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## 1. Introduction

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### 1.1 Project Background

The Öksüt Gold Project (the Project) is owned and operated by Öksüt Madencilik Sanayi ve Ticaret A.Ş. (OMAS), a wholly-owned subsidiary of the international gold mining company Centerra Gold Inc. (Centerra).

#### 1.1.1 About Centerra

Centerra is a North-American based gold mining company focused on operating, developing, exploring and acquiring gold properties in Asia, Canada and other markets worldwide. Centerra is the largest Western-based gold producer in Central Asia. Centerra's shares trade on the Toronto Stock Exchange (TSX) under the symbol CG. The Company is headquartered in Toronto, Ontario, Canada.

#### 1.1.2 The Öksüt Project

The Öksüt Project was first discovered in 2007. In 2008 an exploration drilling programme was started which resulted in the publication of a mineral resource estimate for the Project in February 2013.

The estimated Öksüt Project measured, indicated and inferred mineral resources comprise 1.38 million ounces of gold<sup>1</sup> in two deposits (Keltepe and Güneytepe).

Based on that mineral resource estimate, OMAS undertook detailed planning and engineering studies for the Project, and prepared a Technical Report (NI 43-101), which was published on 3<sup>rd</sup> September 2015<sup>2</sup>.

It is proposed that open pit mining is undertaken with gold being processed via a heap leach facility. This will remove the need for a tailings management facility (a tailings dam). Gold will be processed using cyanide, and all transport, storage and handling will be undertaken in accordance with the International Cyanide Management Code, to which Centerra is a signatory.

The Project will have a short mine-life of approximately eight years, after which a closure, decommissioning and after-care programme will be implemented to ensure the safety and stability of the mining area and to return as much land as possible to its former land-use.

The Project workforce is estimated to be 405 during construction and 456 during operations<sup>3</sup>. The majority of the staff will be Turkish and preference will be given to those living in the vicinity of the Project. An Environmental Impact Assessment (EIA) Application File for the Öksüt Project was submitted to the Ministry of Environment and Urban Planning on July 7, 2014. The EIA was approved on 9<sup>th</sup> November 2015.

### 1.2 Project Location and Setting

The Öksüt Project is located in south-central rural Turkey, 295 km southeast of the capital city of Ankara and 48 km directly south of the city of Kayseri. The nearest administrative centre is at Develi located approximately 10 km north of the Project (Figure 1-1). The District of Develi has a population of 64,550.

The Project is located in the Develi Mountains on a north-south trending mountain range. The topographic relief comprises steep-sided V-shaped valleys, high cliffs, capped by flat-lying mesas and plateaus. The Project site is located at an elevation of approximately 1,800 m. The valleys are extensively farmed, with the local population living in a number of small villages.

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<sup>1</sup> Technical Report on the Öksüt Gold Project, Turkey: NI 43-101 Report (Centerra Gold Inc): 3<sup>rd</sup> September 2015.

<sup>2</sup> [http://www.centerragold.com/sites/default/files/2015\\_oskut\\_43-101-sept3-2015lr\\_0.pdf](http://www.centerragold.com/sites/default/files/2015_oskut_43-101-sept3-2015lr_0.pdf)

<sup>3</sup> During construction it is estimated that there will be 55 OMAS employees and approximately 350 contractors; during operation it is estimated that there will be 156 OMAS employees and approximately 300 contractors.

The Project site is currently accessed via a narrow agricultural road from the village of Zile. Due to the condition of the road, access to the site in winter is currently limited. A new access road is proposed to run from the paved highway located east of the Project that runs from the city of Develi to the village of Epçe and a powerline is planned to run from the substation at Çayırözü to the north of the Project fence line.

The Öksüt Project comprises two operations licenses (IR 82468 and 82469) (“the Licenses”), issued in January, 2013. These Licences comprise a total area of 3,995.8 hectares.

### **1.3 Requirement for an ESIA**

Centerra is seeking project financing for the Project from international lenders including the European Bank for Reconstruction and Development (EBRD). As a result, an environmental and social impact assessment (ESIA) to meet the requirements of EBRD’s Environmental & Social Policy has been prepared (this Report).

