corporation

As part of the exploration effort to discover viable satellite deposits around the Essakane Gold Mine, the mining exploration subsidiary of IAMGOLD Corporation (Essakane Exploration LLC) (“IAMGOLD”) conducted exploration since 2009, the year of acquisition of its legacy OGC license.

From 2010-2012, detailed surface mapping was carried out on the entire Korizéna permit and part of Lao Gountouré 2 (Figure 9.1). This program is part of a regional cartography campaign started in 2009 with the following main objectives:

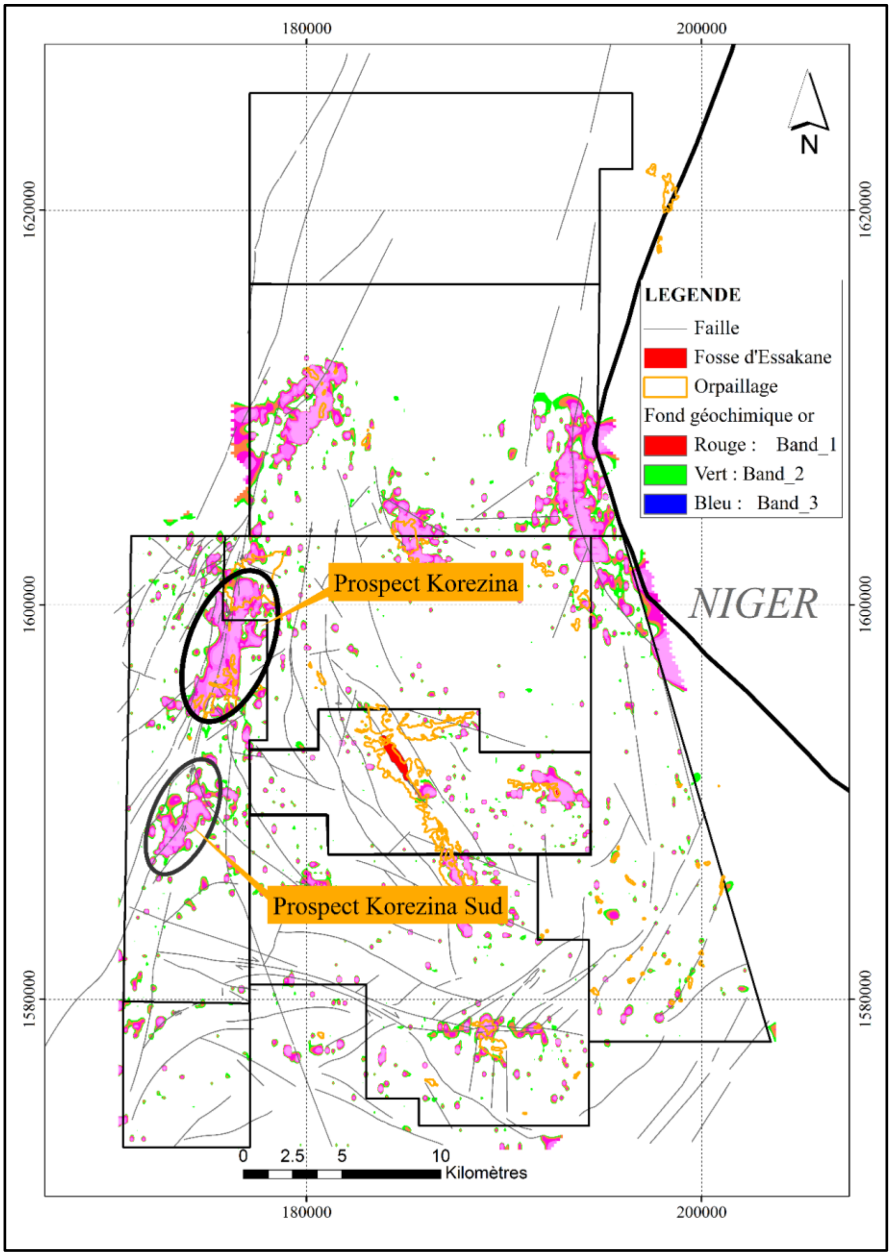
- Produce a regional geological map covering all the IAMGOLD permits in the Essakane gold district;
- Identify important structural markers with control over the distribution of gold mineralization along major geological structures; and
- Help to understand and produce a mineralization model in a more regional context.

Since 2010, Exploration SARL started a regional Air Core (“AC”) drilling program on all permits covering the Gossey Project. The purpose of this program was to detect anomalies that could be masked by wind-transported aeolian material.

AC drilling is a quick and efficient drilling method that involves drilling soft regolith material until blade-refusal using relatively weak air pressures (drilling normally stops at the fresh-rock interface). According to the regional AC sampling procedure by the Essakane Exploration Department, these are shallow vertical holes where only 2 to 3 samples (the first meters) of weathered rock (saprolite) are taken for gold analysis. This drill campaign totaled 843 holes for 6,224 m using a 400 m x 100 m grid in one direction E - W. During the 2012 drilling campaign, the sectors previously drilled with the AC by OGC and Goldfields were also tested to unify the information collected. These various drilling campaigns have identified numerous anomalies on the Korizéna permit (Figure 9.2), the largest of which is located northeast of the permit on the Gossey-Korizéna structure bearing the Gossey-Korizéna deposit.

In 2013, following the initial regional program, a follow-up AC drilling campaign was carried out on its main anomalies using a 200 m x 50 m drilling pattern trending E-W. The objective of this program was to verify the presence of the new targets identified along the Gossey-Korizéna structure. The additional AC drilled holes carried out on the Korizéna permit were vertical holes with a maximum planned depth at 15 m.

Figure 9.2: Distribution of Gold Geochemical Anomalies Resulting from Core Drilling on the Gossey Deposit (Desire Valea, M. 2017)

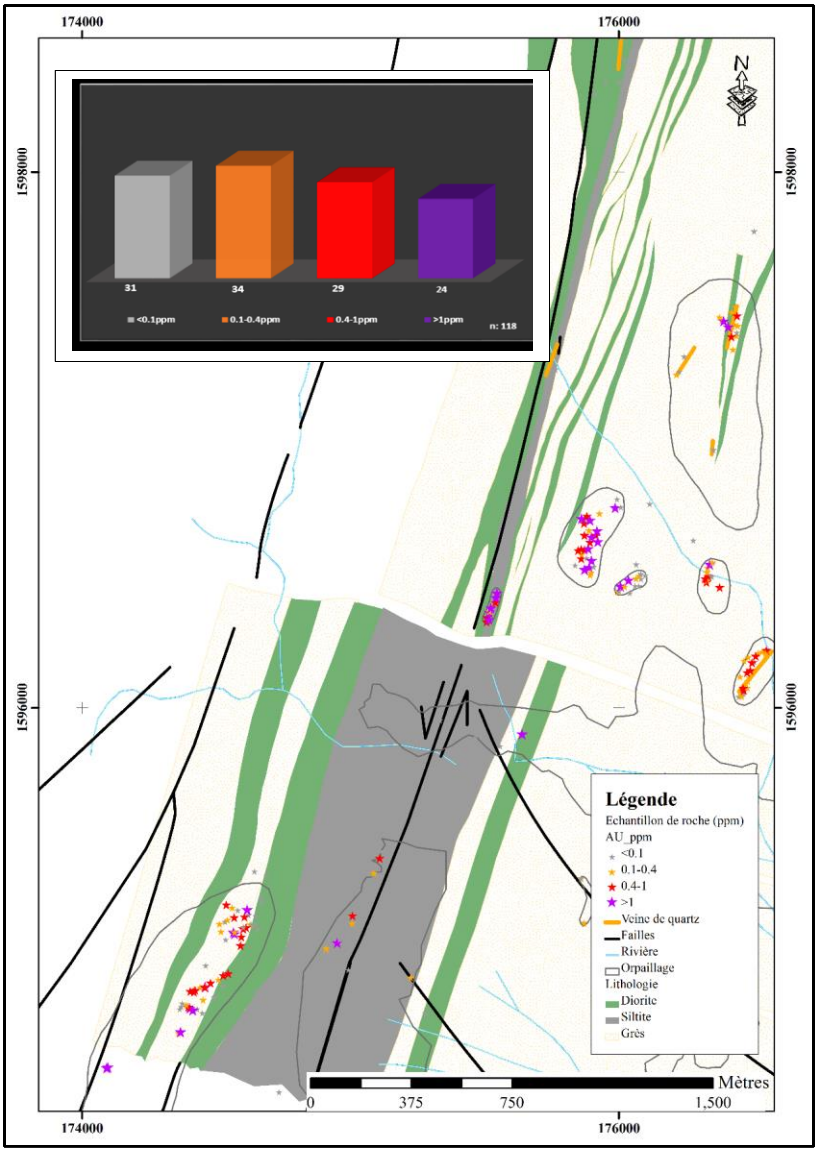


In 2013, a program of detailed mapping, rocks sampling and gold panning rejects were also carried out and showed that the anomaly zone is marked by a tight anticlinal fold trending NNW-SSE and plunging 18° towards the south. The main faults are oriented NNW-SSE and NE-SW.

In 2017, a significant rock sampling campaign was carried out by Essakane Exploration. It involved the collection of 118 rock samples from rejects of gold panning. The analyses results show a high gold potential in gold washing areas exploited throughout the Gossey-Korizéna structure (Figure 9.4**Error! Reference**

source not found.). During the second half of 2017, a helicopter-borne geophysical survey covering an area of approximately 238 km² was conducted by Essakane Exploration around the Gossey-Korizéna deformation corridor. All Tin Taradat, Gossey-Korizéna, Korizéna and South Korizéna prospects were covered by this geophysical survey. The orientation of the flight lines was N100° E / N280° E with a p. 34 spacing of 100 m. The average flight altitude was 80 m. About 2,643 linear kilometers of magnetic data were acquired.

Figure 9.3: Distribution of Gold Values from Rock Sampling Campaign Carried Out in 2017 (Desire Valea, M. 2017)



At the end of the RC drilling program in 2014, a detailed mapping in combination with rock sampling and gold panning was carried out only around the drilling area. This field works confirmed the anticline structure of the prospected area and highlighted several structures that could control the gold mineralization, which reinforced the prospectivity of the area.

9.5 Airborne Geophysical Studies

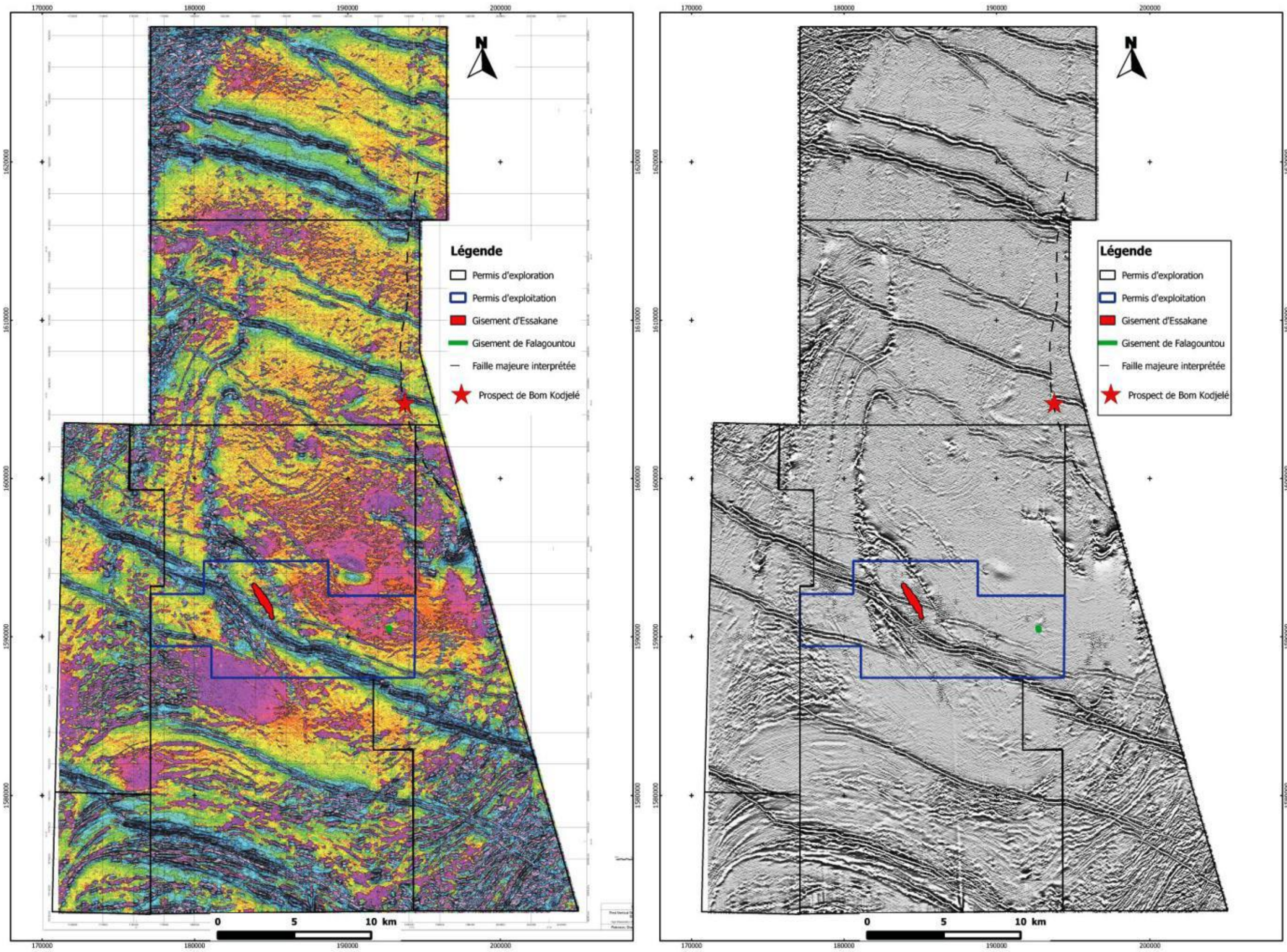
In 1977, airborne magnetometer surveys covering the entire country, including the project area, were conducted by Survair - Terra Surveys and Kenting Earth Sciences - Terra Surveys in 1979.

In 1995, BHP carried out an airborne geophysics survey (magnetism and radiometry) on all exploration licenses.

During 2004-2005, other geophysics studies were conducted using base-ground induced polarization ("IP") surveys and executed by SAGAX Africa SA on behalf of ORZ on several prospects.

In 2009, Essakane Exploration SARL (exploration subsidiary of IAMGOLD Corporation) undertook an additional high-resolution aeromagnetic / radiometric survey on all permits including the Essakane mining permit to obtain a better understanding of geology and structures. The survey was conducted on E-W oriented flight lines spaced 50 m apart and at an altitude of 25 m. Data collection was at intervals of 4 m for magnetism and 70 m for radiometry (Figure 9.4).

Figure 9.4: Aeromagnetic & Radiometric Geophysical Images Showing Some Major Structures ex. One of the Main Faults of Bom Kodjélé Area (Souleymane. S, 2016)



9.6 Geochemical Surveys

Between 2001-2004, OZE conducted different methods of geochemical sampling such as the collection of ground pisolites, termite mounds sampling and grab rock samples on the main prospects.

Also, in 2004, a review of the main gold showings was conducted by AccuMin Mineral Services Inc., with the objective of clarifying the controls of the mineralization. After a preliminary report covering all the regional observations, a detailed report was submitted for the indices of Gossey and Korizéna.

Three years later, in 2007, an AC drilling program was completed by Goldfields/Orezone to test some potential gold fields hidden by sand dunes on several prospects in the Gossey Deposit area.

Since 2010, IAMGOLD has conducted an extensive AC drilling program using a 400 x 100 m drill spacing on all exploration licenses. This program's purpose was to delineate the trend of the Gossey/Korizéna gold target over an area of approximately 3.5 km towards NNW-SSE over an approximate width of 2 km. For more information, refer to Section 9.3 for the fieldwork undertaken by IAMGOLD.

10 DRILLING

10.1 Pre-2017 Drilling History

The distribution of historic drill holes at Gossey is presented on Figure 10.1, which includes BHP Minerals (“BHP”) drilling from 1995, Orezone Gold Corporation (“OGC”) drilling from 2003 and IAMGOLD Gold Corporation (“IAMGOLD”) drilling from 2011.

The first pass of conventional drilling over the Gossey Deposit area was undertaken in 1995 by BHP who completed 11 shallow reverse circulation (“RC”) drill holes totaling 545 m with the objective to test geochemical anomalies and small-scale artisanal workings. This campaign identified several interesting gold anomalous sectors.

When ORZ took over the Project in 2003, they continued with a second pass shallow RC drilling from November 2003 to December 2004 to test the lateral extensions of the previously identified gold mineralization. This program, which consisted of 81 RC holes totaling 5,907 m, defined two main gold mineralized zones over the Gossey prospect area. During the same period, seven additional RC shallow holes totaling 505 m were completed to the south (into the Korizéna Permit) to test the southern extensions of the Gossey mineralized system.

In 2006, the partnership Orezone / Goldfields decided to evaluate the mineral potential of the exploration permits of the whole Essakane Project area. This led to an extensive drilling program targeting the already defined gold showings and existing artisanal workings. In the area of the Gossey prospect, the partners decided to investigate deeper with four diamond drill (“DD”) holes totaling 680 m with the aim to evaluating the extensions at depth and also to increase understanding of the structural and lithological control of gold distribution. The drilling program continued in 2007 with 12 shallow RC holes totaling 909 m drilled to test a few geochemical anomalies in the South of Gossey, inside the Korizéna Permit.

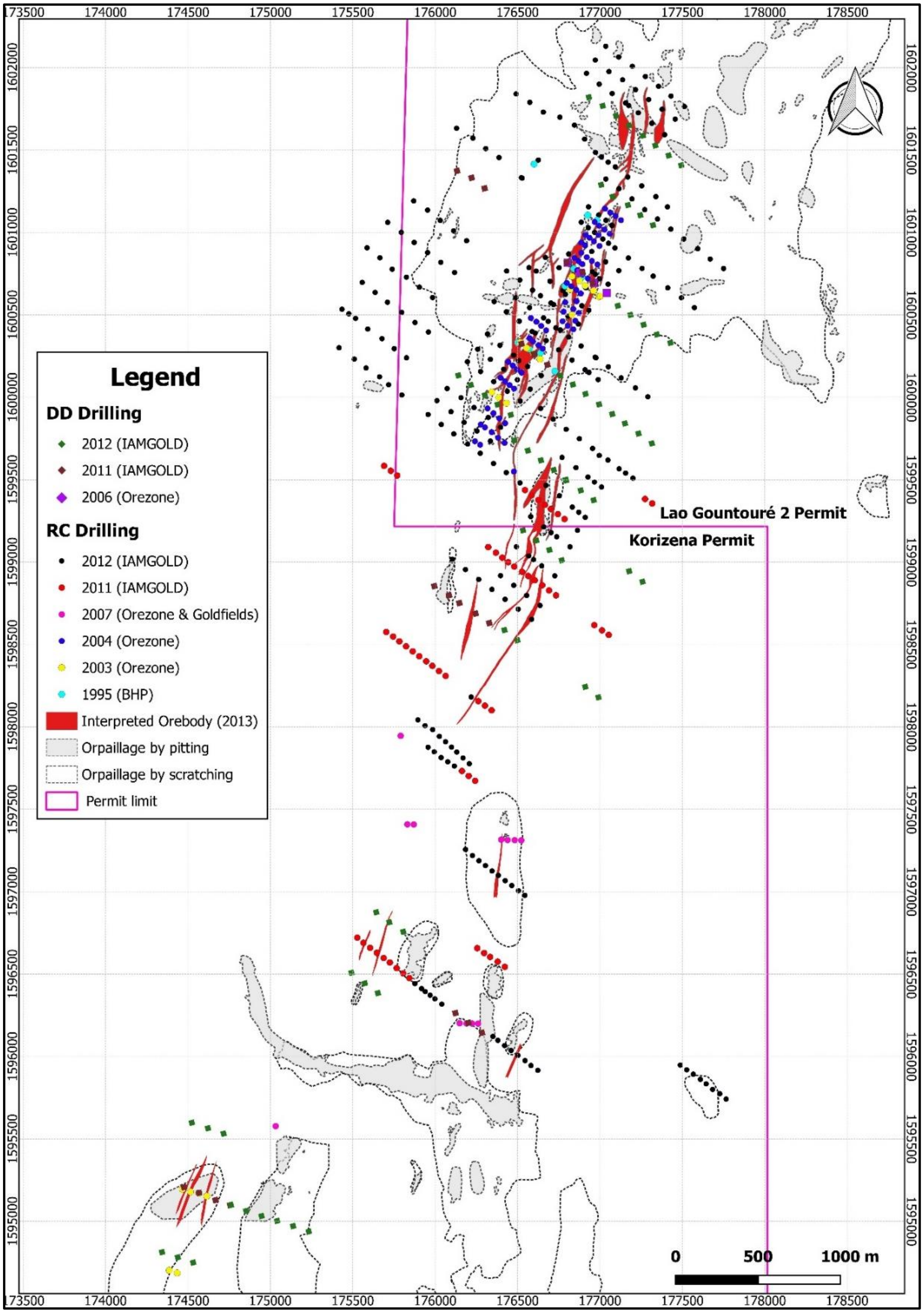
In 2011, a drilling campaign consisting in 9 RC holes (1,072 m) and 10 DD holes (2,508 m) was executed by IAMGOLD. The DD holes provided better understanding of the structures along the mineralized corridors while the RC holes targeted a strong geochemical anomaly which was previously defined in the southeast of the Gossey Main Zone by IAMGOLD’s exploration team. This program resulted in the discovery of the Gossey-SE mineralized zone and the extension of the Gossey Main Zone more than 600 m to the north. During the same year, the southern extensions of the mineralized trend and several geochemical anomalies have been successfully tested in the Korizéna permit with 48 RC holes and 12 DD holes totaling respectively 5,723 m and 2,846 m.

