



**Acacia**  
Mining Operations

**ACACIA MINE OPERATION  
GÖKIRMAK COPPER MINE  
Executive Summary  
2017**

**Document Name**

**ACACIA-2017-E&S-GBP-ES**

**Disclosure Date**

**29.09.2017**

**Prepared By**

**Environment & Social Department**

## **EXECUTIVE SUMMARY**

Acacia Maden İşletmeleri A.Ş. (“AMI” or “Acacia” or the “Company”) is planning to apply for a loan to International Financing Institutions (IFIs) for the development of the Gökırmak Copper Project (“GCP” or “the Project”) located in Hanönü district of Kastamonu province of Turkey.

Acacia was established in 2007 under the name Asya Maden İşletmeleri A.Ş. In 2011, an initial partnership was formed with İlbak Madencilik Sanayi ve Ticaret A.Ş. Following a partnership deal with Akfen Mühendislik A.Ş. in 2016, the Company is currently conducting its operations under its current name, Acacia Maden İşletmeleri A.Ş.

### **The Project**

GCP is an open-pit copper mine project and involves land preparation phase and the construction, operation and closure of the following main units:

- Open Pit
- Process Plant
- Çorakoğlu Waste Rock Dump (WRD)
- Kepezkaya Tailings Storage Facility (TSF)
- Bağdere TSF (subject to confirmation after additional review whether it is needed)
- Tailings Pipeline
- Other auxiliary facilities (administrative building, warehouse, topsoil storage areas etc.)

In addition to the main units, the associated facilities of the Project are as follows:

- Gökırmak River Diversion System
- 28.8 km 34.5 kV Energy Transmission Line (ETL)

The Project’s construction phase is planned to be finalized in the first quarter of 2018, followed by an estimated production life of 11.3 years. The reclamation will go parallel to operation activities and the mine closure period will continue for an additional 2 years following the end of operation phase.

The selected mining method is open pit mining and a total of 22 Mt of ore at 1.50% Cu is planned to be produced. As a result of ore production, 2 Mt per annum ore will be fed to the processing plant. The processing plant is expected to operate at 85% recovery, having a total production of approximately 1,278,703 tonnes of dry concentrate with a copper grade of 22.0% throughout the life of the mine. Approximately 282.2 million tonnes (Mt) of waste rock will be generated as a result of open pit activities and the waste rock will be deposited at Çorakoğlu WRD.

### **Environmental and Social Assessment of the Project**

Since 2011, AMI has conducted mineral exploration and resource development activities to characterize the grade and shape of ore body. The Project has been subject to previous environmental and social assessment studies to meet Turkish regulatory requirements and relevant EIA decisions required under the national EIA Regulation have been secured. Additionally multiple studies in recent years to assess the environmental and social impacts likely to be associated with the Project (some in line with the standards

of the International Financing Institutions) have also been performed by AMI. These studies are listed below:

<b>Company</b>	<b>Technical Documents Produced</b>
Project Owner – AMI	<ul style="list-style-type: none"> <li>(1) Asya Maden İşletmeleri Gökırmak Copper Mining Project Local Recruitment Procedure (2015)</li> <li>(2) Asya Maden İşletmeleri Gökırmak Copper Mining Project Grievance Procedure (2015)</li> <li>(3) Gökırmak Copper Project Feasibility Study (2015)</li> <li>(4) AMI Gökırmak Copper Mining Project Local Procurement Procedure (2016)</li> <li>(5) Gökırmak Copper Project – Feasibility Study (May 2017)</li> <li>(6) Gökırmak Copper Project – Updated Detailed Feasibility Study (July 2017)</li> </ul>
AECOM	<ul style="list-style-type: none"> <li>(1) Gökırmak Copper Project Preliminary Mine Closure Plan (2015)</li> <li>(2) Gökırmak Copper Project Environmental and Social Assessment and Management Review (2015)</li> <li>(3) Environmental and Social Management Plan for Gökırmak Copper Project (2015)</li> <li>(4) Progress Report for the Gökırmak Copper Mine Water Supply Project (2015)</li> <li>(5) Hydrochemical Characteristics and Water Quality Assessment Study for the Gökırmak Copper Project (2015)</li> <li>(6) Flora and Habitat Assessment Report for Gökırmak Copper Project (2015)</li> <li>(7) Visual Impact Assessment Report for Gökırmak Copper Project (2015)</li> <li>(8) Mine Water / Stormwater Management Plan for the Gökırmak Copper Project (2016)</li> <li>(9) Hydrogeological Characterization for the Gökırmak Copper Mine Project (2017)</li> <li>(10) Hydrogeological Impact Assessment Report (2017)</li> </ul>
AMC	<ul style="list-style-type: none"> <li>(1) Gökırmak Copper Project Pit Design and Schedule Optimization Report (2017)</li> <li>(2) Updated Detailed Feasibility Study of Gökırmak Copper Project (2017)</li> </ul>
Discworld	<ul style="list-style-type: none"> <li>(1) Operational Geology Standard Operating Procedures for Gökırmak Copper Project (2016-2017)</li> </ul>
Envy	<ul style="list-style-type: none"> <li>(1) Hanönü Copper Mine Capacity Increase, Mineral Processing Plant, Waste Storage Facility and Concrete Plant Project EIA Report (2013)</li> <li>(2) Hanönü Open-Pit Copper Mine Project, Project Description Report (2014)</li> <li>(3) Hanönü Open-pit Copper Mine Capacity Increase Project EIA Report (2014)</li> <li>(4) Hanönü Copper Mine Project Environmental and Social Impact Assessment Report (2015)</li> </ul>
Geochemico	<ul style="list-style-type: none"> <li>(1) Interim Assessment Report of Geochemical Aspects of The Hanönü Gökırmak Copper Project (2016)</li> <li>(2) ARD/ML Characterization of Rock Samples By Static Testing, Gökırmak Copper Project, Kastamonu (December 2016)</li> <li>(3) Final Report on Geochemical Characterization by Kinetic Testing of</li> </ul>

<b>Company</b>	<b>Technical Documents Produced</b>
	<p>Lithologies at the Gökırmak Copper Project, Kastamonu, Turkey (December 2016)</p> <p>(4) Results of Mass Balance / PHREEQC Modeling of the Open Pit Sump and Lake at the Gökırmak Copper Project, Kastamonu, Turkey (July 2017)</p> <p>(5) Results of Mass Balance / PHREEQC Modeling of the Waste Rock Dump at the Gökırmak Copper Project, Kastamonu, Turkey (May 2017)</p> <p>(6) PHREEQC Modeling of the Kepezkaya Tailings Storage Facility Seepage at the Gökırmak Copper Project, Kastamonu, Turkey (June 2017)</p>
Golder Associates	<p>(1) Risk Assessment for Kepezkaya Tailings Storage Facility (2016)</p> <p>(2) Emergency Preparedness Plan for the Kepezkaya Tailings Storage Facility (2017)</p> <p>(3) Risk Assessment for Kepezkaya Tailings Storage Facility (April 2017)</p> <p>(4) Scoping Study for Alternative Disposals for TSF (May 2017)</p>
MineRP	<p>(1) Geotechnical Aspects for Gokirmak Copper Project, Volume I of III (2017)</p> <p>(2) Technical Report for Gokirmak Copper Project, Ground Control Management Plan, Volume II of III (2017)</p> <p>(3) Geotechnical Standard Operating Procedures for Gokirmak Copper Project, Volume III of III (2017)</p>
REGIO	<p>(1) Gökırmak Copper Project Archaeological and Immovable Cultural Heritage Current State Impact Assessment Report (2017)</p> <p>(2) Gökırmak Copper Mine Project Intangible Cultural Heritage Report (2017)</p>
RPS Aquaterra	<p>(1) AMI Gökırmak Copper Project, Mine Water Management Report (2015)</p>
SRM	<p>(1) Asya Maden İşletmeleri Gökırmak Copper Mining Project Social Impact Assessment Report (2015)</p> <p>(2) Asya Maden İşletmeleri Gökırmak Copper Mining Project Stakeholder Engagement Plan (2015)</p> <p>(3) Asya Maden İşletmeleri Gökırmak Copper Mining Project Cumulative Impact Assessment Report (2015)</p> <p>(4) Asya Maden İşletmeleri Gökırmak Copper Mining Project Human Rights Policy (2015)</p> <p>(5) Asya Maden İşletmeleri Gökırmak Copper Mining Project Human Resources Policy (2015)</p> <p>(6) AMI Gökırmak Copper Mining Project Land Acquisition Procedure (2017)</p> <p>(7) AMI Gökırmak Copper Mining Project Livelihood Restoration Plan (2017)</p> <p>(8) AMI Gökırmak Copper Mining Project Influx Management Plan (2017)</p> <p>(9) Hanonu Development Workshop I (March 2016)</p> <p>(10) Hanonu Development Workshop II (June 2016)</p>

