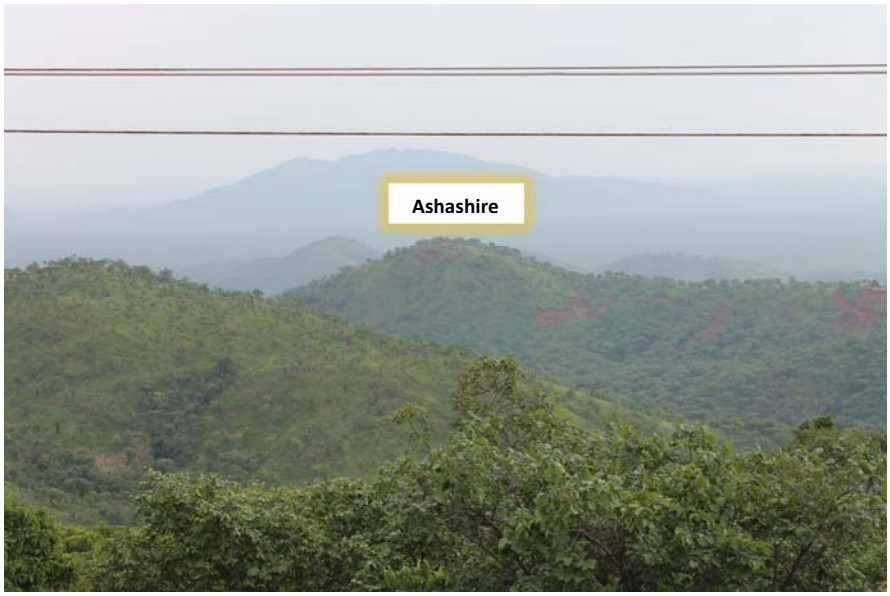
Benzu
Gold Mining Ethiopia PLC

Year 2013 Annual Report
On
Gold Exploration

Dul-Menghe, Agusha East and Agusha West Exploration Blocks

Asosa Zone, Benishangul-Gumuz
National Regional State
(Minerals Exploration License#:056-319/99)

Annex 5- Sample Prep and Analytical Procedures



February 2014

Sample Preparation Procedures

(Summary)

PREP-31: Logging of samples into the tracking system, weighing, drying, fine crushing of entire sample to 70% -2mm, split off 250g and pulverize split to better than 85% passing 75 microns.

CRU-QC: Crushing QC Test

PUL-QC: Pulverizing QC test

PREP-41: Logging of samples, weighing, drying, and sieve sample to -180 micron (80 mesh). Retain both fractions.

LOG-24: Log received sample pulp in tracking system - Sample pulps received without bar code labels attached.

LOG-QC: QC Test for samples received as pulp

SPL-21: Split sample using riffle splitter.

SPL-21d: Duplicate split sample using riffle splitter.

