



# MINISTRY OF MINES AND MINERAL RESOURCES

## NATIONAL MINERALS AGENCY (NMA)

### MINES AND MINERALS DEVELOPMENT ACT, 2023

*Transforming the Minerals Sector for a Better Sierra Leone*

#### MINERALOGICAL LAB – PRECIOUS MINERALS TRADING DEPARTMENT (PMT/D)

Date: Tuesday 3<sup>rd</sup> December 2024

#### SAMPLE DESCRIPTION:

ALLUVIAL GOLD DORE BARS

#### SUBMITTED BY:

MICHAEL WILLIAM – EARTH ELEMENTS

#### LICENSE CODE:

GEL 9/ 2024

#### ANALYSIS REQUIRED:

ASSAY & PURITY TEST

#### METHOD OF EVALUATION:

Inductively Coupled Plasma-Optical Emission Spectrometry

(Reference: EPA METHOD 6010C)

#### AVERAGE PURITY TEST RESULT:

Valuation Category	Parcels	Specific Gravity	Grade (%)	Pure Weight (Grams)	Price Weight (Troy Ounce)	Karat
Bar's Sample (AU-5532/PMT)	150.00	18.75	96.89000	150,391.04	5,305	23:291
Bar's Sample (AU-5532/PMT)	150.00	18.88	97.09211	150,244.69	5,300	23:403
Dust Sample (N/A)	N/A	-	-	-	-	-

#### TOTAL RESULT:

**Weight:** 300.635 Kilograms **Grams:** 300,635.73 grams **Ounce:** 10,605 oz

**S.G:** 18:815

**Grade:** (A)

**Karat:** 23:347

**Purity:** 96.991055%

**Description:** Unrefined

**Note:** The information in the above table is based on the analysis of the average purity test. The calculations are made according to the Government Gold and Diamond valuer preference system.

#### Summary (X-Ray Fluorescence Machine) – XFR:

Bar's No	Weight (kg)	Weight (g)	Ounce (oz)	Specify Gravity (s.g)	Grade	Karat-age	Gold – AU (%)	Silver – AG (%)	Tin – SN (%)	Copper – CU (%)	Description
150	300	300,635	10,605	18:81	(A)	23:27	96.62	1.055	2.641	0.316	Unrefined



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### **Quick Summary:**

The test was conducted using an X-RAY Fluorescence (XRF) machine, and the results show that both gold bars have high purity, with Gold (Au) content exceeding 96%.

The presence of Silver (Ag), Tin (Sn), and Copper (Cu) in the gold bars is minimal, indicating the high – quality and purity of the gold.

These gold bars are of excellent quality and meet with the standard provided by Mineralogical Lab requirements for high-grade gold.

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03/12/24

**Mineral Lab Officer – NMA**



03/12/24

**Geological Survey Officer – MMO**