

# The Saramacca Gold Deposit, A New Orogenic Gold Discovery in the Guiana Shield

AMEC Round Up 2018, Vancouver

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#### **Forward Looking Statement**

This presentation contains forward-looking statements. All statements, other than of historical fact, that address activities, events or developments that the Company believes, expects or anticipates will or may occur in the future (including, without limitation, statements regarding expected, estimated or planned gold production, all-in sustaining costs and other cost estimates, capital expenditures and exploration expenditures and statements regarding the estimation of mineral resources and mineral reserves, exploration results, life-of-mine estimates and potential mineral resources and mineral reserves) are forward-looking statements. Forward-looking statements are generally identifiable by use of the words "may", "will", "should", "continue", "expect", "anticipate", "estimate", "believe", "prospective", "significant", "significant potential", "substantial", transformative", "intend", "plan" or "project" or the negative of these words or other variations on these words or comparable terminology. Forward-looking statements are subject to a number of risks and uncertainties, many of which are beyond the Company's ability to control or predict, that may cause the actual results of the Company to differ materially from those discussed in the forward-looking statements. Factors that could cause actual results or events to differ materially from current expectations include, among other things, without limitation, failure to meet expected, estimated or planned gold production, unexpected increases in all-in sustaining costs or other costs, unexpected increases in capital expenditures and exploration expenditures, variation in the mineral content within the material identified as mineral resources and mineral reserves from that predicted, changes in development or mining plans due to changes in logistical, technical or other factors, the possibility that future exploration results will not be consistent with the Company's expectations, changes in world gold markets and other risks disclosed in IAMGOLD's most recent Form 40-F/Annual Information Form on file with the United States Securities and Exchange Commission and Canadian securities regulatory authorities. Any forward-looking statement speaks only as of the date on which it is made and, except as may be required by applicable securities laws, the Company disclaims any intent or obligation to update any forward-looking statement.

#### **Qualified Persons & Technical Information**

The mineral resource estimate, including verification of the data disclosed, has been completed by SRK Consulting (Canada) Inc ("SRK") and reported in accordance with NI 43-101 requirements and CIM Estimation Best Practice Guidelines. The resource estimate was prepared by Mr. Glen Cole, P.Geo., Principal Resource Geologist and Dr. Oy Leuangthong, P.Eng., Principal Geostatistician with SRK.

Both Mr. Cole and Dr. Leuangthong, who are independent qualified persons under NI 43-101, have reviewed and approved the contents relating to the mineral resource estimate in this presentation. The technical information in this presentation was reviewed and approved by Craig MacDougall, P.Geo., Senior Vice President, Exploration for IAMGOLD. Mr. MacDougall is a Qualified Person as defined by National Instrument 43-101.

Notes to Investors Regarding the Use of Resources

#### **Cautionary Note to Investors Concerning Estimates of Measured and Indicated Resources**

This presentation uses the term "indicated resources". We advise investors that while that term is recognized and required by Canadian regulations, the United States Securities and Exchange Commission (the "SEC") does not recognize them. Investors are cautioned not to assume that any part or all of mineral deposits in these categories will ever be converted into reserves.

#### **Cautionary Note to Investors Concerning Estimates of Inferred Resources**

This presentation also uses the term "inferred resources". We advise investors that while this term is recognized and required by Canadian regulations, the SEC does not recognize it. "Inferred resources" have a great amount of uncertainty as to their existence and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Investors are cautioned not to assume that part or all of an inferred resource exists, or is economically or legally mineable.

#### **Scientific and Technical Disclosure**

IAMGOLD is reporting mineral resource estimates in accordance with the CIM guidelines for the estimation, classification and reporting of resources.

**References**: see news releases dated February13, March 29, May 15, June 16, July 26, September 5, October 17, and November 16, 2017

#### Talk Outline

- Regional Context
- Rosebel Operation
- Property Geology
- Exploration History
- Saramacca Deposit Setting
- Mineral Resources
- Next Steps