Sample Preparation Package

PREP-31

Standard Sample Preparation: Dry, Crush, Split and Pulverize

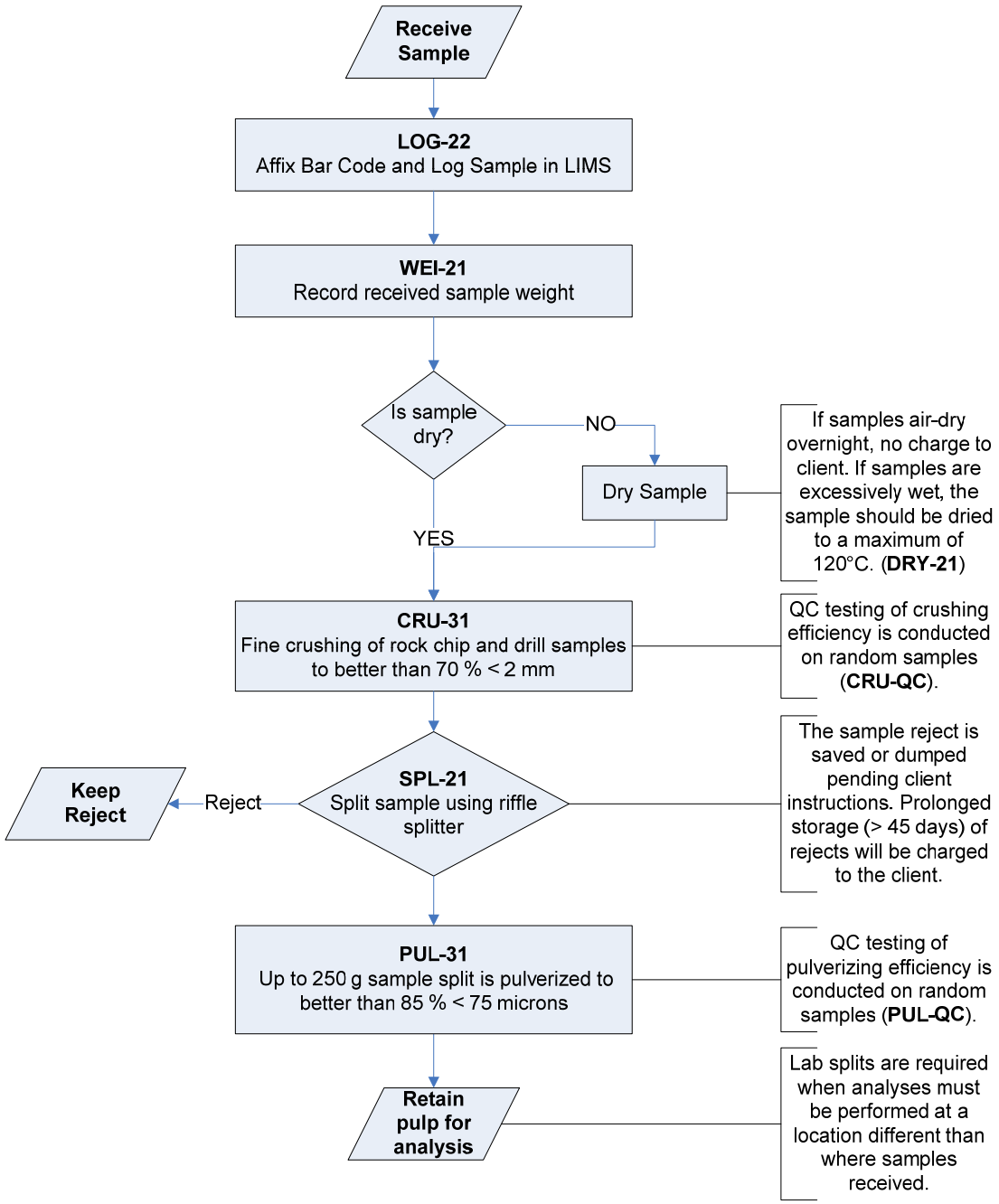
Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory.

The sample is logged in the tracking system, weighed, dried and finely crushed to better than 70 % passing a 2 mm (Tyler 9 mesh, US Std. No.10) screen. A split of up to 250 g is taken and pulverized to better than 85 % passing a 75 micron (Tyler 200 mesh, US Std. No. 200) screen. This method is appropriate for rock chip or drill samples.

Method Code	Description
LOG-22	Sample is logged in tracking system and a bar code label is attached.
DRY-21	Drying of excessively wet samples in drying ovens. This is the default drying procedure for most rock chip and drill samples.
CRU-31	Fine crushing of rock chip and drill samples to better than 70 % of the sample passing 2 mm.
SPL-21	Split sample using riffle splitter.
PUL-31	A sample split of up to 250 g is pulverized to better than 85 % of the sample passing 75 microns.

