Audit 2014
Volume 6 Himmetdede Resources and Reserves
Koza Altın İşletmeleri A.Ş.
Turkey

Report Prepared for

Koza Altın İşletmeleri A.Ş.

Report Prepared by

SRK Consulting (U.S.), Inc.
SRK Project Number 173600.130
January 31, 2015

Audit 2014
Volume 6 Himmetdede Resources and Reserves
Koza Altın İşletmeleri A.Ş.
Turkey

Koza Altın İşletmeleri A.Ş.

Istanbul
Yolu 10. Km. No: 310
Batikent – ANKARA

SRK Consulting (U.S.), Inc.
7175 West Jefferson Avenue, Suite 3000
Lakewood, CO 80235

e-mail: denver@srk.com
website: www.srk.com
Tel: +1.303.985.1333
Fax: +1.303.985.9947

SRK Project Number 173600.130

January 31, 2015

Contributors:
Gözde Kaya Akbaş, M.Sc., METU, Consultant GIS Specialist
Nilüfer Gümüş, B.Sc., Consultant Environmental Engineer
Ahmet Oğuz Öztürk, B.SC., Principal Mining Engineer

Endorsed by CPs:
Leah Mach, MSc Geology, CPG, Principal Consultant (Resource Geology)
Bret Swanson, BEng Mining, MAusIMM, MMSAQP, Principal Consultant (Mining Engineer)
Eric J. Olin, MSc, MBA, SME-RM, Principal Consultant (Metallurgy
Dorinda Bair, BSc Geology, CPG, Principal Consultant (Geologist)

Reviewed by:
Peter Clarke, BSc Mining, MBA, PEng, Principal Consultant (Mining Engineer)
Bart Stryhas, PhD, CPG, Principal Consultant (Resource Geologist)

Table of Contents

List of Tables

List of Figures

Disclaimer & Copyright

List of Abbreviations

The metric system has been used throughout this report unless otherwise stated. All currency is in U.S. dollars unless stated otherwise. Market prices are reported in US$ per troy oz of gold and silver. Tonnes are metric of 1,000 kg, or 2,204.6 lb, unless otherwise stated. The following abbreviations are typical to the mining industry and may be used in this report.

Abbreviation	Unit or Term
°	degree
%	percent
AA	atomic absorption
AAS	atomic absorption spectroscopy
Ag	silver
Amsl	above mean sea level
Au	gold
BLEG	Bulk Leach Extractible Gold
BWI	Bond Work Index
C	Celsius
CoG	cutoff grade
CIP	carbon in pulp
cm	centimeter
CP	Competent Person
CPR	Competent Person's Report
CRP	Community Relations Plan
CRM	Certified Reference Material
Cu	copper
dia.	diameter
Eq	equivalent
EIA	Environmental Impact Assessment
F	Fahrenheit
ft	feet/foot
g	gram
g/cm	grams per centimeter
g/t	grams per tonne
ha	hectares
HG	high-grade
hr	hour
ID2	Inverse Distance Squared
ID3	Inverse Distance Cubed
in	inch
IP	Induced Polarization
kg	kilogram
km	kilometer
koz	thousand troy ounce
kt	thousand tonnes
kV	kilovolt
kVA	kilovolt-amps
L	liter
lb	pound
LHD	load haul dump
LG	low-grade
LoM	life of mine
m	meter
M	million
m.a.	million annum
min	minute
mm	millimeter
Mm	million meter
Moz	million ounces
Mt	million tonnes
Mt/y	million tonnes per year

Abbreviation	Unit or Term
MVA	million volts amperes
NN	Nearest Neighbor
NPV	net present value
OK	Ordinary Kriging
OP	open pit
oz	ounce
ppb	parts per billion
ppm	parts per million
QA/QC	Quality Assurance/Quality Control
RC	reverse circulation
RoM	run of mine
SART	sulfidization, acidification, recycling, and thickening
t	tonne(s)
t/h	tonnes per hour
t/d	tonnes per day
t/m	tonnes per month
t/y	tonnes per year
TEM	Technical Economic Model
μ	micron
UG	underground
V	volt
WAD	weak acid dissociable
Zn	zinc

1 Introduction

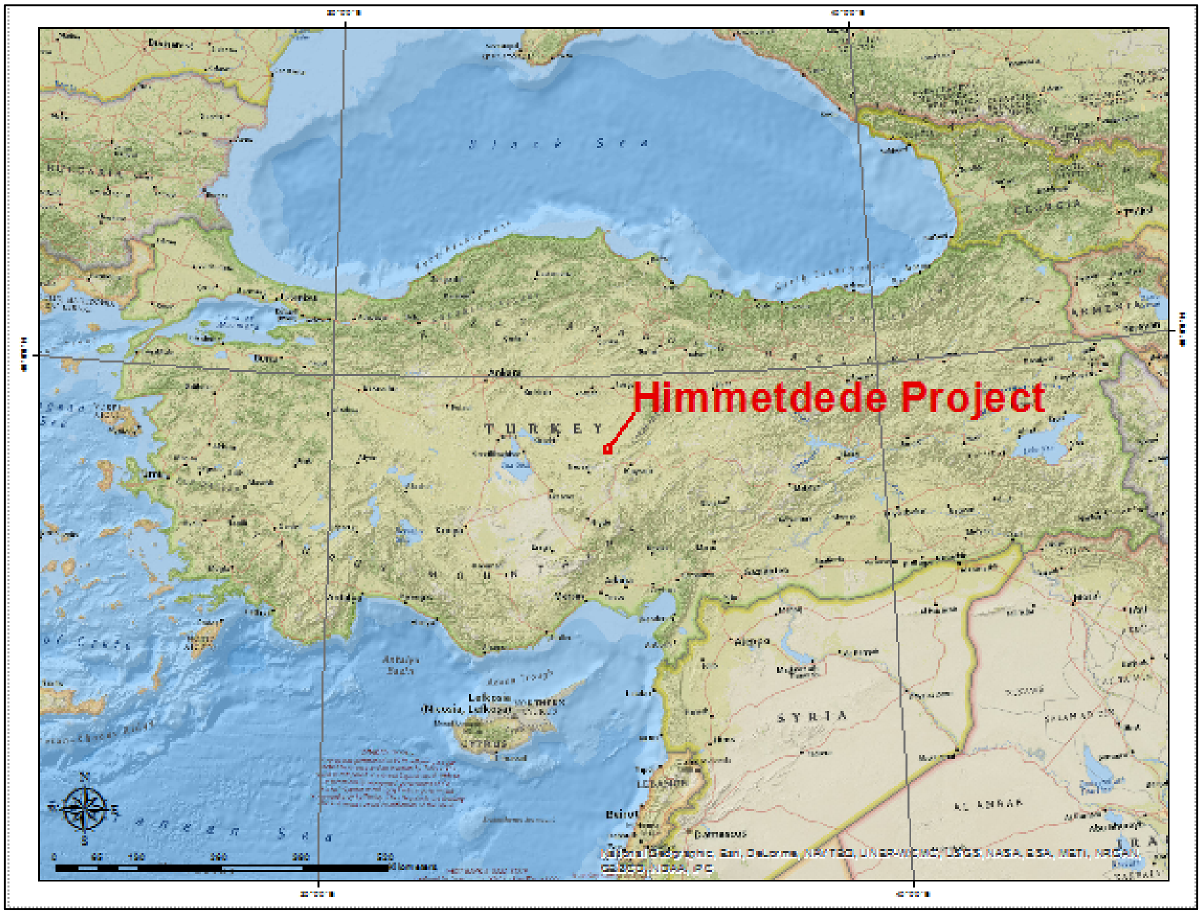
SRK Consulting (U.S.), Inc. (SRK) was commissioned by Koza Altın İşletmeleri A.Ş. (Koza) to audit Koza's gold resources and reserves and exploration projects as of the end of December 2013. Koza's Mining Assets are located in the Ovacık Mining District, Mastra Mining District, and Kaymaz District, including Söğüt, as well as Mollakara in the Diyadin District in Eastern Turkey and Himmetdede in Central Turkey.

This report is Volume 6 Himmetdede Resources and Reserves of the following ten volumes reports:

- Volume 1 Executive Summary;
- Volume 2 Ovacık Resources and Reserves;
- Volume 3 Mastra Resources and Reserves;
- Volume 4 Kaymaz Resources and Reserves;
- Volume 5 Söğüt Resources and Reserves
- **Volume 6 Himmetdede Resources and Reserves**;
- Volume 7 Mollakara Resources and Reserves;
- Volume 8 Technical Economics;
- Volume 9 Hasandağ and Işıkdere Resource Areas; and
- Volume 10 Exploration Projects.

This report is prepared using the industry accepted Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012).

Volume I Executive Summary contains the Terms of Reference and Property Descriptions relevant to all volumes of this audit. A map showing the location of Himmetdede is presented in Figure 1.1.



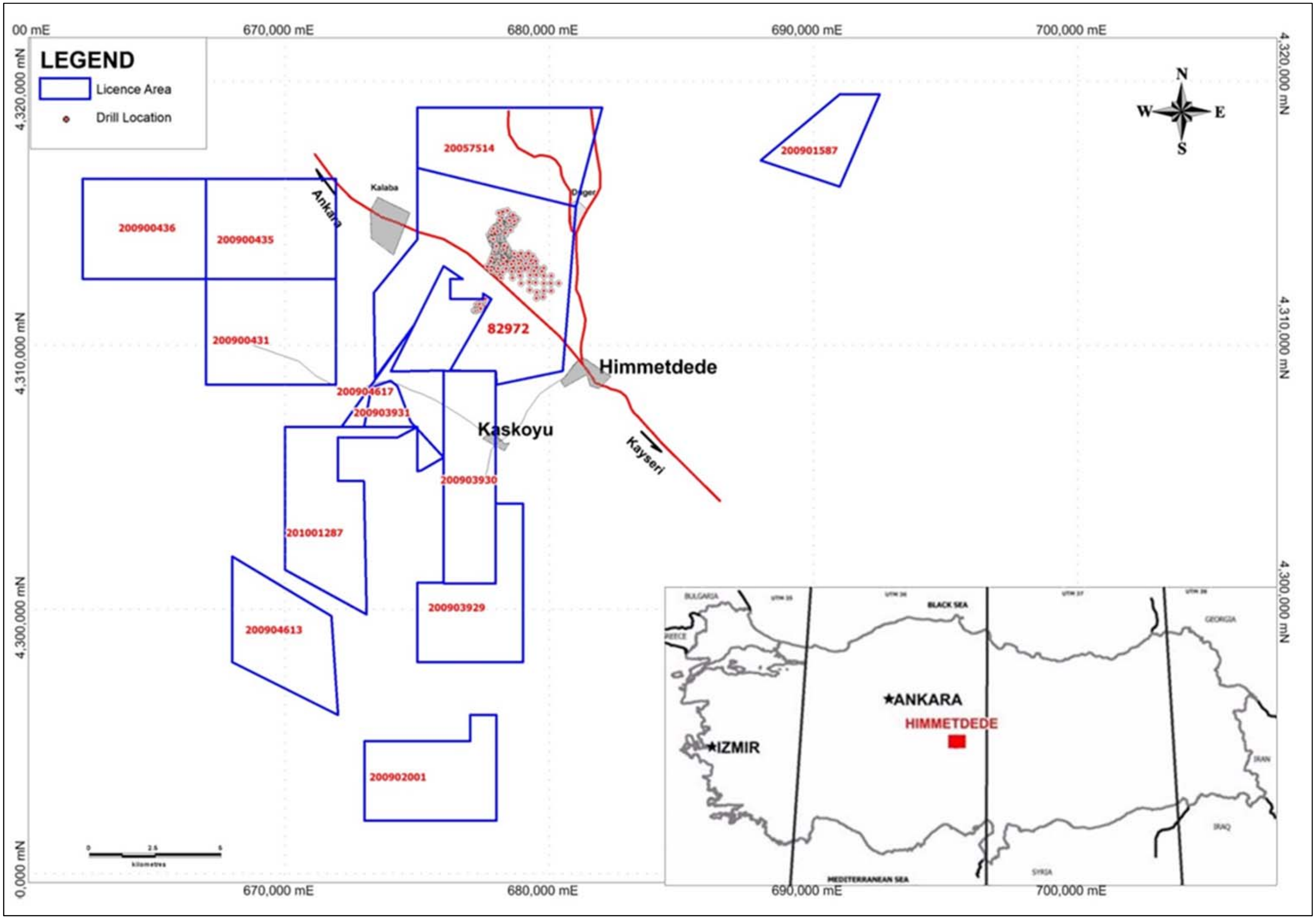
Source: Modified from ESRI Basemap NatGeo_World_Map, 2013

Figure 1.1: Himmetdede Project Location Map

2 Himmetdede Resources and Reserves

2.1 Property Description and Location

The Himmetdede Project is located in central Anatolia approximately 35 km northwest of Kayseri, along road D260, and between the villages of Kalaba and Himmetdede. The Project is between UTM coordinates 4315000 N, 676500 E and 4311000 N, 679500 E, in ED1950 Zone 36. Himmetdede is held under two operation licenses totaling approximately 5,984 ha. These two operation licenses are 20057514 (1,999 ha) and 82972. Operation license 82972 resulted from combining 20057515 and 20057516, and totals 3985.23 ha. Land tenure is shown in Figure 2.1.1. Figure 2.1.1 also shows other Koza controlled licenses surrounding the project area.



Source: Koza GIS, 2013

Figure 2.1.1: Himmetdede Location Map

2.2 Climate and Physiography

The Himmetdede project is located in Central Anatolia between Ankara and Kayseri. This is a region with a continental climate with cold, harsh winters and dry summers with moderate to hot temperatures. Average temperatures range from 0°C in January to 22°C in July and August. The maximum temperatures may reach 40°C in the summer. Local rainfall data indicates average annual precipitation is 350 to 400 mm, which falls as rain during the summer months and snow during the winter months. The village of Himmetdede is located at 1,207 m amsl and the project rises approximately 200 m above the village. The project is in an area of low relief with broad rolling hills.

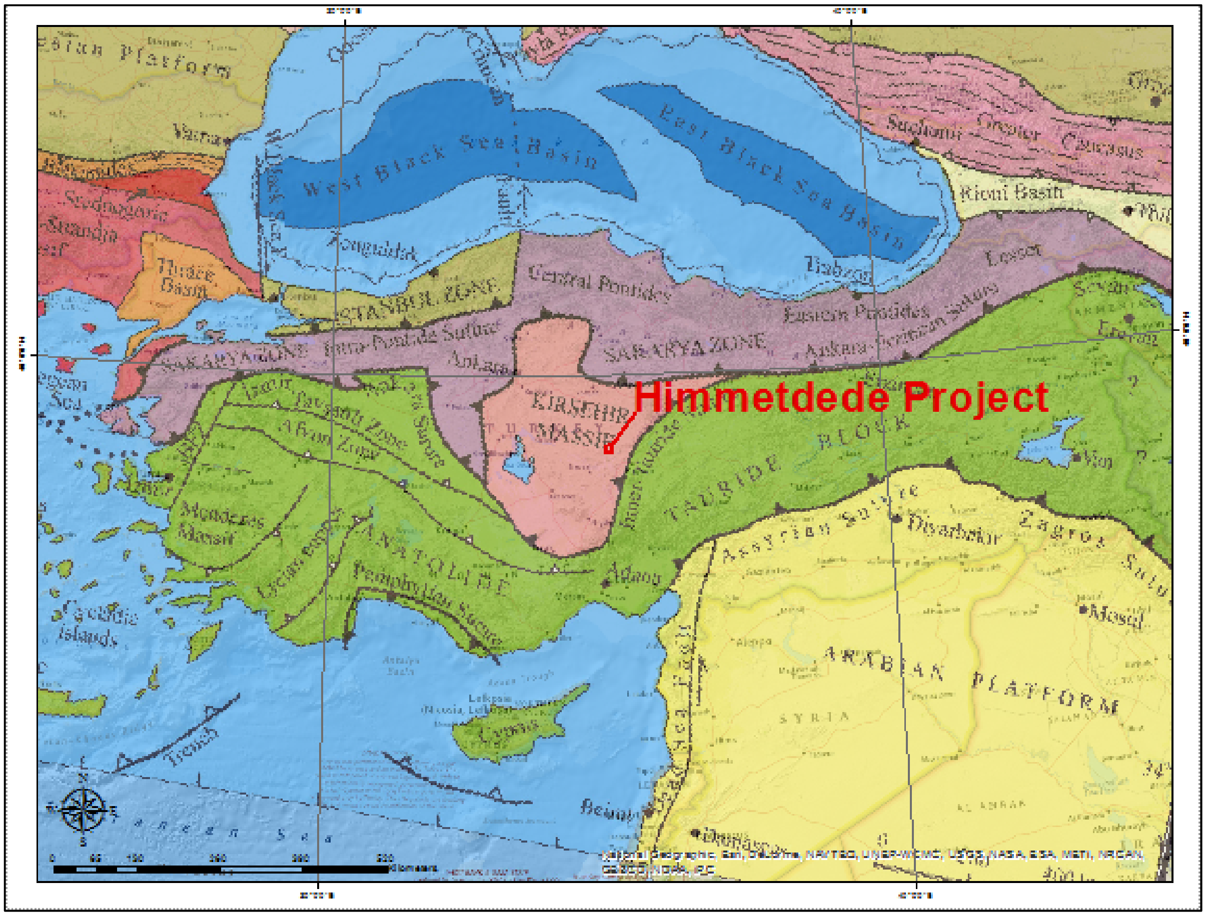
2.3 History

The Himmetdede project is a new project generated by Koza. Koza explored the area because of local hot springs, gossanous outcrops and quartz debris in fields. Other companies have worked in the area including Eurogold and Tüprag. Eurogold has explored for porphyry copper systems, but neither company has previously worked on the Himmetdede license areas held by Koza.

