International Accreditation Service

CERTIFICATE OF ACCREDITATION

This is to signify that

SGS ANKARA MINING AND GEOCHEMISTRY LABORATORY

1. ORGANIZE SANAYI BOLGESI, ORHAN ISIK CADDESI NO: 11 SINCAN
ANKARA 06935
TURKEY

Testing Laboratory TL-632
(Revised February 3, 2015)

has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005, *General requirements for the competence of testing and calibration laboratories*, and has been accredited, commencing January 26, 2015, for the test methods listed in the approved scope of accreditation.

Patrick V. McCullen
Vice President, Chief Technical Officer

C. P. Ramani, P.E.
President

ACCREDITED

(see attached scope of accreditation for fields of testing and accredited test methods)

Print Date: 2/3/2015

This accreditation certificate supersedes any IAS accreditation certificate bearing an earlier date. The certificate becomes invalid upon suspension, cancellation or revocation of accreditation.
See the IAS Accreditation Listings on the web at www.iasonline.org for current accreditation information, or contact IAS directly at (562) 364-8201.

11-04576

International Accreditation Service

SCOPE OF ACCREDITATION

SGS Ankara Mining and Geochemistry Laboratory TL-632
(Revised February 3, 2015)

SGS Ankara Mining and Geochemistry Laboratory
1. Organize Sanayi Bolgesi, Orhan Isik Caddesi No: 11 Sincan
Ankara 06935
Turkey

Dr. Evgueni Terentiev
Laboratory Manager
+90(312)2670031

FIELDS OF TESTING	STANDARDS	ACCREDITED TEST METHODS
Geological Samples	PRP89	Preparation of rock drill core, grab, tranches, channel drillings (Dry - Crush - Split - Pulverise)
	SCR30	Preparation of soil, lake sediments, stream sediments, silt (Dry – Screening)
	ICP12B	Determination of geological samples by 2:1 HNO3 / HCL / ICP-OES finish (34 Elements)
	ICP14B	Determination of geological samples by 3:1 HCL / HNO3 / ICP-OES finish (34 Elements)
	ICP40B	Determination of geological samples by four acid digestion / ICP-OES finish (33 Elements)
Geological Samples/Metallurgical Products/Ores	ICP42S	Determination of geological samples four acid (hydrofluoric, perchloric, hydrochloric and nitric acid) dissolution to quantify major element concentrations / ICP-OES finish
	ICP90A	Determination of geological samples, metallurgical product and ores by sodium peroxide fusion / ICP-OES finish
	ICP90B	Determination of geological samples, metallurgical product and ores by sodium peroxide fusion / ICP-OES – Nickel laterite package (includes drying at 105°C for 8 hrs.)
	ICP90Q	Determination of geological samples, metallurgical product and ores by Sodium peroxide fusion / ICP-OES – Ore grade (Cu, Pb, Zn, Fe, Sb)
Geological Samples	ICP95A	Determination of geological samples by Lithium Metaborate fusion / ICP-OES (Lithologic package) (18 Elements)
Geological Samples/Metallurgical Products/Ores	AAS42S	Determination of geological samples, metallurgical product and ores by four acid, (hydrofluoric, perchloric, hydrochloric and nitric acid) dissolution to quantify major element concentrations / AAS finish (Ag, Cu, Fe, Pb, Zn)
	AAS43B	Determination of geological samples, metallurgical product and ores by four acid, (hydrofluoric, perchloric, hydrochloric and nitric acid) with higher elemental concentrations / AAS finish (Ag, Cu, Fe, Pb, Zn)
	AAS12E	Determination of Ag in geological samples by 2 acid digest, AAS finish (Ag)
Geological Samples/Metallurgical Products/Ores	FAA303	30g, Fire Assay, AAS finish ore grade levels (Au)
	FAA313	30g, Fire Assay, AAS finish trace levels (Au)
	FAA505	50g, Fire Assay, AAS finish ore grade levels (Au)
	FAA515	50g, Fire Assay, AAS finish trace levels (Au)
	FAG303	30g Fire Assay gravimetric finish ore grade levels (Au)
Geological Samples/Metallurgical Products/Ores	CSA01V	Determination of Carbon in Geological Samples Using Infrared (IR) Combustion [S; C; LECO]
	CSD06V	Determination of Total Sulphur in Geological Samples Using Infrared (IR) Combustion [S; C; LECO]
	CSA06V	Determination of Total Sulphur and Carbon in Geological Samples Using Infrared (IR) Combustion [S; C; LECO]

January 26, 2015
Commencement Date

ACCREDITED

C. P. Ramani, P.E.
President

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13-08892

International Accreditation Service

SCOPE OF ACCREDITATION

SGS Ankara Mining and Geochemistry Laboratory TL-632
(Revised February 3, 2015)

FIELDS OF TESTING	STANDARDS	ACCREDITED TEST METHODS
Ores/Concentrates/ Metallurgical/Products/ Metals	CON10B	The Preparation and Determination of Chromium in Ores, Concentrates, Metallurgical Products and Metals by Fusion with Ferrous Ammonium Sulphate Titration. Fe content in sample is analyzed by ICP for Cr:Fe ratio calculation
	CON08V	The Preparation and Determination of Iron in Ores, Concentrates and Metallurgical Products by Fusion, Separation and Titration [Fe]
	CON11V	Preparation and Determination of Lead in Ores, Concentrates, Metallurgical Products by Precipitation and Titration of Acid Solubles [Pb: EDTA]
	CON12V	Preparation and Determination of Zinc in Ores, Concentrates, Metallurgical Products and Metals by Separation, Precipitation and Titration of Acid Solubles [Zn: EDTA]
	CON13V	Preparation and Determination of Total Copper by Short Iodide Titration
	CON15V	Determination of Total Manganese by KMnO4 Titration in Ferromanganese, Silica Manganese and Ferro-silica-manganese [Mn, Titration]
	CLA01A	Preparation and Determination of Ferrous Iron (FeO) by Sulphuric/HF acid Digest, Potassium Dichromate Titration [FeO: K2Cr2O7]

January 26, 2015
Commencement Date

ACCREDITED

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