### **Project Categorization**

Projects that involve large scale extraction via open-pit mining to obtain base metals including the processing of the extracted material are classified as Category A as there is the potential to have significant adverse environmental and/or social impacts, which are diverse, irreversible and/or unprecedented. Depending on the Project, these impacts may affect an area broader than the sites or facilities subject to physical works.

The Revised Environmental and Social Risk Categorisation List (2014) of the European Bank for Reconstruction and Development (EBRD) categorizes all mining and quarrying activities, including mining of metal ores, as having high environmental and social risks with a corresponding high overall risk.

A project of GCP's type and scale is categorised as Category A and requires a fit for purpose Environmental and Social Impact Assessment (ESIA) study in line with IFI standards and good international industry practice.

### **ESIA Disclosure Package**

AECOM Turkey and SRM have been retained by AMI to develop a fit for purpose ESIA disclosure package of the Project in line with EBRD Environmental and Social Policy and Performance Requirements on financing the Project, which is independent of the permitting process as required by the national competent authorities.

The ESIA Disclosure Package includes:

- ESIA Report (provided including separately as EIA and SIA reports, technical reports and E&S management plans in 4 volumes)
- Environmental and Social Management and Monitoring Framework Plan (ESMMFP)
- Stakeholder Engagement Plan (SEP)
- Non-technical Summary (NTS)

In addition to the ESIA Disclosure Package, an Environmental and Social Action Plan (ESAP) will also be developed in order to address specific issues associated with the Project construction works and AMI operations, and it will be disclosed in due course.

The environmental baseline and impact assessment studies including environmental sampling and analysis within the scope of the ESIA process has been carried out by AECOM Turkey. The baseline studies and assessments include topics such as air quality and greenhouse gas emissions, hydrogeology, biodiversity, cultural heritage and occupational health and safety. All the assessments including cumulative impacts have been compiled under the EIA Report.

On the other hand, social baseline and impact assessment studies including site surveys within the scope of the ESIA process has been carried out by SRM Consultancy ("SRM"). As a part of the social studies, stakeholder engagement activities were conducted by SRM with a wide range of key stakeholders including representatives of local communities (i.e. village headmen, wider community members including women), employees from the local, local governmental bodies, media, non-governmental organizations, local business enterprises and cooperatives in 2015-2016. In this scope, besides the in-depth interviews, meetings with public institutions and focus groups meetings done with relevant stakeholders, three community meetings were conducted in the selected Project affected settlements. All the assessments including cumulative impacts and findings of the consultations done have been compiled under the SIA Report.

Technical documents have also been prepared by other consultants (as given in table above) to support to overall ESIA process and the impact assessments. As complementary to the ESIA process, E&S management plans have also been prepared. These include, but not limited to, stakeholder engagement plan, livelihood restoration plan, biodiversity management plan, and mine closure framework plan.

The ESIA Report includes the assessment of environmental and social impacts of the Project in line with EBRD PRs and is compiled in four volumes as below:

Volume I – EIA Report prepared by AECOM (including occupational health and safety, community health, safety and security, cultural heritage)

Volume II – SIA Report prepared by SRM

Volume III – Technical Reports supporting the EIA and SIA Reports

Volume IV – Management Plans prepared by AMI, AECOM and SRM