2.4 Geology

2.4.1 Regional Geology of the Himmetdede District

The Himmetdede Project is located in the Central Anatolian Crystalline Complex, which has also been generally referred to as the Kırşehir Massif. The Central Anatolian Crystalline Complex lies between the Anatolide-Tauride Terrane to the south and the Sakarya Zone to the north. The Himmetdede project is located immediately north of the Inner-Tauride Suture. Local thrust faulting is interpreted to be related to the suture zone and the closing of the Tethyan Ocean. The Central Anatolian Crystalline Complex is a series of Mesozoic age metasedimentary rocks overlain by Upper Cretaceous to Tertiary volcanic rocks and cut by peraluminous plutons composed of monzonite, monzodiorite and quartz-monzonite. Metamorphic grades in the complex range from greenschist to granulite facies. Although the entire complex has been referred to as the Kırşehir Massif, there are actually three massifs in this complex: Kırşehir, Niğde and Akdağ. The Himmetdede Project lies within the Bozçaldağ Formation of the Kırşehir Massif on trend with several volcanic centers (Yigit, 2006; Okay, 2008). Figure 2.4.1.1 shows the position of Himmetdede relative the Central Anatolian Crystalline Complex/Kırşehir Massif.



Source: Modified from Okay et al, 2010; Basemap = ESRI NatGeo_World_Map, 2013

Figure 2.4.1.1: Location of Himmetdede relative the Central Anatolian Crystalline Complex/Kırşehir Massif

2.4.2 Local Geology of the Himmetdede Project

The Himmetdede project lies within a south dipping massif of the Bozçaldağ Formation a high-grade metamorphic unit (Figure 2.4.2.1) making up the hanging wall of an overthrust (Koza, 2013a).

The Bozçaldağ Formation contains calcareous gneiss, quartz-feldspathic gneiss and metasediments that include marine limestone and marble. The foot wall of the overthrust consists of calcareous conglomerates, sandstones and shales and is separated from the Bozçaldağ Formation by a thick unmineralized mylonite. All the units are covered by volcano-sedimentary rocks including ignimbrite and tuff that are interlayered with lacustrine sediments (Koza, 2013a).

At the Project, mineralization is concentrated in hydrothermal breccias hosted by metasedimentary rocks. Koza is of the opinion that gold has been concentrated in places by supergene enrichment. Supergene enrichment is hosted in lacustrine limestone and metavolcanic rocks. Neogene sediment is found in the oxidation zone. Crackle breccias cemented by silica, secondary iron oxide and sulfide minerals have been identified in drillholes. Ignimbrite has also been found on the eastern side of the property. There has been no skarn development identified at the contacts between the silicification and the limestone (Koza, 2013a).

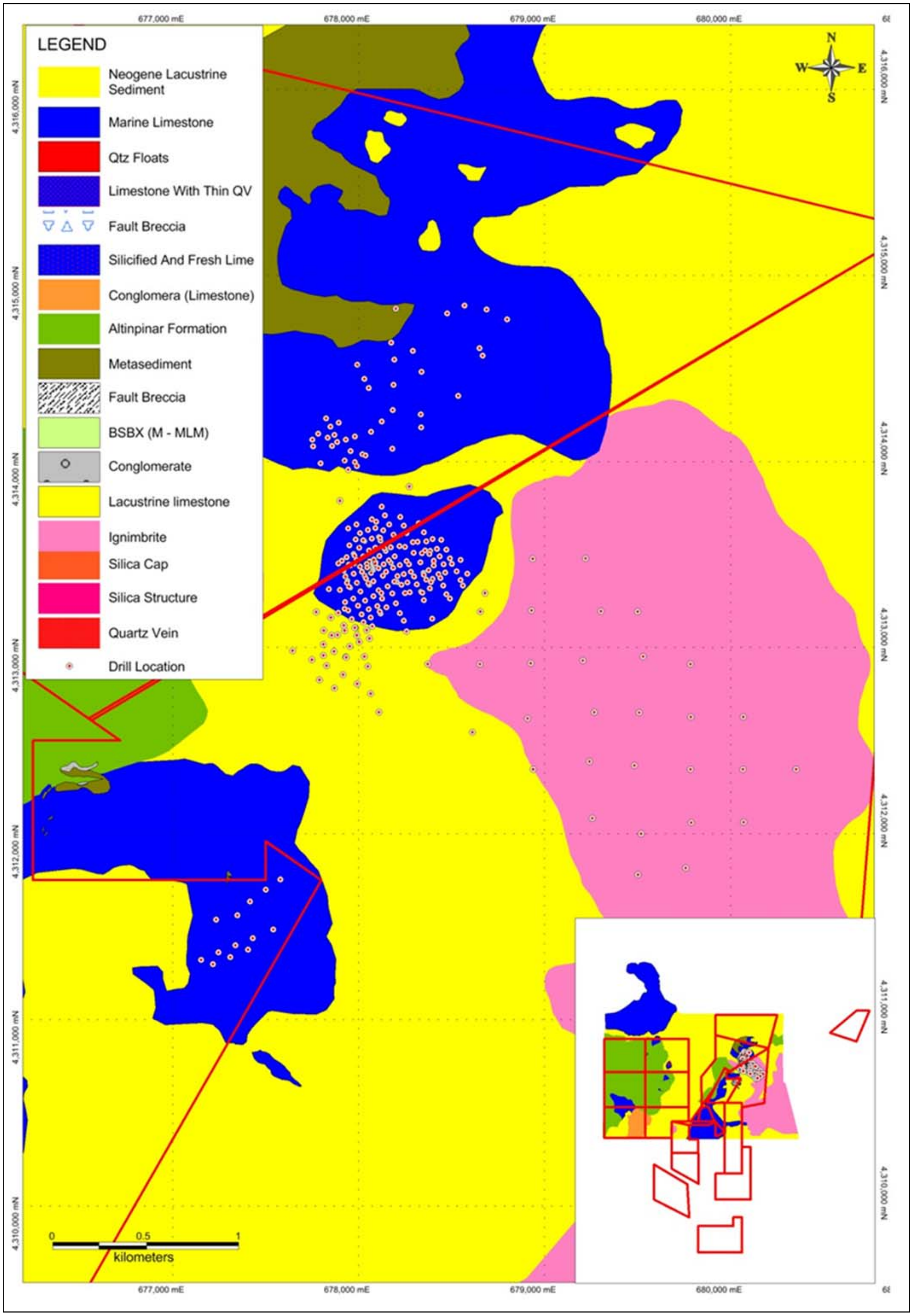
The mineralization can be divided into two primary types:

- Hypogene breccia related mineralization; and
- Supergene enrichment.

Hypogene mineralization is gold-bearing and occurs in narrow hydrothermal breccias with meter-scale argillic alteration halos. The breccias zones have been reactivated and faulted, which has resulted in oxidation and supergene enrichment. Supergene enrichment occurs where the breccias have been exposed to meteoric and fluctuating ground water levels (Koza, 2013a).

Koza interprets the deposit type as low sulfidation epithermal mineralization related to thrusting. The mineralization has been subsequently displaced by a south-dipping thrust fault. In addition, there are two areas of mining and exploration focus. These are Himmetdede and Himmetdede North. Himmetdede is the main mineralized zone and Himmetdede North is interpreted as the continuation of the main mineralized zone that has been offset by reverse faulting and thrust faults in the upper plate of the major thrust fault structure (Albayrak, personal communication 2015).

The Himmetdede project is located within a farming area with low rolling hills. Hill tops in the area mark the location of outcrops of resistant silicification within the mineralized system. At these locations, the silicification includes quartz stockworks, breccia pipes and gossanous iron oxide. Koza has mapped silica outcrops over an area 8 km long. The largest silica zone is approximately 1 km long by 500 m wide (Koza, 2013a).



Source: Koza, 2013

Figure 2.4.2.1: Himmetdede Geology Map

2.5 Exploration

Exploration samples collected to date include 161 stream sediment, 2,422 soil and 114 rock chip samples. Koza has also completed 7,932 m of trenching, 204 core holes, geophysical surveys, two Portable Infrared Mineral Analyzer (PIMA) programs and mapping at 1:25,000 and 1:5000 scales. Koza has budgeted approximately TL685,000 (US$304,000) for the 2015 exploration program. The program will include drilling and geophysics at the project.

2.5.1 Sample Collection

Stream sediment samples were collected along master streams above and below the inflow of tributary creeks. Samples were collected to be as representative as possible. This was done by collecting a composite sample at each location from the same depositional environment in the stream bed. Koza screens stream sediment samples to -80 mesh and typically collects 3 to 4 kg of sample.

Soil samples were collected over a regular grid. Samples were collected from the B horizon and typically 3 to 4 kg of sample was collected.

Rock samples were selective chip samples collected at locations across the width of the exposed veins and silica zones and were typically 3 to 4 kg in weight. Collection points ranged from 200 to 25 m apart along the veins trend and were selected based on field observations, conditions and accessibility to the vein.

Core sampling is discussed in the following section.

2.5.2 Drilling/Sampling Procedures

Koza has conducted all drilling at Himmetdede. The database contains a total of 353 drillholes totaling 83,028 m of HQ and NQ core and 22 trenches with 6,826 m of excavation.

About 20% of the holes are vertical and the remainder are oriented to the northwest at angles between -45º and -55º from horizontal. In the Himmetdede main resource area, the drilling in the central part of the deposit is on section lines 40 m apart with drillholes spaced at about 50 m on the section lines. Peripherally, the drilling is on 50 m section lines with drillholes spaced at about 100 m on the section lines. At Himmetdede North, the drilling is on a rough 50 m by 50 m grid in the mineralization. Koza's recent drilling program includes holes between Himmetdede Main and Himmetdede North. The drilling is summarized in Table 2.5.2.1 and Figure 2.5.2.1 is a drillhole location map.

Table 2.5.2.1: Himmetdede Drilling Summary

Area	Core Holes		Trenches	
	Number	Meters	Number	Meters
Himmetdede	353	83,082	22	6,826

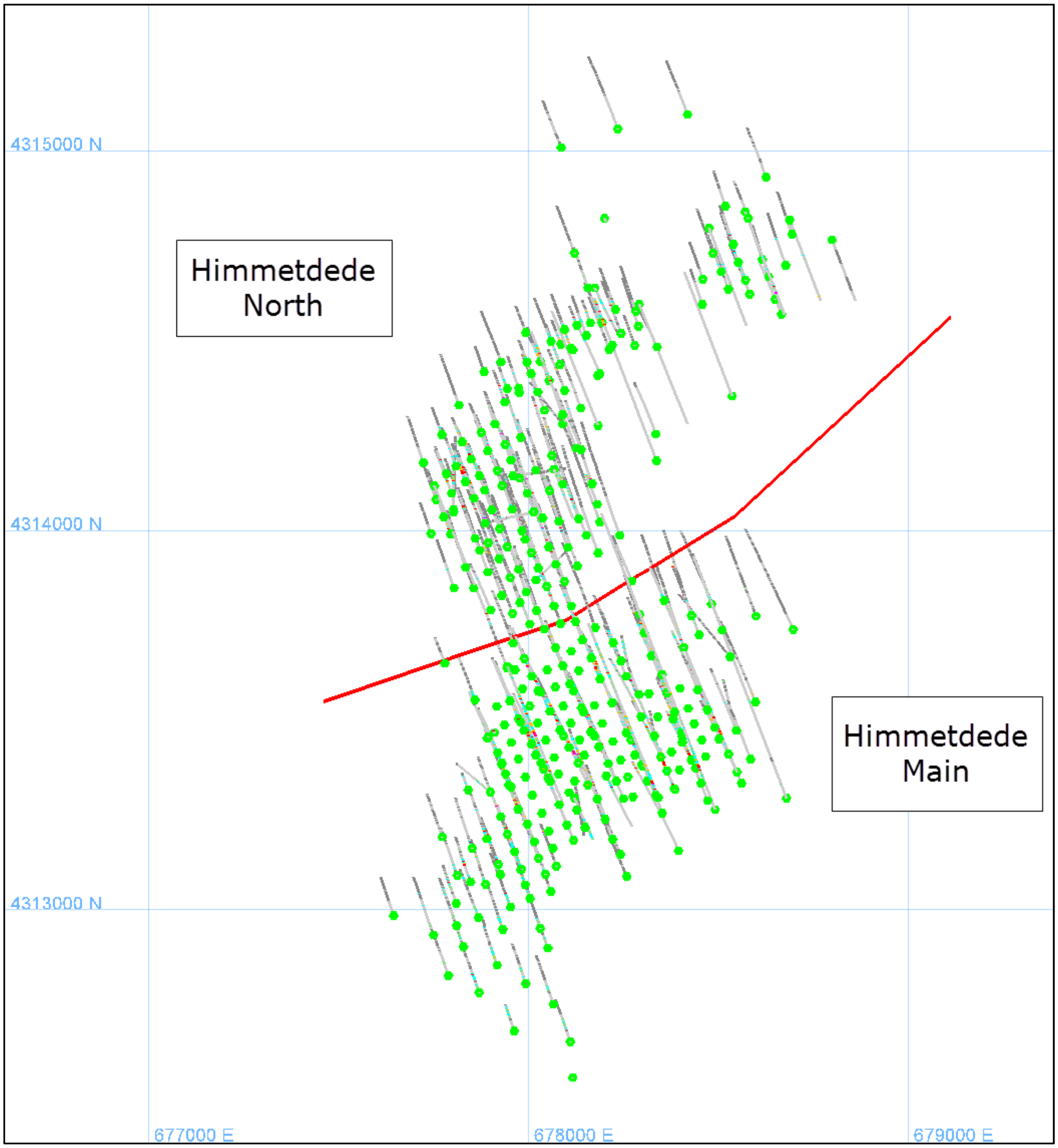


Figure 2.5.2.1: Himmetdede Drillhole Location Map

The drilling and sampling were conducted according to Koza's standard exploration methods which includes surveying the holes for downhole deviation, surveying the collar coordinates, photographing the core and logging for geological and geotechnical data.

Koza logs onto paper and collects recovery, rock quality designation (RQD), fracture counts, fracture orientation, quartz vein density, vein orientation, rock type, alteration and sulfide and oxide percentages. Data is then entered into the computer for additional analysis. Sample intervals are selected by the geologist and are typically 1 m in length. Samples may be shorter or slightly longer than 1 m to accommodate changes in lithology. The core is cut in half lengthwise with ½ sent for assay and ½ archived for reference or future analysis.

Drill recovery at Himmetdede ranges from 6% to 100% with an average of 98%. There are 43 intervals with no core recovery out of more than 84,000 intervals. SRK has reviewed core recovery versus gold grade and has not found any correlation between the two.

2.5.3 Sample Preparation and Analysis

Core and exploration samples are held in the custody of Koza until they are shipped to the laboratory for analysis. Samples are stored in a locked vehicle, locked core logging facility or at the nearest mine site in a locked building. Core samples are either delivered to the laboratory by Koza personnel or shipped via commercial trucking. This is industry best practice.