IAMGOLD pursued the exploration activities over the project in 2012 with an extensive drilling phase with three main objectives:

1. Bring the Gossey main deposit to a mineral inventory of around 500,000 oz;
2. Add 500,000 additional ounces to the known deposit by executing some infill drilling on the Gossey-SE prospect; and
3. Test the western contact of the large mafic intrusion controlling the Gossey Deposit; some 40 DD holes totaling 8,934 m and 200 RC holes totaling 37,053 m were drilled.

A follow-up drilling campaign was also completed over the targets defined during the previous campaign, and new geochemical anomalies shown by air core drilling earlier in the year. This consisted in 89 RC holes totaling 13,065 m and 27 DD holes totaling 6,367 m.

Figure 10.1: Historic RC and DD Drilling Over the Gossey Deposit Area and its Southern Extensions (Allou, B., 2018)



10.2 2017 and 2018 Drilling Campaigns – IAMGOLD Corporation

During the second quarter of 2017, an infill RC drilling program of 50 x 50 m pattern was implemented at the Gossey Deposit. A total of 15,000 meters were proposed to upgrade the classification of the resource and infill the southern part of the deposit. This drilling program was completed during third quarter of 2017, and a total of 15,254 m (124 RC holes) were drilled.

Towards the year end of 2017, an internal preliminary estimation of Mineral Resources was conducted by GMSI with no boundary imposed around the Gossey Village. Open-pit constrained Indicated Mineral Resources were estimated to a total of 10.3 Mt at an average grade of 0.84 g Au/t, totaling 285 k oz of gold. Inferred Mineral Resources were estimated at that time at 6.5 Mt at an average grade of 0.95 g Au/t, totaling 221 k oz of gold.

In 2018, a second infill drilling program of 14,300 m commenced. The objectives of this Phase 2 drilling campaign were to test for strike extensions of the deposit, test grade continuity to a vertical depth of approx. 100 m and convert Inferred resources into Indicated resources. In addition, drilling was intended to test for lateral and down-dip extensions of gold mineralization.

This program was completed during April 2018 and 14,284 m (191 RC holes) were drilled. The database compilation was subsequently completed and submitted to GMSI in mid-May 2018 for a Mineral Resource update.

Table 10.1: Drilling Statistics – 2017 & 2018 Drilling Programs

Hole Type	Year	Series	No. of Drill Holes	Meters Drilled
RC	2018	MGRC0130-MGR0320	191	14,284
	2017	MGRC0002-MGR0129	124	15,254
Total			315	29,538

Figure 10.2: Location of Planned 2017 & 2018 Drill Holes with the Gossey Village **Perimeter(s) in Green (Sawadogo, F.2018)**

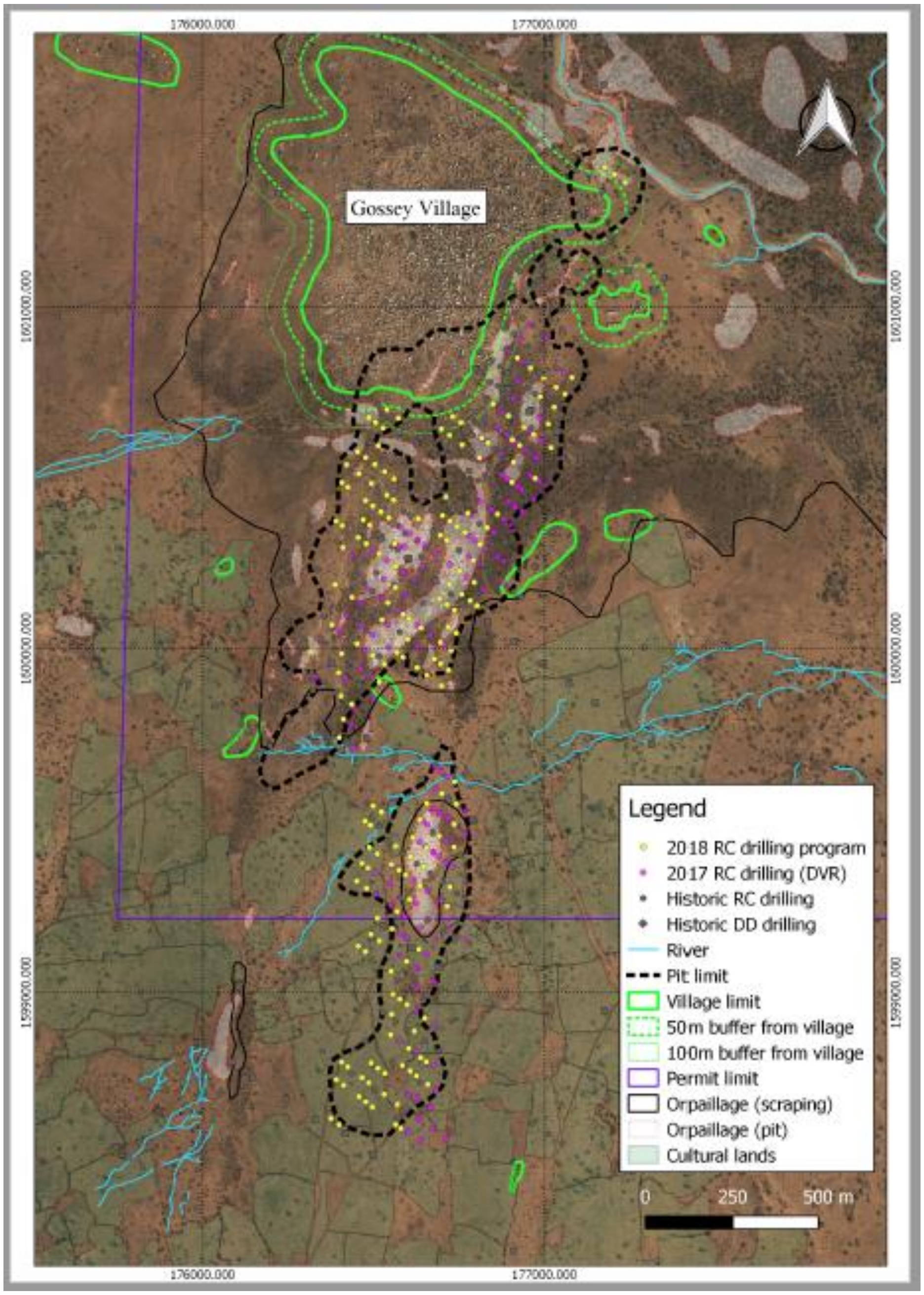
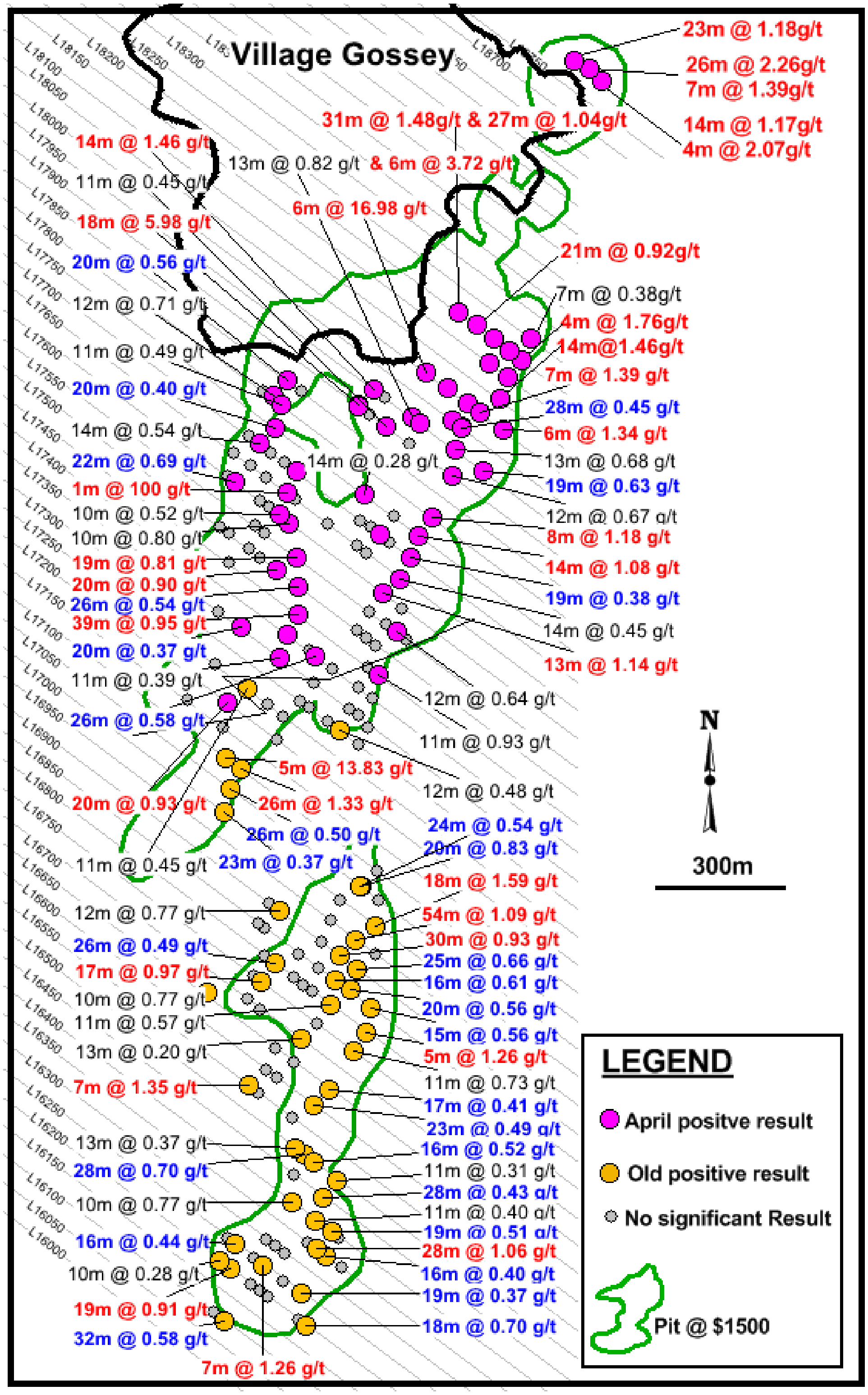


Figure 10.3: Significant Intersections from the 2017 & 2018 Drilling Programs (Sawadogo, F. 2018)



10.3 Drilling Procedures for the 2017/2018 Drilling Campaign

Drilling in 2017 and 2018 comprised of RC drilling using a 5 ½ in. drill bit and a conventional cyclone set-up. No sample splitting was undertaken at the drill site, and all drill cuttings were collected every 0.5 m in a large plastic bag (800 mm x 500 mm). The cyclone was cleaned before the start of every drill hole and cleaned as required during drilling (if wet drilling conditions were encountered). The name of the drill hole and depth of the sample was written on each sample bag and recorded on the sample sheet (handwritten). The samples were sealed for transportation.

Figure 10.4: Reverse Circulation Drilling at Gossey – March 2018

Once drilled, a cemented monument was installed on each drill collar with the hole identification and final depth written on it.

10.3.1 <u>Collar Surveys</u>

Once a drill hole was completed, the collar was initially surveyed using a handheld Garmin™ GPS, and subsequently resurveyed, at a later date, with a differential GPS ("DGPS"). The coordinate system used at Gossey is the UTM Zone 31, Datum WGS84.

10.3.2 <u>Downhole Surveys</u>

Downhole surveys were taken using the Reflex EZ-Shot™ at 5 m intervals. The data was subsequently filtered to remove any erroneous or suspicious data points.

10.4 Sample Storage and Security

Samples were transported periodically from the drilling site to the Essakane Mine Site, located 12 km to the south-east of the Gossey Deposit under the supervision of IAMGOLD geologists and field technicians. The samples were stored in the laydown of the exploration department, where sample preparation and splitting occur. The Essakane Mine Site is a highly secure facility, and only Essakane SA employees may enter the site.

11 SAMPLING, PREPARATION AND ANALYSIS

The information contained within this section was sourced from the final 2017 drilling campaign report, and the March 2018 Quality Assurance / Quality Control ("QA/QC") report by the Essakane Mine resource development team. This document outlines the practices and workflows employed during the 2017 and 2018 drilling programs designed for sample preparation, assaying, QA/QC, logging and data collection.

11.1 RC Percussion Sampling

Samples were collected every 0.5 m (around 10-20 kg each) and weighed at the drill rig. Once transported to the Essakane Mine Site, a 1 m composite was formed by combining two 0.5 m samples. This was subsequently reduced in size through a 1-tier, 50:50 riffle splitter to produce a final split for the laboratory weighing around 5 kg, with a coarse reject preserved for archiving. The remaining material was discarded after a small portion was retained for the chip tray.

11.2 Drillcore Sampling

No diamond drilling was undertaken during the 2017/2018 drilling campaigns. Diamond drilling by previous operators was sampled half-core (HQ and NQ) with typical sample lengths of 1 m. Lithological boundaries were used to delimit sampling intervals.

11.3 QA/QC Protocol

The insertion of QA/QC samples into the sample stream has been completed in accordance with protocols developed on the Essakane Gold Mine. The purpose of submitting QA/QC samples is to ensure the integrity of the assay data, by drawing attention to any erroneous or suspicious laboratory results, and ensuring an auditable trail is available if any issues arise.

All samples were analyzed by the mine site laboratory, which was toured by GMSI in March 2018. Around 10–20% of the regular sample pulps were sent to an external laboratory (SGS Ouagadougou) as intra-laboratory umpire check assays.

A list of QA/QC samples used during the 2017 and 2018 drilling campaign are summarized in Table 11.1.

Table 11.1: List of QA/QC Samples – 2017 & 2018 Drilling Campaigns

Sample Type	Description	Au (g/t)	Frequency of Insertion
FLDDUP	Field Duplicate	N/A	1 for every 20 regular samples
UMPIRE	Intra-lab duplicate (pulps sent to SGS Ouagadougou)	N/A	10% - 20% of all regular sample pulps > 0.3 g Au/t
BLANK	Blank quartz sand (uncertified)	0.0005	1 for every 20 regular samples, plus additional blanks before and after mineralised zones
STANDARDS	Various standards ranging from 0.07 g/t to 5.18 g/t from Rock Labs	0.07 g/t to 5.18 g/t	1 for every 20 regular samples

The QA/QC sample protocol results in a batch of 24 at the laboratory that contains at least one blank, one standard and one field duplicate. When a standard fails (result is greater than 3SD of the certified value), the 10 samples before and after the failed sample (21 in total including the failed sample) are reanalyzed.

All standards are sourced from Rock Labs for the 2017 and 2018 drilling campaigns at Gossey. Twelve different CRMs (standards) were used ranging from very low-grade (0.077 g/t) to high-grade (5.96 g/t) and are shown in Table 11.2. GMSI notes that the Rock Labs CRMs quote a certified value for the fire assay technique, however the Gossey samples were analyzed using the LeachWELL™ technique. Due to the difference between the two analysis methods, some deviations in the overall mean values could occur.

Of the non-blank CRMs inserted into the sample stream, around 54% contained oxide matrices, and the remaining 46% contained sulphide matrices.

Table 11.2: List of CRMs Used during the 2017 and 2018 Drilling Programs

Standard	Certified Value (g/t)	Standard Deviation	Sulphur (%)	Number Inserted	Mean of Analyses (g/t)
OxA131	0.077	0.007	-	129	0.079
OxC129	0.205	0.007	-	153	0.204
OxC145	0.212	0.007	-	113	0.207
OxD144	0.417	0.048	-	51	0.420
OxF125	0.806	0.02	-	62	0.800
OxH122	1.247	0.031	-	110	1.236
OxH97	1.278	0.03	-	24	1.280
OxJ95	2.337	0.057	-	80	2.391
SH82	1.333	0.027	2.8	71	1.288
SH69	1.346	0.026	2.7	139	1.308
SJ80	2.656	0.057	3.0	147	2.628
SK94	3.899	0.084	3.0	134	3.948
SL77	5.181	0.156	3.2	116	5.167
SL76	5.960	0.192	-	102	5.996
			Total	**1,431**	

11.4 Data Recording

All relevant data was recorded on a sampling sheet, and sample ID's were assigned accordingly to each 1 m composite. The sample sheet includes the insertion of QA/QC samples. An example sheet is shown in Figure 11.1.

Figure 11.1: Typical Sample Sheet Outlining Data Collected During Sample Preparation (Allou, B., & Pratas, M., 2017)

						PROJECT ESSAKANE											
IAMGOLD ESSAKANE SARL						50 / 50 SPLITTER SAMPLING SHEET								HOLEID:	KRC0729		
														Date:	16-Apr-17		
						Geo:		TH			Team Leader:		KJB		Page: 1	of	4
						TECH:		JW			Weight	< 6kg		6kg - 24kg		> 24kg	
						QC Sample				Geo		No Split		1st Split		2nd Split	
BHID	From	To	OK	SampleID	OK	Type	Parent_ID	Code	Jar ID	Notes	Start (l)	E1	R	E1	R1	R2	R3
KRC0729				1197493		BLK											
KRC0729	0	1															
KRC0729	1	2		1197494													
KRC0729	2	3		1197495													
KRC0729	3	4		1197496													
KRC0729	4	5		1197497													
KRC0729	5	6		1197498													
KRC0729	6	7		1197499													
KRC0729				1197500		STD											
KRC0729	7	8		1197501													
KRC0729	8	9		1197502													
KRC0729	9	10		1197503													
KRC0729	10	11		1197504													
KRC0729	11	12		1197505													
KRC0729	12	13		1197506													
KRC0729	13	14		1197507													
KRC0729	14	15		1197508													
KRC0729	15	16		1197509													
KRC0729	15	16		1197510		FD	1197509										
KRC0729	16	17		1197511													
KRC0729	17	18		1197512													
KRC0729	18	19		1197513													
KRC0729	19	20		1197514													
KRC0729	20	21		1197515													

All sampling data is captured in Microsoft Excel™ and is transferred daily onto the Data Coordinators computer. This data is subsequently imported into the central database (DataShed™) either directly, or via the data input software (Logchief™).

11.5 Laboratory Sample Preparation and Analytical Procedures

GMSI representatives toured the Essakane Mine Laboratory in March 2018 to oversee the sample preparation and assaying techniques applied to samples from the Gossey Deposit. The laboratory was considered to meet the specifications required for reporting under the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") guidelines (November 2010) and assay data produced are considered suitable for inclusion in the estimation of Mineral Resources.

The following procedure was observed for assaying reverse circulation ("RC") samples for the Gossey Deposit:

1) Sample weighing and drying at 105°C;
2) Pulverisation of entire sample (5 – 7 Kg) in a Keegor pulveriser to P95 at 500 µm;
3) Splitting of pulverised sample using a rotary splitter to obtain a 1 kg split for assaying;
4) Analysis using the LeachWELL techniques:
    a. Two parts water to one-part sample (2 litres of water);
    b. Addition of one LeachWELL tablet;
    c. Leach time of 12 hours, ensuring that the pH remains above 10.5;
    d. Decanting time of 1 hour, homogenisation of the solution for 7 minutes and final AAS finish of the solution.
5) 20% to 30% of the residues are analyzed by Fire Assay where the grade is > 0.3 g/ Au:
    a. Residue is filter-pressed, washed and dried at 105°C;
    b. Residue is rotary split to obtain 50 g subsample;
    c. Typical fire assay route and AAS finish.

Figure 11.2 to Figure 11.5 illustrate the various steps of the analysis process at the Essakane Laboratory.

Figure 11.2: Sample Sorting (above) & Drying (below) Facilities at the Essakane Laboratory

Figure 11.3: Rotary Splitter in Operation

Figure 11.4: Leachwell Samples During the Leaching Process. Note Batches of 24 on the Racks

Figure 11.5: Spectrometry of Leach Solution

11.6 Results of QA/QC Program

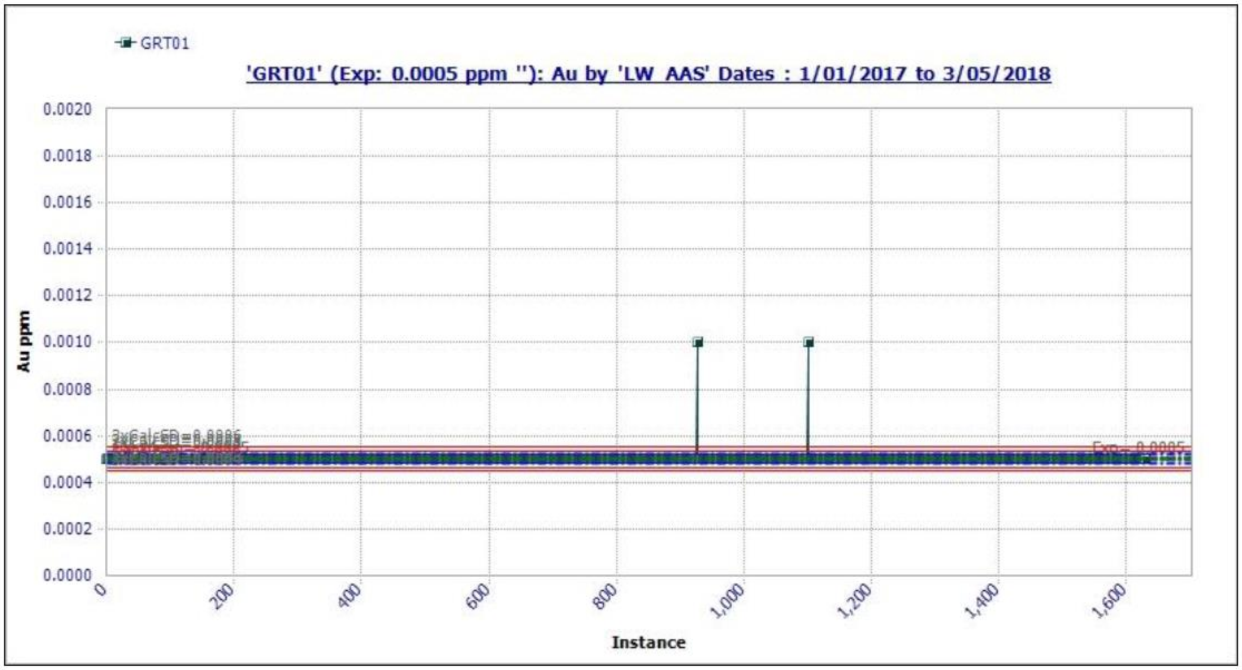
QA/QC sample analysis results for the 2017 and 2018 drilling programs were provided to GMSI for review as part of the Mineral Resource for the Gossey Project. No QA/QC data was made available for the historical data.