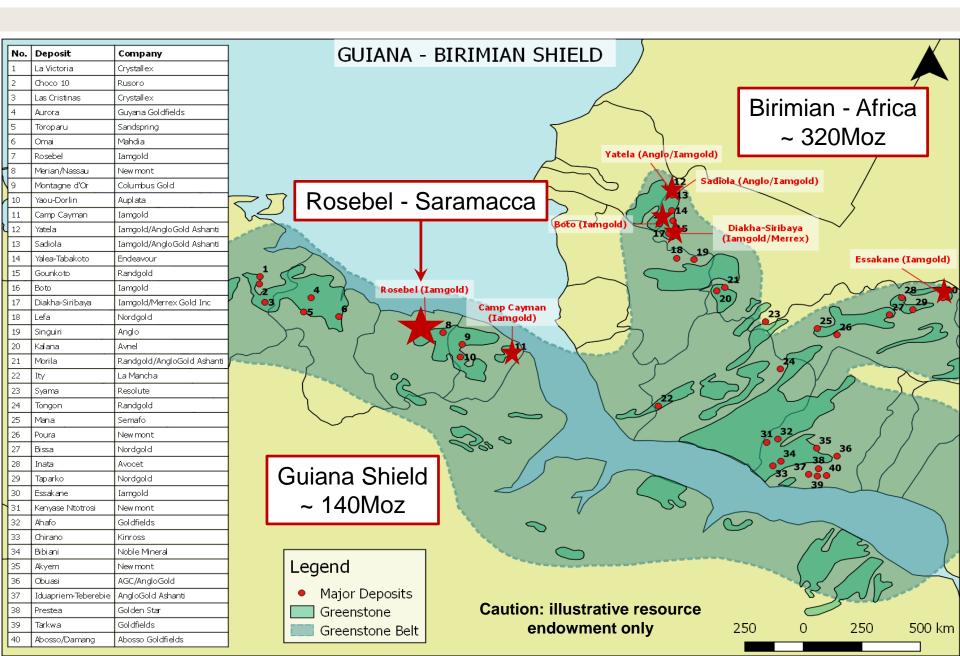




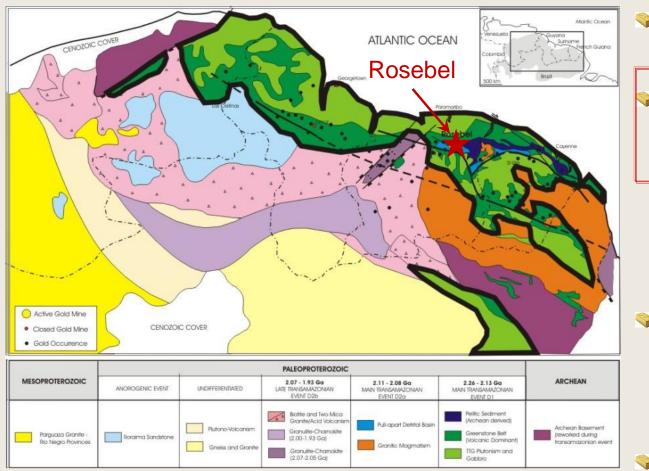




#### Reconstructed Guiana and Leo-Man Shields - Regional Gold Endowment



### Regional Geology – Guiana Shield



Archean Basement

 Imataca Complex

 Transamazonian Orogeny

 TTG & Greenstone Belts (2.26-2.13Ga)
 Pull-Apart Basins

& Granitic Magmatism (2.11-2.08Ga)

- ≽ Late Transamazonian
  - High Grade Metamorphism
  - Plutono Volcanism

Senic Events

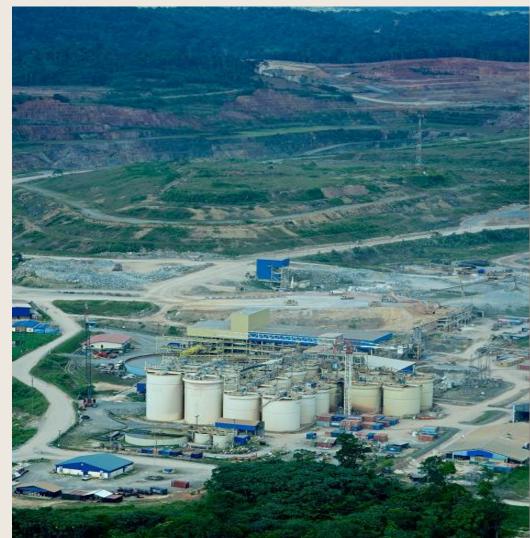
Gold deposit / occurrence

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Modified from Daoust et. al., 2011

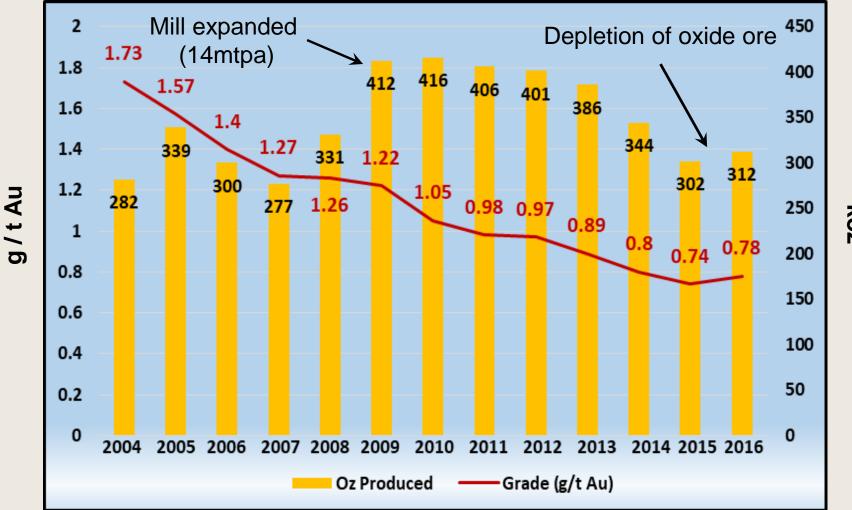
### **Rosebel Operations - Suriname**

- Began full production in 2004
- Acquired from Cambior in 2006
- Operations: 8 deposits, 6 pits
- Production: ~ 4.8Moz
- Reserves<sup>1</sup>:
  - **3.7Moz** @1.0 g/t Au
- Resources<sup>1</sup>:
  - M+I: 9.3Moz @ 0.9 g/t Au
  - Inf: 2.7Moz @ 1.0 g/t Au
- QV-hosted orogenic gold deposit