Drillhole and trench samples have been analyzed internally by Koza and externally at ALS Global. Koza used the laboratory at the Kaymaz Mine. When ALS Global was used, sample preparation was completed at ALS Izmir and analysis at ALS Vancouver or ALS Romania.

ALS Global Analysis

Samples were prepared at ALS İzmir. All early analysis was conducted at the ALS Vancouver laboratory but later only ICP multi-element analysis was completed at ALS Vancouver. Later in the program, FA was conducted at ALS Romania. ALS Vancouver and ALS Romania have ISO 17025 accreditation for specific analytical methods through the Standards Council of Canada. ALS Vancouver's accreditation is valid through May 18, 2017 and ALS Romania's is valid through March 27, 2016.

Once the samples arrived at the laboratory, they were bar coded and entered into the Laboratory Information Management System (LIMS). All samples were dried to a maximum temperature of 60°C in order to avoid or limit volatilization of elements such as mercury (ALS code DRY-22). Soil and stream sediment samples were screened to -180 micron (80 mesh) to remove organic matter and large particles. Soil and stream samples were pulverized to 85% passing 75 microns (ALS code PUL-31) prior to digestion and analysis.

Soil samples and stream sediment samples were analyzed using ALS code ME-MS41, a 51 element package with ultra-trace level sensitivity typically used for rock samples and drill core. In this analysis, a 1 g sample is digested using aqua regia and analyzed using both Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES) and Inductively Coupled Plasma-Mass Spectroscopy (ICP-MS). Because of the sample size, ME-MS41 is considered a semi-quantitative method for gold, Because of this, Koza also analyzed for gold using ALS code Au-ICP22, which is a FA method using a 50 g charge and ICP-AES finish. The aqua regia digestion used in method ME-MS41 may not provide representative results for refractory minerals and elements such as molybdenum (ALS Global, 2014). The analytical method selected is appropriate for the mineralization. Table 7.5.5.1 presents the analytes with upper and lower detection limits for ALS ME-MS41 and Au-ICP22.

Table 2.5.3.1: Analytes and Upper and Lower Detection Limits for ALS Codes ME-MS41 and Au-ICP22 in ppm Unless Otherwise Noted

Method	Analyte	Range	Method	Analyte	Range	Method	Analyte	Range
Au-ICP22	Au	0.001-10	ME-MS41	Hf	0.02-500	ME-MS41	Sc	0.1-10,000
ME-MS41	Ag	0.01-100	ME-MS41	Hg	0.01-10,000	ME-MS41	Se	0.2-1,000
ME-MS41	Al	0.01-25%	ME-MS41	In	0.005-500	ME-MS41	Sn	0.2-500
ME-MS41	Au	0.2-25	ME-MS41	K	0.01-10%	ME-MS41	Sr	0.2-10,000
ME-MS41	B	10-10,000	ME-MS41	La	0.2-10,000	ME-MS41	Ta	0.01-500
ME-MS41	Ba	10-10,000	ME-MS41	Li	0.1-10,000	ME-MS41	Te	0.01-500
ME-MS41	Be	0.05-1,000	ME-MS41	Mg	0.01-25%	ME-MS41	Th	0.2-10,000
ME-MS41	Bi	0.01-10,000	ME-MS41	Mn	5-50,000	ME-MS41	Ti	0.005-10%
ME-MS41	Ca	0.01-25%	ME-MS41	Mo	0.05-10,000	ME-MS41	Tl	0.02-10,000
ME-MS41	Cd	0.01-1,000	ME-MS41	Na	0.01-10%	ME-MS41	U	0.05-10,000
ME-MS41	Ce	0.02-500	ME-MS41	Nb	0.05-500	ME-MS41	V	1-10,000
ME-MS41	Co	0.1-10,000	ME-MS41	Ni	0.2-10,000	ME-MS41	W	0.05-10,000
ME-MS41	Cr	1-10,000	ME-MS41	P	10-10,000	ME-MS41	Y	0.05-500
ME-MS41	Cs	0.05-500	ME-MS41	Pb	0.2-10,000	ME-MS41	Zn	2-10,000
ME-MS41	Cu	0.2-10,000	ME-MS41	Rb	0.1-10,000	ME-MS41	Zr	0.5-500
ME-MS41	Fe	0.01-50%	ME-MS41	Re	0.001-50			
ME-MS41	Ga	0.05-10,000	ME-MS41	S	0.01-10%			
ME-MS41	Ge	0.05-500	ME-MS41	Sb	0.05-10,000			

Source: ALS Global, 2014

After drying using ALS code DRY-22, rock chip and core samples were crushed to 70% passing -2 mm (ALS code CRU-31) and a 1,000 g split was collected using a riffle splitter (ALS code SPL-21). The 1,000 g split was pulverized to 85% passing 75 microns (ALS code PUL-32). Koza requests a larger split pulverized to help mitigate the nugget affect.

For core and rock chip samples, Gold was analyzed at ALS using either ALS code Au-AA24 or, if over limit, either Au-AA26 or Au-GRA21. Both Au-AA24 and Au-AA26 are Fire Assay (FA) using a 50 g charge and an Atomic Absorption Spectroscopy (AAS), but Au-AA24 has an analytical range of 0.005 to 10 ppm while Au-AA26 has a range of 0.01 to 100 ppm. The Au-GRA21 code is for a 30 g charge FA with a gravimetric finish and an analytical range of 0.05 to 1,000 ppm. Silver is analyzed using four acid digestion and Inductively Coupled Atomic Emission Spectroscopy (ICP-AES) under code ME-ICP61, which is a 33 element geochemistry package an analytical range for silver of 0.5 to 100 ppm. Over limit silver is analyzed using code Ag-AA47. This is an aqua regia digestion with an AAS finish and analytical range of 1 to 1,500 ppm. In addition, Hg is analyzed using code ME-MS42, which is an aqua regia digestion and ICP Mass Spectroscopy (MS) method with an analytical range of 0.005 to 25 ppm. Table 2.5.3.2 presents the analytes with upper and lower detection limits for ALS ME-ICP61.

Table 2.5.3.2: Analytes and Upper and Lower Detection Limits for ALS Codes ME-ICP61 in ppm Unless Otherwise Noted

Analyte	Range	Analyte	Range	Analyte	Range
Ag	0.5-100	Fe	0.01-50%	S	0.01-10%
Al	0.01-50%	Ga	10-10,000	Sb	5-10,000
As	5-10,000	K	0.01-10%	Sc	1-10,000
Ba	10-10,000	La	10-10,000	Sr	1-10,000
Be	0.5-1,000	Mg	0.01-50%	Th	20-10,000
Bi	2-10,000	Mn	5-100,000	Ti	0.01-10%
Ca	0.01-50%	Mo	1-10,000	Tl	10-10,000
Cd	0.05-1,000	Na	0.01-10%	U	10-10,000
Co	1-10,000	Ni	1-10,000	V	1-10,000
Cr	1-10,000	P	10-10,000	W	10-10,000
Cu	1-10,000	Pb	2-10,000	Zn	2-10,000

Source: ALS Global, 2014

Koza Kaymaz Laboratory Analysis

Koza conducted analysis of some of the Himmetdede exploration samples at the Kaymaz laboratory. This laboratory has the following capabilities for gold and silver:

- Au by aqua regia – di-isobutyl ketone (AR-DIBK or DIBK) and Atomic Absorption Spectroscopy (AAS) finish with a lower detection limit of 0.1 ppm; and
- Ag by aqua regia and AAS finish with a lower detection limit of 0.2 ppm.

The lower detection limit for gold at 0.1 ppm is very close to the resource cutoff grade of 0.14 ppm Au. SRK previously recommended that Himmetdede samples be analyzed using a method with a detection limit less than 0.01 ppm Au.

A laboratory has been constructed at Himmetdede and is being used for the Himmetdede production and exploration samples. The Himmetdede lab is using the same aqua regia digestion used at other Koza laboratories but Himmetdede has a lower detection limit. The Himmetdede laboratory has the following capabilities:

- Au by aqua regia – DIBK (AR-DIBK with a lower detection limit of 0.05 ppm; and
- Ag by aqua regia and AAS finish with a lower detection limit of 0.2 ppm.

2.5.4 Quality Assurance and Quality Control (QA/QC)

Insertion of Internal controls

Koza inserts QA/QC control samples into the sample stream at approximately one blank per drillhole, one Certified Reference Materials (CRMs) every 25 samples and duplicate samples at a rate of one or two per drillhole. These samples are numbered in sequence by the core logging geologist. The location of the control samples is noted on the sample log and in the sample database.

Certified Reference Materials

Koza used four CRMs at Himmetdede and five at Himmetdede North during the 2014 exploration program. These CRMs were purchased from Ore Research and Exploration in Australia (OREAS). For all CRMs Koza uses a performance range of ±10% of the mean. SRK uses ± 2 standard deviations to define warnings and ± 3 standard deviations to define failures. The ± 3 standard deviation threshold should not exceed 10% of the mean.

Table 2.5.4.1 presents the expected mean, standard deviations and summaries of the analyses of the Au CRMs used at Himmetdede. Table 2.5.4.2 presents the expected mean, standard deviations and summaries of the analyses of the Au CRMs used at Himmetdede North.

Table 2.5.4.1: Results of Au CRM Analyses at Himmetdede

CRM	Number of Samples	Expected (ppm)		Observed (ppm)		% of Expected	±2 SD <±3 SD		>±3 SD	
		Mean	Std Dev	Mean	Std Dev		No. Failures	% Failure Rate	No. Failures	% Failure Rate
OREAS 201	20	0.498	0.030	0.494	0.008	99.2	0	0	0	0
OREAS 202	20	0.711	0.050	0.725	0.019	101.9	0	0	0	0
OREAS 203	16	0.825	0.062	0.833	0.038	100.9	0	0	0	0
OREAS 204	16	1.007	0.050	1.010	0.027	100.3	0	0	0	0
Total	**72**						**0**	**0**	**0**	**0**

SD = standard deviation

Table 2.5.4.2: Results of Au CRM Analyses at Himmetdede North

CRM	Number of Samples	Expected (ppm)		Observed (ppm)		% of Expected	±2 SD <±3 SD		>±3 SD	
		Mean	Std Dev	Mean	Std Dev		No. Failures	% Failure Rate	No. Failures	% Failure Rate
OREAS 201	16	0.498	0.030	0.495	0.007	99.4	0	0	0	0
OREAS 202	18	0.711	0.050	0.719	0.016	101.1	0	0	0	0
OREAS 203	23	0.825	0.062	0.833	0.032	100.9	0	0	0	0
OREAS 204	20	1.007	0.050	0.998	0.027	99.1	0	0	0	0
OREAS 206	4	2.089	0.084	2.080	0	99.6	0	0	0	0
Total	**81**						**0**	**0**	**0**	**0**

SD = standard deviation

There were no failures in any of the CRMs. At Himmetdede three CRMs were higher than the expected mean and one was lower with observed values between 99.2 and 101.9. At Himmetdede North two were higher and three were lower than the expected mean. Observed values at Himmetdede North were between 99.1 and 101.1%. The observed standard deviation is very small for the standards submitted to the Himmetdede laboratory, indicating that there is very little variability in the results. SRK notes that OREAS 206 had only four submissions and that the gold grade was exactly 2.080 ppm for all the analyses. It is unusual to see the same result for all analyses. SRK recommends monitoring this CRM to see if the grade varies. If the grade does not vary, SRK recommends contacting laboratory about this CRM.

Blanks

Sample blanks test for contamination in preparation and assaying and handling errors. Koza inserted one sample blank per drillhole using pulp blanks up until June 2012 and preparation blanks since then. A blank failure is a result greater than five times the detection limit. The lower detection limit at the Kaymaz lab is 0.1 g/t Au. SRK has examined the results for gold in the blank samples did not find any failures.

Preparation Duplicates

Preparation duplicates are created by splitting a second cut of the crushed sample (coarse reject) in the same way and for the same weight as the original sample. The objective is to determine if:

- Splitting procedures are applied consistently; and
- Changes are required for the crush size.

In 2014 Koza sent preparation duplicates to the Himmetdede laboratory, the primary lab, for analysis. The 2014 duplicate analysis data provided to SRK includes 103 duplicate pairs with Au results. After removing all pairs with at least one value less than detection limit, 15 duplicate pairs were available for QA/QC review.

A summary of the analytical results are presented in Table 2.5.4.3.

Table 2.5.4.3: Summary of Preparation Duplicate Au Analysis at Himmetdede and Himmetdede North

Criteria	Number of Samples	Original>Dup	Dup>Original	Original = Dup	Within +/- 20%
All samples	15	3	8	4	15
		20%	53.3%	26.7%	100%

With the exception of one sample, the results are all within 5% of the original sample. The one sample was outside ±20% and is considered a failure. For the other 14 samples, the differences between the original and duplicate samples are so small, even at the higher grades, that it may be that the lab is reanalyzing the duplicate until it obtains the same value as the original sample. SRK suggests the following:

- Duplicate samples should be taken in the mineralized zones; and
- Duplicate samples should be prepared and then returned to the geology department, renumbered and submitted to the lab in batches of ten or so, so that the samples are blind.

Pulp Duplicates

Koza has not submitted any pulp duplicate samples to the primary lab. Pulp duplicates are the primary method of checking the precision of analysis. SRK recommends that the Company begin sending pulp duplicates as part of its QA/QC program or monitor the internal pulp duplicates produced and analyzed by the primary lab.

Secondary Check Lab Analysis

Koza submitted 58 check samples to a SGS Australia as a check the analyses of the Himmetdede laboratory during the 2014 drilling programs. A summary of the analytical results for Au and Ag are presented in Tables 2.5.4.4 and 2.5.4.5., respectively.

Table 2.5.4.4: Summary of Himmetdede and SGS Au Analysis at Himmetdede

Criteria	Number of Samples	Himmetdede >SGS	SGS> Himmetdede	Himmetdede =SGS	Within +/- 10%
Himmetdede and SGS Au Analysis	58	51 87.9%	7 12.1%	0 0%	30 51.7%

Table 2.5.4.5: Summary of Himmetdede and SGS Ag Analysis at Himmetdede

Criteria	Number of Samples	Himmetdede >SGS	SGS> Himmetdede	Himmetdede =SGS	Within +/- 10%
Himmetdede and SGS Ag Analysis	58	37	21	0	1
		63.7%	36.2%	0%	1.7%

The data show that overall Himmetdede is biased high in comparison to SGS for gold and silver. Reproducibility between the two labs is approximate 52% for gold and is poor for silver. SRK is unsure what analytical methods are used at SGS, but recommends that Koza confirm that both laboratories are analyzing using the same methods gold and silver. SGS may not be using the DIBK-AR gold method that Koza uses and as a result, SGS may not have as complete a digestion in there analysis for gold.

Koza submitted a blank and two CRM with the samples. The blank was OREAS 22D and was a quartz blank. The CRMs were OREAS 201 and OREAS 206. There was one submission each of the CRM and two submission of the blank in the batch.

Since pulps are sent to the secondary laboratory and there is no sample preparation, the blank is not a necessary. SRK notes that there were no sample blank failures.

There are an insufficient number of CRMs to make an assessment of the SGS laboratory performance. For OREAS 201, the one analysis for SGS was biased low at 97.1% of the mean and for OREAS 206 was biased high at 104.4% of the mean. Koza is biased low for both CRMs. SRK recommends that with submissions to secondary check labs that a CRM be inserted every 5 to 6 samples and that two CRMs being used in order to get a statistically meaningful dataset.

Conclusions and Recommendations

Koza monitors QA/QC of the laboratory analyses by inserting internal control samples into the sample stream. CRMs, blanks preparation duplicates and secondary check lab analyses are systematically inserted to ensure reliability and accuracy of the laboratory. When a failure occurs, Koza assesses the failure and decides on a course of action. If it is only one failure, Koza reanalyzes five samples before and after the failure. However, in the case of multiple failures, Koza may reassay the entire batch. These actions are industry practice.

SRK has the following recommendations:

- Plot the standards against time to determine if the laboratory has trouble during a certain period;
- Duplicate samples should be chosen from mineralized zones and should be submitted blind to the lab;
- Pulp duplicates should be prepared and submitted the lab;
- Continue submitting check samples to a secondary laboratory as a check of the Himmetdede lab; and
- Insert CRM samples with the check assay samples at a frequency of one CRM per five to six samples.