11.6.1 <u>Blanks and CRM Results</u>

Fifteen various CRMs (14 certified standards, 1 uncertified blank) were routinely inserted into the sample stream at a rate of 2 per batch of 24. In addition, quartz blanks used to wash the Keegor pulverisers were analyzed to detect any contamination. The various CRMs contain grades ranging from very low-grade (0.077 g/t) to high-grade (5.96 g/t) and represent either oxide or sulphide matrices. Essakane geologists consider any CRMs falling outside of three standard deviations as a failure, which resulted in reanalysis of the batch by the laboratory.

Blank performance is considered good, with both the Keegor blanks and the blanks inserted into each batch (2,134 in total) returning acceptable results, with only two instances where the detection limit (0.001 g/t) was achieved. The results of the batch-inserted blank analyses are shown in Figure 11.6.

Figure 11.6: Batch-Inserted Blank Performance (Zongo, B., Salle, A., 2018)



Overall performance of the oxide CRMs (OxA131, OxC129, OxC145, OxD144, OxF125, OxH122, OxJ95) is considered acceptable, with the vast majority of samples falling within the three standard deviations supplied by the provider of the CRM. More variability was observed in the 2018 drilling for the low-grade (0.205 g/t) CRM OXC129; however, the results still centre around the expected certified value. The performance of each oxide CRM is shown in Figure 11.7 to Figure 11.13.

Figure 11.7: Oxa131 Performance- 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

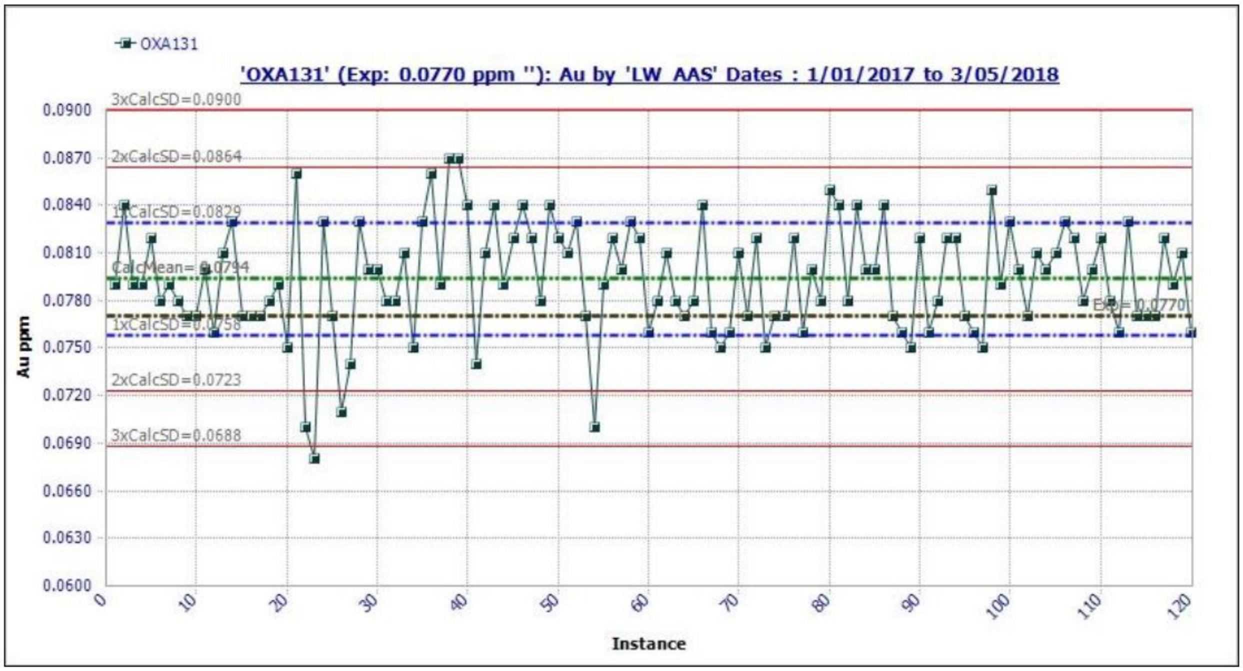


Figure 11.8: Oxc129 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

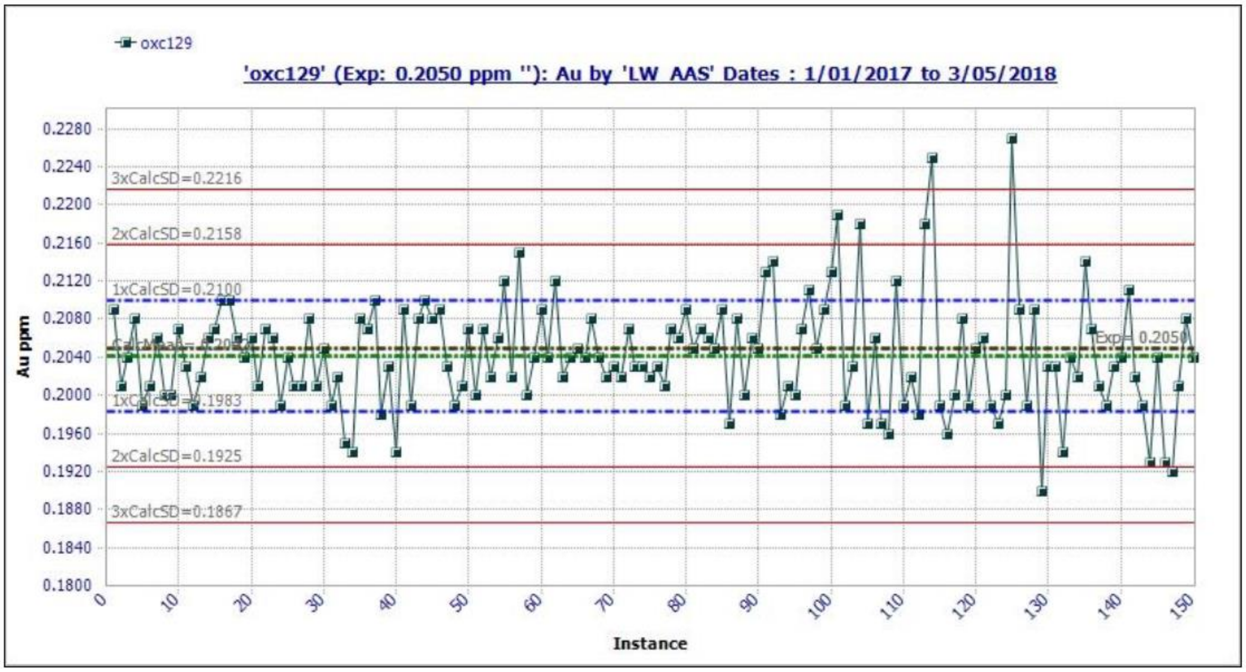


Figure 11.9: Oxc145 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A.,2018)

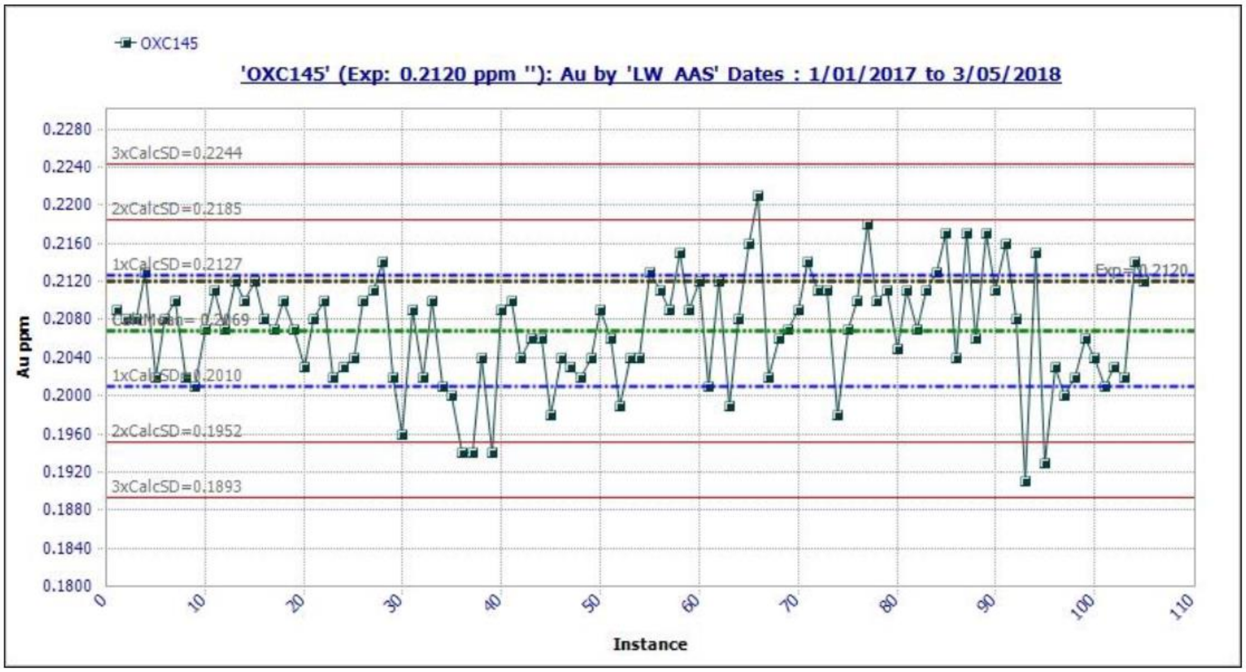


Figure 11.10: Oxd144 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

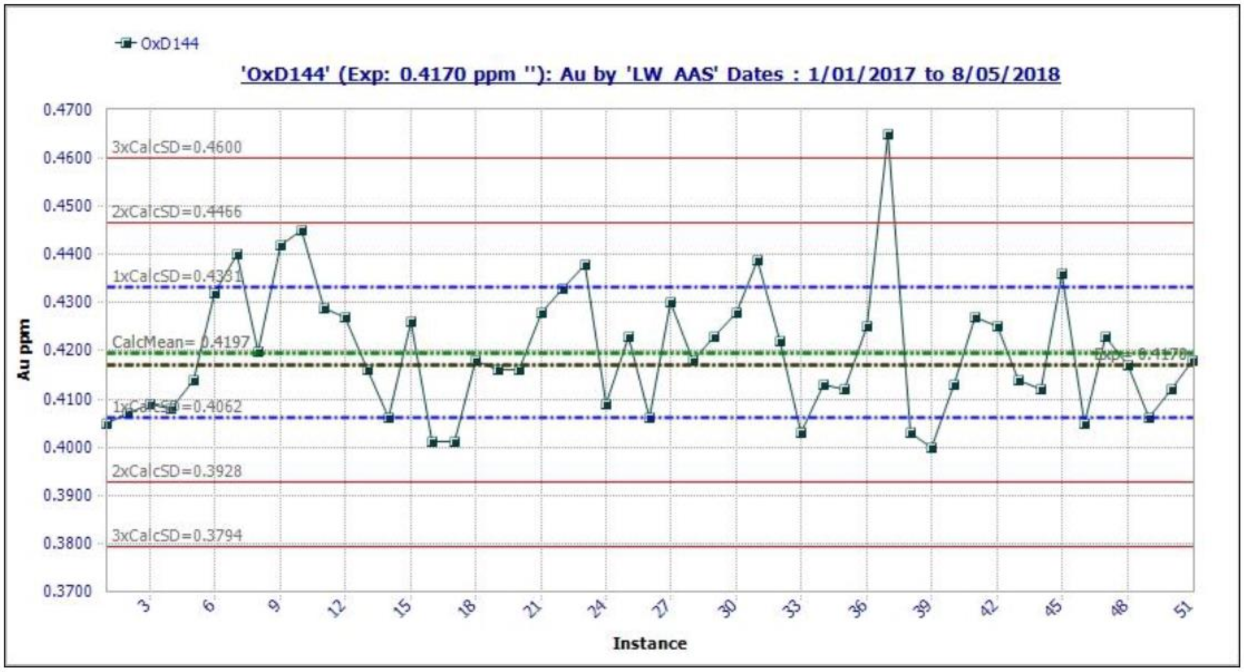


Figure 11.11: Oxf125 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

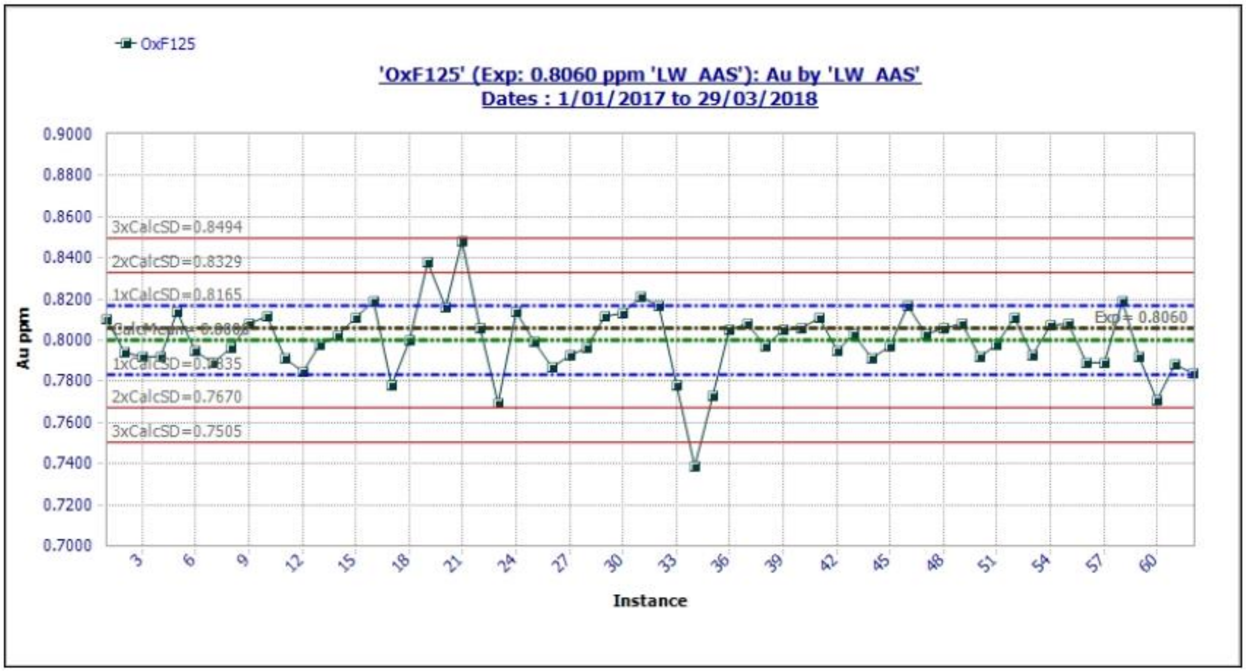


Figure 11.12: Oxh122 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

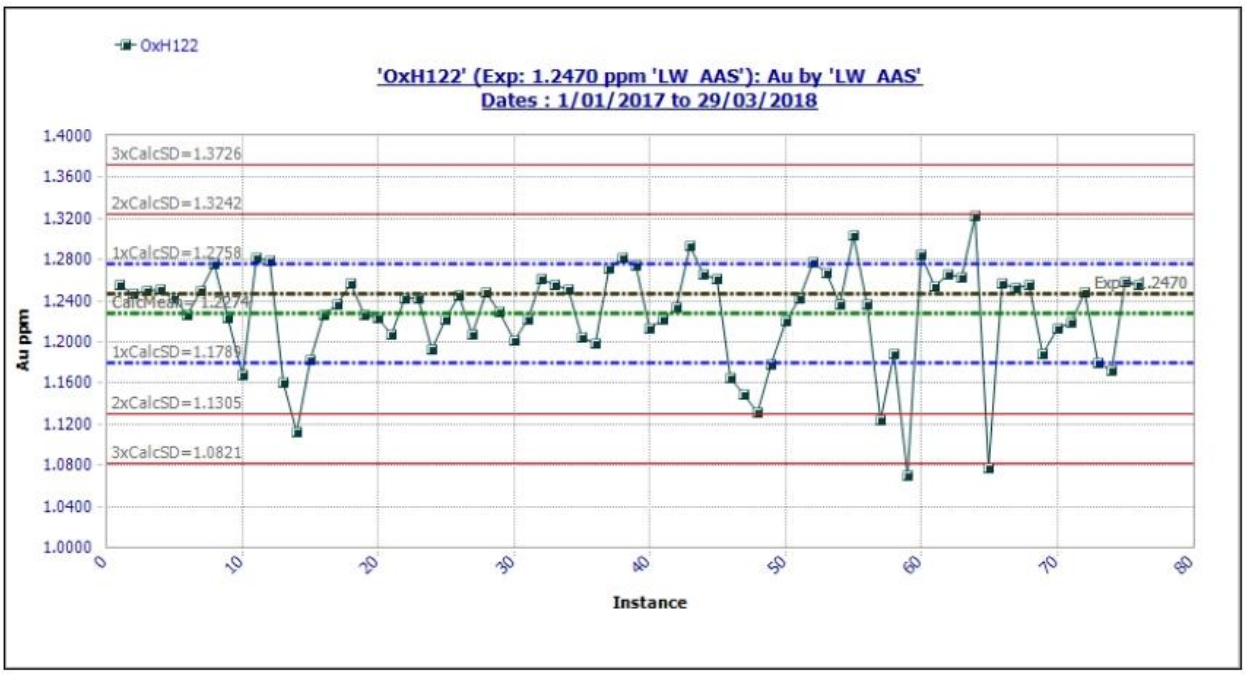
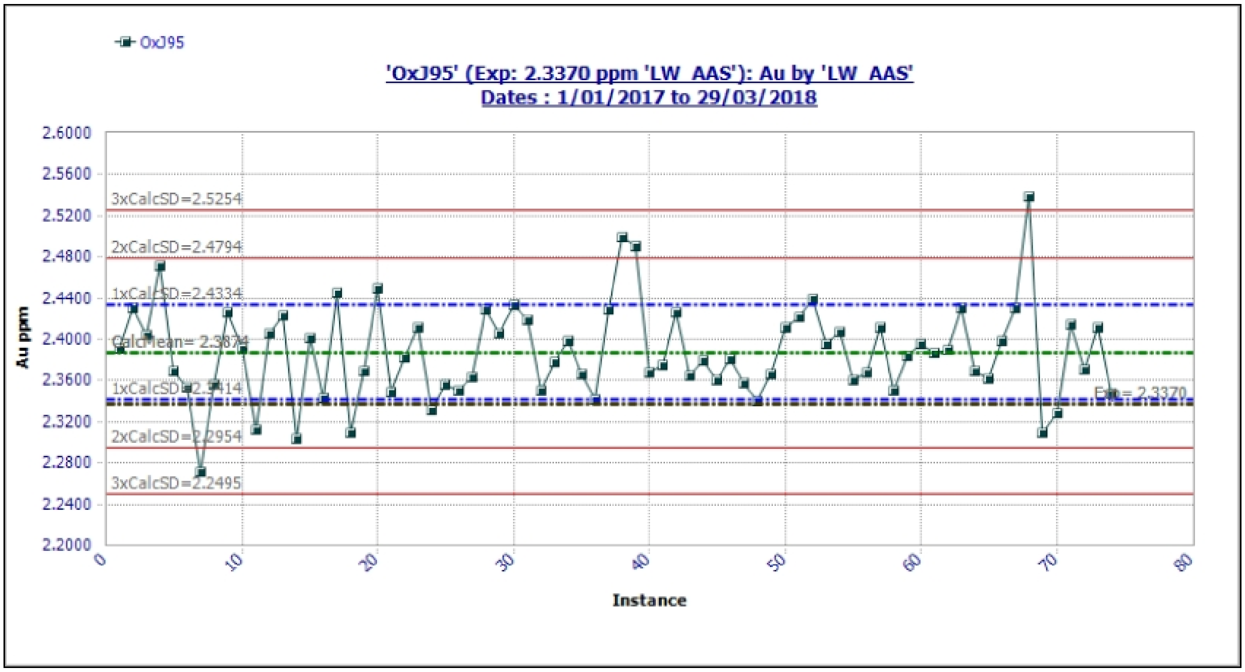


Figure 11.13: Oxj95 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)



Overall performance of the sulphide CRMs (SH82, SH69, SL76, SI64, SJ80, SK94, SL77) is considered acceptable, with the vast majority of samples falling within the three standard deviations supplied by the provider of the CRM. The performance of CRM SL77 (high-grade, 5.181 g/t Au) was relatively poor for the 2017 drilling campaign; however, the results for this CRM during the 2018 drilling campaign improved significantly. GMSI notes that no low-grade sulphide standard was available for analysis. Ideally, a low-grade sulphide standard in the range of 0.2 – 0.5 g/t should be used to ensure the effective analysis of low-grade material. The performance of each sulphide CRM is shown in Figure 11.14 to Figure 11.19.