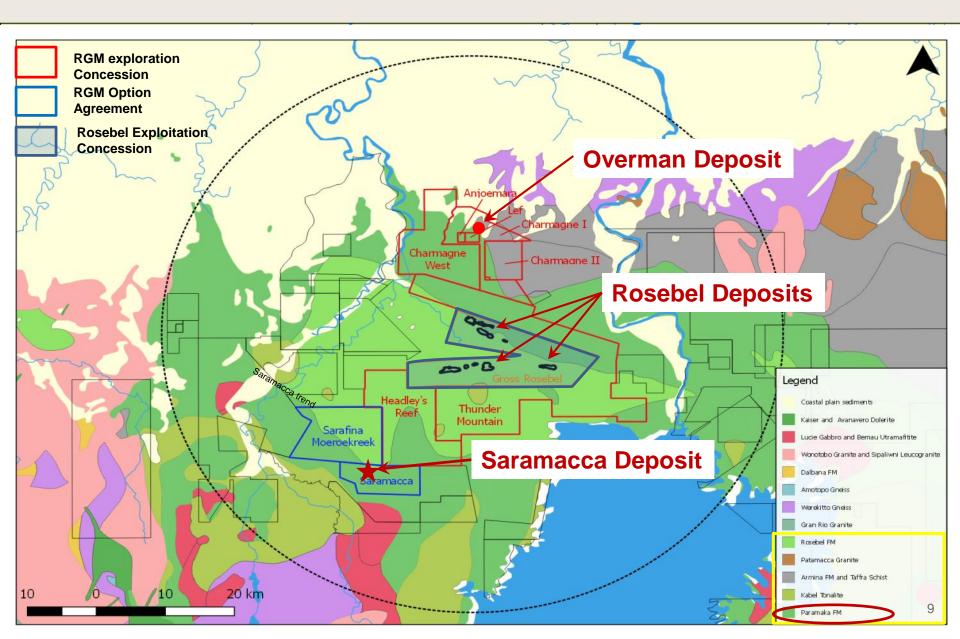
#### Historical Production vs. Grade

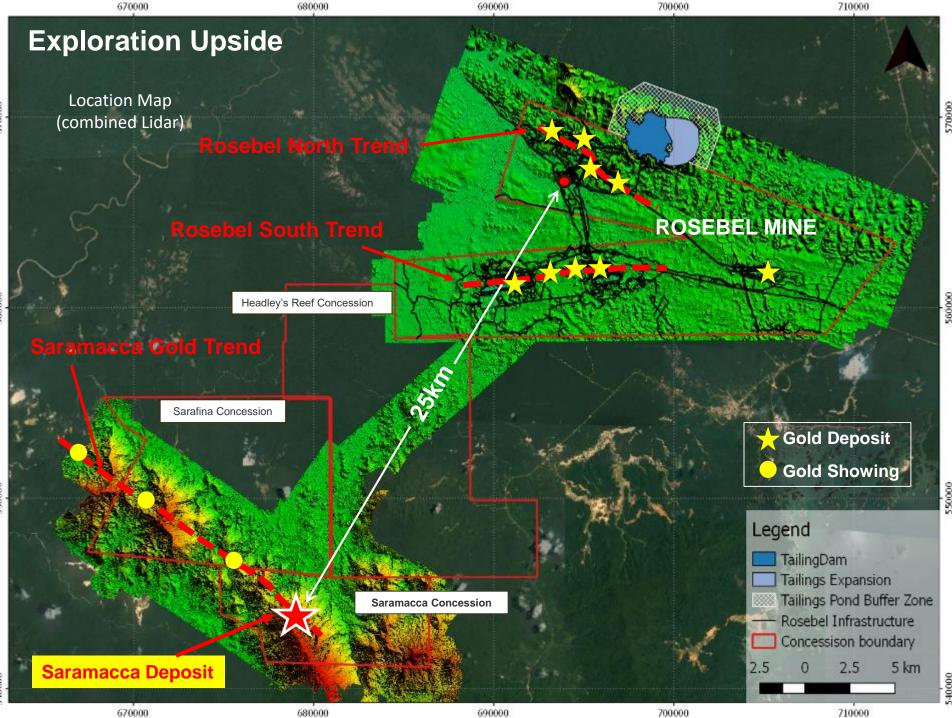




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#### **Property Geology**





### **Exploration History**

Company	Dates	Work	
Golden Star Resources (GSR)	1994 - 2005	<ul> <li>Airborne magnetics &amp; radiometric survey</li> <li>Geochemistry: stream, soils and deep auger</li> <li>24 DDH's (1307m)</li> </ul>	
GSR – Newmont JV	2006-2012	<ul><li>IP survey</li><li>Deep Auger</li><li>66 DDH's (13,713m)</li></ul>	
IAMGOLD	2016-2017	<ul> <li>2017 RC and DDH's (38,731m)</li> <li>Mineral resource estimate (August 2017)</li> </ul>	