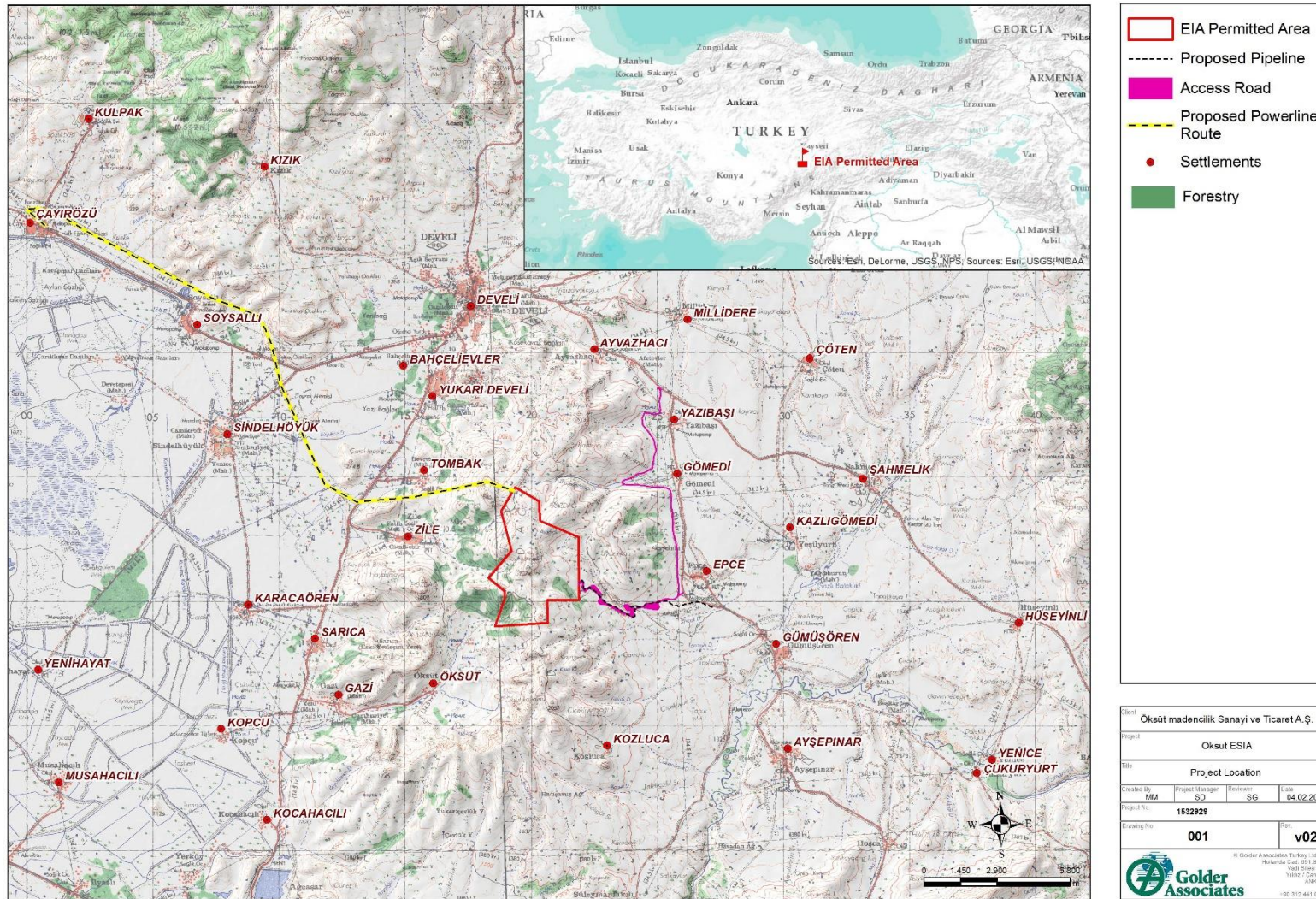
### **1.4 Content and Purpose of this ESIA**

The Project has been subject to an EIA as part of the Turkish permitting process and this was approved by the Ministry of Environment and Urban Planning on 9<sup>th</sup> November 2015. In parallel to this, OMAS commissioned a Social Impact Assessment (SIA) for the Project to ensure that the socio-economic impacts and opportunities of the Project were also assessed and appropriate plans put in place to ensure that Project impacts were minimized and community benefits were maximized.

This ESIA has combined the EIA prepared for Turkish permitting purposes and the SIA prepared by OMAS for the Project. A number of supplementary environmental and social studies have been undertaken in order to fill the gaps necessary to meet international good practice and the EBRD’s Performance Requirements (PRs). These have related to biodiversity, water resources management and land acquisition and livelihood restoration.

The ESIA builds on the regulatory framework set out in the EIA and provides a structure for the assessment and management of environmental and social risks and impacts that goes beyond compliance with Turkish requirements while respecting the requirements and commitments set out in the EIA.

Figure 1-1: Project Location



## 1.5 Structure of this ESIA and supporting documentation

This ESIA is structured as follows:

Non-Technical Summary

Chapter 1	Introduction
Chapter 2	Legal and Planning Policy Framework
Chapter 3	Approach to Environmental and Social Assessment
Chapter 4	Alternatives
Chapter 5	Project Description
Chapter 6	Stakeholder Consultation and Engagement
Chapter 7	Air Quality
Chapter 8	Biodiversity
Chapter 9	Topography, Geology and Soils
Chapter 10	Water Resources
Chapter 11	Noise and Vibration
Chapter 12	Landscape and Visual Amenity
Chapter 13	Population and Society
Chapter 14	Economics and Employment
Chapter 15	Land Use and Ownership
Chapter 16	Infrastructure and Services
Chapter 17	Community Health, Safety & Security
Chapter 18	Cultural Heritage and Archaeology
Chapter 19	Cumulative Effects
Annex A	Centerra 43-101 Report
Annex B	SRK Turkish EIA (English Translation)
Annex C	SRK Turkish EIA (In Turkish)
Annex D	SRK Report for Cultural Heritage Potential of Öksüt Property
Annex E	Letter from Kayseri Directorate of Culture and Tourism
Annex F	Biodiversity Baseline Report
Annex G	Golder Air Quality Dust Modelling Assumptions
Annex H	Golder Air Quality Modelling - Results
Annex I	Golder Topography, Geology and Seismology
Annex J	Golder Soil and Land Use Baseline
Annex K	Golder Noise Modelling Maps
Annex L	SRK Visual Impact Assessment for Öksüt Gold Mine Project
Annex M	Photographs of Infrastructure Corridor Views
Annex N	Coordinates of hydro-census stations and assay results
Annex O	SRK Hydrogeological Impact Assessment and Modelling Report
Annex P	SRK Geochemical Impact Assessment and Modelling Report
Annex Q	SRK Groundwater Monitoring and Testing Well Logs
Annex R	Pumping Test Analyses
Annex S	Field Measurements and Assay Certificates
Annex T	Golder Additional Water Monitoring September 2015

Annex U	OMAS Stakeholder Engagement Register 2014 to January 2016
Annex V	Letter from Kayseri Provincial Directorate of Environment and Urbanisation
Annex W	Powerline Appropriate Assessment (English)
Annex X	Habitat suitability maps for terrestrial flora threatened species
Annex Y	Powerline Appropriate Assessment (Turkish)

The ESIA is supported by the OMAS Environmental & Social Management System (ESMS) which is governed by the OMAS ESMS Framework (Document Number OMAS-ESMS-001). This sets out how the mitigations set out in the ESIA will be implemented by OMAS throughout the lifecycle of the Project. Management Plans and Frameworks that sit within the OMAS Environmental and Social Management System are:

OMAS-ESMS-AE-PLN-001	Air Emissions Management Plan
OMAS-ESMS-BIO-PLN-001	Biodiversity Management Plan
OMAS-ESMS-CHSS-PLN-001	Community Health, Safety and Security Management Plan
OMAS-ESMS-CD-PLN-001	Community Development Framework
OMAS-ESMS-CP-PLN-001	Conceptual Mine Closure Framework
OMAS-ESMS-CM-PLN-001	Contractor Management Framework
OMAS-ESMS-CH-PLN-001	Cultural Heritage Management Plan
OMAS-ESMS-CY-PLN-001	Cyanide Management Framework
OMAS-ESMS-ERP-PLN-001	Emergency Response Plan
OMAS-ESMS-HM-PLN-001	Hazardous Materials Management Plan
OMAS-ESMS-LM-PLN-001	Labour Management Plan
OMAS-ESMS-LR-PLN-001	Livelihood Restoration Framework
OMAS-ESMS-MW-PLN-001	Mineral Waste Management Plan
OMAS-ESMS-NV-PLN-001	Noise and Vibration Management Plan
OMAS-ESMS-NMW-PLN-001	Non-Mineral Waste Management Plan
OMAS-ESMS-OFF-PKN-001	Biodiversity Offsets Strategy
OMAS-ESMS-SEP-PLN-001	Stakeholder Engagement Plan
OMAS-ESMS-TMP-PLN-001	Transport Management Plan
OMAS-ESMS-WR-PLN-001	Water Resources Management Plan

## 1.6 Project Proponent

The Project Proponent is Öksüt Madencilik Sanayi ve Ticaret A.Ş. (OMAS).

## 1.7 The Environmental and Social Assessment Team

The ESIA been prepared by Citrus Partners LLP, an international environmental and social consultancy company, in conjunction with Golder Associates (Turkey) Ltd; and drawing on:

- The national mine EIA and social baseline prepared for the project by SRK Danışmanlık ve Mühendislik A.Ş.
- The national powerline EIA prepared for TEİAŞ by Selin Ltd.
- A number of additional environmental and social studies that were undertaken to fill the information gaps to meet international good practice. These studies included:

- Additional biodiversity studies carried out by Professor Hayri Duman (Gazi University), Professor Abdullah Hasbenli (Gazi University), Professor Zafer Ayaş (Hacettepe University), Professor Yusuf Kumlutaş (Dokuz Eylül University) and Nilay Aygüney Berke (Kiana Biological and Environmental Consulting).
- Additional studies on land use and livelihoods were provided by a team from the University of Ankara, including Prof. Dr. Harun Tanrivermiş, Prof. Dr. Nilay Çabuk Kaya, Prof. Dr. Metin Arslan, Dr. Yeşim Aliefendioğlu, Asst. Prof. Dr. Nihan Özdemir Sönmez and Asst. Prof. Dr. Arzuhan Burcu Gültekin.
- Studies on the groundwater and geochemical modelling were undertaken by SRK Danışmanlık ve Mühendislik A.Ş.
- Studies on potential archaeology were undertaken by Prof. Dr. S. Yücel Şenyrt, Dr. Atakan Akçay and Dr. Yalçın Kamyş from Gazi University Archaeology Department.