Figure 11.14: SH82 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

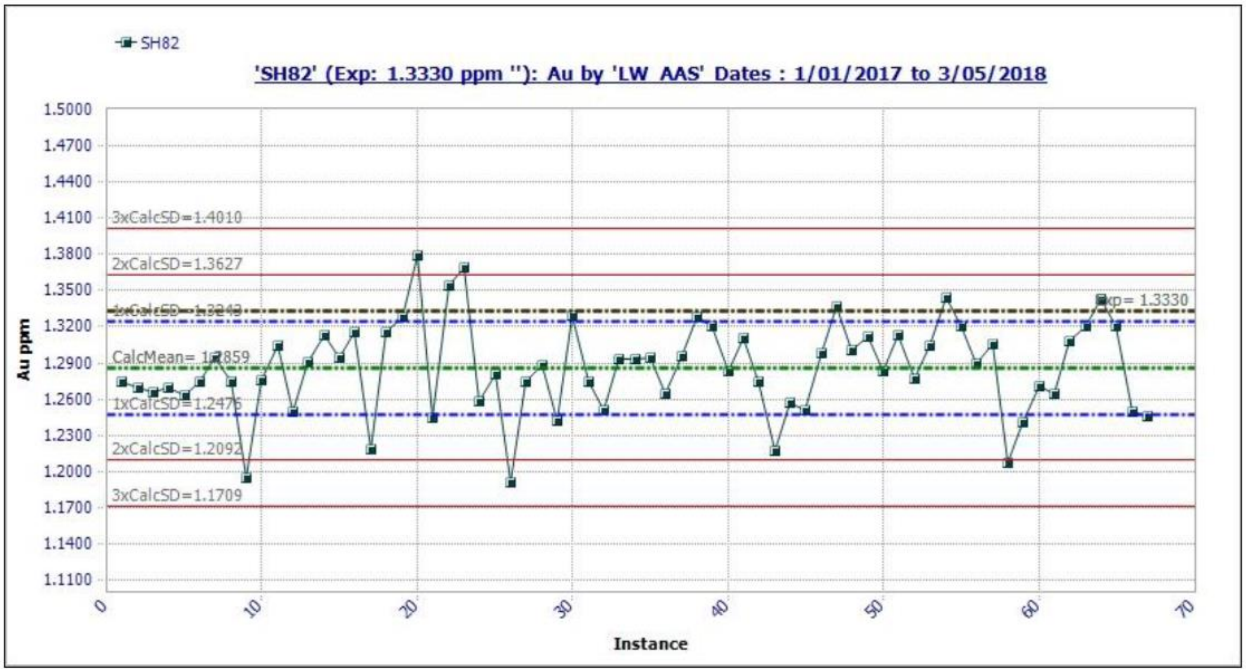


Figure 11.15: SH69 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

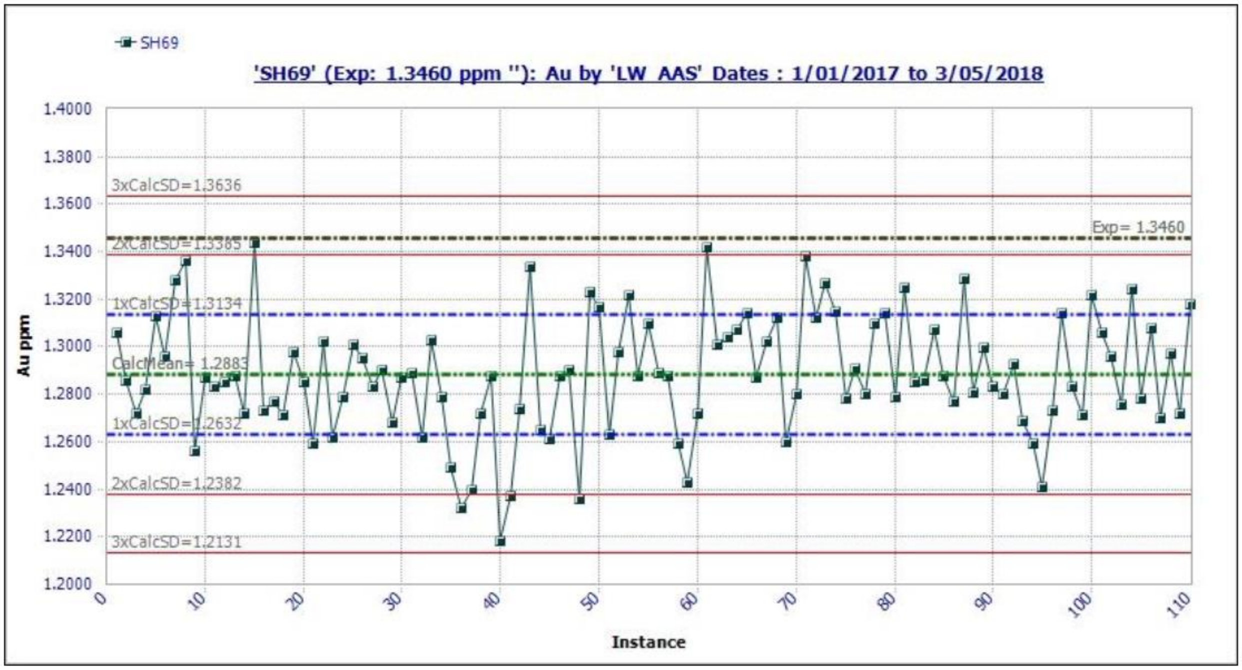


Figure 11.16: SL76 Performance - 2017 &2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

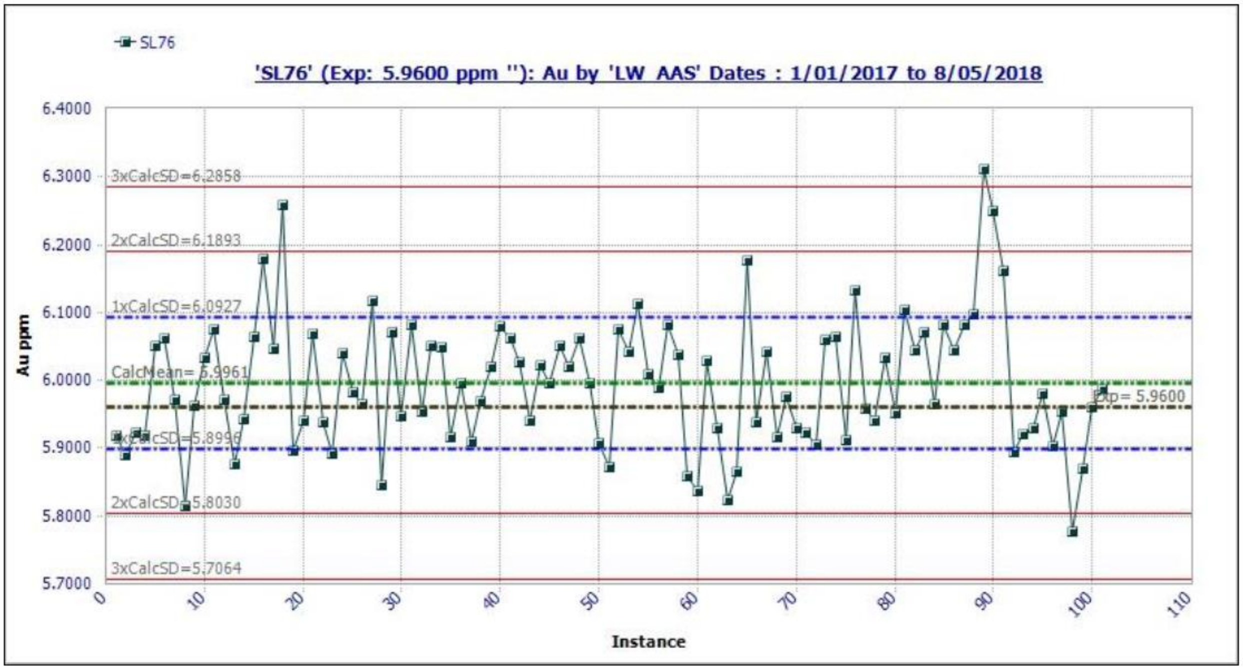


Figure 11.17: SJ80 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

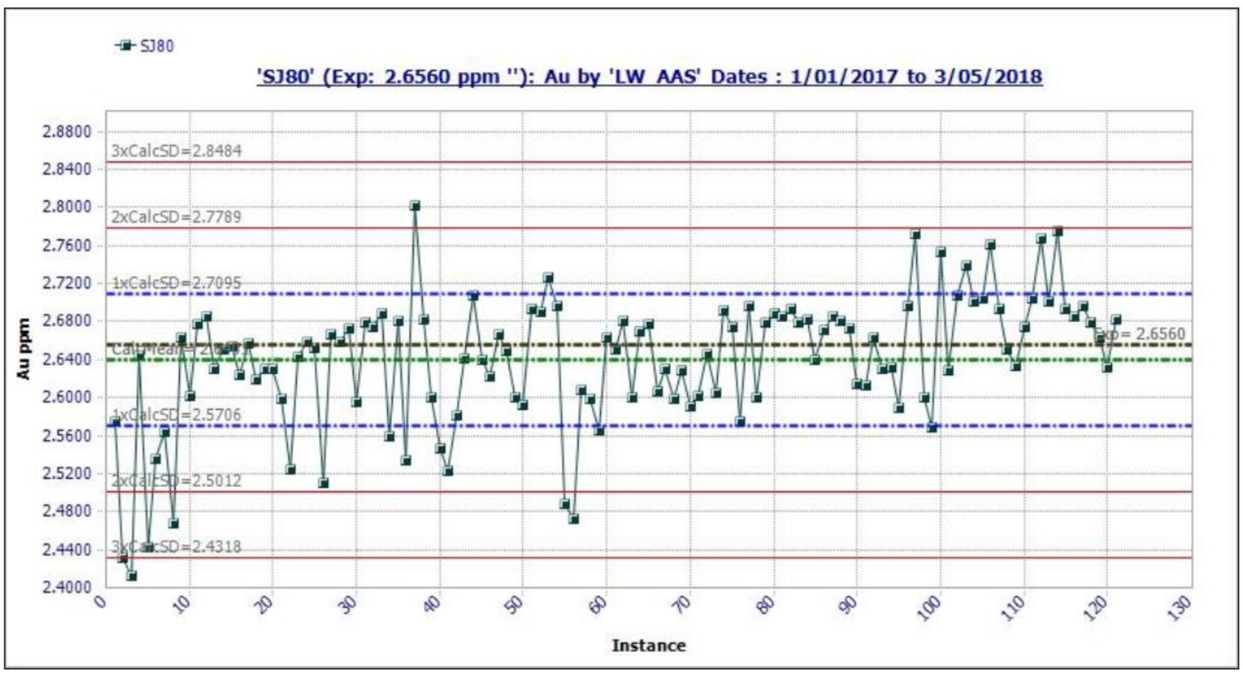


Figure 11.18: SK94 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)

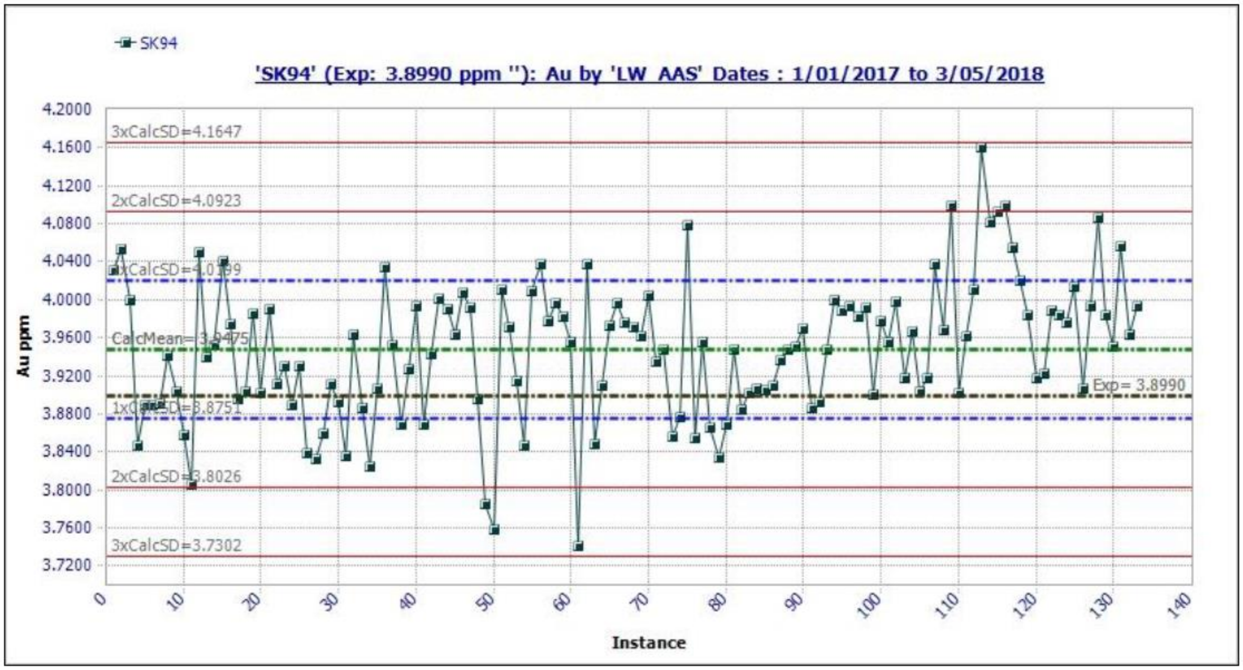
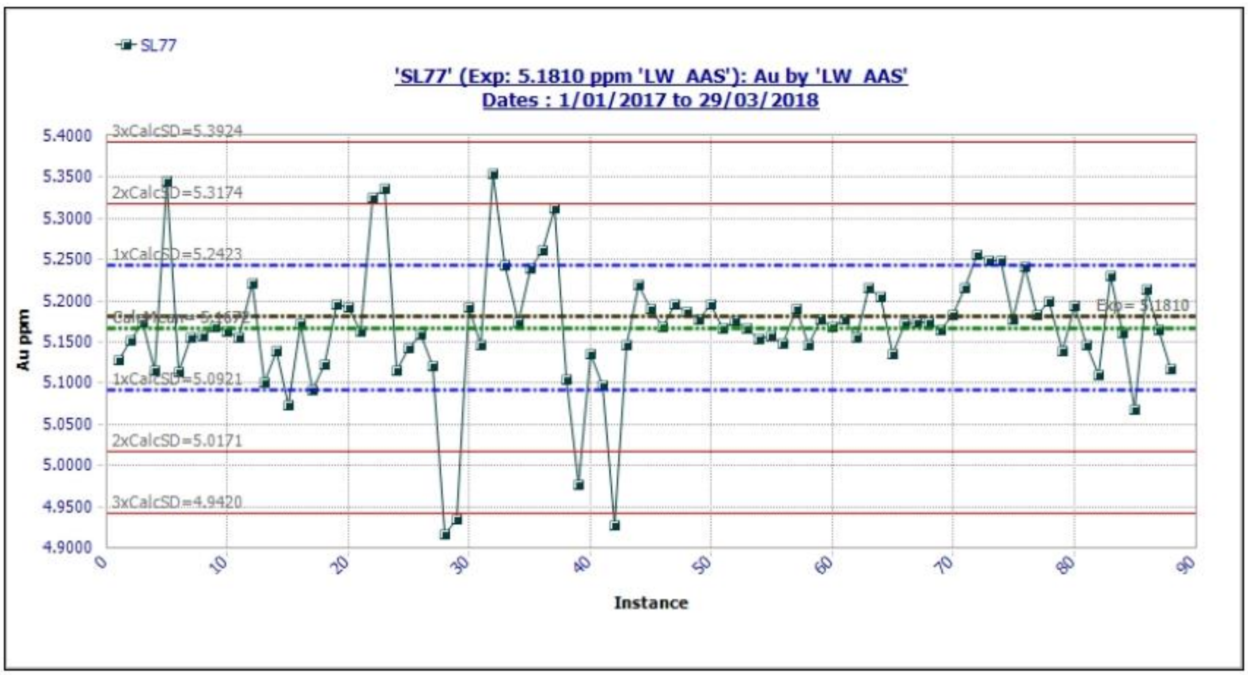


Figure 11.19: SL77 Performance - 2017 & 2018 Drilling Campaigns (Zongo, B., Salle, A., 2018)



11.6.2 Field Duplicates

Field duplicates were taken at a frequency of 1 for every 20 regular samples. Field duplicates are analyzed at the Essakane Laboratory and were produced from the coarse rejects (during initial sample splitting).

Figure 11.20 shows the relationship between the original result (X-Axis) vs the field duplicate result (Y-Axis). Due to the high-nugget nature of the Gossey deposit, it is expected that a certain proportion of the field duplicates will fall outside of the accepted limits.

Figure 11.21 shows the HARD% (Half Absolute Relative Difference) plot for the 2017 and 2018 drilling programs at Gossey for all samples.

Figure 11.20: Field Duplicate Performance Scatter Plot

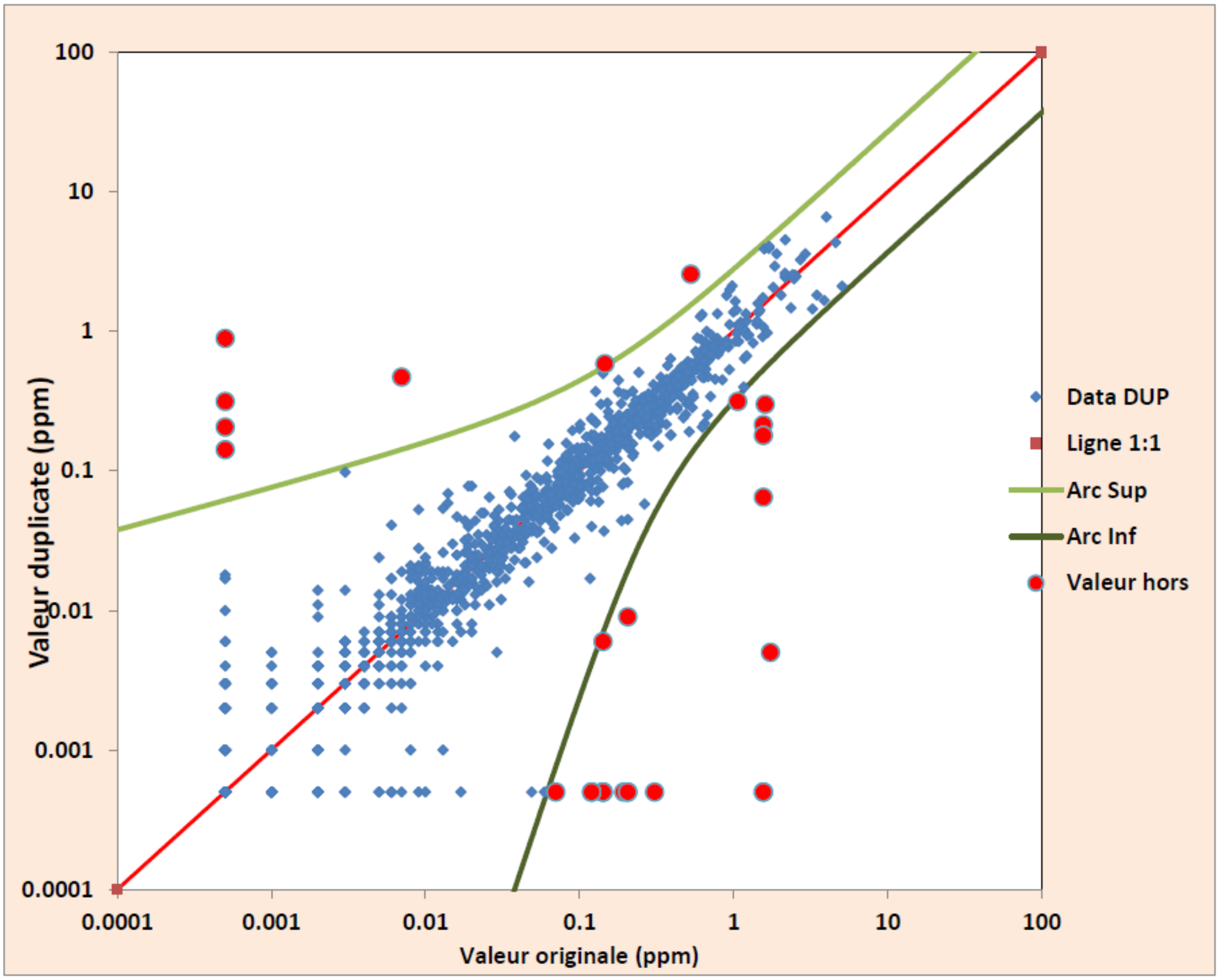
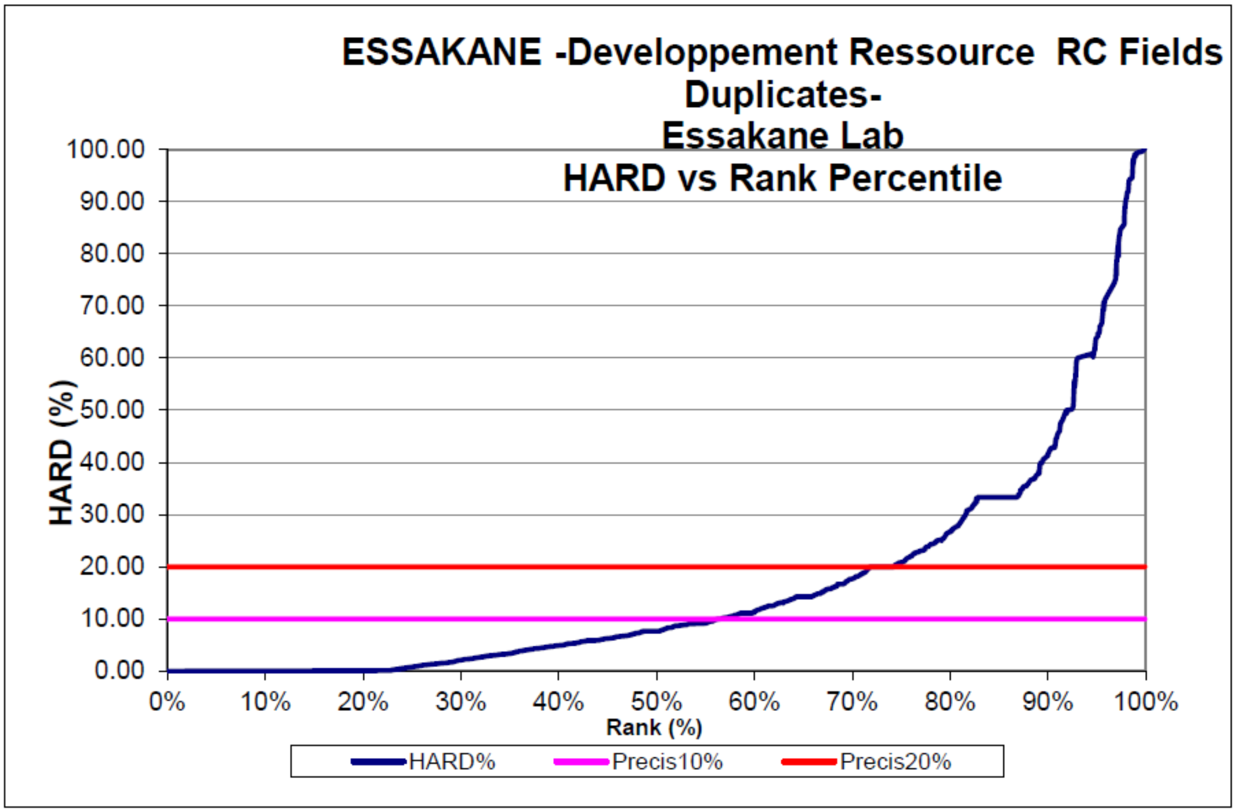


Figure 11.21: HARD% Plot of Field Duplicates - 2017 & 2018 Drilling Programs at Gossey



11.6.3 <u>Intra-Lab Check Assays (Umpire Assays)</u>

For the 2017 and 2018 drilling campaigns, between 10% and 20% of the original sample pulps were sent to SGS Ouagadougou as umpire check assays. SGS Ouagadougou followed the same analytical procedure as the Essakane Laboratory, ensuring that the results are comparable. Only pulps with an original assay result of greater than 0.3 g/t were sent to SGS Ouagadougou.