Flow Chart - Sample Preparation Package – PREP-31

Standard Sample Preparation: Dry, Crush, Split and Pulverize



PREP-41

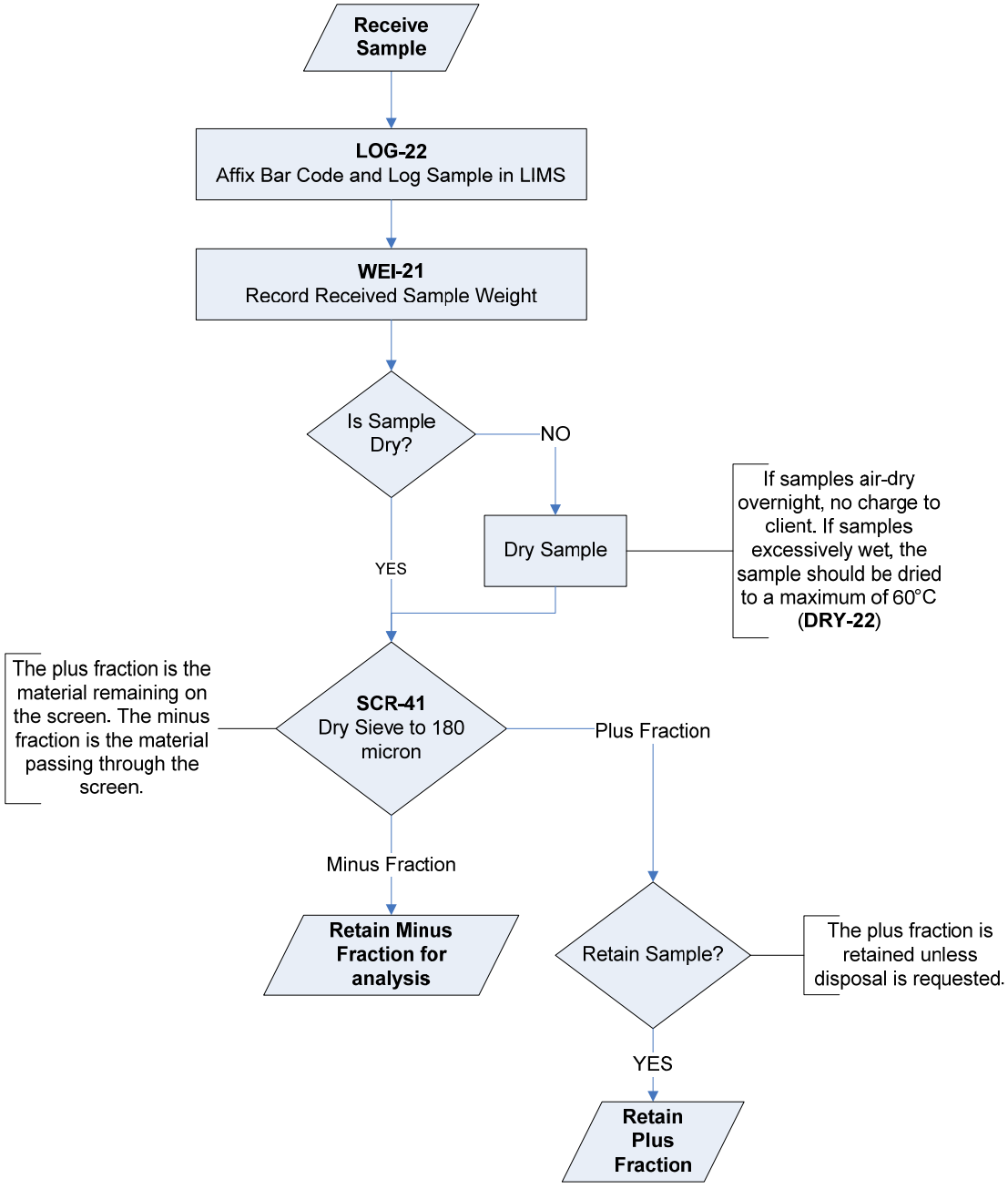
Standard Preparation: Dry sample and dry-sieve to –180 micron

Sample preparation is the most critical step in the entire laboratory operation. The purpose of preparation is to produce a homogeneous analytical sub-sample that is fully representative of the material submitted to the laboratory.

An entire sample is dried and then dry-sieved using a 180 micron (Tyler 80 mesh) screen. The plus fraction is retained unless disposal is requested. This method is appropriate for soil or sediment samples up to 1 kg in weight.