## Saramacca Gold Project

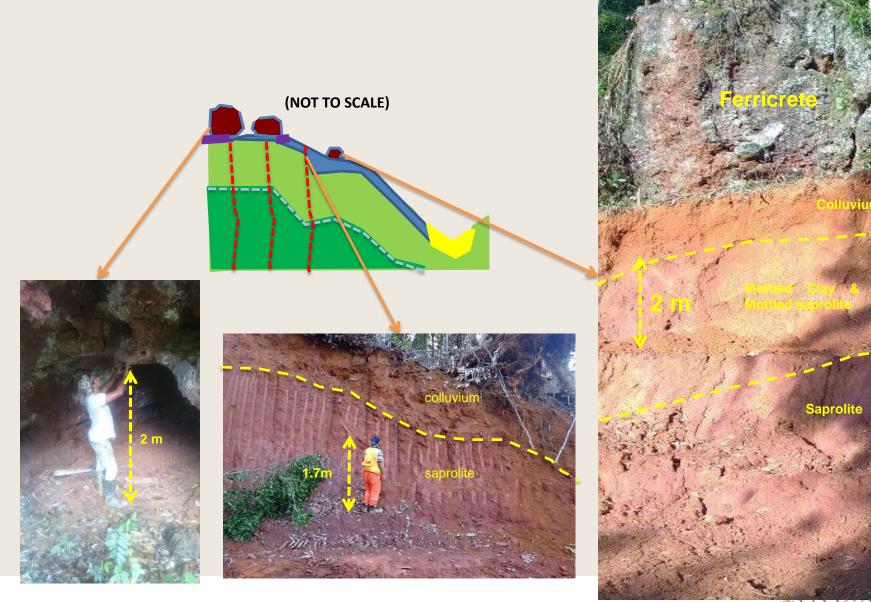
Gold-rich drainages

Rosebel 25km

Main access road

Brokolonko Krus Some drill pads

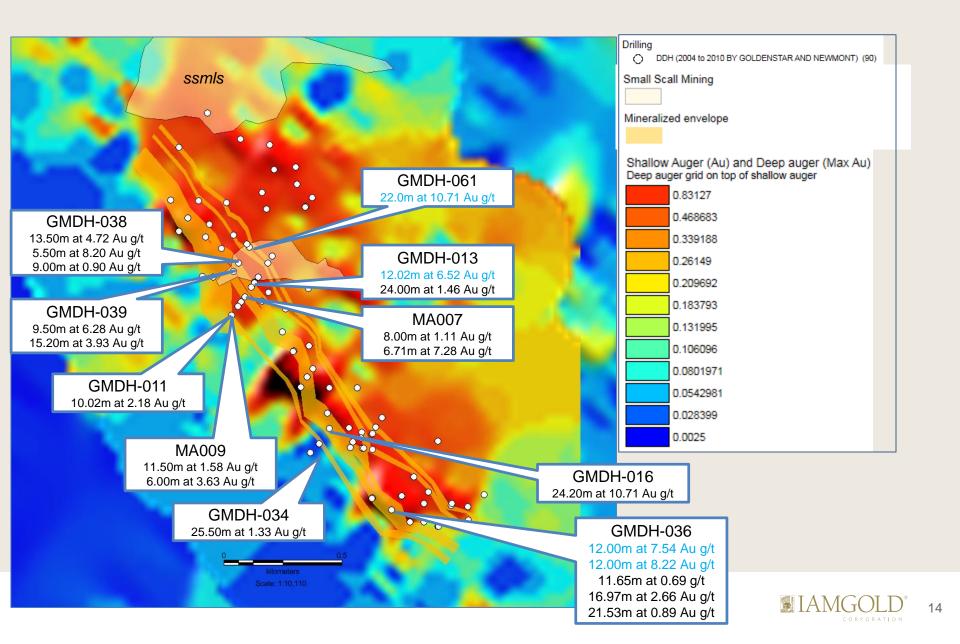