SRK also recommends contacting SGS to confirm that the analytical methods used at SGS match those used at Himmetdede for future analysis.

Overall the laboratory is performing well and the QA/QC program is sufficiently monitoring laboratory accuracy and reliability.

2.6 Mineral Resources

The resource estimations for the Himmetdede Main and North deposits were updated by Koza in 2014 (Koza, 2014 and 2014a).

2.6.1 Geological Modeling and Grade Estimation

The main body of mineralization occurs in a series of breccia zones striking east-northeast and dipping about -40º to the southeast (Domain 1). There is also mineralization which dips shallowly to the southeast (Domain 2) and higher-grade, northwest dipping mineralization (Domain 3) both in the southeast. The mineralization has been modeled by Koza in grade shells at a cutoff grade of 0.1 g/t Au. Himmetdede Main consists of 18 separate wireframes grouped into the three domains. There is a relatively sharp contact between mineralization and waste.

At Himmetdede North, the mineralization strikes northeast and dips to the southeast at about 40º. Himmetdede North mineralization was modeled as 12 wireframes grouped into three domains. The mineralization is found in an area about 2 km long by 1.5 km wide and extending about 280 m below surface. The individual wireframes have smaller extents and vary in thickness from 1 to over 30 m.

An oxide/sulfide surface was generated for Himmetdede Main using the information from the drill logs. SRK has reviewed the surface and found that it is fairly irregular which may be caused by groundwater presence in the faults and breccia zones.

Koza has not modeled an oxide/sulfide surface for Himmetdede North. SRK has reviewed the drillholes at Himmetdede North in cross-section and found that the amount of sulfide is limited and not conducive for modeling as a surface. In addition, the mineralization is shallower and the sulfide may not have been reached with the drilling.

Figures 2.6.1.1 and 2.6.1.2 illustrate the wireframes in plan and cross-sectional view. The cross-section shows the mineralization tends to flatten with depth and that there is not a clear distinction between Himmetdede Main and North. Statistics of the assays within the wireframes are given in Table 2.6.1.1. Intervals with no core recovered were ignored, and unassayed intervals within the wireframe were set to zero. Trenches are included in the resource database.

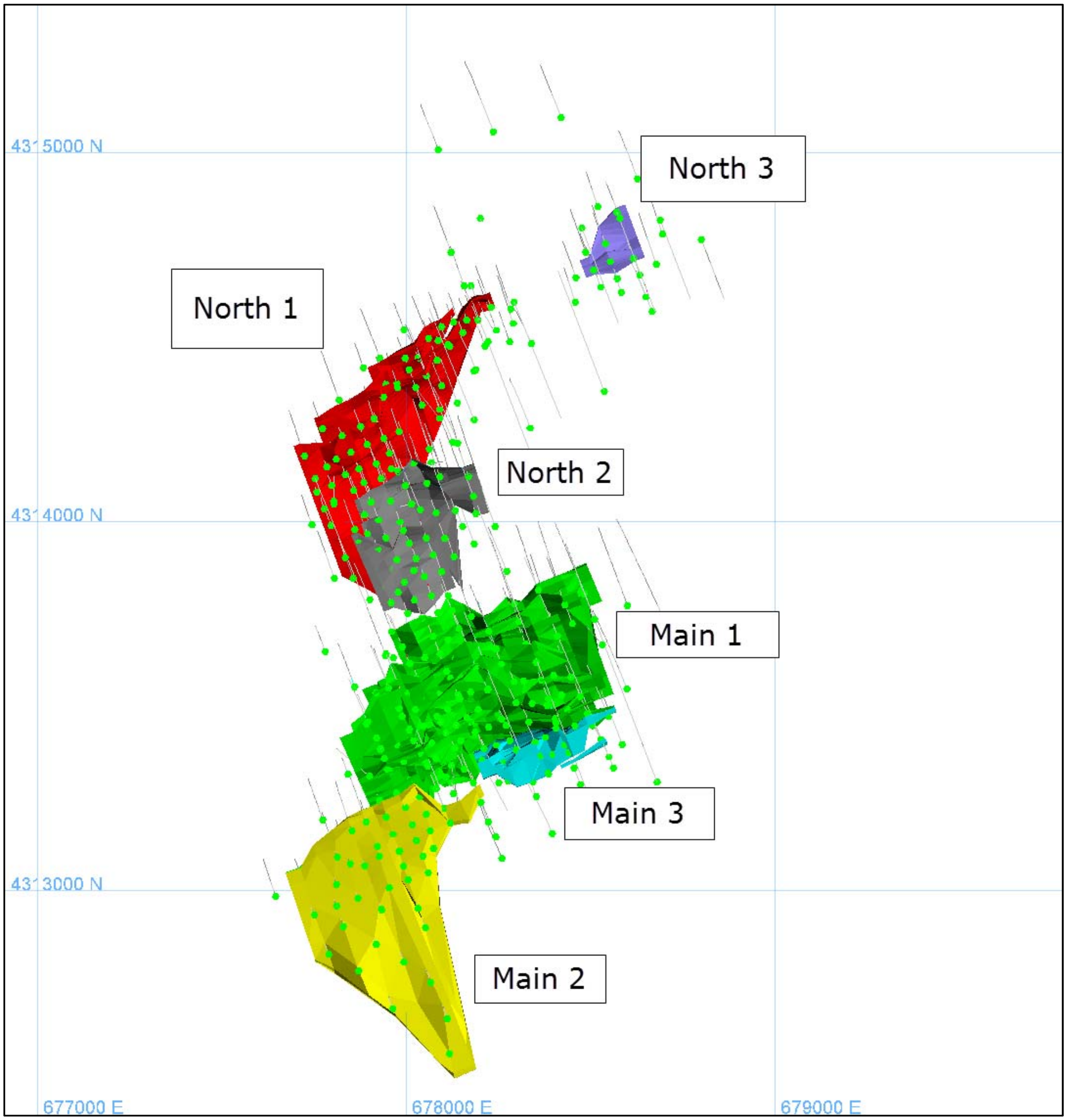


Figure 2.6.1.1: Drilling and Mineralized Zones at Himmetdede and Himmetdede North in Plan View

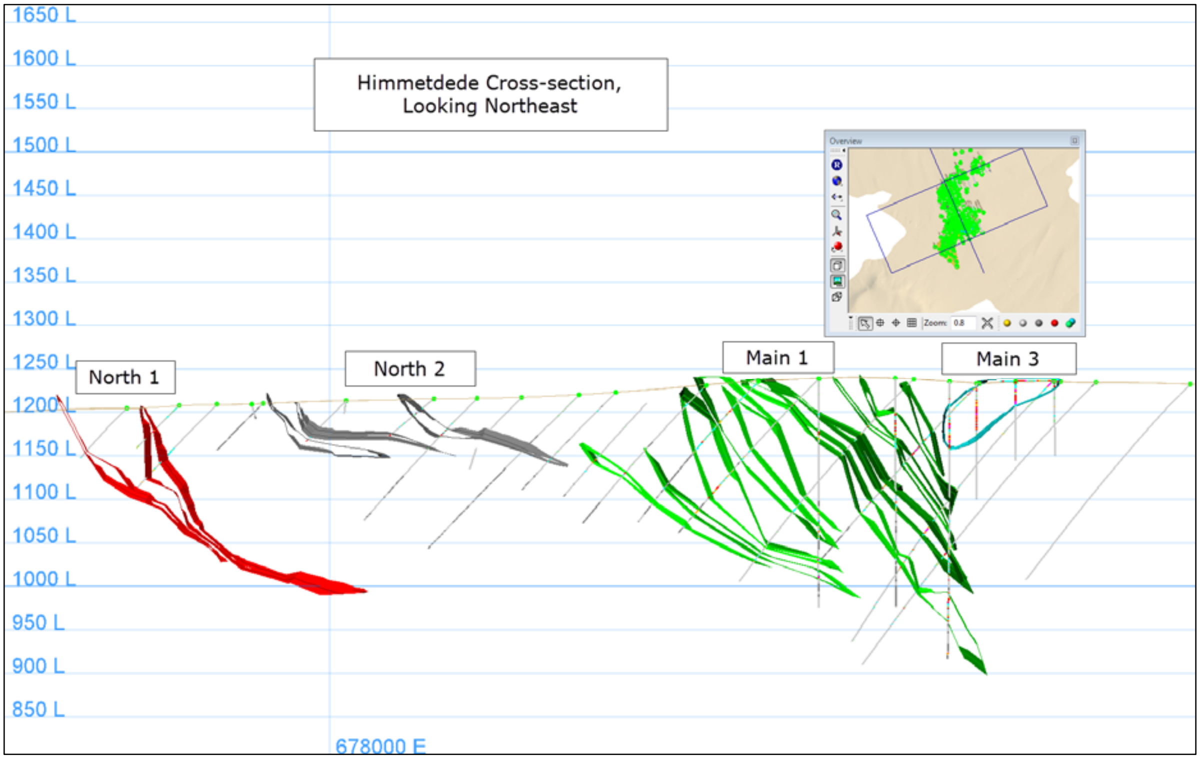


Figure 2.6.1.2: Cross-section View of Drilling and Mineralized Zones at Himmetdede and Himmetdede North, Looking Northeast

Table 2.6.1.1: Statistics of Gold Assays within Wireframes at Himmetdede and Himmetdede North

Area	Zone	Count	Min	Max	Mean	Std Dev	CV
Himmetdede	Oxide	9,504	0	93.50	0.71	2.25	3.19
	Sulfide	1,022	0	53.90	1.10	3.74	3.38
Himmetdede North	Oxide	2,562	0	39.09	0.52	1.59	3.04

2.6.2 Capping and Compositing

The drillhole sample lengths were plotted on a frequency chart to analyze the distribution to aid in the choice of an appropriate composite length. In the Himmetdede Main data, more than 95% of the samples are 1.5 m or less in length and Koza therefore selected a composite length of 1.5 m for Himmetdede Main. At Himmetdede North, 92% of the samples are 1 m or less in length and Koza selected 1 m composites for Himmetdede North which resulted in more composites than samples. SRK suggests that in future estimations that a composite length of 1.5 m be used at Himmetdede North as well. The drillholes were composited using the distribution method whereby the intervals are divided into equal lengths as close to 1.5 m as possible across the wireframe. The resulting composite file has lengths ranging from 0.60 to 2.20 m with an average of 1.5 m. Table 2.6.2.1 presents basic statistics of the uncapped gold composites.

Table 2.6.2.1: Statistics of Uncapped Gold Composites within Wireframes at Himmetdede and North Himmetdede

Area	Zone	Count	Min	Max	Mean	Std Dev	CV
Himmetdede	Oxide Domain 1	4,953	0	33.38	0.65	1.40	2.16
	Oxide Domain 2	778	0	5.01	0.26	0.37	1.41
	Oxide Domain 3	648	0	53.65	1.62	4.05	2.51
	Oxide All	6,379	0	53.65	0.70	1.82	2.60
	Sulfide Domain 1	654	0	33.30	1.12	3.23	2.88
Himmetdede North	Oxide Domain 1	1,882	0	27.32	0.46	1.22	2.68
	Oxide Domain 2	585	0	39.09	0.82	2.44	3.00
	Oxide Domain 3	154	0.01	9.20	0.36	0.84	2.34
	Oxide All	2,621	0	39.09	0.53	1.57	2.96

Koza prepared histograms, log probability plots and a quantile analysis to determine the presence of outlier values and the need for capping. A value of 15 g/t Au was selected at Himmetdede as the capping value, affecting 27 samples or about 0.3% of the composites. At Himmetdede North, gold was capped at 4 g/t in Domain 1; 4 g/t in Domain 2; and 0.8 g/t in Domain 3 which affected a total of 66 composites or about 2.5% of the composites. The capping was applied after compositing. The basic statistics of the capped composites are given in Table 2.6.2.2. The Coefficient of Variation (CV) has been reduced to below 2 for all the domains, but is still somewhat high for resource estimation.

Table 2.6.2.2: Statistics of Capped Gold Composites within Wireframes at Himmetdede and North Himmetdede

Area	Zone	Count	Min	Max	Mean	Std Dev	CV
Himmetdede	Oxide Domain 1	4,953	0	15.00	0.64	1.18	1.86
	Oxide Domain 2	778	0	5.01	0.26	0.37	1.41
	Oxide Domain 3	648	0	15.00	1.44	2.63	1.83
	Oxide All	6,379	0	15.00	0.67	1.37	2.04
	Sulfide Domain 1	654	0	15.00	0.99	2.31	2.34
Himmetdede North	Oxide Domain 1	1,882	0	4.00	0.40	0.66	1.65
	Oxide Domain 2	585	0	4.00	0.58	0.98	1.70
	Oxide Domain 3	154	0.01	0.80	0.24	0.27	1.10
	Oxide All	2,621	0	4.00	0.43	0.73	1.71

2.6.3 Density

Density determinations were made on 408 core samples collected from 71 drillholes. The samples were grouped according to rock type, alteration, and position above or below the water table. Specific gravity determinations were made using Archimedes Principle. The samples were coated with wax and then weighed in water and in air. A value of 2.50 g/cm^3 is used for oxide blocks and 2.64 g/cm^3 is used for sulfide blocks. The density is on a dry basis.

2.6.4 Variography

Koza conducted an analysis of variograms, but was unable to obtain valid results.

2.6.5 Grade Estimation

Separate block models were created for Himmetdede and Himmetdede North with parent block size of 5 m x 5 m x 5 m, and sub-blocking to 1.25 m in the three directions. The parent block size is about a tenth of the drillhole spacing. SRK suggests that the two models be combined into one as the additional drilling indicates that there is no geological distinction between the two areas.

The three domains in each area were estimated separately. No distinction was made between oxide and sulfide blocks, or composites, in the estimation. Himmetdede Main Domain 1 is the only domain with sulfide mineralization. The average capped composite gold grade for oxide Domain 1 is 0.64 g/t and the average for sulfide Domain 1 is 0.99 g/t which is about 50% higher than the oxide average grade. SRK suggests that the sulfide domain should be estimated separately from the oxide domain.

Gold was estimated with Inverse Distance Squared (ID2) and nearest neighbor (NN), using Datamine's dynamic anisotropy option where the search ellipse orientation is assigned to each block depending on the shape of the wireframe at that location. The grade estimation was done in three passes with parameters shown in Table 2.6.5.1. An octant search was used for Himmetdede, but not Himmetdede North. Composites were matched to the block domain code for estimation.

Table 2.6.5.1: Himmetdede Estimation Parameters

Zone	Search	Search			Composites				
		Dist 1	Dist 2	Dist 3	Min. Octant	Min/ Octant	Max/ Octant	Min/Max comps	Max/Dh
Himmetdede	Search 1	60	60	10	2	1	4	10/20	4
	Search 2	120	120	20				10/20	
	Search 3	180	180	30				2/20	
Himmetdede North 1, 2	Search 1	60	60	15	NA	NA	NA	12/21	4
	Search 2	120	120	30				12/21	
	Search 3	180	180	45				6/12	
Himmetdede North 3	Search 1	70	40	10	NA	NA	NA	6/12	2
	Search 2	140	80	20				6/12	
	Search 3	210	120	30				3/6	

2.6.6 Block Model Validation

Koza did not provide any information as to how the Himmetdede Main block model was validated. SRK validated the block model by comparing composite grades to ID2 and NN estimations as shown in Table 2.6.6.1 and generation of swath plots by easting, northing and elevation. Koza validated the Himmetdede North block model by comparison of estimated grades to composite grades (Table 2.6.6.1) and visual examination of block and drillhole grades on cross-sections. The final resource results are based on the ID2 estimation.

Table 2.6.6.1: Statistics of Blocks at Himmetdede

Area	Zone	Composite	ID2	NN
Himmetdede	Oxide Domain 1	0.64	0.60	0.60
	Oxide Domain 2	0.26	0.23	0.25
	Oxide Domain 3	1.44	1.63	1.57
	Sulfide Domain 1	0.99	0.78	0.74
Himmetdede North	Oxide Domain 1	0.40	0.41	0.39
	Oxide Domain 2	0.58	0.56	0.52
	Oxide Domain 3	0.24	0.28	0.29

The estimated ID2 and NN grades are close to each other and similar to the composite grades, with the exception of:

- Himmetdede Main Domain 3 where the ID2 grades are about 15% higher than the composite grades;
- Himmetdede Main Sulfide Domain 1 where the ID2 grades are about 20% lower than the composite grades; and
- Himmetdede North Domain 3 where the estimated grades are about 15% higher than the composite grades.