Method Code	Description
LOG-22	Sample is logged in tracking system and a bar code label is attached.
SCR-41	Sample is dry-sieved to – 180 micron and both the plus and minus fractions are retained.

Sample Preparation Flowchart Package –PREP-41



Ag-GRA21, Ag-GRA22, Au-GRA21 and Au-GRA22

Precious Metals Gravimetric Analysis Methods

SampleDecomposition:

Fire Assay Fusion (FA-FUSAG1, FA-FUSAG2, FA-FUSGV1 and FA-FUSGV2)

AnalyticalMethod:

Gravimetric

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button. The lead button containing the precious metals is cupelled to remove the lead. The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold. Silver, if requested, is then determined by the difference in weights.

Method Code	Element	Symbol	Units	Sample Weight (g)	Detection Limit	Upper Limit
Ag-GRA21	Silver	Ag	ppm	30	5	10,000
Ag-GRA22	Silver	Ag	ppm	50	5	10,000
Au-GRA21	Gold	Au	ppm	30	0.05	1000
Au-GRA22	Gold	Au	ppm	50	0.05	1000

Au-AA23&Au-AA24

Fire Assay Fusion, AAS Finish

SampleDecomposition:

Fire Assay Fusion (FA-FUS01 & FA-FUS02)

AnalyticalMethod:

Atomic Absorption Spectroscopy (AAS)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.

The bead is digested in 0.5 mL dilute nitric acid in the microwave oven, 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.

Method Code	Element	Symbol	Units	Sample Weight (g)	Lower Limit	Upper Limit	Default Overlimit Method
Au-AA23	Gold	Au	ppm	30	0.005	10.0	Au-GRA21
Au-AA24	Gold	Au	ppm	50	0.005	10.0	Au-GRA22

Au-AA25 and Au-AA26

Fire Assay Fusion, AAS Finish

Sample Decomposition:

Fire Assay Fusion (FA-FUS03 & FA-FUS04)

Analytical Method:

Atomic Absorption Spectroscopy (AAS)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.

The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 10 mL with de-mineralized water, and analyzed by atomic absorption spectroscopy against matrix-matched standards.

Method Code	Element	Symbol	Units	Sample Weight (g)	Lower Limit	Upper Limit	Default Overlimit Method
Au-AA25	Gold	Au	ppm	30	0.01	100	Au-GRA21
Au-AA26	Gold	Au	ppm	50	0.01	100	Au-GRA22

Au-ICP21 and Au-ICP22

Fire Assay Fusion ICP-AES Finish

SampleDecomposition:

Fire Assay Fusion (FA-FUSPG1 & FA-FUSPG2)

AnalyticalMethod:

Inductively Coupled Plasma – Atomic Emission Spectrometry (ICP-AES)

A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.

The bead is digested in 0.5 mL dilute nitric acid in the microwave oven. 0.5 mL concentrated hydrochloric acid is then added and the bead is further digested in the microwave at a lower power setting. The digested solution is cooled, diluted to a total volume of 4 mL with de-mineralized water, and analyzed by inductively coupled plasma atomic emission spectrometry against matrix- matched standards.

Method Code	Element	Symbol	Units	Sample Weight (g)	Lower Limit	Upper Limit	Default Overlimit Method
Au-ICP21	Gold	Au	ppm	30	0.001	10	Au-AA25
Au-ICP22	Gold	Au	ppm	50	0.001	10	Au-AA26

Geochemical Procedure

ME-ICP41

Trace Level Methods Using Conventional ICP-AES Analysis

SampleDecomposition:

HNO3 – HCl Aqua Regia Digestion (GEO-AR01)

AnalyticalMethod:

Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)

A prepared sample (0.50 g) is digested with aqua regia for 45 minutes in a graphite heating block. After cooling, the resulting solution is diluted to 12.5 mL with deionized water, mixed and analyzed by inductively coupled plasma-atomic emission spectrometry. The analytical results are corrected for inter-element spectral interferences.

NOTE: In the majority of geological matrices, data reported from an aqua regia leach should be considered as representing only the leachable portion of the particular analyte.