### Deep Weathering Profile

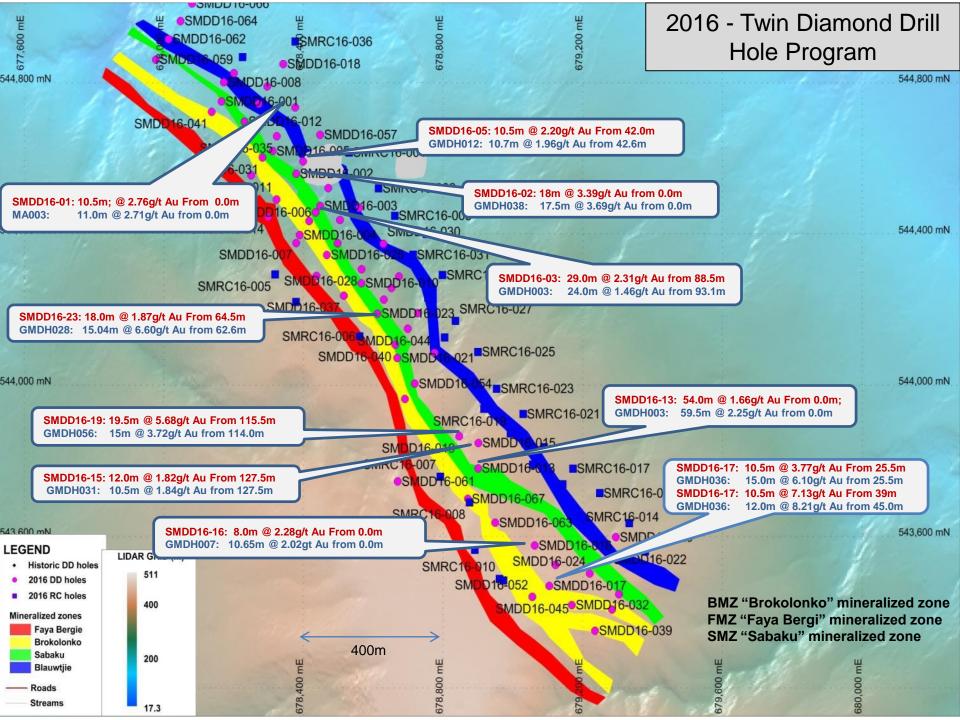


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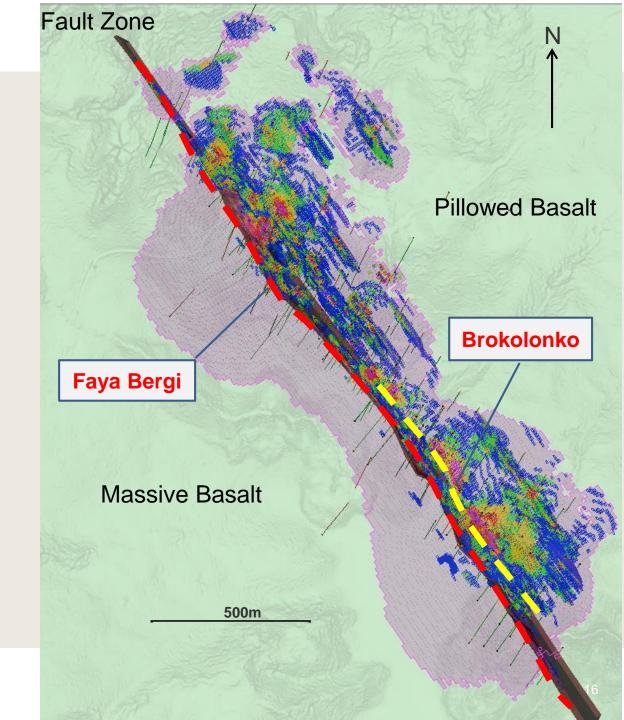
#### Historical Drilling - Selected Results on Au-in-Auger Geochem