The discrepancy in the sulfide zone is most likely due to the fact that the sulfide and oxide zones are not estimated separately. SRK suggests that Koza review the estimation methodology used in oxide and sulfide Domain 1 in the Himmetdede Main block model. Koza has classified Himmetdede North Domain 3 as inferred because of the overestimation of block grades.

SRK also compared block grades to composite grades visually on cross-sections.

SRK suggests that Koza use swath plots as a method of validating the block model and identifying areas where there may be estimation problems.

2.6.7 Mineral Resource Classification

Koza used the following classification scheme for Himmetdede:

- Measured: A wireframe was constructed based on drill spacing of less than 50 m in the central part of the deposit and blocks within this wireframe were classified as measured. Within the Measured blocks there are drillholes with low core recovery. A wireframe was constructed around these drillholes and the blocks within it were classified as Indicated.
- Inferred: A wireframe was constructed in the northeastern part of the deposit where there is low drill density and blocks within this wireframe were classified as inferred.
- Indicated: The remaining blocks were classified as Indicated based on drill spacing of about 50 m.

SRK notes that the total Measured and Indicated tonnage is about the same as the tonnage estimated in the first two estimation passes. SRK agrees with Koza’s classification methodology given the drillhole spacing.

At Himmetdede North, Domains 1 and 2 were classified as Indicated and Zone 3 was classified as Inferred. Given the drillhole spacing, SRK considers this a reasonable classification.

2.6.8 Mineral Resource Statement

The cutoff grade for the oxide resource is 0.15 g/t Au and the cutoff grade for the sulfide resource is 0.50 g/t Au, based on the open pit mining assumptions in Table 2.6.8.1. The one year rolling average gold price is US$1,266; the two year average is US$1,339; and the three year average is US$1,449. The cutoff grade is based on the assumption that all material will be mined by open pit methods and will be processed by heap leaching. There has been very little metallurgical testing of the sulfide material to support the assumption that it will be processed by heap leaching. SRK suggests that Koza do the metallurgical work to support this assumption or leave the sulfide material out of the resource statement.

It is SRK's policy to report resources within a pit optimization shell. Koza ran a pit optimization in 2013 with the parameters shown in Table 2.6.8.1 and US$1,500 gold price in 2012. Nearly all the oxide material falls inside the pit, and half of the sulfide material. However, the Himmetdede resources are reported globally, without a pit shell constraint.

Table 2.6.8.1: Himmetdede Cutoff Grade Parameters

Prices and Costs	Units	Oxide	Sulfide
Gold Price	US$/oz	1,450	1,450
Gold Recovery	%	72	30
Gold Refining	US$/oz	3.44	3.44
Government Right	%	1	1
Process Cost	US$/t	3.69	6.00
Mining Cost	US$/t	0.00	0.00
G&A Cost	US$/t	1.00	1.00
Calculated Cutoff grade	g/t	0.14	0.51
Final Cutoff grade	g/t	0.15	0.50

Koza, 2014

Table 2.6.8.2: Himmetdede and Himmetdede North Mineral Resources, Including Reserves, at December 31, 2014

Classification	kt	g/t Au	koz Au
Himmetdede Oxide			
Measured	7,063	0.66	151
Indicated	33,503	0.60	647
Measured and Indicated	40,566	0.61	798
Inferred	1,365	0.36	16
Himmetdede North Oxide			
Measured	0	0	0
Indicated	8,086	0.49	128
Measured and Indicated	8,086	0.49	128
Inferred	408	0.34	4
Total Oxide			
Measured	7,063	0.66	151
Indicated	41,589	0.58	775
Measured and Indicated	48,652	0.59	926
Inferred	1,773	0.36	20
Sulfide			
Measured	22	0.80	1
Indicated	2,779	1.27	114
Measured and Indicated	2,801	1.27	114
Inferred	74	0.78	2
Total			
Measured	7,085	0.66	151
Indicated	44,368	0.62	889
Measured and Indicated	51,453	0.63	1,040
Inferred	1,846	0.37	22

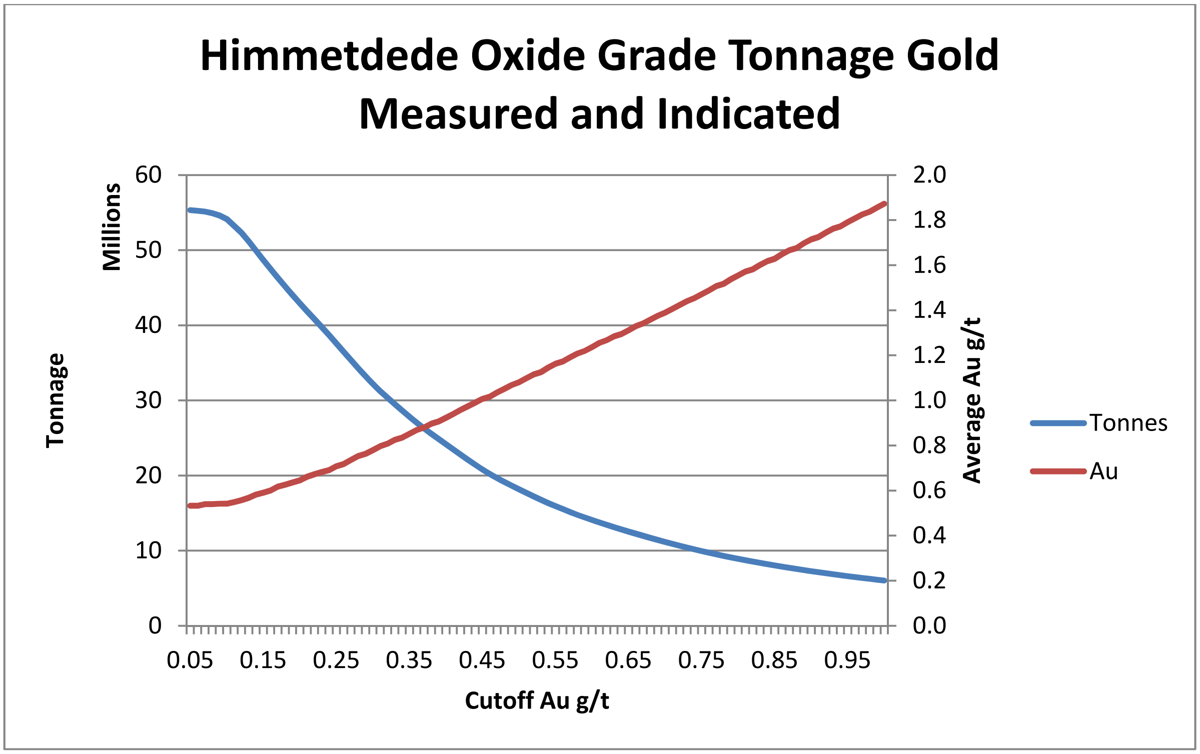
- Tonnages and grade are rounded to reflect approximation;
- Resources are stated at a cutoff grade of 0.15 g/t Au for oxide and 0.50 g/t Au for sulfide;
- Open pit resources are contained within grade shells but are not constrained by a pit optimization shell; and
- Mineral Resources are reported inclusive of Mineral Reserves.

2.6.9 Mineral Resource Sensitivity

The grade tonnage curves for the Measured and Indicated, and Inferred Resource by oxidation type are shown in Figures 2.6.9.1 and 2.6.9.2, respectively. Himmetdede and Himmetdede North are combined in the grade tonnage curves. Cutoff grades for the Himmetdede resource at various gold prices are shown in Table 2.6.9.1.

Table 2.6.9.1: Himmetdede Cutoff Grades vs. Gold Price

	Cutoff Grade	
Gold Price	**Oxide**	**Sulfide**
1600	0.13	0.46
1550	0.13	0.47
1500	0.14	0.49
1450	0.14	0.51
1400	0.15	0.52
1350	0.15	0.54
1300	0.16	0.57
1250	0.16	0.59
1200	0.17	0.61



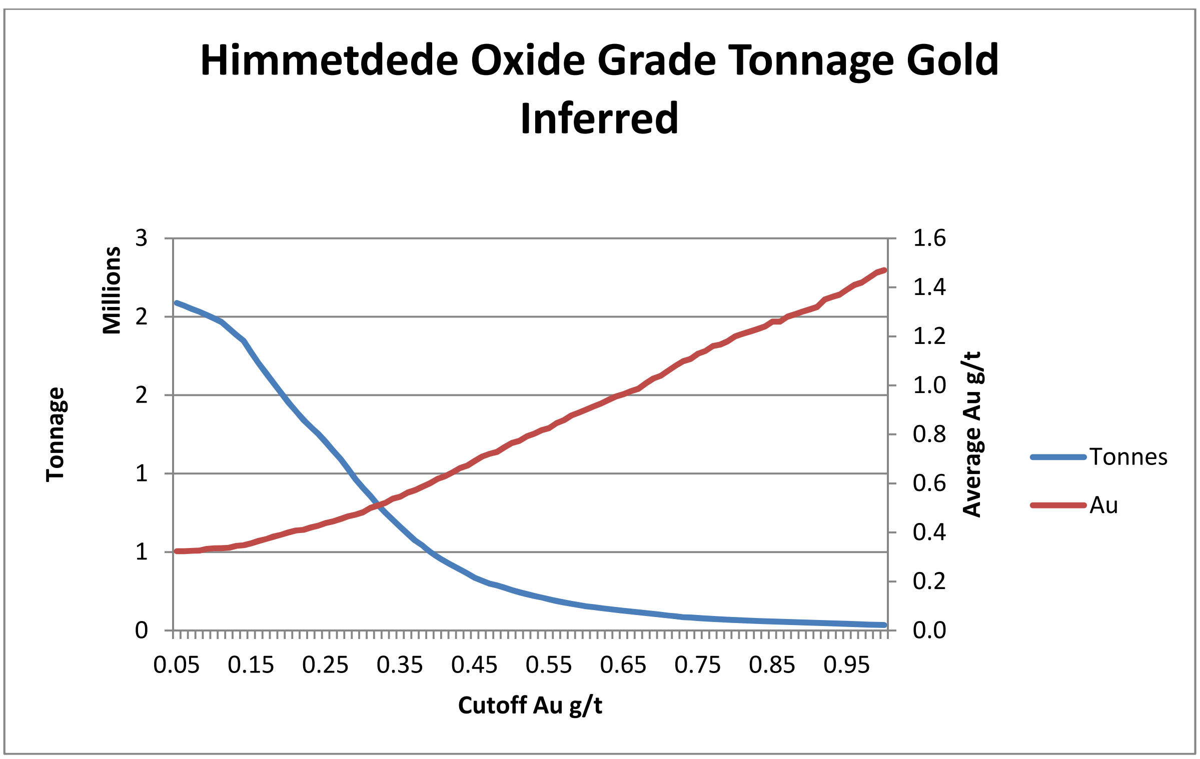
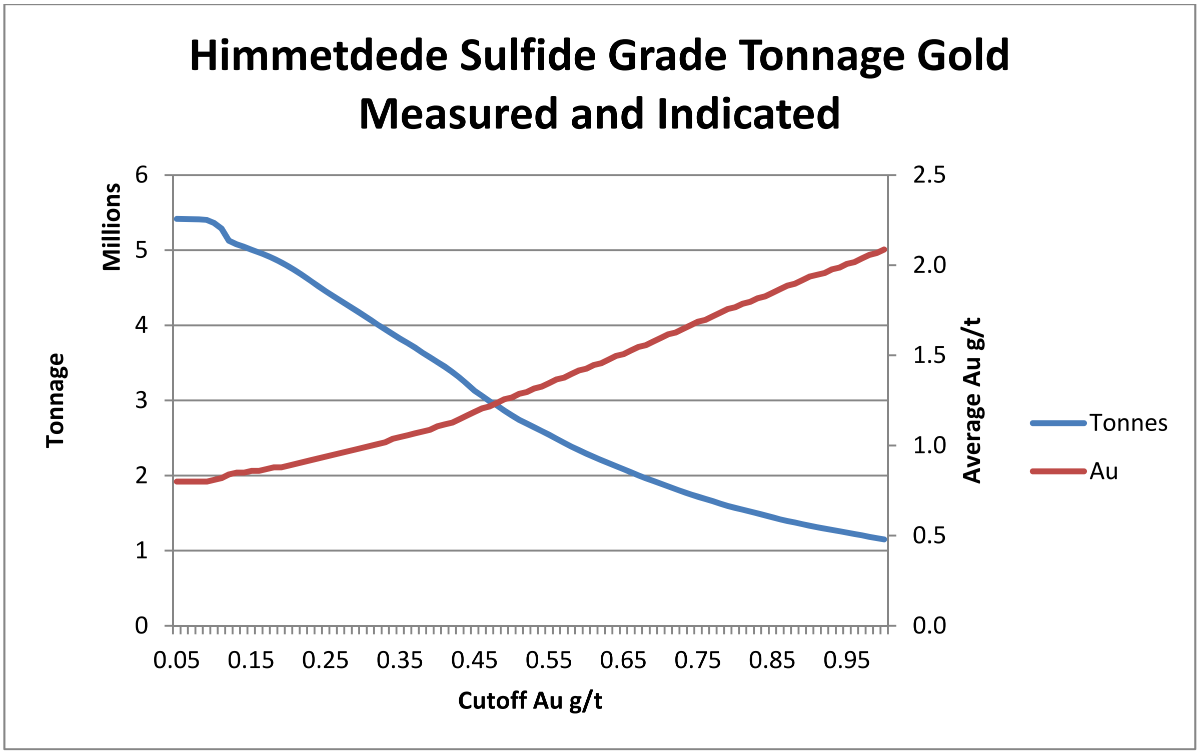