Figure 11.22 shows the relationship between the original result (X-Axis) vs. the umpire pulp duplicate result (Y-Axis). Figure 11.23 shows the HARD% ("Half Absolute Relative Difference") plot for umpire pulp duplicates from the 2017 and 2018 drilling programs at Gossey for all samples.

Figure 11.22: Umpire Pulp Duplicates Performance Scatter Plot

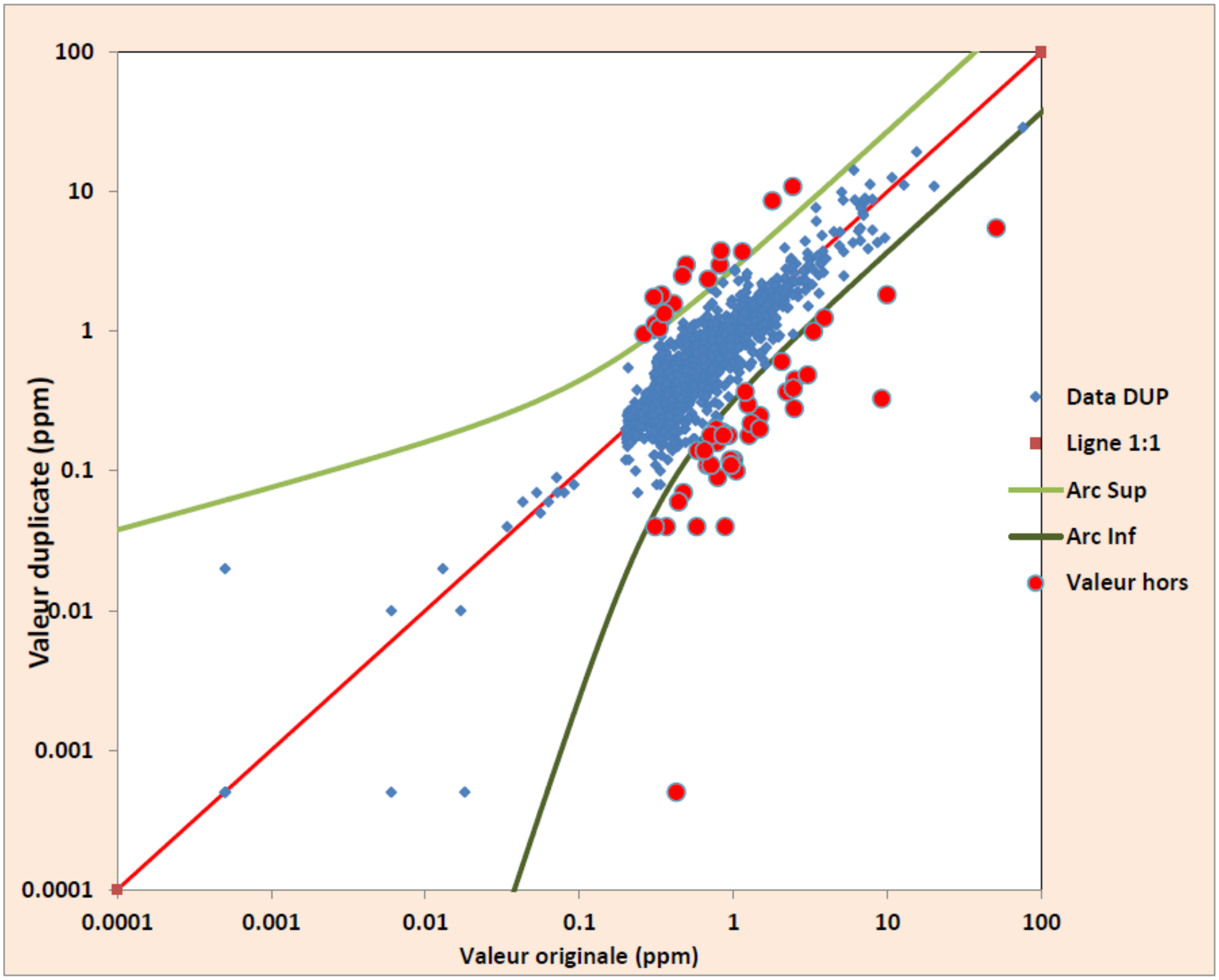
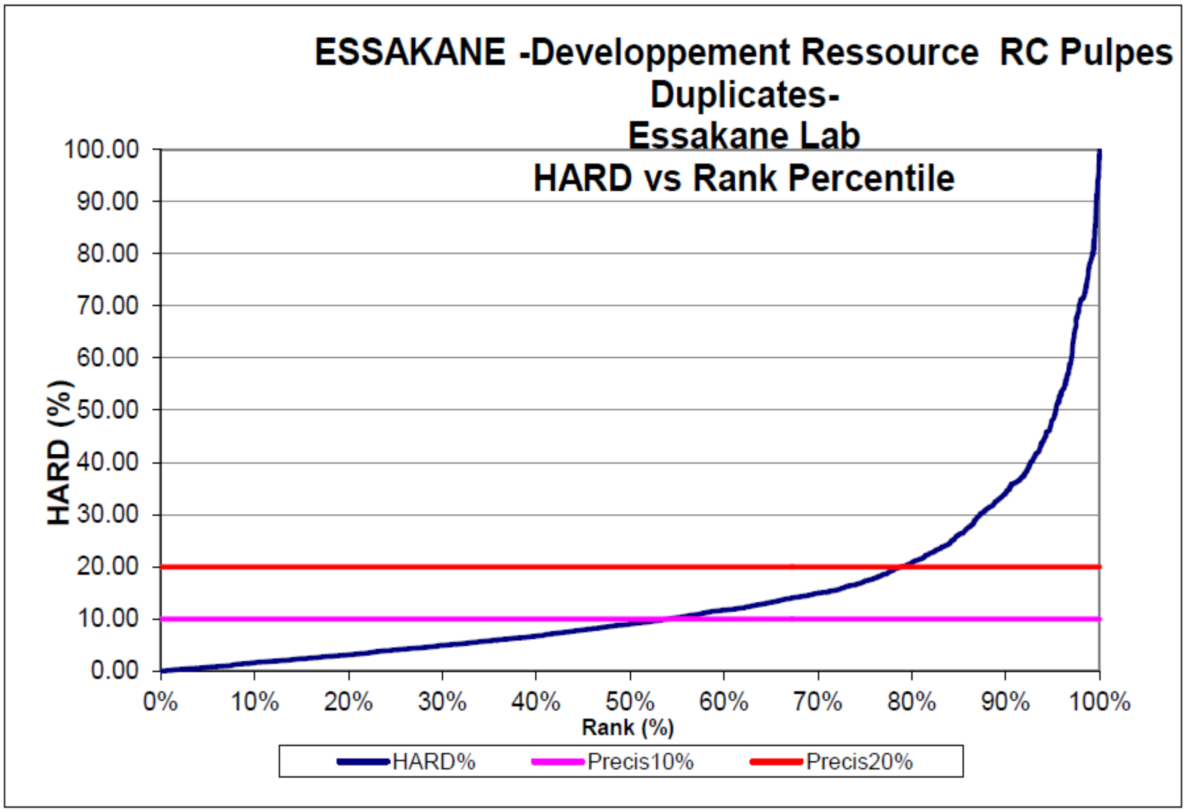


Figure 11.23: HARD% Plot of Umpire Pulp Duplicates - 2017 & 2018 Drilling Programs at Gossey



Overall, the umpire pulp assays by SGS Ouagadougou are acceptable for the style of mineralization present at Gossey.

11.7 Conclusions

GMSI is satisfied that the QA/QC protocol in place for the 2017 and 2018 drilling programs meets or exceeds industry standards, and the results from these studies confirm that the drilling database is of sufficient quality for use in Mineral Resource estimations.

12 DATA VERIFICATION

12.1 Database

Drill hole information for the 2018 drilling program at the Gossey Project was provided to GMSI from Essakane geologists (Resource Development Team) on May 10, 2018. The drilling database was provided as a single excel spreadsheet containing the various downhole tables (Collar, Survey, Assays, Lithology, Density, Hardness, Alteration). GMSI imported the files into the original MS Access database used in the interim resource estimate using the Geovia® GEMS software. The following drill hole information was imported in the GEMS database.

A total of 1,106 drill holes were available for grade estimation. The database was reviewed and corrected if necessary prior to final formatting for resource evaluation. The following activities were performed during database validation:

- Validate total hole lengths and final sample depth data;
- Verify for overlapping and missing intervals;
- Check drill hole survey data for out of range or suspect down-hole deviations;
- Visual check of spatial distribution of drill holes;
- Validate lithology codes.

A new weathering interpretation was provided to GMSI that standardizes the logging practices between the Resource Development team and the Exploration team. This ensures that hardness is recorded consistently, and that laterite, saprolite, transition and fresh material is clearly interpreted between sections.

12.2 GMSI Data Verification

GMSI was provided the assay certificates (both pdf and csv versions) for all IAMGOLD drilling at Gossey since 2011. Forty-nine analysis certificates were compared with the drilling database to ensure that assay data was appropriately imported into the database. A list of assay certificates that were checked is provided in Table 12.1 below, and spans drilling from 2011 up to 2018:

Table 12.1: List of Assay Certificates - 2011 - 2018

Assay-11-0582.CSV	Assay-11-0693.CSV
Assay-11-0719.CSV	Assay-11-0785.CSV
Assay-12-0631.CSV	Assay-12-0807.CSV
Assay-12-0878.CSV	Assay-12-0978.CSV
Assay-12-1060.CSV	Assay-12-1127.CSV
Assay-12-1194.CSV	Assay-12-1276.CSV
Assay-12-1416.CSV	Assay-12-1488.CSV
Assay-12-1621.CSV	Assay-12-1755.CSV
Assay-12-2064 _120705.CSV	Assay-12-2190 _120727.CSV
Assay-13-0044.CSV	Assay-13-0141 _133020.CSV
Assay-13-0220 _133033.CSV	Assay-13-0254.CSV
Assay-13-0390 _136016.CSV	Assay-13-0667 _133141.CSV
Assay-13-0748 _133165.CSV	Assay-13-0813 _133182.CSV
Assay-13-0993 _133232.CSV	Assay-13-1068 _133253.CSV
Assay-13-1123 _133267.CSV	Assay-13-1182.CSV
Assay-13-1211 _133301.CSV	Assay-17-0795 _MEX2410.CSV
Assay-17-0875 _MEX2425.CSV	Assay-17-0913 _G-MEX2434.CSV
Assay-17-0950 _G-MEX2447.CSV	Assay-17-1009 _G-MEX2457.CSV
Assay-17-1023 _G-MEX 2467.CSV	Assay-17-1049 _G MEX2477.CSV
Assay-17-1088 _GMEX2487.CSV	Assay-17-1115 _MEX2499.CSV
Assay-17-1153 _G-MEX2511.CSV	Assay-18-0251 _MEX2679.CSV
Assay-18-0300 _MEX2694.CSV	Assay-18-0342 _G-MEX2709.CSV
Assay-18-0376 _G-MEX2724.CSV	Assay-18-0413 _G-MEX2740.CSV
Assay-18-0434 _G-MEX2750.CSV	Assay-18-0463 _G-MEX2768.CSV

All assay results from the checked certificate are in agreement with the stored database used for resource estimation.

12.3 Drill Hole Collar Location

GMSI personnel visited numerous drill collars from the 2018 drilling campaign during the site visit between March 27 and March 31, 2018. In addition, GMSI personnel reviewed the artisanal workings and the ongoing drilling to validate mineralization was present, and to review the drilling and sampling procedures.

Drill collars were identified by a concrete base with the name of the drill hole engraved onto it with the end-of-hole depth. An example is shown in Figure 12.1.

Figure 12.1: Drill Hole Collar Example – MGRC0267

12.4 QA/QC Validation

GMSI reviewed the results of the QA/QC from the 2017 and 2018 drilling campaigns (as discussed in Section 11) and found them to be within acceptable limits.

12.5 Conclusions

Overall, GMSI is comfortable that the data, analyses, QA/QC and geological interpretation presented by IAMGOLD's Essakane geologist. It was performed in a professional manner using industry best practices. GMSI believes that the data is reliable for use in the estimation of Mineral Resources presented in this Technical Report.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

Not applicable at this stage of the project.

14 MINERAL RESOURCE ESTIMATE

14.1 Data

The drill hole database was handed over to GMSI on May 10, 2018 and consisted of a single excel spreadsheet containing down-hole drilling files (collar, survey, assays, lithology, weathering). All information was subsequently imported into GEMS project and a Leapfrog™ project provided by Essakane SA during the site visit on March 27 – 30th, 2018.

14.1.1 Drill Holes

The GEMS Gossey project holds 1,016 exploration drill holes of different types covering the Gossey Deposit and its surroundings. The mineralization modelling and resource estimation reported herein focus on three mineralized bodies defined along a semi-continuous trend, where 97,959 meters were drilled and assayed between 2003 and 2018. Three types of drill holes were used for the estimation: 1) Diamond Drill Holes ("DDH"), 2) Reverse Circulation ("RC") and 3) Reverse Circulation followed by Diamond Drill Holes ("RCD"). Note that because Air Core ("AC"), Reverse Air Blast ("RAB") and Trench ("TR") sampling are more subject to segregation bias, their results are not used in the estimate process. They were used as guide for geological and weathering modelling only.

Around 14% of the drilled metres used for the estimation of Gossey come from diamond drill holes, with the remainder RC holes (86%). Table 14.1 details the drill holes found in the Gossey Deposit. The drilling pattern of 50 m (between sections) by 25 m (on-section) in the three main portions of the deposit is presented in Figure 14.1.

Figure 14.1: Drill Hole Plan May 2018 – Gossey Deposit

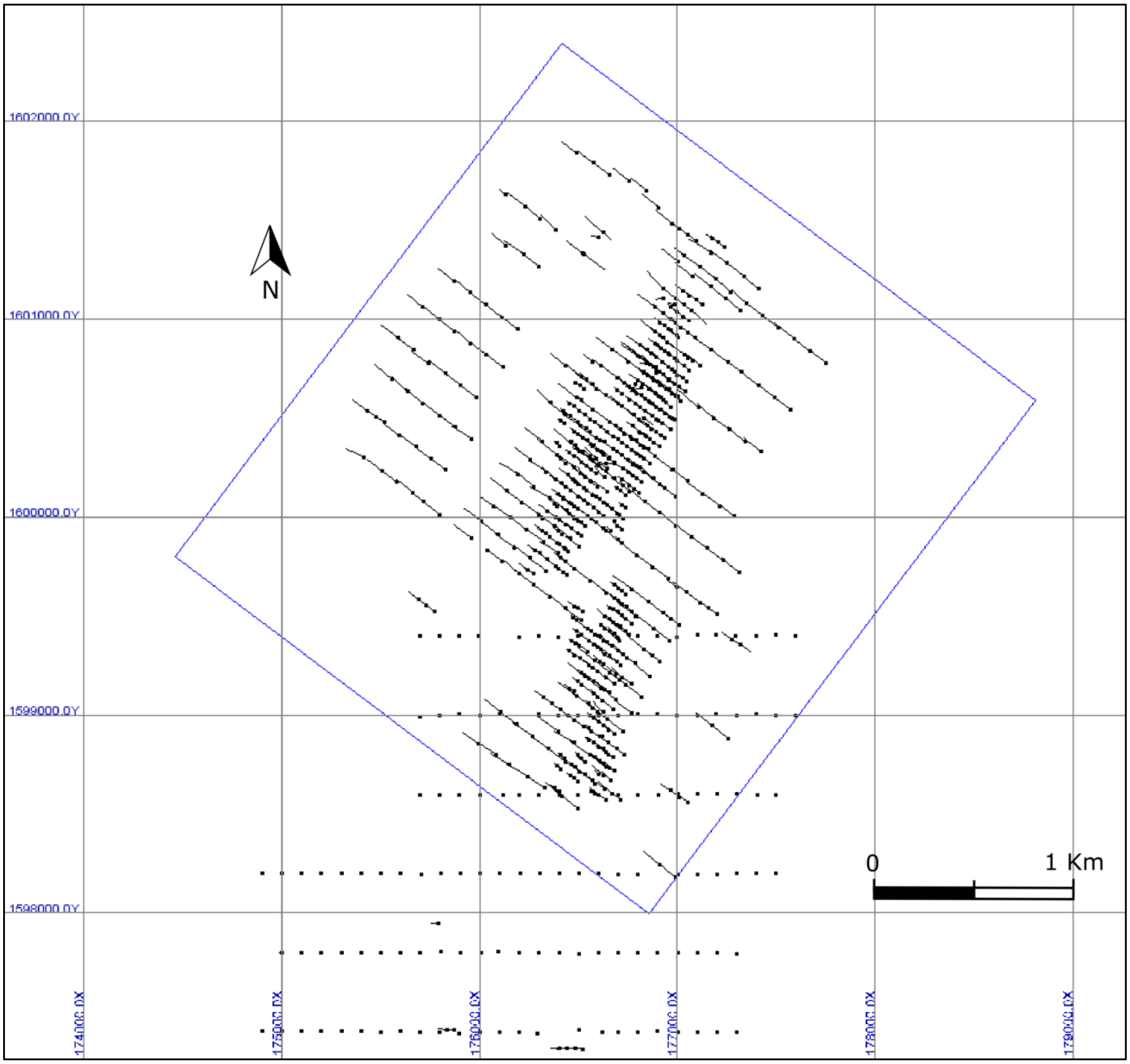


Table 14.1 Summary of Drill Holes as of May 2018

Hole Type	Number of Holes	Metres Drilled
DDH	60	13,652
RC	673	81,257
Total	**733**	**94,909**

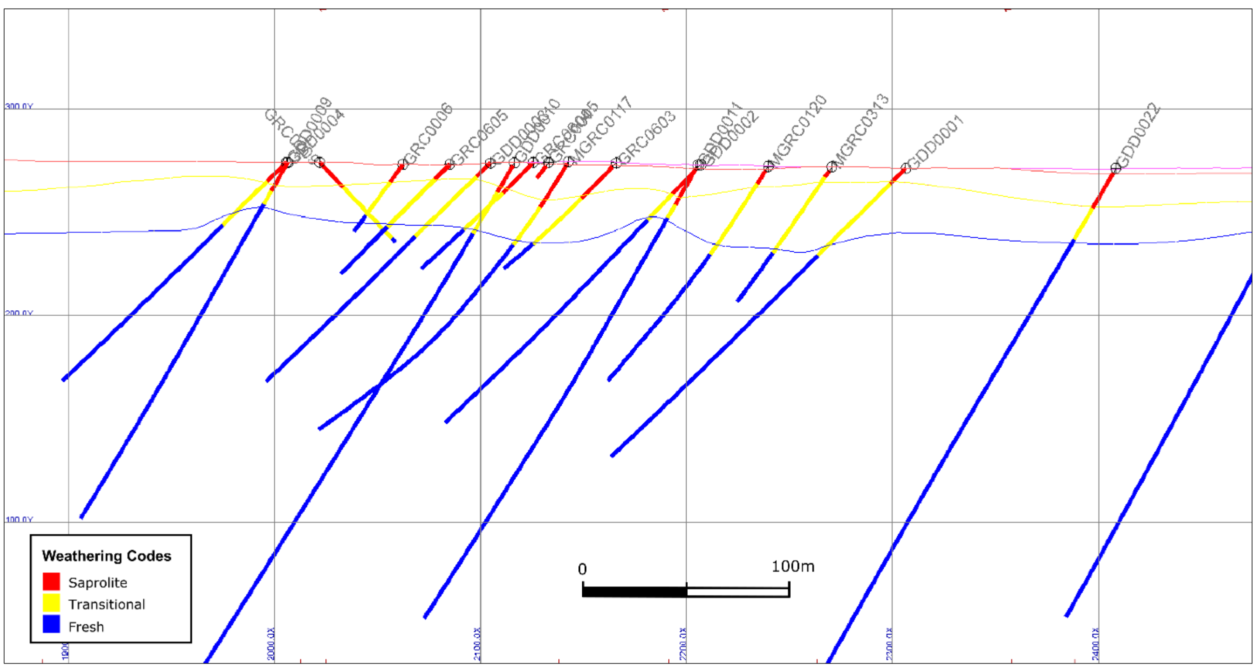
14.2 Modelling

Weathering and mineralization solids were generated for this resource estimate using Leapfrog® Geo (version 4.0) and were based on the drilling database provided.

14.2.1 Weathering Wireframes

Two surfaces were generated based off new data provided in May 2018 1) base of saprolite and 2) base of transition. Each surface represents a lower contact, delimiting layers of weathering. Weathering codes were determined from hardness tests and visual assessment to produce a consistent input for modelling. These wireframes are used for the density model presented in Section 14.4.3. Figure 14.2 illustrates the provided surfaces in relation with the drill hole information.