Element	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Silver	Ag	ppm	0.2	100	Ag-OG46
Aluminum	Al	%	0.01	25	
Arsenic	As	ppm	2	10000	
Boron	B	ppm	10	10000	
Barium	Ba	ppm	10	10000	
Beryllium	Be	ppm	0.5	1000	
Bismuth	Bi	ppm	2	10000	
Calcium	Ca	%	0.01	25	
Cadmium	Cd	ppm	0.5	1000	
Cobalt	Co	ppm	1	10000	
Chromium	Cr	ppm	1	10000	

Geochemical Procedure

Element	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Copper	Cu	ppm	1	10000	Cu-OG46
Iron	Fe	%	0.01	50	
Gallium	Ga	ppm	10	10000	
Mercury	Hg	ppm	1	10000	
Potassium	K	%	0.01	10	
Lanthanum	La	ppm	10	10000	
Magnesium	Mg	%	0.01	25	
Manganese	Mn	ppm	5	50000	
Molybdenum	Mo	ppm	1	10000	
Sodium	Na	%	0.01	10	
Nickel	Ni	ppm	1	10000	
Phosphorus	P	ppm	10	10000	
Lead	Pb	ppm	2	10000	Pb-OG46
Sulfur	S	%	0.01	10	
Antimony	Sb	ppm	2	10000	
Scandium	Sc	ppm	1	10000	
Strontium	Sr	ppm	1	10000	
Thorium	Th	ppm	20	10000	
Titanium	Ti	%	0.01	10	
Thallium	Tl	ppm	10	10000	
Uranium	U	ppm	10	10000	
Vanadium	V	ppm	1	10000	
Tungsten	W	ppm	10	10000	
Zinc	Zn	ppm	2	10000	Zn-OG46

Elements listed below are available upon request

Element	Symbol	Units	Lower Limit	Upper Limit	Default Overlimit Method
Cerium	Ce	ppm	10	10000	
Hafnium	Hf	ppm	10	10000	
Indium	In	ppm	10	10000	
Lithium	Li	ppm	10	10000	
Niobium	Nb	ppm	10	10000	
Rubidium	Rb	ppm	10	10000	
Selenium	Se	ppm	10	10000	
Silicon	Si	ppm	10	10000	
Tin	Sn	ppm	10	10000	
Tantalum	Ta	ppm	10	10000	
Tellurium	Te	ppm	10	10000	
Yttrium	Y	ppm	10	10000	
Zirconium	Zr	ppm	5	10000	

Assay Procedure

ME-OG46

Ore Grade Elements by Aqua Regia Digestion Using Conventional ICP-AES Analysis

SampleDecomposition:

HNO_3-HCl Digestion (ASY-AR01)

AnalyticalMethod:

Inductively Coupled Plasma - Atomic Emission Spectroscopy (ICP - AES)*

Assays for the evaluation of ores and high-grade materials are optimized for accuracy and precision at high concentrations. Ultra high concentration samples (> 15 -20%) may require the use of methods such as titrimetric and gravimetric analysis, in order to achieve maximum accuracy.

A prepared sample (0.4 g) is digested with concentrated nitric acid for 90 minutes in a graphite heating block. The resulting solution is diluted with concentrated hydrochloric acid before cooling to room temperature. The samples are diluted in a volumetric flask (100 or 250) mL with demineralized water and analysed using atomic absorption spectrometry.

*NOTE: ICP-AES is the default finish technique for ME-OG46. However, under some conditions and at the discretion of the laboratory an AA finish may be substituted.

Element	Symbol	Units	Lower Limit	Upper Limit
Silver	Ag	ppm	1	1500
Arsenic	As	%	0.01	30
Cadmium	Cd	%	0.001	10
Cobalt	Co	%	0.001	20
Copper	Cu	%	0.001	40
Iron	Fe	%	0.01	100
Manganese	Mn	%	0.01	50
Molybdenum	Mo	%	0.001	10
Nickel	Ni	%	0.001	10
Lead	Pb	%	0.001	20
Zinc	Zn	%	0.001	30