Figure 2.6.9.1: Himmetdede Grade Tonnage Curves – Oxide Resource



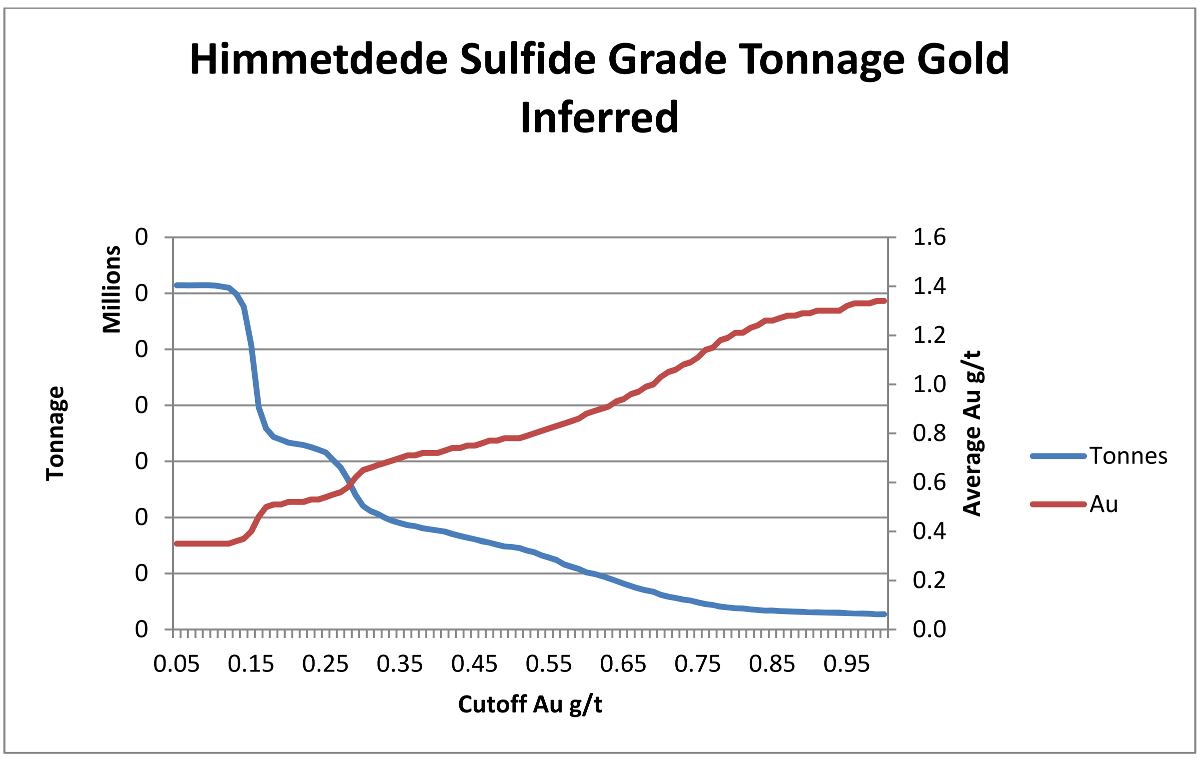
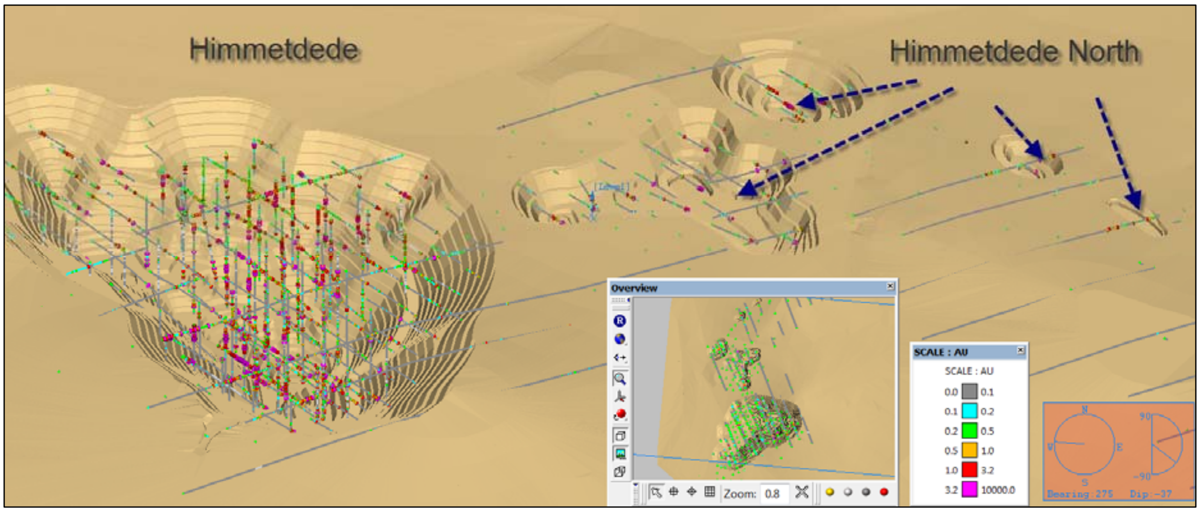


Figure 2.6.9.2: Himmetdede Grade Tonnage Curve – Sulfide Resource

Koza has done more drilling at Himmetdede and thereby increased the size of the resource and the confidence level.

2.7 Ore Reserve Estimation

Himmetdede is broken up into two deposits known as Himmetdede and Himmetdede North. The two areas of mineralization are separated by 50 m. Figure 2.7.1 illustrates the spacial separation of the two areas of mineralization.



Source: SRK, 2013

Figure 2.7.1: Himmetdede and Himmetdede North

LoM plans and resulting reserves are determined based on a gold price of US$1,250/oz for the Himmetdede open pit project. Reserves stated in this report are as of December 31, 2014.

The ore at Himmetdede is to be extracted using open pit methods utilizing heap leach operations for gold extraction. The ore material is converted from resource to reserve based primarily on positive cash flow pit optimization results, open pit mine design and geological classification of Measured and Indicated resources. The in-situ value is derived from the estimated grade and various modifying factors. The previous section discusses the procedures used to estimate gold grade. The modifying factors include the metal value and recovery.

2.7.1 Modifying Factors

The conversion of resource to reserve entails the evaluation of modifying factors that should be considered in stating a reserve. Table 2.7.1.1 illustrates a reserve checklist and associated commentary on the risk factors involved for the Himmetdede and Himmetdede North reserve statement.

Table 2.7.1.1: Himmetdede Reserve Checklist

Unit	Data Evaluated	Data Not Evaluated	Not Applicable	Notes
Mining				
Mining Width	X			Single Phase
Open Pit and/or Underground	X			Open Pit
Density and Bulk Handling	X			Owner mining, heap leach
Dilution	X			SMU 5x5x5
Mine Recovery	X			Full mine recovery assumed
Waste Rock	X			Waste dump strategy in place and sufficient volume (22.8 Mm^3)
Grade Control	X			Blast holes, bulk mining
Processing				
Representative Sample	X			Column Testing
Deleterious Elements	X			Clay, moisture content, crushability
Process Selection	X			Heap Leach
Geotechnical/Hydrological				
Slope Stability (Open Pit)	X			Slope stability study complete
Area Hydrology	X			Drawdown required, shallow water table
Seismic Risk	X			Assumed in design work
Environmental				
Baseline Studies	X			Ongoing
Tailing Management			X	No tailings at site
Waste Rock Management	X			Oxide rock
Acid Rock Drainage Issues			X	Oxide rock
Closure and Reclamation Plan	X			Project still developing EIA
Permitting Schedule	X			Operating license granted 2012
Legal Elements or Factors				
Security of Tenure	X			
Ownership Rights and Interests	X			
Environmental Liability	X			
Political Risk (e.g., land claims, sovereign risk)	X			Moderate and Ongoing Risk
Negotiated Fiscal Regime	X			
General Costs and Revenue Elements or Factors				
General and Administrative Costs	X			
Commodity Price Forecasts	X			
Royalty Commitments	X			
Taxes	X			
Corporative Investment Criteria	X			
Social Issues				
Sustainable Development Strategy	X			Koza Environmental/Social – Operating Mine
Impact Assessment and Mitigation		X		Koza Environmental/Social – Operating Mine
Negotiated Cost/Benefit Agreement		X		Assume no limiting factor to mining
Cultural and Social Influences		X		Koza Environmental/Social – Operating Mine

Mining was shut down at Himmetdede due to government officials not releasing an operating permit for the mine. This was believed to be politically motivated as part of the government's attempt to influence Koza owners. Given that the same technique was used at Kaymaz, the political risk associated with mining in Turkey has greatly increased.

Table 2.7.1.2 details the cost breakdown for pit optimization. Mining costs have been estimated using Koza's internal fleet estimation models. Processing cost is based on reagent consumptions and associated infrastructure, while the rehabilitation, grade control, administration and selling are costs from prior operational experience throughout Koza sites.

Table 2.7.1.2: 2012 Himmetdede Pit Optimization Inputs

Parameter	Unit	Amount
Mining Cost	US$/t material	1.45
Rehabilitation Cost	US$/t waste	0.20
Heap Leach Cost	US$t/ore	3.69
Selling Cost	US$/oz	3.44
Grade Control	US$t/ore	0.20
Administration	US$t/ore	1.00
Gold Price	US$/oz	1,250.00
Silver Price	US$/oz	20.00
Gold Recovery	%	72
Silver Recovery	%	50
Cutoff grade	g/t Au	0.17

Source: Koza, 2014

2.7.2 Reserve Classification

Ore tonnes which lie within the final pit design shape are classified as Proven or Probable reserves based on the geological classification for Measured and Indicated resources. Proven reserves are Measured resources within the design pit shape and Probable reserves are Indicated resources within the design pit shape. Inferred material which lies within the pit design is not included in the reserve statement and is treated as waste.

Material stockpiled on site is treated as a Proven reserve.

Table 2.7.2.1: 2014 Himmetdede Reserves

Category	Kt	g/t Au	Oz Au
Proven Reserves – Heap Leach	7,200	0.63	145,000
Probable Reserve	18,877	0.78	473,000
Proven and Probable Reserves	**26,077**	**0.74**	**619,000**
Proven Stockpile Reserve	33	0.94	1,000

Metal price: US$1,250/Oz-Au, Au Recovery 72%, Au Cutoff grade 0.17g/t.

Himmetdede is based on a selective mining unit of 5 m x 5 m x 5 m so no additional dilution has been added to reserve calculations over and above that inherent in the model. Full mine recovery is also assumed. After 2015, the production history will determine if this assumption is valid or not.

2.8 Mine Engineering

SRK conducted a site visit of the Himmetdede project in October 2014, during which time operations were suspended. The permit required for operations was received in January 2015 after Koza began legal proceedings on the government department withholding the permit. From an engineering perspective there is excellent access to power, water and human resources as the site is located next to a major Turkish freeway. In close proximity to the site, there are limestone quarries and a cement plant which border the proposed project boundary. The ground is gently undulating farmland with no limitation to heap leach pads or waste dump locations. Figure 2.8.1 shows a cross section of the final reserve pit, block model and mine topography.

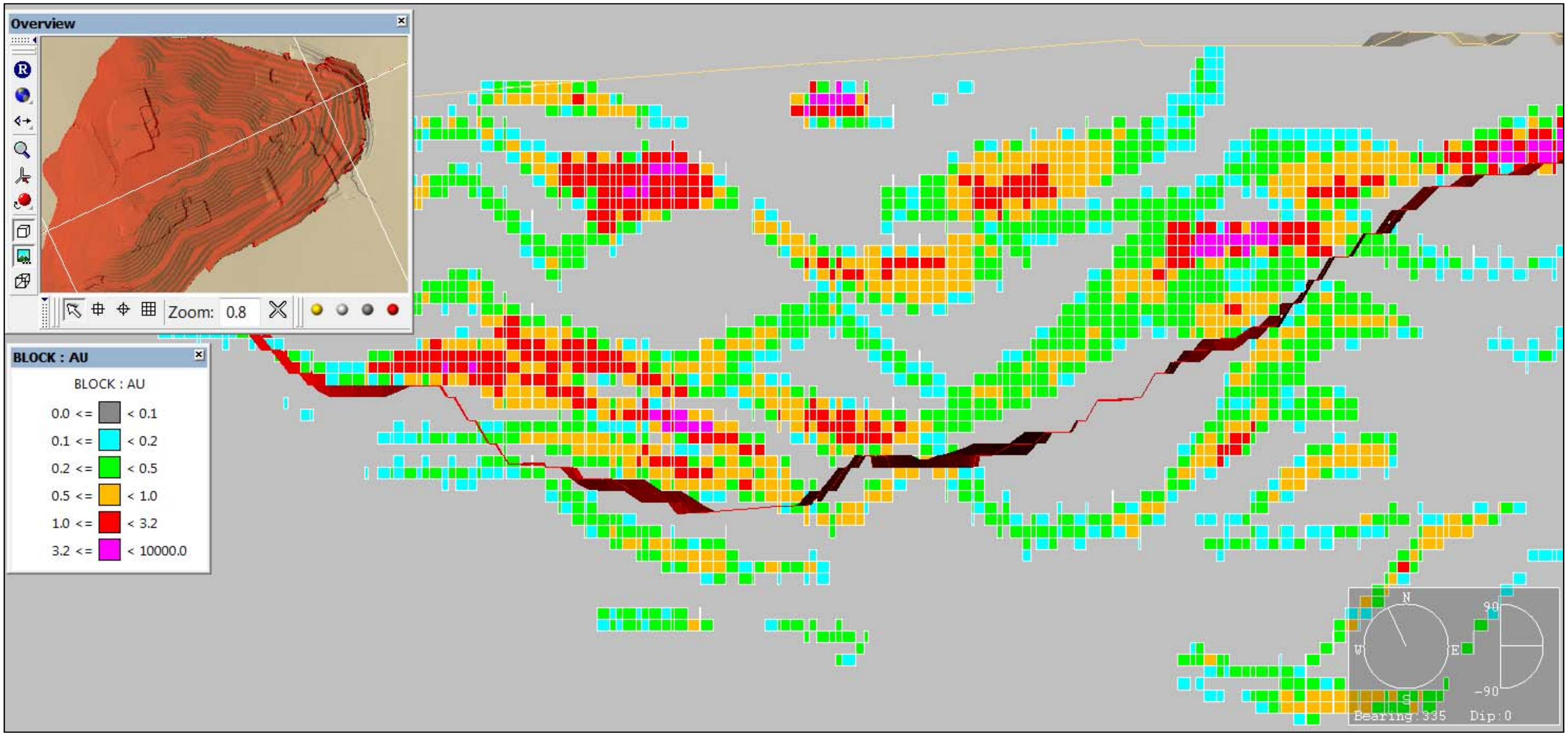


Figure 2.8.1: Himmetdede Cross Section

2.8.1 Project Schedule and Mine Planning

Himmetdede is an open pit heap leach operation that is owner operated with minimal reliance on third party contractors which constitutes a business change for Koza. Mining will target a 50 kt/d total material movement production rate that will allow up to 20 kt/d of ore delivery to crusher and ultimately the heap leach pad. This will equate to a gold production rate of between 6,000 oz/Au to 9,000 oz/Au per month depending on grade. The mine life is currently estimated to continue for approximately five years.

Himmetdede is the first mining operation to use Koza staff for mining operation in an open pit as the other open pits are all excavated by contractors. Koza has purchased Komatsu equipment for major loading and earthmoving equipment in combination with Volvo 40-t highway trucks. There are four Sandvik DX800 blast rigs using 101 mm bits for grade control and blasting. The equipment is all new and the majority of equipment can be supported from the major town of Kayseri. The equipment is suitable for planned operations with careful control of haul cycle times to ensure production rates can be met.

Table 2.8.1.1 shows the Himmetdede mine equipment list.

Table 2.8.1.1: Himmetdede Equipment List

Units	Make	Type	Specification
4	Komatsu	Excavator	PC700LC
1	Komatsu	Excavator	PC300LC
1	Komatsu	Loader	WA470
1	Komatsu	Loader	WA500
1	Komatsu	Grader	GD675
1	Komatsu	Dozer	D155AX
1	Komatsu	Dozer	D65EX
1	Komatsu	Beko (Loader)	WB97S
1	Bomag	Road Roller	216
4	Sandvik	ROC	DX800
13	Truck	Volvo	FMX500
2	Water Truck	Volvo	FMX330
1	Petrol Truck	Volvo	FMX331
1	Maintenance Truck	Ford	1826
1	Tow Truck	Volvo	FMX460

Source: Koza, 2013

Figure 2.8.1.1 shows the preliminary mine face at the time of the 2013 site visit. The brownish oxide material is mineralization and the lighter colored rock are marble intrusive. This can create issues given the difference in material handling and blasting characteristics given the differences in strength and clay content. The ability of the crusher plant to deal with these materials will require close analysis.

Figure 2.8.1.1: Himmetdede Mine Face

Figure 2.8.1.2 illustrates the heap leach pad as constructed in October 2014 and location relative to the site infrastructure.

Figure 2.8.1.2: Himmetdede Heap leach Pad

2.8.2 Groundwater

The groundwater table around Himmetdede is quite shallow and hydraulic conductivity is controlled by two faults that intersect the pit. It is thought these two faults are charged with water and will act as water conduits during open pit excavation. Two issues that may cause operational problems for the open pit are groundwater inflows necessitating in-pit pumping and also increased pore water pressure affecting weak oxidized material in the pit walls. The maximum water inflow has been estimated by SRK Turkey at around 120 L/s. This can be managed by two 250 m^3 submersible pumps if inflow rates are correct. An alternative option would be too use ex-pit wells to dewater the faults, limiting the water entering the pit.

Of greater concern is the groundwater on geotechnical stability of Domain 1 that will be discussed in Section 2.8.3. Saturated slopes on unconsolidated rock can cause significant instability issues. Horizontal wells or dedicated wells to reduced pore water pressure may be needed.

Given the pit water inflows and potential for wall stability issues, SRK would recommend a phased mine plan be implemented so operational conditions can be encountered before any final highwall is excavated.

2.8.3 Geotechnical

A geotechnical analysis was carried out by Koza staff in an effort to determine the factor of safety that relates to the reserve and pit design.

Koza conducted limit equilibrium slope stability analysis of the project area using Mohr-Coulomb type strength values. Samples were collected from 10 geotechnical drillholes. In total, 66 Uniaxial Compressive Strength and 207 point load strength tests were conducted on samples collected. Major inputs to the analysis include:

Three material types were modeled based on degree of weathering so the strength properties could be adequately represented spatially. The weathering domains include:

- FR (Fresh) / SW (Slightly Weathered);
- MW (Moderately Weathered); and
- HW (Highly Weathered) / XW (Extremely Weathered).