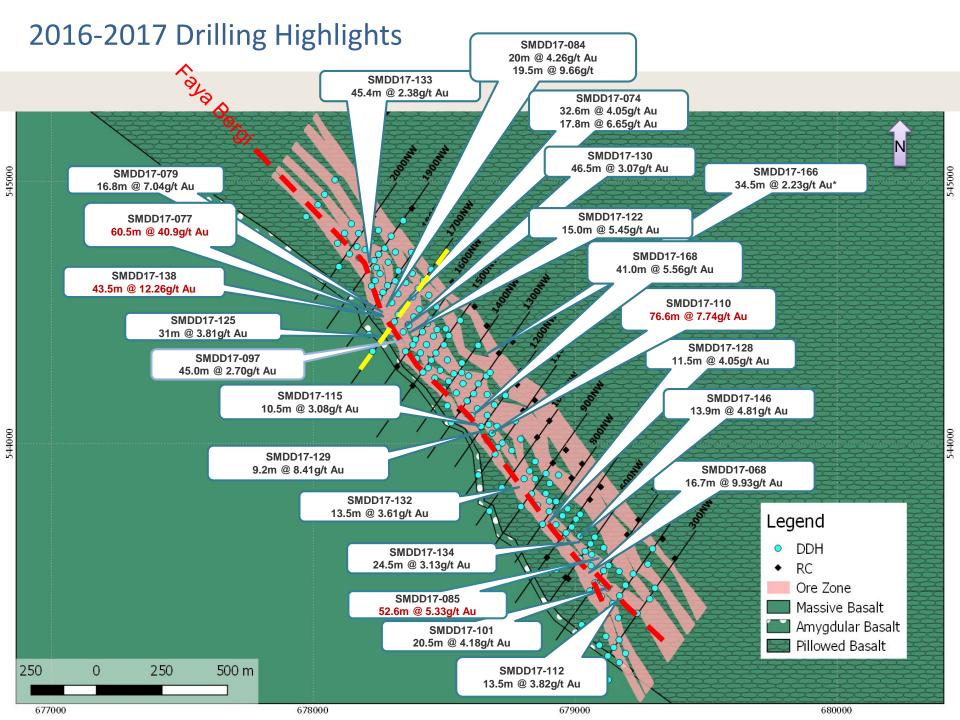


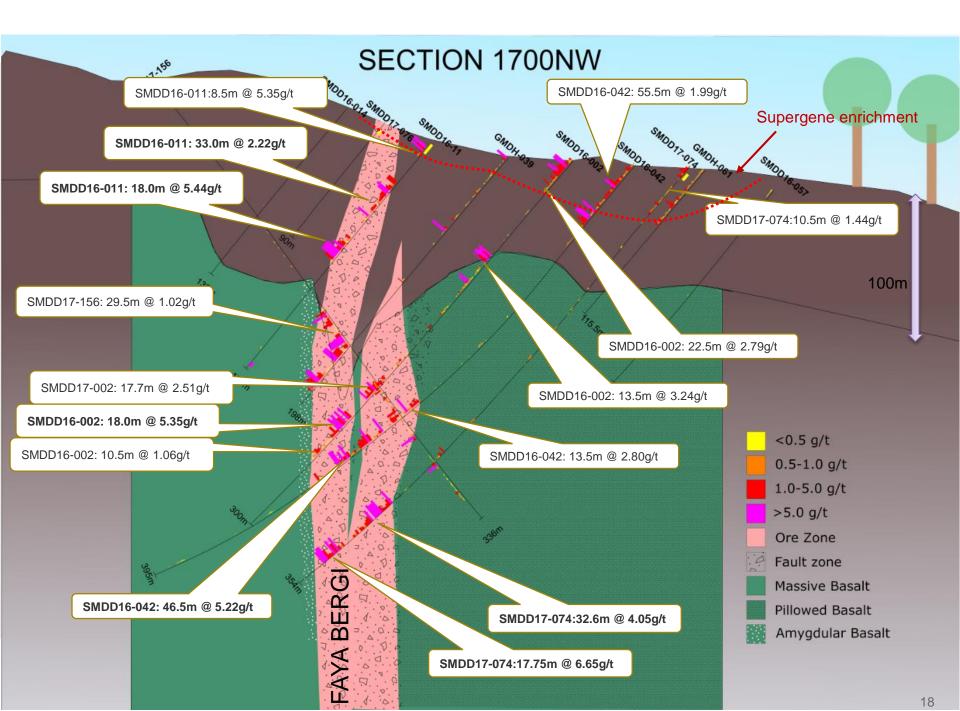


### **Deposit Setting**

- Gold mineralization associated with a major brittle-ductile NW trending vertical fault zone located at the contact between massive and pillowed basalt units
- Multiple mineralized structures with main fault and associated sub parallel shear zone within corridor at least 2km along strike (open) and 400m wide
- Deep weathering profile preserved with the depth of oxidation ranging from 50m to 100m and locally to 200m







#### Supergene enrichment in duricrust and upper regolith facies



SMDD16-016 : From 0m: 8m @ 2.3 g/t Au (Section 550W)



#### Oxide mineralization: generally soft white clay and saprolite



e.o.

Massive clay 54.3m: part of a 1.5m interval @ 10.3 g/t Au

\*All grades in g/t Au



#### Fault Zone - Brittle Features

- Cataclasites (fault breccias with/without hydrothermal infill)
- Clay gouges
- Fractured zones (gravel, broken rock)
- Striated fault slips (graphitic)











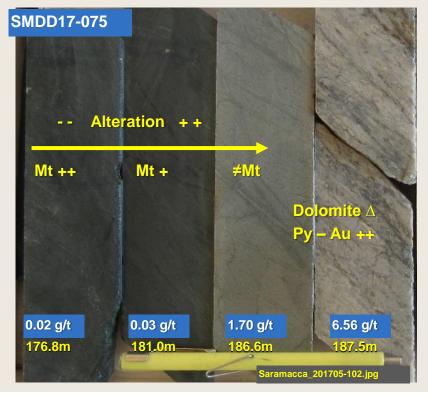
#### Fault Zone - Ductile Features

- Foliation, flattening & stretching
- Minor folding
- Shear foliation



### Hydrothermal Alteration

- Classic mafic rock hydrothermal alteration pattern:
  - Outer: Chlorite-calcite halo (magnetite destruction).
  - Inner: Muscovite (sericite), dolomite, pyrite, (albite?), gold.