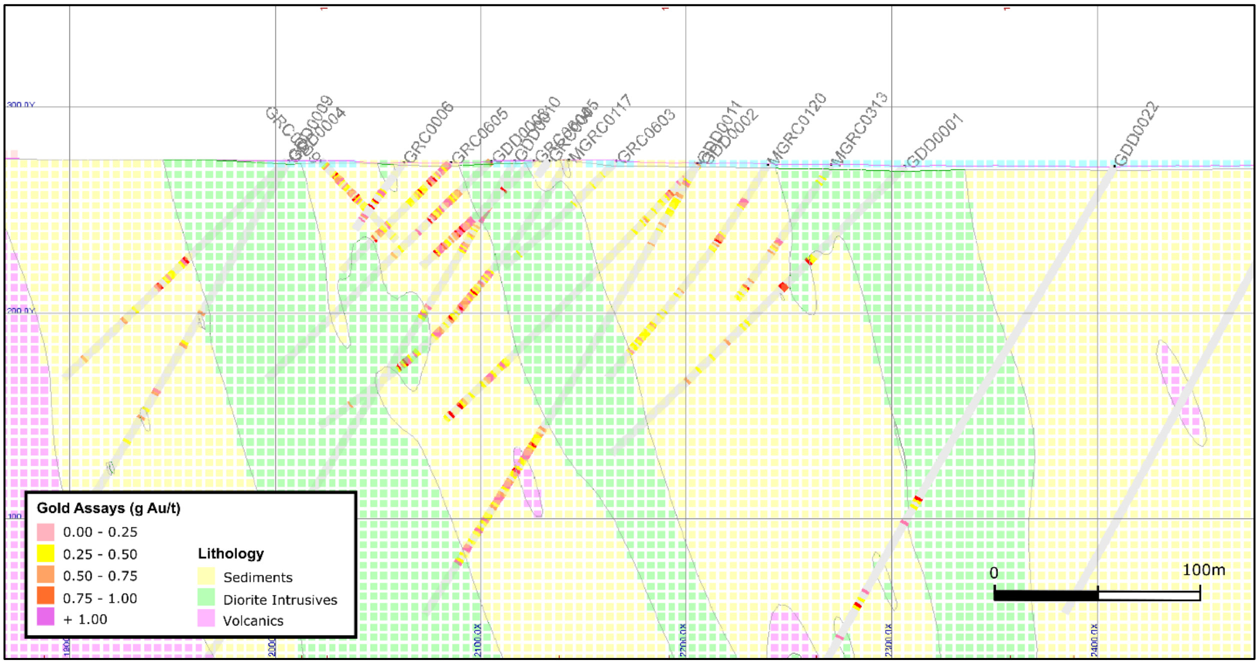
Figure 14.2: Weathering Profile Model - Section 18100 Looking NE



14.2.2 Mineralization Zones

Due to the strong lithological control on gold mineralization at Gossey (strongest mineralization is found within the sediments close to contacts with the intrusive rocks), GMSI built a lithology model based on provided grouped logging codes (Figure 14.3). In addition, grade shells were built using arsenic assays for comparative purposes, as there is also a strong link demonstrated between gold and arsenic. At a cut-off of 400 ppm arsenic, the key mineralizing fluid pathways become clear in the datasets and define a clear envelope along the mineralized trend at Gossey. In addition, at a 250 ppm arsenic cut-off, a continuous halo constrains the majority of mineralized intercepts.

Figure 14.3: Lithology Interpretation and Gold Assays – Section 18100



14.2.3 <u>Topography Surface</u>

A LiDAR topography surface for Gossey was provided to GMSI, which was subsequently resized as a SEG in GEMS.

14.3 Statistical Analysis

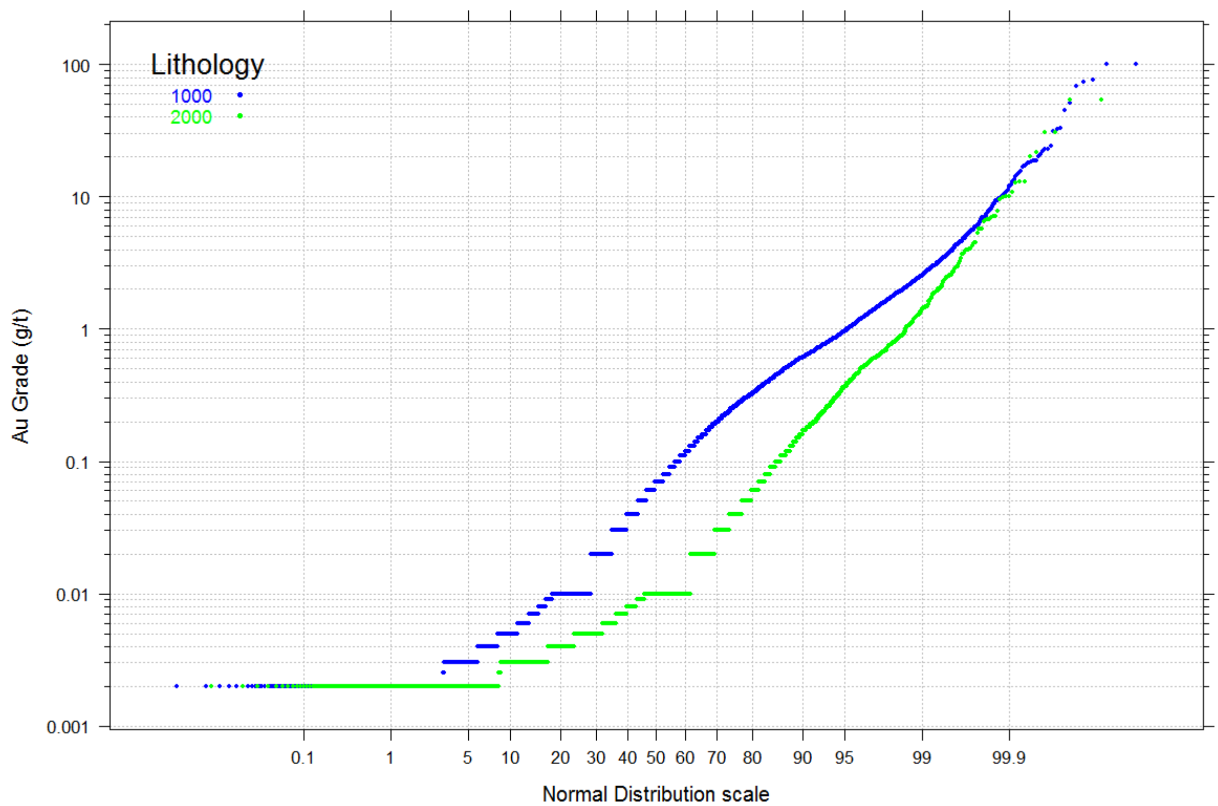
14.3.1 <u>Statistics of the Raw-Assays</u>

Length-weighted statistics of the raw Au assays were computed using R statistical software. Statistics were studied for assays grouped by lithology domains and are presented in Table 14.2. A specific grade capping was applied to the raw assays for each domain based of probability plots of the raw assays (Figure 14.4).

Table 14.2: Basic Statistics of Raw Assays by Mineralized Domain

Domain	Description	No. of Assays	Gold Raw Assays (g Au/t)						CoV	Capping (g Au/t)
			Min	Max	Mean (uncapped)	Median	Standard Deviation			
1000	Arenites	52,926	0.0005	100.00	0.193	0.02	1.098		5.70	20
2000	Diorite	27,528	0.0005	54.26	0.042	0.0005	0.627		14.92	8
3000	Argillite	2,400	0.0005	19.00	0.050	0.0005	0.452		9.07	2
4000	Volcanics	5,571	0.0005	18.54	0.050	0.0005	0.360		7.22	2
6000	Regolith	1,129	0.0005	10.2	0.199	0.07	0.481		2.41	3

Figure 14.4: Probability Plots of Raw Assays (Uncapped) Grouped by the Two Key Lithologies (Arenite (1000) And Diorite (2000))



Due to the strong lithological control on mineralization, no further domaining was considered.

14.3.2 Compositing

The capped raw-assays were composited into 2.5 m run length (down-hole) within each of the mineralization domains. The determination of composite length was based on assay average length (1.0 m), the thickness of mineralization domains and the likely selectivity during mining. Composites were subdivided by domain, and all composite lengths were used in the estimation of the blocks.

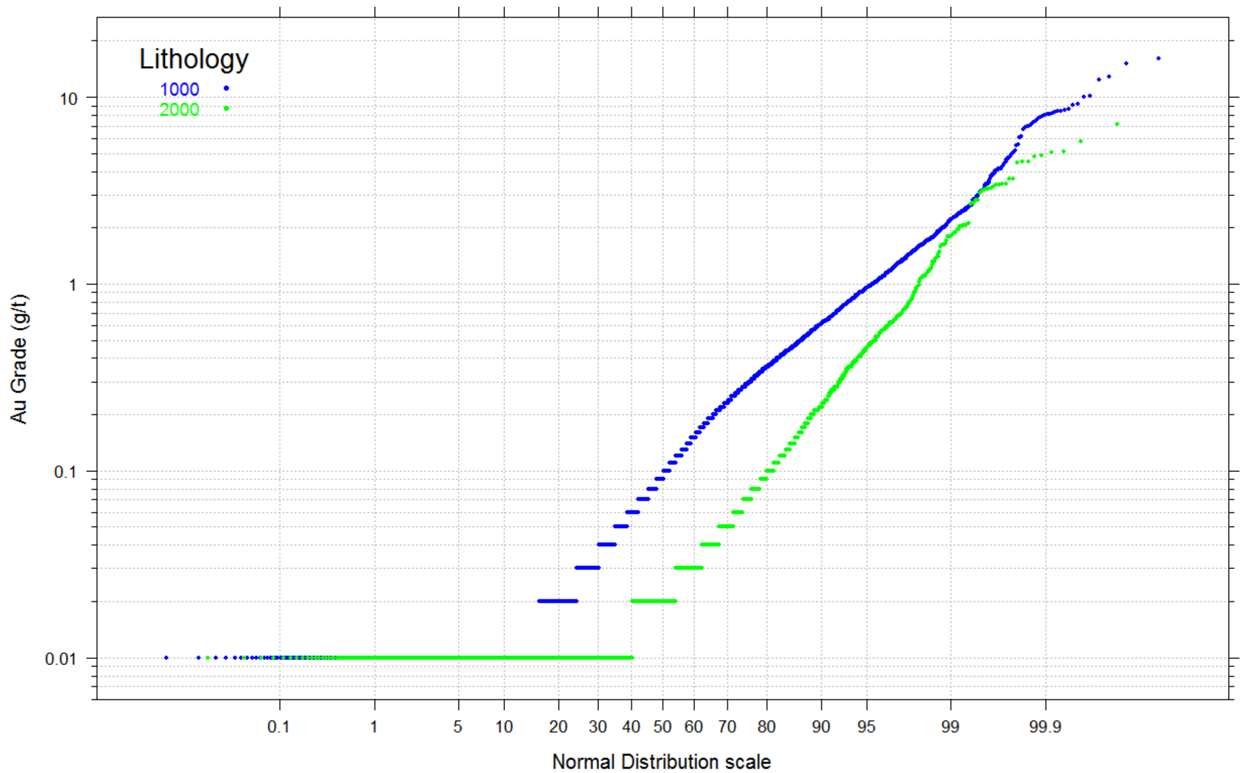
Descriptive statistics of the 2.5 m composites generated within the mineralization domains are summarized in Table 14.3.

Table 14.3: Basic Statistics of Composites by Lithology

Domain	No. of Composites	Gold (g Au/t)					CoV
		Min	Max	Mean (capped)	Median	Standard Deviation	
1000	22,822	0.0005	16.00	0.182	0.03	0.489	2.69
2000	12,162	0.0005	7.12	0.038	0.0005	0.225	5.92
3000	1,061	0.0005	1.64	0.041	0.0005	0.154	3.72
4000	2,596	0.0005	1.61	0.044	0.0005	0.119	2.68
6000	834	0.0005	8.00	0.179	0.08	0.406	2.27

Table 14.5 shows the probability distributions of the 2.5 m composites for the two key lithologies (Arenite and Diorite).

Figure 14.5: Probability Plot of 2.5 m Composites Grouped by the Two Key Lithologies (Arenite (1000) Diorite (2000))



14.3.3 Bulk Density Data

The database includes specific gravity measurement from 13,318 samples, of which 69% are derived from drill core, with the remaining 31% derived from RC drilling. Table 14.4 summarizes the basic statistics obtained from these samples. Samples were subdivided by weathering profile and were analysed on this basis.

Table 14.4: Statistics of Specific Gravity Samples for Gossey

Weathering Profile	Weathering Code	Average Bulk Density (g/cm^3)	Number of Observations
Regolith	6000	2.29	58
Saprolite	1	2.29	986
Transition	2	2.51	1,516
Fresh Rock	3	2.72	10,816

14.3.4 Variography

No variography study was produced for the May 2018 Gossey resource estimation.

14.4 Block Modelling

A single block model was constructed containing the Gossey Deposit. The block model was rotated 37 degrees clockwise from north around the origin to align with drill sections. The block model was created in the Geovia® GEMS 6.8.1 database environment.

14.4.1 Block Model Parameters

The drilling pattern, the thickness and continuity of mineralization domains, and the open pit mine planning considerations were factors in the choice of block dimensions. The block model parameters are summarized in Table 14.5.

Table 14.5: Block Model Settings (May 18_10 m)

Axis	Origin and Rotation (m)	Block Size (m)	No. of Blocks	
X	174,460	5	600	Columns
Y	1,599,800	10	325	Rows
Z	300	5	60	Levels
Rotation	37.00			

Additionally, a series of attributes needed during the block modelling development were incorporated into the block model project. Table 14.6 presents the list of attributes found in the block model project May 18_10 m in the Standard folder.

Table 14.6: List of Attributes Found in the Block Model May 18_10 m

Folder Name	Model Name	Description
Standard	LF_Weathering	Weathering profile coding (ovb, sap., trans., rock)
	LF_LITHO	Domain coding (shown in Table 14.2)
	DENS_FINAL	Specific gravity (g/cm^3)
	LIT_AuCAP	Inverse distance cube gold grades (g/t) – Capped Assays – Used for final resource figures
	LIT_CATEG	Resource classification (2 = Indicated, 3 = Inferred, 4 = Blue Sky)
	LIT_As	Inverse distance cube arsenic (ppm)
	LIT_Pass	Estimation pass

14.4.2 Rock Type Model

The rock type model, or domain coding, was built from the lithology solids presented in Section 14.2.2 and acted as hard boundaries. Table 14.7 lists all the rock coding associated to domains developed from the solids and used in the block model. No block percentages were recorded in the block model.

Table 14.7: Rock Codes (LF_LITHO Attributes)

Code	Lithology
1000	Arenites
2000	Diorite
3000	Argillite
4000	Volcanics
6000	Regolith

14.4.3 Density Model

The assignment of bulk density was undertaken using a single estimation pass within each of the four weathering profiles (regolith, saprolite, transition, fresh). The density estimation pass is described below:

- An horizontally-orientated search ellipse with the dimensions 25 m (X) x 25 m (Y) x 10 m (Z);
- Minimum of 2 density readings to estimate the block;
- Inverse Distance Squared (ID2) interpolation method;
- Hard boundaries between the weathering domains.

Blocks which were not estimated during the initial estimation pass were assigned the average bulk density for each weathering domain according to Table 14.2.

14.4.4 Grade Estimation Methodology

The interpolation technique selected for the Gossey Deposit is the Inverse Distance Cube ("ID^3") method. No other interpolation methods were tested at this stage of the project. The ID^3 method was judged suitable to replicate composite grades throughout the deposit.

Grade estimates were produced using the 2.5 m composites. Mineralized domains were considered as hard boundaries through each interpolation step. Each domain was estimated using only composites pertaining to the domain in question. Geovia® GEMS 6.8.1 software was used for the estimate.

Four interpolation passes were used iteratively to estimate the blocks for Gossey Deposit. The sample selection methodology for each pass is summarized below:

- **First Pass:** A minimum of 9 and a maximum of 20 composites within the selected search ranges. A maximum of three composites per hole could be used for any block estimate.
- **Second Pass:** A minimum of 6 and a maximum of 20 composites within the selected search ranges. A maximum of three composites per hole could be used for any block estimate. Only blocks which were not estimated during the first pass could be estimated during the second pass.
- **Third Pass:** A minimum of 3 and a maximum of 20 composites within the selected search ranges. A maximum of three composites per hole could be used for any block estimate. Only blocks which were not estimated during the first and second passes could be estimated in the third pass.
- **Fourth Pass:** A minimum of 1 and a maximum of 20 composites within the selected search ranges. A maximum of three composites per hole could be used for any block estimate. Only blocks which were not estimated during the first and second passes could be estimated in the third pass

Search ellipse ranges were determined considering the drill hole spacing and the desired level of extrapolation of gold grade (for mineral resource categorisation purposes). The search ellipse distances progressively increase from 25 m x 25 m in the first interpolation pass towards longer distances up to 100 m by 100 m in the fourth pass, while the thickness of the search ellipse remains constant at 10 m throughout the interpolation process.

No restrictions were placed on the search ellipse to limit the influence of high-grade composites.

The various profiles of interpolation and search rectangles for gold composites utilized in the estimation of the Gossey resource are tabulated in Table 14.8 and Table 14.9.

Table 14.8: Interpolation Profile Settings for Resource Estimation

Profile Name*	Pass	Sample			Target Rock Code	Ellipses Name
		Min	Max	Max per Hole		
LIT_AU_1	1	9	20	3	1000 2000 3000 4000 6000	PASS_1
LIT_AU_2	2	6	20	3		PASS_2
LIT_AU_3	3	3	20	3		PASS_3
LIT_AU_4	4	1	20	3		PASS_4

Table 14.9: Sample Search Rectangles Settings for Resource Estimation

Pass	Rotation			Anisotropy Range (m)		
	Z	Y	Z	X	Y	Z
1	20°	-25°	0°	25	25	10
2				50	50	10
3				75	75	10
4				100	100	10

The grades interpolated were saved in attributes LIT_AuCAP (capped Au grade estimate). The mineral resources discussed in the next sections refer to the capped gold grades.

14.1 Classification and Resource Reporting

The CIM Definition Standards on Mineral Resources and Mineral Reserves, prepared by the CIM Standing Committee on Resource Definitions and adopted by the CIM council on May 10, 2014, provide standards for the classification of Mineral Resources and Mineral Reserve estimates into various categories. The category to which a resource or reserve estimate is assigned depends on the level of confidence in the geological information available on the mineral deposit, the quality and quantity of data available, the level of detail of the technical and economic information which has been generated about the deposit and the interpretation of that data and information. Under CIM Definition Standards:

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 or 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.

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 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.

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.

In addition, the classification of interpolated blocks was undertaken by considering the following criteria:

- Quality and reliability of drilling and sampling data;
- Distance between sample points (drilling density);
- Confidence in the geological interpretation;
- Continuity of the geologic structures and the continuity of the grade within these structures;
- Statistics of the data population;
- Quality of assay data.

The resources were classified according to the above-mentioned criteria which also directed the choice of the search parameters for each interpolation pass during the block estimation.

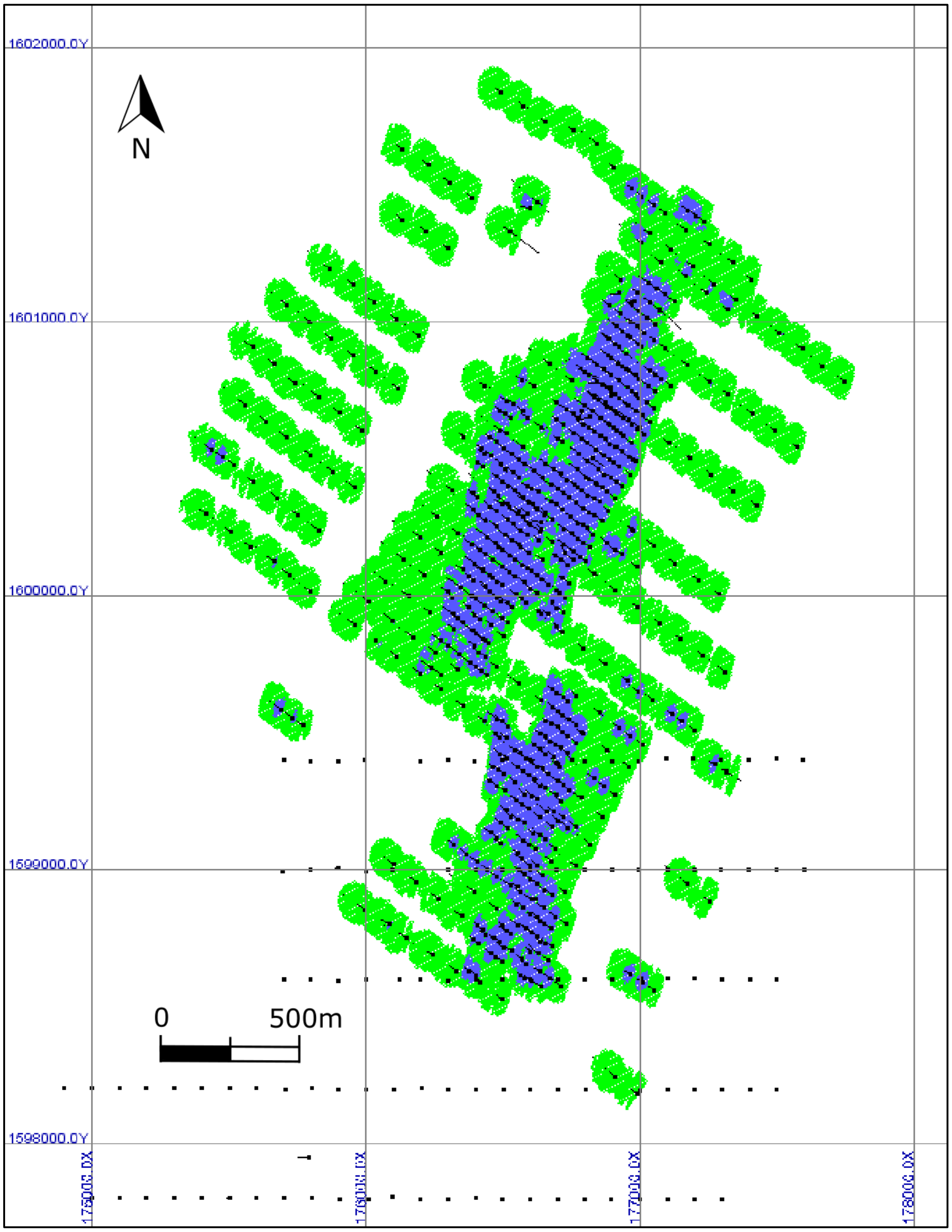
No measured resources are estimated in the Gossey Deposit.