To define the shear strength parameters of rock units, 18 sets of triaxial test samples were prepared and tested. The summary of cohesion and internal friction angles calculated from triaxial tests are given in Table 2.8.3.1 and Table 2.8.3.2.

Table 2.8.3.1: Summary of Triaxial Test (Cohesion)

Weathering	Cohesion, min (kPa)	Cohesion, max (kPa)	Cohesion, mean (kPa)	Stdev (kPa)
FR/SW	504	849	622.77	100.75
MW	257	382	268.82	57.86
HW/XW	239	268	253.50	20.51

Source: Koza, 2013

Table 2.8.3.2: Summary of Triaxial Tests (Internal Friction Angle)

Weathering	ø, min (kPa)	ø, max (kPa)	ø, mean (kPa)	Stdev (kPa)
FR/SW	26.06	37.90	31.08	3.53
MW	16.21	20.32	16.49	1.92
HW/XW	15.95	17.02	16.49	0.76

Source: Koza, 2013

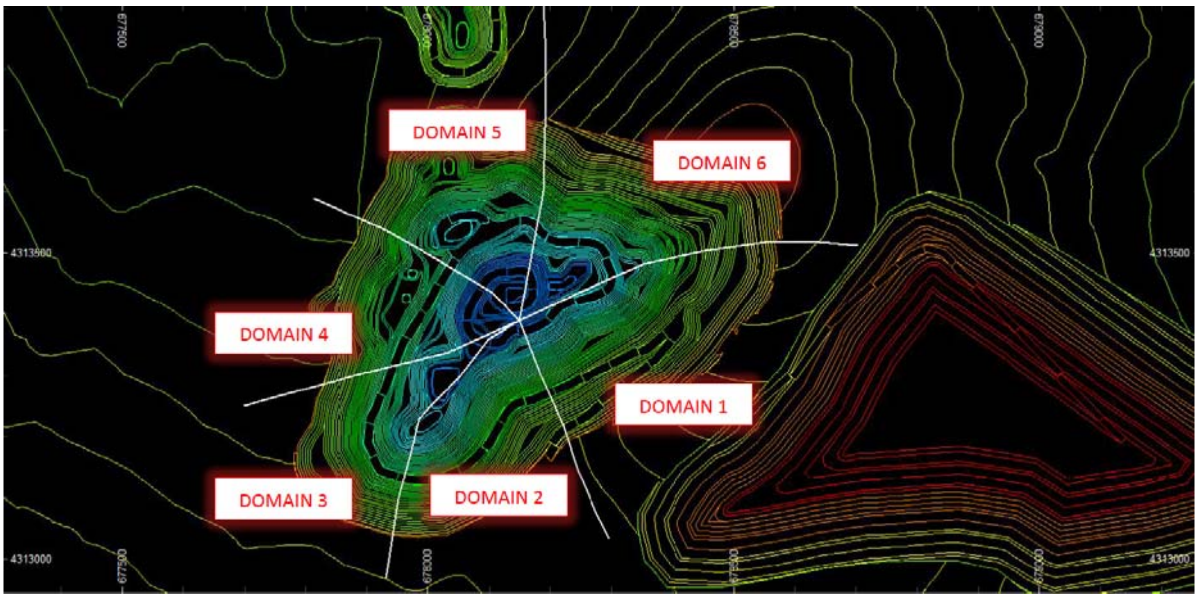
The strength input parameters to be used in the limit equilibrium analyses are lower than the average value. The design input parameters in Table 2.8.3.3 have defined as the mean value minus 50% standard deviation for conservatism.

Table 2.8.3.3: Summary of Shear Strength Parameters

Weathering	Cohesion, (kPa)	ø, (kPa)
FR/SW	570	29
MW	270	17
HW/XW	240	16
Fault Zone	10	30

Source: Koza, 2013

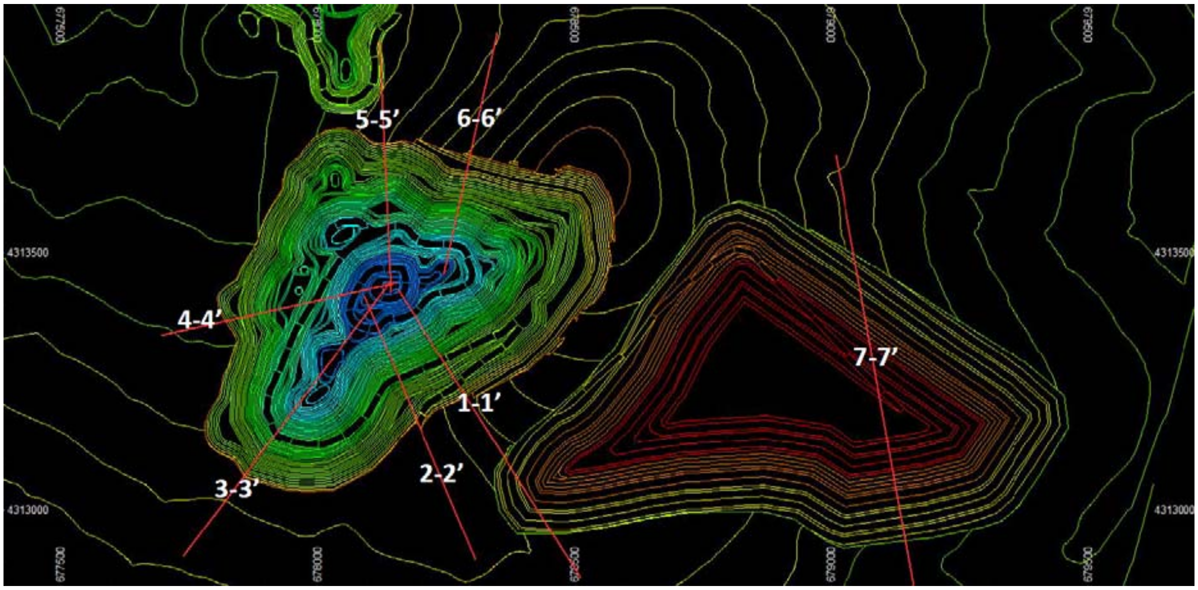
The open pit area is divided into six domains as shown in Figure 2.8.3.1. The domains were selected according to the material properties and pit wall orientation. Stability analyses were conducted using seven different cross-sections within the geotechnical domains. The selected cross-sections are critical and represent the highest risk for failure within the pit. The Figure 2.8.3.2 illustrates the special orientation of the analyzed sections in relation to the pit.



Source: Koza, 2014

Figure 2.8.3.1: Himmetdede Geotechnical Zones

Table 2.8.3.1 corresponds spatially to the section lines detailed in Figure 2.8.3.2.



Source: Koza, 2014

Figure 2.8.3.2: Himmetdede Section Lines Intersecting Geotechnical Zones

Based on the results of the slide analysis the factors of safety from each domain are shown in Table 2.8.3.4.

Table 2.8.3.4: Himmetdede Domain Factors of Safety

Domain	Slope Height (m)	Slope Angle (°)	FOS
1	194	38	1.33
2	177	36	1.54
3	148	39	1.41
4	79	36	1.56
5	190	35	1.60
6	175	40	1.47
Waste Dump	111	29	1.37

Source: Koza, 2014

All the pit walls are quite aggressive and well designed for operations. The main wall of concern is Domain 1. The slide analysis for Domain 1 is shown in Figure 2.8.3.3.

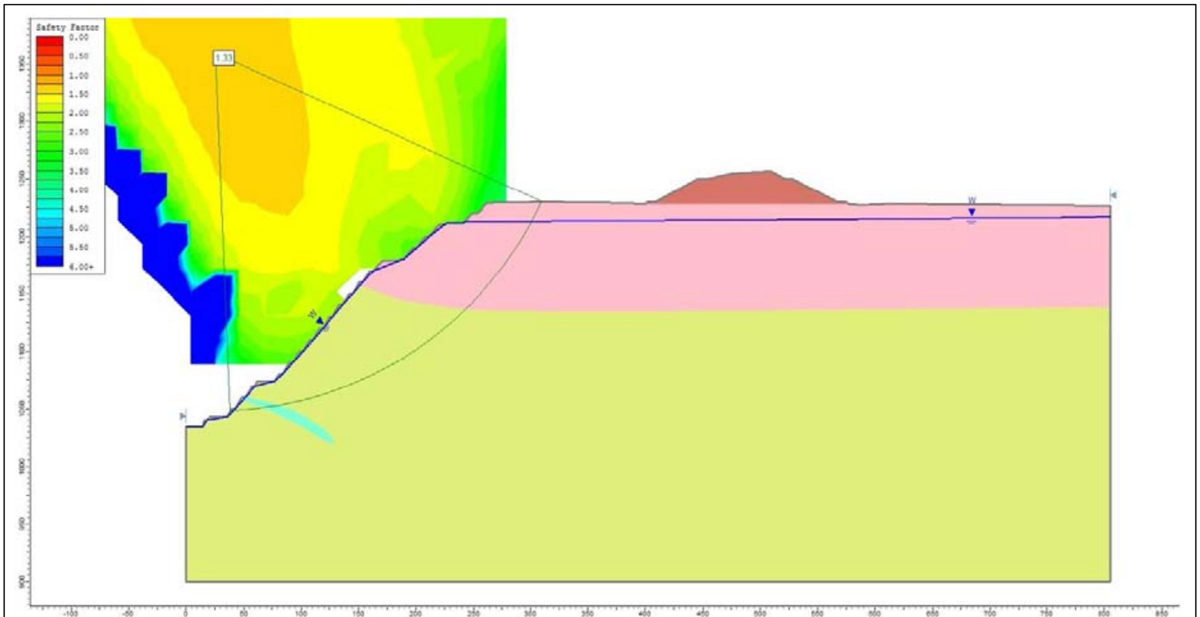
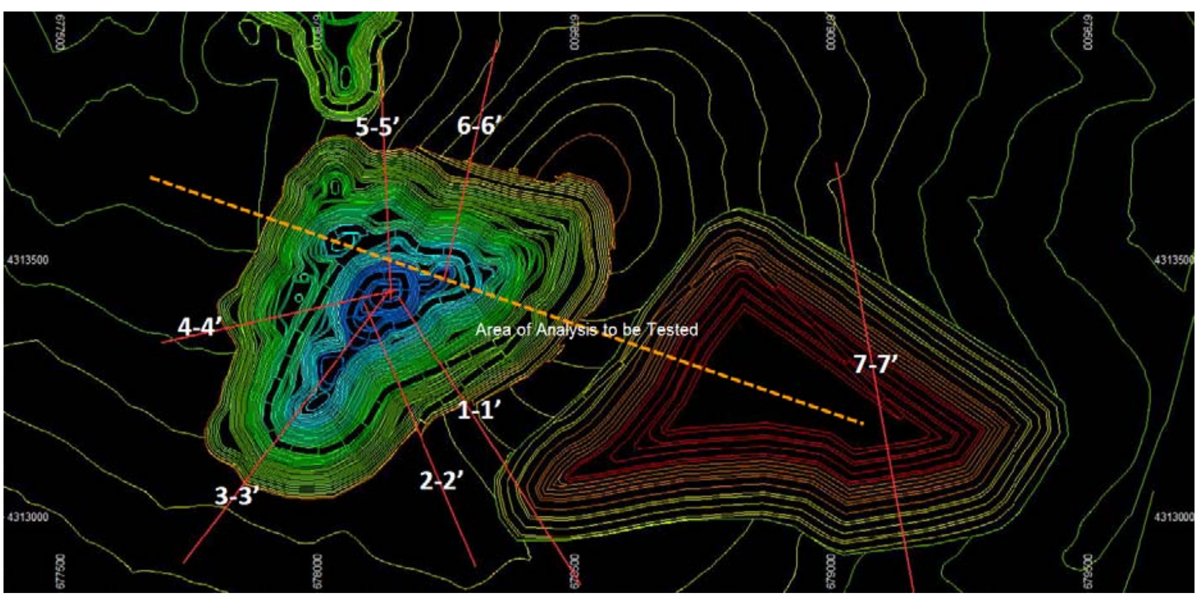


Figure 5 Limit equilibrium analysis of Cross-Section 1-1' (Domain 1)

Source: Koza, 2014

Figure 2.8.3.3: Himmetdede Slide Analysis – Saturated

Domain 1 should have an additional section that includes the waste dump validation of its location. SRK is concerned that the weakest slope is also closest to the waste dump, but the dump was not included in the analysis. Additional load on weak material may unduly influence the local stability of Domain 1. Figure 2.8.3.4 shows the section that SRK recommend undergo additional analysis for stability of the open pit.



Source: SRK, 2014

Figure 2.8.3.4: SRK Suggested Geotechnical Section

2.9 Metallurgy, Process Plant and Infrastructure

2.9.1 Introduction

Metallurgical investigations have been completed at McClelland Laboratories, Inc. (McClelland) on drill core samples from Himmetdede. This work has included initial bottle roll variability testing on 35 variability composites of both oxide and sulfide drill core intervals. The results of this variability test work were used to formulate six test composites for column leach test work at P_{80} 32 mm and P_{80} 9.5 mm crush sizes to evaluate the potential for recovering the contained gold values using standard heap leaching technology.

2.9.2 Variability Metallurgical Investigations - McClelland 2011

Bottle roll test work was undertaken on 35 core samples of oxide and sulfide material using bottle roll tests on samples crushed to 80% < 1.7 mm. The results of these tests demonstrate that the oxide zone composites generally responded very well to direct agitated cyanidation treatment with gold extractions ranging 72.2 to 93.9%. The sulfide ore composites are refractory with gold extractions ranging from 0-47%. Cyanide consumptions on the oxide samples was very low, ranging from <0.07-0.3 kg/mt. Lime consumption ranged from 0.7-3.1 kg/mt. Results are summarized in Table 2.9.2.1.

Table 2.9.2.1: Summary of Bottle Roll Tests on Himmetdede Drill Core Composites

Ore Type	Composite	Au Recovery %	Calc. Head Au g/t	NaCN Kg/t	Lime Kg/t
Oxide	Comp C-1	73.5	0.34	<0.07	1.5
Oxide	Comp C-2	72.2	0.54	<0.07	2.3
Oxide	Comp C-3	73.6	0.53	<0.07	1.4
Oxide	Comp C-4	84.4	0.32	<0.07	1.9
Oxide	Comp C-5	81.8	0.33	<0.07	1.1
Oxide	Comp C-6	64.2	0.53	0.15	2.1
Oxide	Comp C-7	94.3	0.87	0.22	1.8
Oxide	Comp C-8	83.5	1.09	0.22	1.0
Oxide	Comp C-9	85.1	0.94	0.23	1.9
Oxide	Comp C-10	92.8	0.97	0.15	1.6
Oxide	Comp C-11	89.6	2.21	0.15	1.6
Oxide	Comp C-12	81.0	3.32	0.30	1.7
Oxide	Comp C-13	77.1	0.35	0.22	1.2
Oxide	Comp C-14	62.5	0.32	0.31	0.7
Oxide	Comp C-15	78.6	0.42	0.08	0.8
Oxide	Comp C-16	69.1	0.97	0.20	0.9
Oxide	Comp C-17	70.4	0.71	<0.07	1.1
Oxide	Comp C-18	69.4	4.02	0.22	1.1
Oxide	Comp C-19	89.2	0.37	0.52	2.4
Oxide	Comp C-20	86.8	0.38	<0.07	2.0
Oxide	Comp C-21	76.9	0.39	0.15	2.6
Oxide	Comp C-22	82.1	0.95	0.16	2.2
Oxide	Comp C-23	91.8	0.85	0.07	1.8
Oxide	Comp C-24	91.5	2.35	0.23	2.2
Oxide	Comp C-25	82.5	0.40	0.15	2.1
Oxide	Comp C-26	78.0	1.09	<0.07	2.6
Oxide	Comp C-27	83.3	2.46	0.08	2.6
Oxide	Comp C-28	93.9	0.33	<0.07	2.4
Oxide	Comp C-29	84.2	1.20	0.29	3.1
Oxide	Comp C-30	89.1	2.57	0.08	2.5
Sulfide	Comp C-31	0.0	0.22	0.51	2.2
Sulfide	Comp C-32	0.0	0.44	0.59	1.7
Sulfide	Comp C-33	8.8	1.14	0.56	2.1
Sulfide	Comp C-34	47.1	0.87	0.15	1.6
Sulfide	Comp C-35	19.6	2.50	0.70	2.3

Source: McClellan, 2012

2.9.3 Column Leach Testwork – McClelland 2011

Column cyanidation leach testwork was conducted on six oxide drill core composites, at simulated secondary crusher discharge (P_{80} 32 mm) and tertiary crusher discharge (P_{80} 9.5 mm) feed sizes. Comparative bottle roll tests were conducted on each composite at an 80% -1.7 mm feed size. Average head grades for the composites varied from 0.37 to 3.37 g/t Au. The oxide ore type composites were observed to have a significant clay component.