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In Basalt

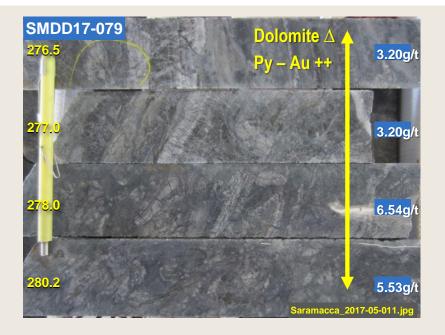
#### SMDD16-008 Sericite Main Faya **Dolomite** $\Delta$ Bergi Fault 7.61 g/t 0.04 g/t 14.54 g/t 0.15 g/t 164.6m 167.9m 162.3m 171.8m Saramacca\_201705-126.jpg

#### In Amygdalar Basalt

**EXAMONATION** 

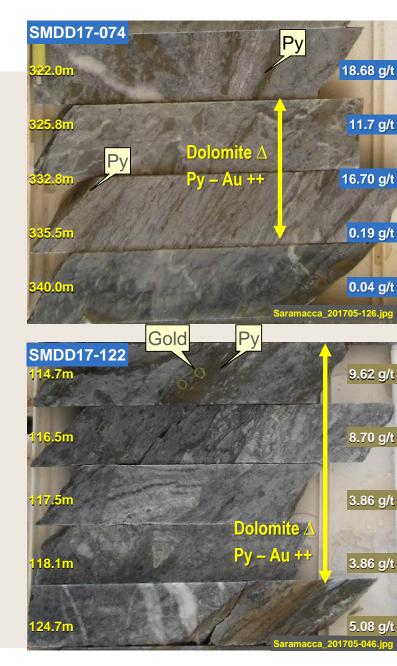
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### **Gold Mineralization**



- Hosted in hydrothermal dolomite veins and breccia's

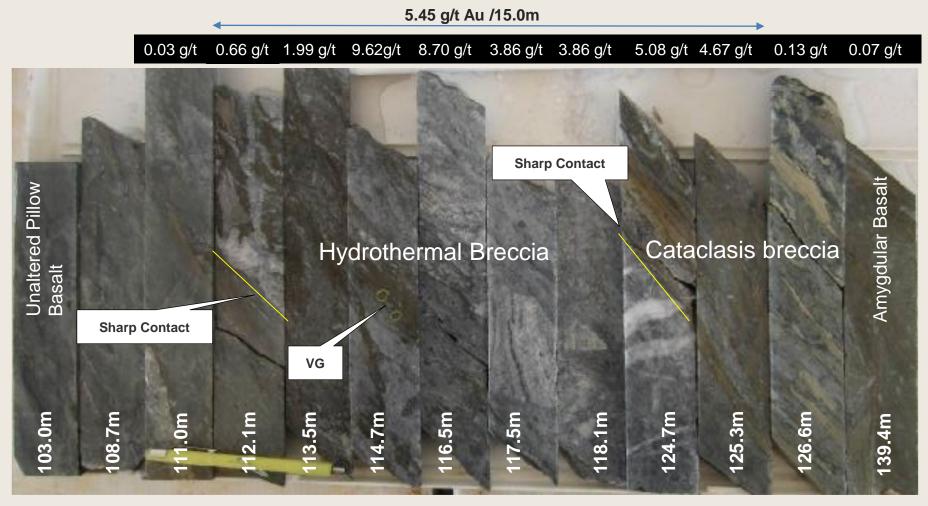
- Display repeated "crack / seal" & dilational infilling
- Associated with Py & trace Aspy
- Abundant visible gold







### **Typical Mineralized Sequence**



(\* Fresh Rock)





- **Data base:** 307 diamond & reverse circulation drill holes totaling 47,000 metres
  - IMG: 217 DD & RC holes totaling 37,700 metres (80% of total) >
  - 32,250 assay intervals & 2,350 SG determinations >
- **Modelling:** Wire frames created for dominant lithologies, mineralized structures & weathering profile
  - Mineralized structures sub-domained by grade >
- **Data Conditioning:** 
  - Assay QA / QC review
  - Assay composite length 1.5 metres >
  - Variable capping by domain (i.e. HG domains capped at 20 40 g/t Au) >
  - Continuity analysis by calculating variograms using Geostatistical Software Library >
    - Low nugget and long ranges confirm good continuity within domains
- Block model:
  - 5 x 10 x 5 metre blocks >
  - Interpolation by ordinary kriging >
- **Classification:** 
  - Indicated blocks: 40 x 40 x 40 metre search radii informed by a minimum 3 drill holes >
  - Inferred blocks: all other blocks not more than twice the variogram range >
- Conceptual pit shell @ US\$1,500 /oz:
  - Slopes: 30°, 35°, 45° >
  - (laterite/saprolite, transition, fresh rock) Met recoveries: 97%, 76%, 82% >
  - Cut off grades: 0.25, 0.35, 0.45 ->
    - Operating costs: as per current Rosebel operations plus a transport cost