Indicated resources are the blocks estimated from the first and second passes.

Inferred resources are the blocks estimated from the third pass.

Table 14.6 shows the distribution of the resource's categories in the Gossey Deposit for the ID^3 interpolation method. Indicated resources are essentially concentrated in the southern, central and northern part of the deposit where the drill hole density is the highest. Inferred resources are peripheral to indicated resources, but mainly located in the extensions at depth of the deposit where drill spacing is wider, and confidence in grade continuity is low.

Figure 14.6: Resource Categories - Level 225 m – Indicated (blue) and Inferred (green)



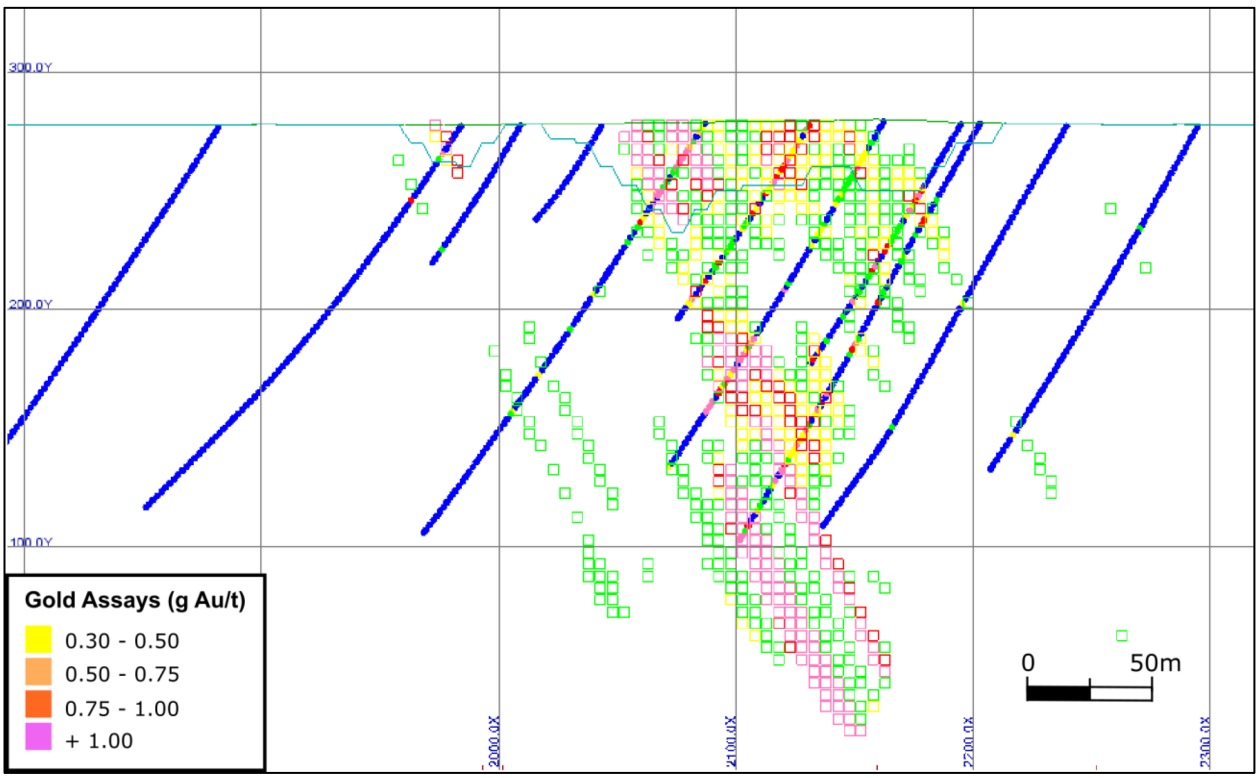
14.5 Block Model Estimation Validation

Multiple validations were completed on the block model to ensure the block model is a good representation of the composites. The validation process included visual checks, statistical validation of the model and swath plots.

14.5.1 Visual Validation

The visual checks consisted of visualization of slices of the block model, mineralized zones and drill hole database. The slicing was performed vertically on 50 m intervals and horizontally on 5 m intervals. The data source was visually compared with the different model attributes (rock type or domains, percent, weathering type, density, Au grades) throughout the strike length of the deposit (Table 14.7). The weathering profile layers, mineralization domains and associated percentages are well represented in their proper attribute model. The Inverse Distance Cube (ID^3) method of resource estimation was found to be a good representation of the drill hole composites.

Figure 14.7: Section 17450 Showing Composite and Block Model Gold Grades with the US$1,500 Indicated and Inferred Pit Optimization Outline



14.5.2 Global Statistical Validation

Comparative statistics were generated for the composites and the blocks for each domain at Gossey considering only blocks within the Indicated and Inferred categories. The results are presented in Table 14.10.

Due to the lognormal distribution of gold grades, outliers in the data have a significant impact on global arithmetic means. In addition, composite clustering and over/under representation of grade domains can impact statistical validation when considering individual domains. For these reasons, arithmetic means should be used only as a guide in validating Mineral Resources. It can be advantageous to compare the grade distributions of composites and blocks across key grade domains (not just descriptive statistics) to better understand the estimation performance.

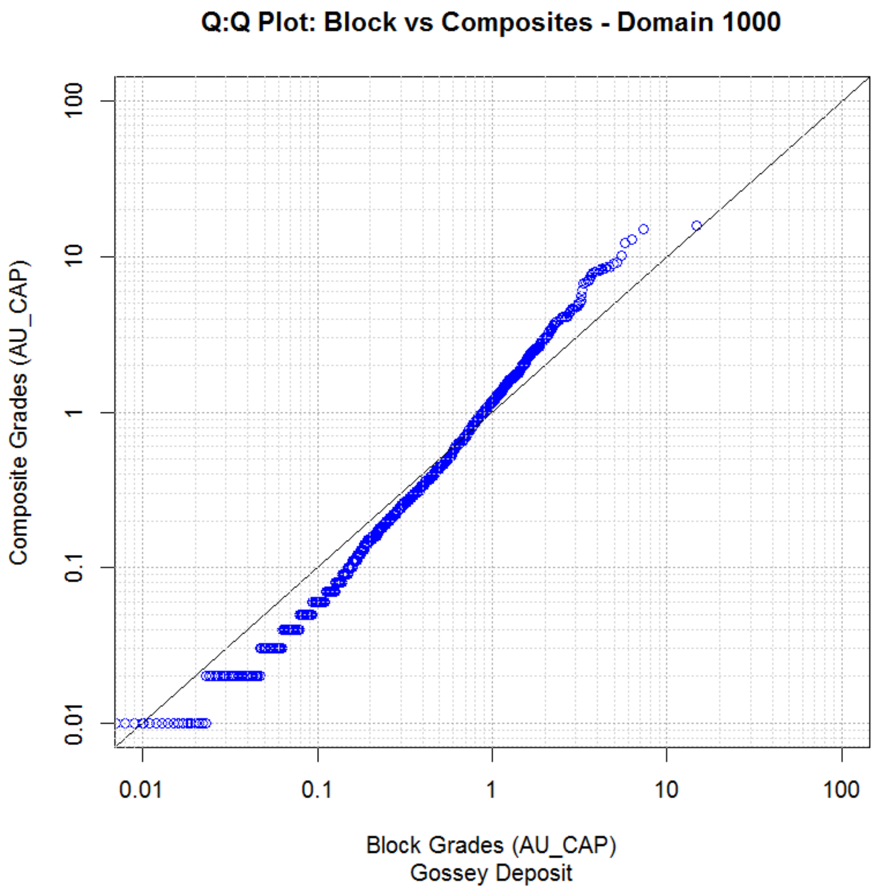
The Coefficient of Variation ("CoV") values suggest that an acceptable level of smoothing has occurred, largely due to ID^3 interpolator used during grade estimation. Mean gold grades correlate well for domains 1000 and 2000, which contain most of the metal.

Table 14.10: Comparative Statistics between 2.5 M Composites & Blocks within the Indicated & Inferred Mineral Resource Categories, Grouped by Lithology Domain within the US$1,500 Indicated & Inferred Pit Optimization

Domain	No. of Composites	Composites (g/t Au)		Coeff. of Variation Composites	Number of Blocks	Blocks (g/t Au)		Coeff. of Variation Blocks	Reduction in Coeff. Of Variation	Proportion of Total Composites	Proportion of Total Blocks
		Mean	Median			Mean	Median				
1000	3,698	0.48	0.22	1.95	47,950	0.45	0.29	1.24	36%	67.9%	64.7%
2000	1,196	0.12	0.01	3.93	16,909	0.12	0.01	2.64	33%	22.0%	22.8%
6000	459	0.26	0.12	1.98	8,379	0.19	0.12	1.26	36%	8.4%	11.3%
Other	90	-	-	-	904	-	-	-	-	1.7%	1.2%

In addition to descriptive statistics, Q:Q plots were generated to assess the distribution of gold grades of composites against blocks on a domain-by-domain basis. These plots are useful in assessing the degree of smoothing (conditional bias) observed during the grade estimation process and can identify any significant over/under estimation of grades. Table 14.8 shows a Q:Q plot of composite gold grades (Y-axis) vs. block gold grades (X-axis) for domain 1000.

Figure 14.8: Q:Q Plot of Gold Grades from Indicated & Inferred Blocks vs. 2.5 m Composites for Domain 1000 within the US$1,500 Indicated & Inferred Pit Optimization



We can see that distribution of block gold grades and composite gold grades for domain 1000 are comparable, and the degree of observed smoothing implies a good local estimation of gold grades within the block model. No significant bias towards the composites or blocks was observed.

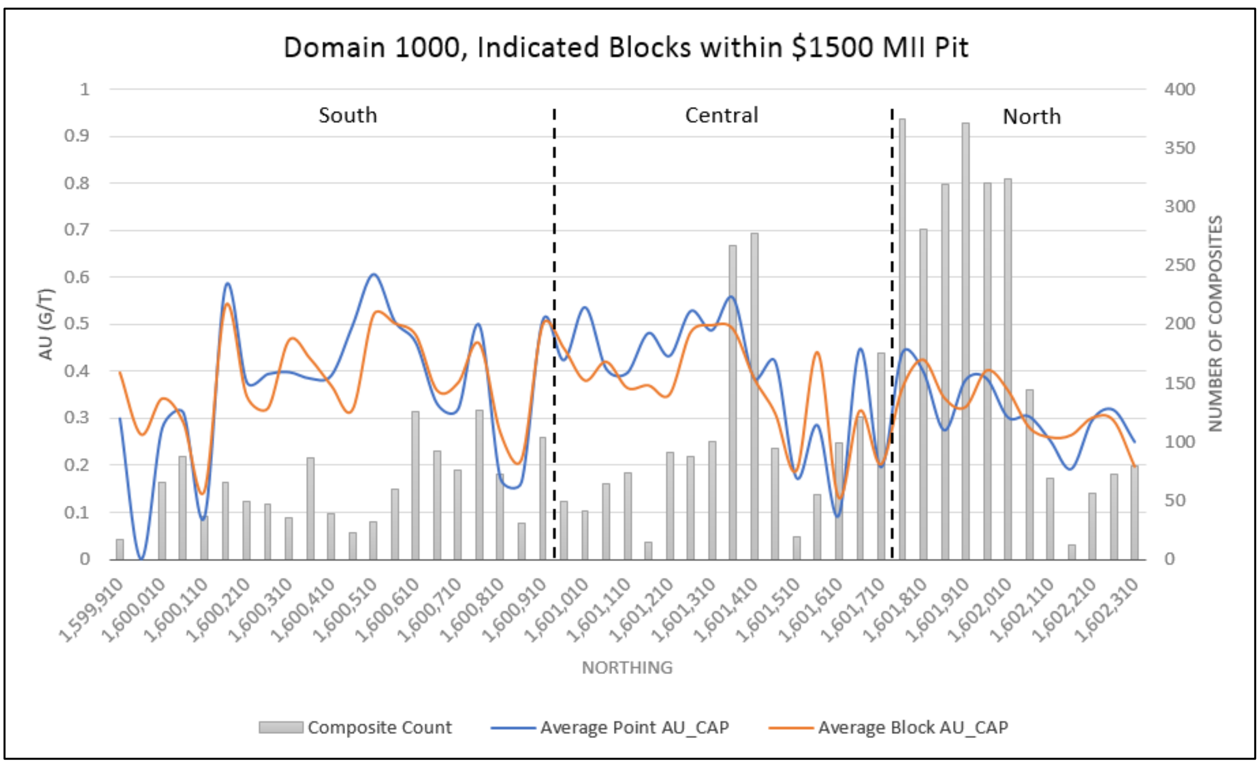
14.5.3 Local Statistical Validation - Swath Plots

The swath plot method is considered a local validation, which works as a visual mean to compare estimated block grades against composite grades within a 3D moving window. In addition, it can identify possible bias in the interpolation (i.e. over/under estimation of grades).

Swath plots were generated for domain 1000 at increments of 50 m (Easting) by 50 m (Northing) by 20 m (Elevation) for gold grade. Figure 14.9 illustrates the swath plot for Indicated Mineral Resources within the US$1,500 MII pit optimization by Northing. Swath plots were created by grouping regolith, saprolite, transition and fresh rock weathering profiles, and isolating only blocks and composites pertaining to domain 1000.

Peaks and lows in estimated gold grades generally follow peaks and lows in composite (or point) grades in well informed areas of the block model, whereas less informed areas can occasionally show some discrepancies between the grades (such as 1601160 mN).

Figure 14.9: Swath Plot of Indicated Mineral Resources within the US$1,500 Indicated & Inferred Pit Optimization by Northing – Domain 1000



Reconciliation between composites and block grades at the southern end of the Gossey Deposit show a good local estimate.

14.5.4 Discussion on Block Model Validation

Overall, the Gossey block model is a good representation of composite gold grades used in the estimation. Global statistical validations show the degree of smoothing is within acceptable limits, and no significant over/under-estimation of gold grades has occurred. Local statistical validations show good local correlation of block and composite gold grades, and no excessive extrapolation of grades was observed.

14.6 Constrained Mineral Resources

To establish a mineral resource estimate, an open pit development scenario is the most adapted to the geology/geometry, tonnage and grade. The deposit model was imported into Whittle® to determine optimal pit shells based on the Lerchs-Grossman algorithm. The method works on a block model of the orebody, and progressively constructs lists of related blocks that should, or should not, be mined. The method uses the values of the blocks to define a pit outline that has the highest possible economic value, subject to the required pit slopes defined as structure arcs in the software.

At this stage of the project, all blocks classified as Indicated and Inferred were utilized in the pit optimization process, with a sensitivity analysis run on Indicated, Inferred and Potential Economic Mineralization (“PEM”)

This analysis requires several input parameters such as slope constraints, gold prices, process recoveries and operating costs. A cut-off grade for each weathering type of mineralized rocks (saprolite (including regolith), transition and rock) was determined in the process.

14.6.1 Open Pit Constrained Mineral Resource

The compilation of the Mineral Resource was constrained using the LiDAR topography surface provided to GMSI, and from a Whittle pit optimization (gold price of US$ 1,500/oz) on Indicated and Inferred resource categories combined. No buffer zone was applied around the Gossey Village. Operating costs and recoveries were derived from the Essakane Mine. Surfaces were produced by Louis-Pierre Gignac (GMSI) on May 15, 2018.

The Gossey Constrained Indicated Mineral Resource is estimated to a total of 10.4 Mt at an average grade of 0.87 g Au/t, totalling 291 k oz of gold (Table 14.11). The Gossey Constrained Inferred Mineral Resource is estimated at 2.9 Mt at an average grade of 0.91 g Au/t, totalling 85 k oz of gold. Gold grade distribution and resource categorization for Gossey are illustrated in Figure 14.10 and Figure 14.11,respectively.

Table 14.11: Open Pit Constrained Mineral Resource for Gossey –May 25, 2018

Weathering Profile	Cut-off Grade	Indicated			Inferred		
		Tonnage ('000 t)	Grade (g/t)	Gold (k oz)	Tonnage ('000 t)	Grade (g/t)	Gold (k oz)
Laterite & Saprolite	0.33 g Au/t	3,916	0.66	83	1,464	0.75	35
Transition	0.42 g Au/t	3,467	0.85	94	986	0.97	31
Fresh Rock	0.47 g Au/t	3,071	1.15	114	489	1.23	19
Total	**Varying**	**10,454**	**0.87**	**291**	**2,939**	**0.91**	**85**

Figure 14.10: Gold Grades Distribution Inside the Whittle Shell Optimized at $1,500 /oz Gold Price for Gossey (Indicated and Inferred Blocks)

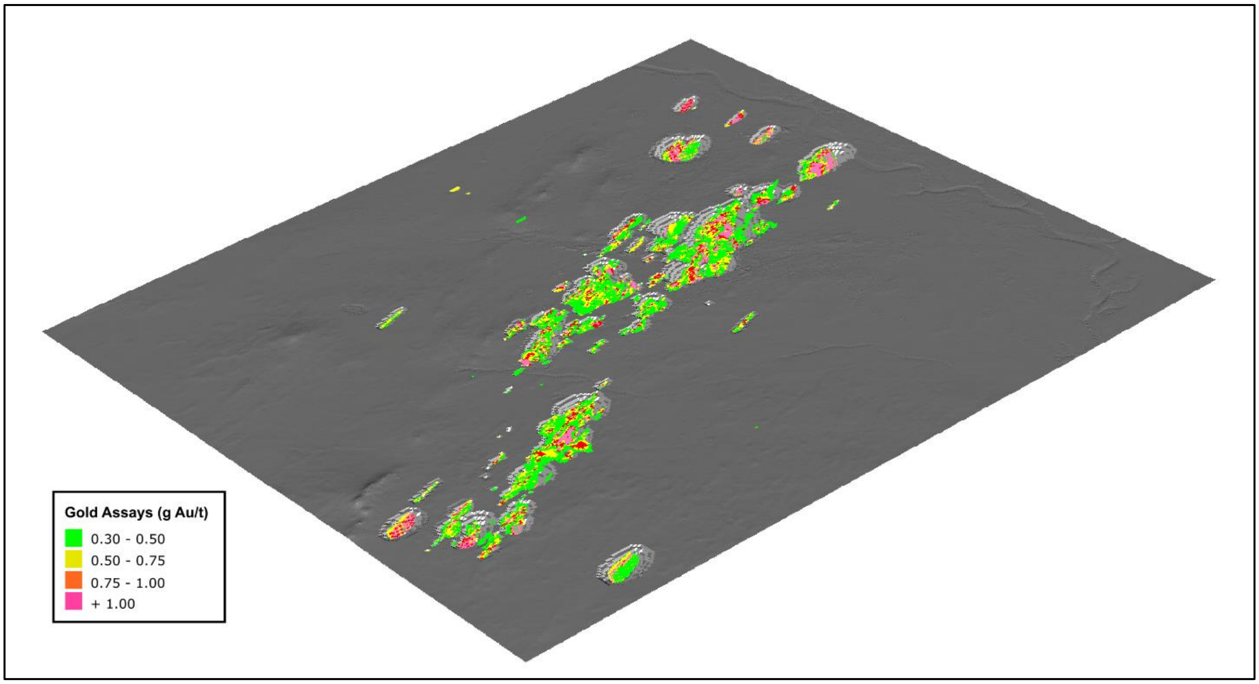
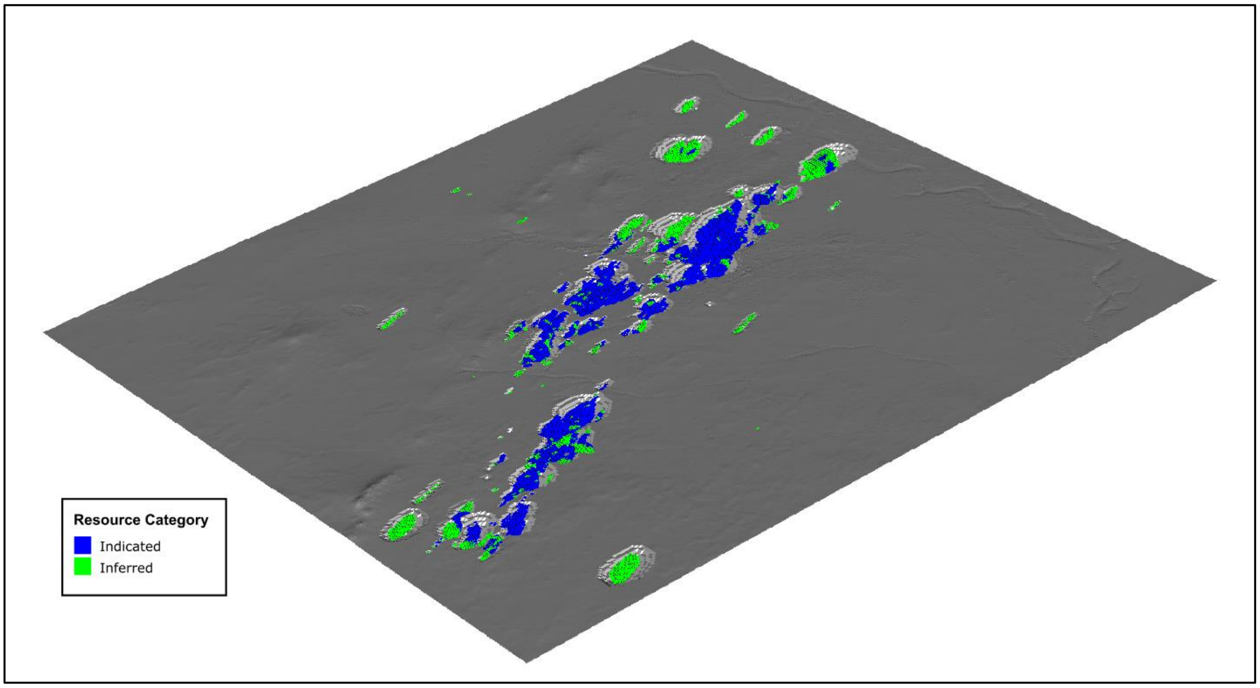


Figure 14.11: Resource Categorization Inside the Whittle Shell Optimized at $1,500 /oz Gold Price for Gossey (Indicated and Inferred Blocks)



14.7 Mineral Resource Sensitivity to Cut-Off Grades

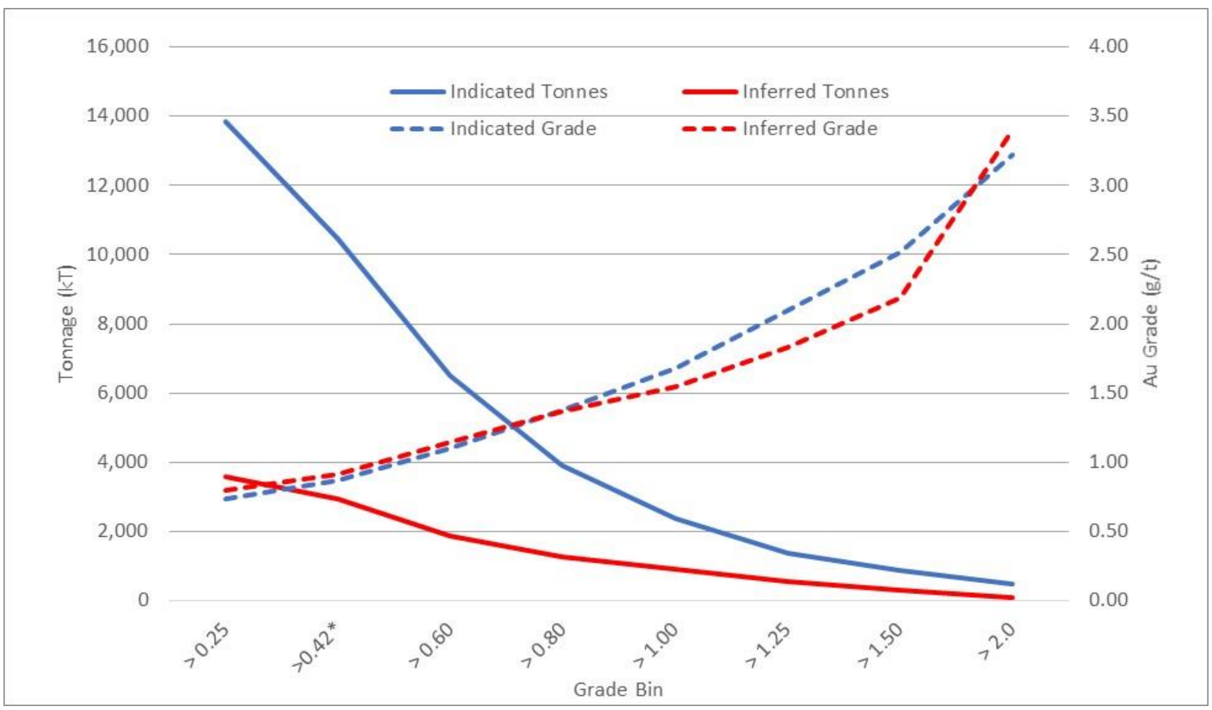
Table 14.12 summarizes the sensitivity of the Constrained Mineral Resources of the Gossey Deposit for a series of selected cut-off grades. The sensitivity analysis uses gold cut-off grades ranging between 0.25 g/t and 2.0 g/t. Figure 14.12 illustrates the grade-tonnage curves for the Indicated and Inferred Mineral Resources for Gossey. The sensitivity table and graph use a compilation of the regolith, saprolite, transition and fresh rock weathering profiles.

Table 14.12: Indicated and Inferred Mineral Resource Sensitivity to Cut-off Grade

Cut-off Grade (g Au/t)	Indicated			Inferred		
	Tonnage ('000 t)	Grade (g Au/t)	Gold (k oz)	Tonnage ('000 t)	Grade (g Au/t)	Gold (k oz)
>2.00 g/t	471	3.22	49	91	3.40	10
>1.50 g/t	876	2.52	71	302	2.19	21
>1.25 g/t	1,379	2.10	93	545	1.83	32
>1.00 g/t	2,382	1.68	129	920	1.54	46
>0.80 g/t	3,902	1.37	172	1,257	1.37	55
>0.60 g/t	6,507	1.10	230	1,879	1.15	69
>0.33/0.42/0.47 g/t*	**10,454**	**0.87**	**291**	**2,939**	**0.91**	**85**
>0.25 g/t	13,837	0.73	327	3,580	0.80	92

*Cut-off grades used for the reporting of the Mineral Resources

Figure 14.12: Grade-Tonnage Curves of Constrained Indicated and Inferred Mineral Resource Estimate at Gossey for Selected Gold Cut-off Grades



*Cut-off grades used for the reporting of the Mineral Resources

14.8 Potential Economic Mineralization at Gossey

In addition to the previously described Indicated and Inferred Resources within the $1,500 gold price Measured, Indicated and Inferred pit shell, GMSI undertook a fourth estimation pass to quantify further potential economic mineralization at Gossey. The values shown in Table 14.13 were generated using a $1,500 gold price Measured, Indicated and Inferred plus PEM (Potential Economic Mineralization from the fourth pass), and show that a further 16,000 Oz can potentially be upgraded to Inferred status with further drilling.

Table 14.13: Potential Economic Mineralization (PEM)

Weathering Profile	Cut-off Grade	Potential Economic Mineralization		
		Tonnage	Grade	Gold
		('000 t)	(g/t)	(k oz)
Laterite & Saprolite	0.35 g Au/t	409	0.87	11
Transition	0.45 g Au/t	105	1.10	4
Fresh Rock	0.51 g Au/t	13	2.16	1
Total	**Varying**	**527**	**0.95**	**16**

It should be noted that potential economic mineralization represents very low confidence ounces (lower confidence that inferred) and are higher-risk exploration targets.

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15 MINERAL RESERVES

Not applicable at this stage of the project.

16 MINING METHODS

Not applicable at this stage of the project.

17 RECOVERY METHOD

Not applicable at this stage of the project.

18 PROJECT INFRASTRUCTURE

Not applicable at this stage of the project.

19 MARKET STUDIES

Not applicable at this stage of the project.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Not applicable at this stage of the project.

21 CAPITAL AND OPERATING COSTS

Not applicable at this stage of the project.

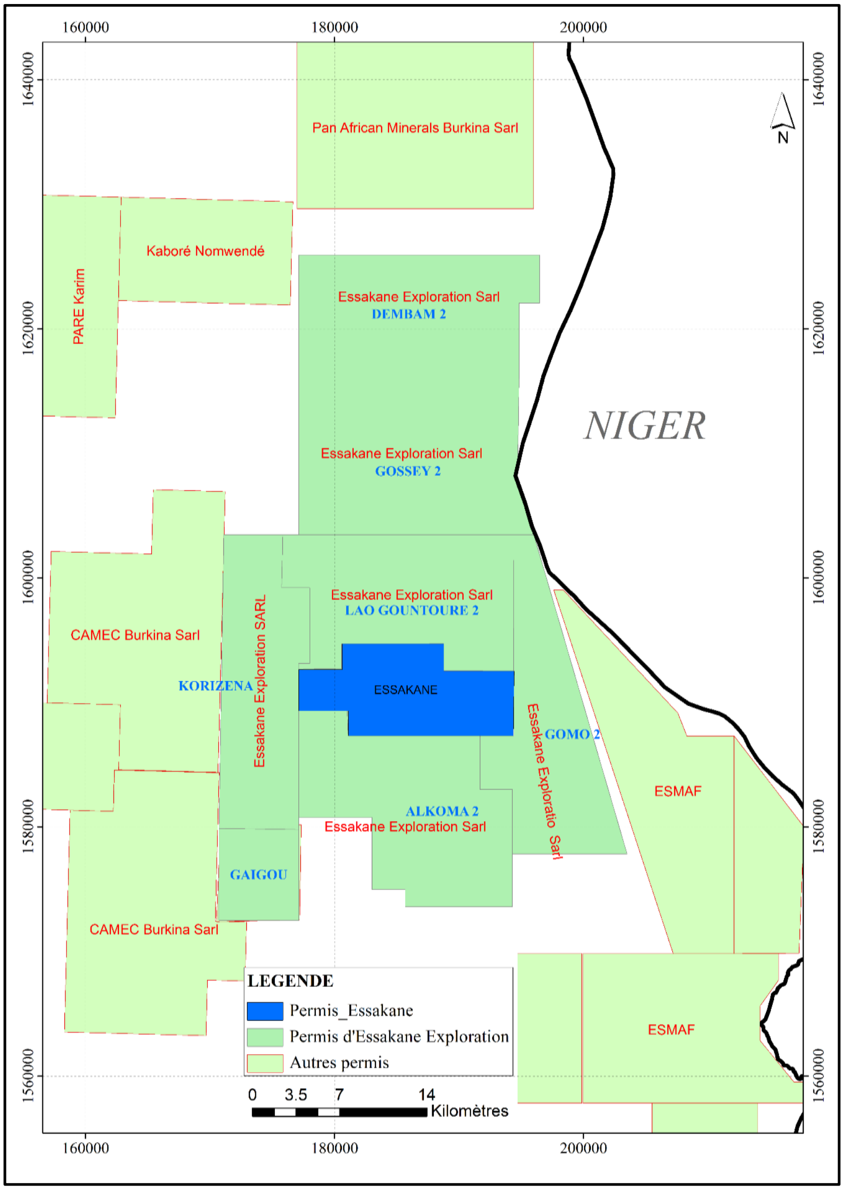
22 ECONOMIC ANALYSIS

Not applicable at this stage of the project.

23 ADJACENT PROPERTIES

Adjacent properties to the Gossey Deposit are held by numerous exploration companies (Figure 23.1). In the west, the Essakane Exploration SARL (subsidiary of IAMGOLD) properties shares its limit with properties held by CAMEC Burkina SARL. In the north, some areas are unoccupied, and others are held by Pan Africa Minerals Burkina SARL, PARE Karim and Kaboré Nomwendé. In the southeast, the permits are held by ESMAF (Établissements Sawadogo Mahamadi et Frères).

Figure 23.1 Adjacent Properties to the Essakane Gold District



This information is relevant as of December 2017.

24 OTHER RELEVANT DATA AND INFORMATION

Not applicable at this stage of the project.

25 INTERPRETATION AND CONCLUSIONS

25.1 Geology and Mineral Resources

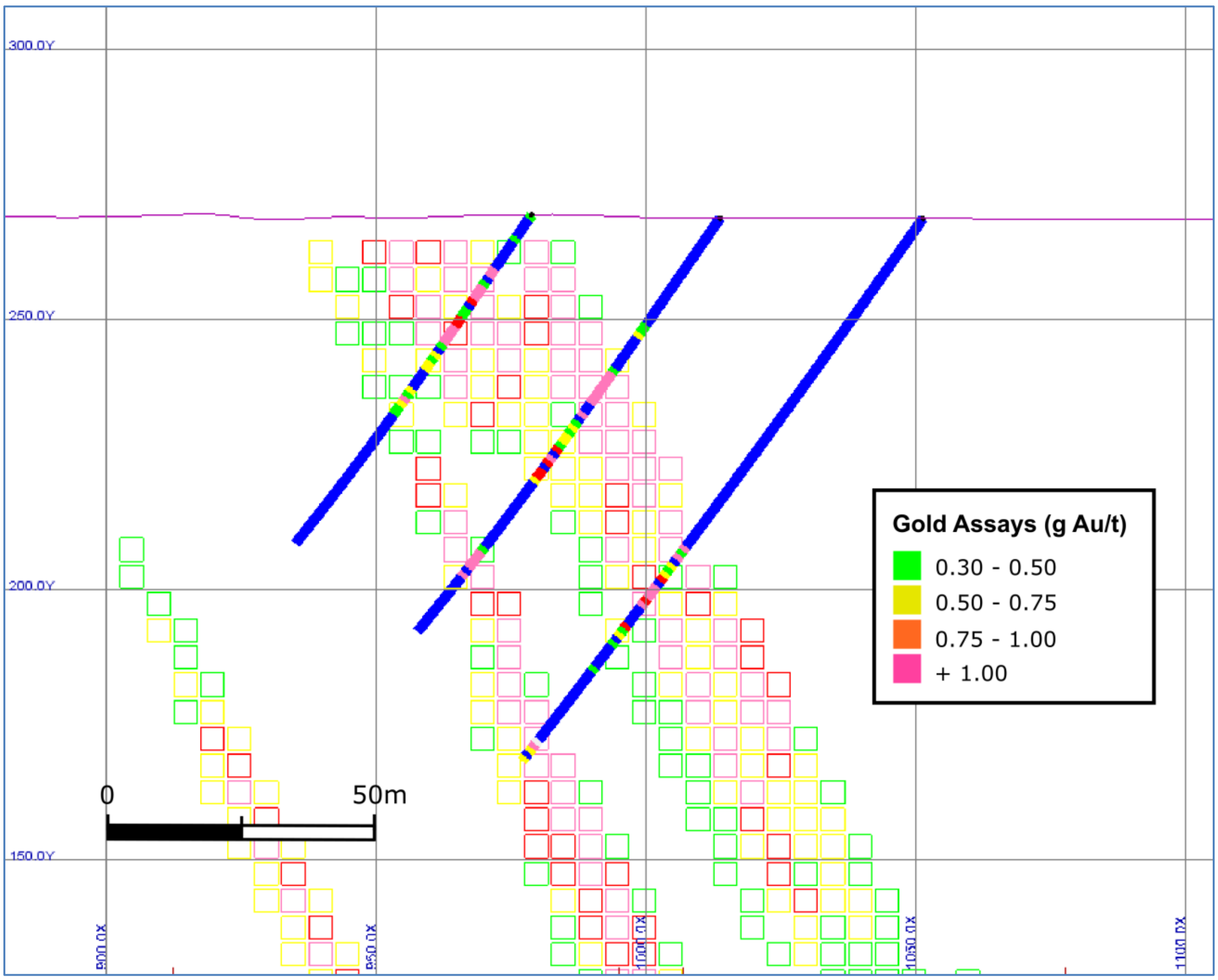
- The geological interpretation for the Gossey Deposit is based primarily on diamond drilling data and geological interpretations by representatives of IAMGOLD Essakane ("IAMGOLD"). The geology of the deposit is well understood.
- The mineralization is found mainly in the arenitic lithologies, and occasionally found within the diorite intrusive. Strongest mineralization is found along the contacts between these two lithologies. The mineralization controls of the deposit are well understood.
- The protocols followed to collect sample data are considered sufficient for National Instruments 43-101 Canadian Standards of Disclosure for Mineral Projects ("NI 43-101") purposes. Stringent protocols are in place to ensure that sampling and assaying of drill samples are undertaken to a high standard, and that QA/QC data is checked frequently to identify any errors that may arise. Sampling has been undertaken based on geological logging and is adequate for the mineralization style and size of the deposit.
- QA/QC samples submitted as part of the 2017 drilling campaign returned values within expectations. QA/QC data from previous drilling campaigns were also reviewed and were found to be in good standing. All analyses were undertaken by the on-site laboratory at the Essakane mine site, with frequent umpire checks submitted to an external laboratory (SGS Ouagadougou). GMSI considers all matters relating to QA/QC in line with NI 43-101requirements.
- Réjean Sirois, P. Eng., from GMSI, supervised the Reverse Circulation ("RC") drilling campaign during a site visit on March 27-31st, 2018 and a laboratory tour was also undertaken. GMSI found the drilling methods and sample recoveries acceptable.
- The geological model was undertaken in Leapfrog GEO™, where 3D wireframe solids of lithologies and weathering profiles were produced and are representative of the style of deposit observed at Gossey.
- Mineral Resources were estimated within the lithology domains using Geovia GEMS™ from 2.5 m long composites using four interpolation passes of Inverse Distance Cubed ("ID^3"). Each search ellipse was incrementally larger than the previous, and dimensions were based on drill hole spacing.
- The block model was validated against the drill hole composites through global and local validation methods, including visual comparisons, descriptive statistics, swath plots and Q:Q plots. No production data was available to validate the accuracy of the model to true known grade. Block grades were found to reproduce composite grades sufficiently in the block model.

- The Mineral Resources are reported within a Lerchs-Grossman open pit shell (based on Indicated and Inferred Mineral Resources) and are effective May 25th, 2018. A 0.33 g Au/t cut-off for saprolite and laterite material, 0.42 g Au/t for transitional material and 0.47 g Au/t for fresh rock were used to report Mineral Resources. A gold price of USD $1,500 per ounce was used for the pit optimization. The open-pit constrained Mineral Resource for the Gossey Project is as follows:
  - Indicated Mineral Resource is estimated to a total of 10.4 Mt at an average grade of 0.87 g Au/t, totalling 291 k oz of gold.
  - Inferred Mineral Resource is estimated at 2.9 Mt at an average grade of 0.91 g Au/t, totalling 85 k oz of gold.
- Mineral Resources were classified into Indicated and Inferred categories according to the CIM Definition Standards on Mineral Resources and Mineral Reserves as adopted by NI 43-101.

26 RECOMMENDATIONS

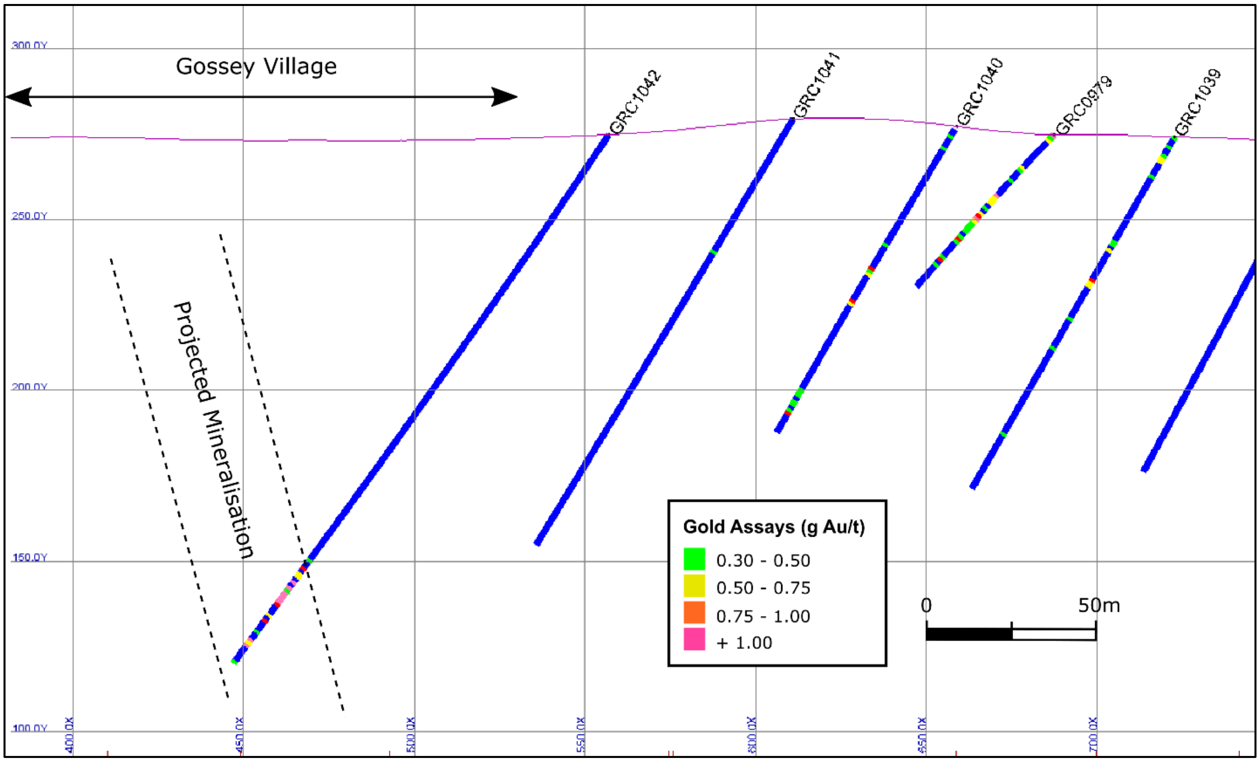
The Gossey Deposit remains open to the northeast, where some of the best intersections of the 2018 drilling campaign were returned (23 m @ 1.18 g Au/t, 26 m @ 2.26 g Au/t and 14 m @ 1.17 g Au/t). The most northern drill line (Figure 26.1) is located on the northeast margin of the Gossey Village, and artisanal workings continue further northeast for 1 km. There is scope for significant additional tonnage to be discovered along this highly prospective trend.

Figure 26.1: Most Northern Section of the 2018 Drilling Campaign Showing Strong Mineralization



Although the Gossey Deposit is well-delineated to the south, there remain excellent prospects of finding mineralization beneath the existing Gossey Village. Early RC drilling (before the expansion of the Gossey Village) discovered mineralization at depth (GRC1042 – 14 m @ 1.3 g Au/t from 155 m), which appears to be open hundreds of metres to the northeast and southwest (Figure 26.2).

Figure 26.2: Section 18350 – Mineralization at Depth Beneath the Gossey Village



GMSI also proposes the following recommendations:

1) Increase the proportion of diamond drilling (currently 14%) within the constrained mineral resource to increase confidence in the gold grades and provide more bulk density data.
2) Periodically review the reverse circulation drill sample splitting procedure. During the site visit it was noted that the riffle splitters were often bias towards one side (poorly aligned), therefore affecting the ability to obtain a representative sample. In addition, sample splitting was undertaken outside in windy conditions resulting in a loss of fine material during splitting.
3) A budget of 1.0 M$ is proposed to drill the northeast extensions of the deposit.

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