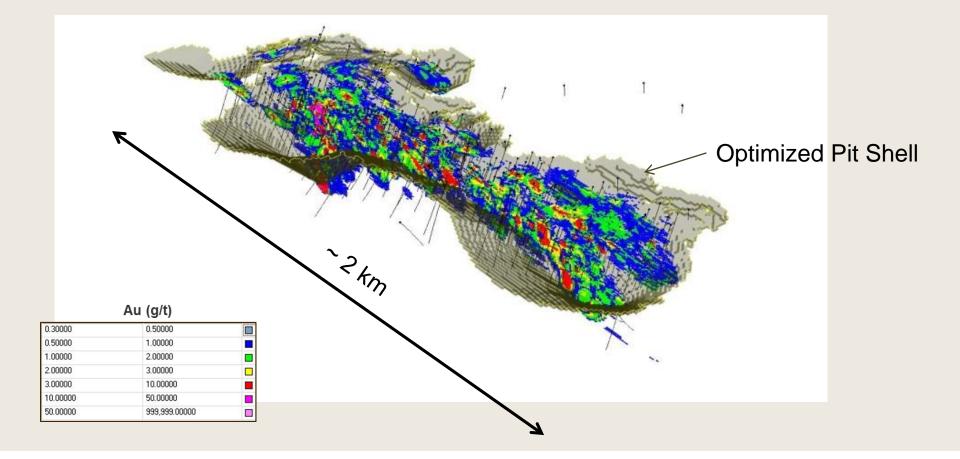
### **srk** consulting



#### **Resources Constrained by Conceptual Pit**

#### **Pit Optimization Parameters**

- Pit slopes: 30 45° (sap to fresh)
  - Metal Recoveries (%): 97 (lat/sap), 76 (trans), 82 (fresh)
- Mining: 95% mining recovery, 5% dilution



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#### Mineral Resource Statement – Saramacca (as at August 28, 2017)

Category	Weathering Zone	Cut-off Grade (g/t Au)	Tonnage ('000 t)	Grade (g/t Au)	Contained Au (koz)
	Laterite	0.25	2,372	1.20	91
Indicated	Saprolite	0.25	5,573	2.43	436
	Transition	0.35	2,526	2.17	176
	Fresh	0.45	3,973	2.49	318
Total Indicated			14,444	2.20	1,022
	Laterite	0.25	4,455	0.69	98
Inferred	Saprolite	0.25	4,790	0.82	126
	Transition	0.35	1,349	1.97	86
	Fresh	0.45	3,039	2.13	208
Total Inferred			13,632	1.18	518

Notes:

1. Mineral resources are not mineral reserves and have not demonstrated economic viability.

2. CIM definitions were followed for classification of Mineral Resources.

3. Cut-off grades are 0.25 g/t Au for laterite and saprolite, 0.35 g/t Au for transition and 0.45 g/t Au for fresh rock.

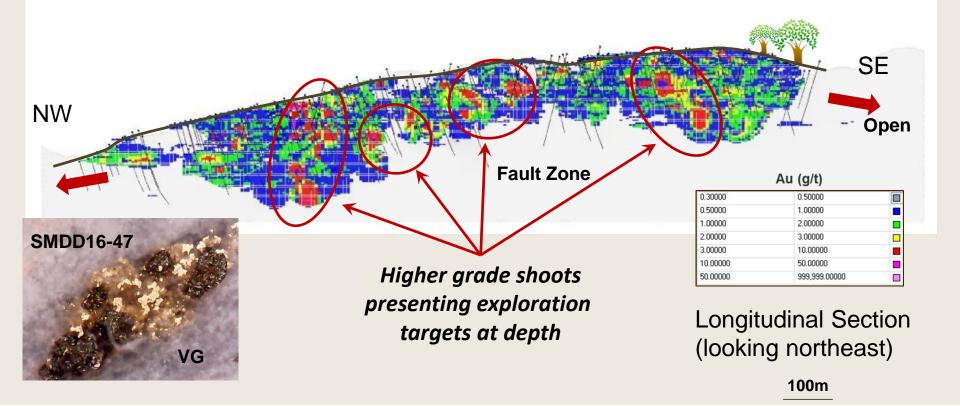
4. Mineral Resources are reported using a gold price of US\$1,500 per ounce.

5. Mineral Resources are constrained by a Whittle optimized pit shell.

6. All figures have been rounded to reflect the relative accuracy of the estimates. Discrepancies in sums may occur due to rounding.

### Block Model with Interpolated Gold Grades

# Continuous Envelope of lower grade mineralization along Fault Zone with Higher Grade "Shoots"





### Next Steps - Development

#### Mine Development

- Infrastructure planning underway:
  - > Ore transport options / transportation corridors
  - > Waste rock disposal and stockpiles
  - > Site roads and infrastructure
  - > Infrastructure capital requirements

#### **Metallurgical Testing**

- Refine recovery assumptions
- Test crushing and grinding characteristics
- Assess metallurgical variability

#### Mine Design

- Integrated scheduling of Saramacca and Rosebel resources
- Detailed operating cost models
- Complete geologic and engineering studies
  - Geotechnical and water management
  - Mining fleet selection and capital requirement

#### **Exploration and Drilling**

- Orebody extensions
- Infilling / conversion of inferred resources
- Geotechnical investigation and condemnation drilling



## Initial production expected 2019



# Looking to the West and... and to the Future

## Thank you

Saramacca Exploration Camp

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