Composite Make-up and Head Analyses

Drill core interval samples were composited according to instructions from Koza to formulate six composites for subsequent metallurgical testing. The composites were air dried and then stage-crushed to P_{80} -32 mm (100% -50 mm) and thoroughly blended by repeated coning and were quartered to obtain approximately 125 kg for a column leach test and 25 kg for a head screen analysis. The remaining -32 mm material from each composite was stage-crushed to -19 mm in size.

The -19 mm composite material was thoroughly blended and split to obtain 10 kg for generation of an abrasion index test sample, and 110 kg for finer crushing. Each 110 kg split was stage crushed to P_{80} -9.5 mm (100% -12.5 mm), and thoroughly blended and split to obtain approximately 70 kg for a column leach test, 15 kg for a head screen analysis, four 1 kg samples for head assay, 10 kg for agglomeration testing and 10 kg for finer crushing. Each 10 kg split for finer crushing was stage crushed to 80% -1.7 mm for bottle roll testing and mineralogy.

Head samples were assayed using conventional fire assay fusion procedures to determine gold content. A four acid-digestion/AA finish procedure was used to determine silver content. A single head sample from each composite was also submitted for a multi-element ICP analysis, sulfur speciation (total, sulfide and sulfate) analyses and carbon speciation (total, organic and inorganic) analyses. Head assay results and head grade comparisons are presented in Table 2.9.3.1 and the carbon and sulfur speciation analyses are presented in Table 2.9.3.2.

Of particular note, mercury content in the test composites ranged from 5.6-39.1 ppm Hg. At these mercury levels it can be anticipated that a retort will be required to process the precious metal precipitates prior to smelting. Carbon speciation results showed that none of the composites contained greater than 0.1% organic carbon, indicating that preg-robbing should not be a problem. Sulfur speciation results showed that the composites contained between 0.02% and 0.08% sulfide sulfur.

Table 2.9.3.1: Head Analyses, Himmetdede Drill Core Composites

Analysis	Unit	Composite					
		C-1	C-2	C-3	C-4	C-5	C-6
Au*	ppm	3.34	0.97	0.40	0.38	0.57	0.50
Ag*	ppm	<1	<1	<1	<1	<1	<1
Ag	ppm	0.20	0.14	0.14	0.14	1.41	0.21
Al	%	4.48	5.17	5.12	2.97	5.30	2.56
As	ppm	2,280	2,120	1,490	744	1,555	885
Ba	ppm	280	250	200	250	220	180
Be	ppm	0.88	0.91	0.84	0.44	0.84	0.46
Bi	ppm	0.15	0.85	0.27	0.27	0.20	0.21
Ca	%	2.92	2.81	3.91	21.3	4.67	18.40
Cd	ppm	0.61	0.43	0.38	0.36	0.26	0.37
Ce	ppm	24.8	24.7	25.6	32.7	29.9	19.50
Co	ppm	11.8	14.0	13.6	5.1	13.0	6.0
Cr	ppm	41	36	46	21	51	24
Cs	ppm	2.65	2.13	2.26	1.88	1.81	1.26
Cu	ppm	38.2	45.9	39.6	15.1	51.4	22.1
Fe	%	4.78	5.01	4.06	2.04	3.65	2.77
Ga	ppm	9.71	12.40	13.00	6.64	13.40	5.41
Ge	ppm	0.14	0.15	0.13	0.09	0.14	0.12
Hf	ppm	0.5	0.6	0.8	0.9	0.8	0.5
Hg	ppm	39.1	8.6	5.12	7.4	5.6	7.4
In	ppm	0.038	0.048	0.048	0.026	0.046	0.022
K	%	0.18	0.21	0.30	0.18	0.25	0.14
La	ppm	13.6	12.8	12.9	18.5	15.4	10.8
Li	ppm	65.9	77.2	79.8	47.4	75.4	46.2
Mg	%	0.15	0.08	0.09	0.26	0.17	0.51
Mn	ppm	1,140	1,000	875	577	688	856
Mo	ppm	2.57	2.41	2.02	1.51	2.42	1.81
Na	%	0.02	0.02	0.02	0.01	0.02	0.01
Nb	ppm	6.7	10.0	11.2	7.8	11.5	5.1
Ni	ppm	16.3	15.2	14.5	8.6	15.5	11.2
P	ppm	580	550	630	250	430	360
Pb	ppm	18.6	20.7	18.1	17.9	16.3	14.3
Rb	ppm	8.0	6.6	9.1	10.2	6.7	6.1
Re	ppm	<0.002	<0.002	<0.002	<0.002	<0.002	0.002
S	%	0.13	0.04	0.03	0.08	0.09	0.03
Sb	ppm	133.0	143.5	128.5	89.5	125.5	135.0
Sc	ppm	14.0	13.5	12.7	5.8	12.5	8.2
Se	ppm	2	2	2	2	2	1
Sn	ppm	1.0	1.5	1.5	1.4	1.5	1.1
Sr	ppm	53.9	53.8	64.1	611	104.0	408
Ta	ppm	0.42	0.62	0.74	0.54	0.74	0.33
Te	ppm	0.05	0.10	<0.05	<0.05	0.06	<0.05
Th	ppm	3.9	4.2	4.4	6.6	6.7	3.0
Ti	%	0.202	0.249	0.277	0.136	0.259	0.120
Tl	ppm	3.22	3.23	2.19	1.52	1.76	1.56
U	ppm	2.8	2.1	2.0	2.5	2.1	1.8
V	ppm	105	123	116	42	108	53
W	ppm	11.8	11.4	11.4	5.6	22.9	17.9
Y	ppm	15.7	12.2	12.4	12.4	12.2	11.1
Zn	ppm	109	102	95	49	73	51
Zr	ppm	13.7	16.9	24.2	27.4	21.0	15.2

Source: McClellan, 2012
* Average of triplicate direct assay.

Table 2.9.3.2: Carbon and Sulfur Speciation Analyses, Himmetdede Drill Core Composites

Analyte	Unit	Composite					
		C-1	C-2	C-3	C-4	C-5	C-6
C (Total)	%	0.97	0.88	1.24	6.80	1.54	6.23
C (Organic)	%	0.05	0.04	0.05	0.08	0.04	0.06
C (Inorganic)	%	0.86	0.77	1.10	6.23	1.37	5.76
S (Total)	%	0.13	0.05	0.04	0.07	0.10	0.03
S (Sulfate)	%	0.02	0.02	0.01	0.02	0.01	0.01
S (Sulfide)	%	0.08	0.02	0.01	0.04	0.05	0.02
CO_2	%	3.2	2.8	4.0	22.8	5.0	21.1

Source: McClellan, 2012

Bottle-Roll Cyanidation Testwork

Bottle roll cyanidation tests were conducted on each of the Himmetdede composites at P_{80} -1.7 mm feed size to determine ultimate gold recovery and reagent requirements. These tests were conducted at a slurry density of 40% solids with a cyanide concentration of 1 g/t NaCN and the slurry pH maintained at about 11.0 with lime. Tests were conducted for a total of 96 hours with solutions samples taken after 2, 6, 24, 48, and 72 hours.

Overall bottle-roll results are provided in Table 2.9.3.3 and show gold extractions ranging from about 77 to 82%. Gold extraction rates were fairly rapid and substantially complete after 24 hours of leaching. Cyanide consumptions were very low for all composites, ranging from <0.07 to 0.16 kg/t and lime addition ranged from 1.7 to 2.7 kg/t.

Table 2.9.3.3: Summary of Bottle Roll Test Results on Himmetdede Drill Core Composites

Composite	Recovery, %	Calc. Head	Reagent Consumption	
		Au g/t	NaCN, Kg/t	Lime, kg/t
C-1	78.0	3.28	<0.07	2.7
C-2	80.6	0.98	<0.07	2.5
C-3	80.0	0.35	<0.07	2.3
C-4	75.0	0.40	0.16	1.7
C-5	82.1	0.56	<0.07	2.4
C-6	76.9	0.52	<0.07	2.0

Source: McClelland, 2012

Agglomeration Strength and Stability Testing

Agglomerate strength and stability tests were conducted on all six composites at the P_{80} -9.5 mm crush size to optimize agglomerating conditions. Test charges were agglomerated by adding the appropriate quantity of binder, wetting with water to the optimum moisture content (determined visually) and curing in sealed containers for 72 hours. Agglomerate strength tests were conducted by selecting two typical agglomerates from each agglomerated charge before jigging and submerging them in separate beakers of water and observing the degree of agglomerate degradation in a 24-hour period. An agglomerate with sufficient grain strength to overcome swelling tendencies of contained clays would not degrade in 24 or more hours of complete submersion. Complete degradation means that the submerged agglomerate broke down to a natural state within 10 minutes of submersion. Agglomerate strength and stability test results are presented in Table 2.9.3.4. Optimum agglomeration binder additions were determined to be lime, equivalent to 80% of the bottle roll test lime requirement, plus cement, equivalent to 2.0 kg/t ore for Composites1, 2, 3 and 5 and 1.0 kg/t for Composites 4 and 6.

Table 2.9.3.4: Agglomerate Strength & Stability Tests Himmetdede Drill Core Composites, 80%-9.5mm Feed Size

Test No.	Composite	Binder Addition kg/mt ore		Moisture	Retained on 1.7mm Screen,	Submersion Observation (degree of degradation)	
		Cement	Lime	%	Wt. %	10 Minutes	24 Hours
N/A	C-1	N/A	N/A	N/A	0.0	Dry Screened	
Test A1	C-1	0.0	0.0	9.1	72.9	None	Partial
Test A2	C-1	0.0	2.7	10.2	70.1	Partial	Partial
Test A3	C-1	1.0	2.2	9.9	72.0	None	Partial
Test A4 (1)	C-1	2.0	2.2	9.7	76.6	None	None
Test A5	C-1	3.2	0.0	9.8	73.9	Partial	Partial
N/A	C-2	N/A	N/A	N/A	0.0	Dry Screened	
Test A6	C-2	0.0	0.0	9.3	73.2	Partial	Partial
Test A7	C-2	0.0	2.5	9.7	72.5	Partial	Partial
Test A8	C-2	1.0	2.0	9.8	74.3	Partial	Partial
Test A9 (1)	C-2	2.0	2.0	10.0	77.7	None	None
Test A10	C-2	3.0	0.0	9.8	75.9	Partial	Total
N/A	C-3	N/A	N/A	N/A	0.0	Dry Screened	
Test A11	C-3	0.0	0.0	9.3	72.2	Partial	Partial
Test A12	C-3	0.0	2.3	9.9	70.0	Partial	Partial
Test A13	C-3	1.0	1.8	10.0	71.7	Partial	Partial
Test A14 (1)	C-3	2.0	1.8	10.1	75.6	Partial	Partial
Test A15	C-3	2.8	0.0	9.6	74.0	Partial	Total
N/A	C-4	N/A	N/A	N/A	0.0	Dry Screened	
Test A16	C-4	0.0	0.0	6.6	75.1	Partial	Partial
Test A17	C-4	0.0	1.7	6.8	64.3	None	Partial
Test A18 (1)	C-4	1.0	1.4	6.9	73.8	None	None
Test A19	C-4	2.0	1.4	6.6	73.8	None	None
Test A20	C-4	2.0	0.0	6.9	74.1	None	None
N/A	C-5	N/A	N/A	N/A	0.0	Dry Screened	
Test A21	C-5	0.0	0.0	8.4	74.1	None	None
Test A22	C-5	0.0	2.4	8.6	69.0	Partial	Partial
Test A23	C-5	1.0	1.9	8.9	70.1	None	Partial
Test A24 (1)	C-5	2.0	1.9	8.5	74.5	None	None
Test A25	C-5	2.9	0.0	8.3	72.1	None	Partial
N/A	C-6	N/A	N/A	N/A	0.0	Dry Screened	
Test A26	C-6	0.0	0.0	7.5	70.3	None	Partial
Test A27	C-6	0.0	2.0	7.4	70.2	Partial	Partial
Test A28 (1)	C-6	1.0	1.6	7.4	72.3	None	None
Test A29	C-6	2.0	1.6	7.6	75.5	None	None
Test A30	C-6	2.4	0.0	7.3	73.6	None	None

Source: McClelland, 2012
(1) Conditions used for column test agglomeration.

Column Leach Testwork

Column percolation leach tests were conducted on each of the six composites at P_{80} -32 mm and P_{80} -9.5 mm crush sizes to determine gold extraction, extraction rate, reagent requirements and feed size sensitivity, under simulated heap leaching conditions. The ore charges were agglomerated by adding the appropriate quantity of lime and cement, wetting with water to optimum moisture content, mechanically tumbling to affect agglomeration, and curing in 3 m high leaching columns before applying leach solution. Agglomerates were placed into the columns in a manner to minimize particle segregation and compaction. Column diameters used for the 32 mm and 9.5 mm feeds were 20 cm and 15 cm, respectively.

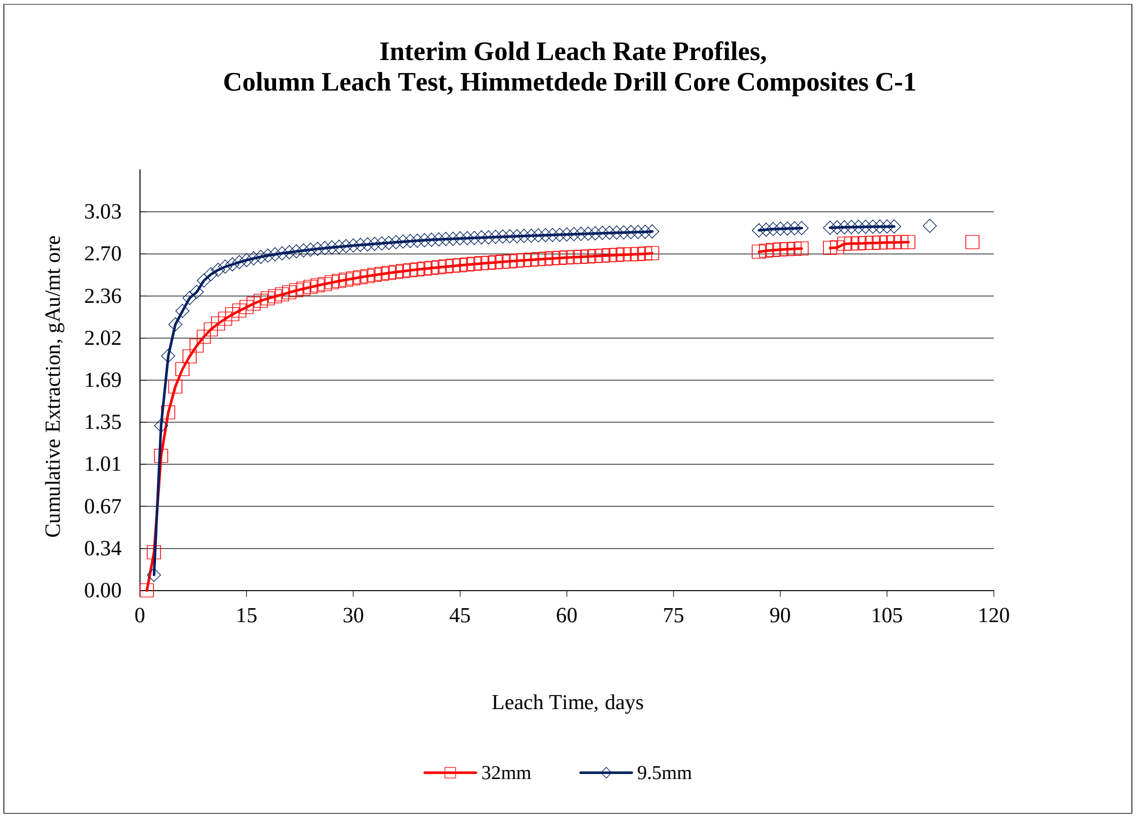
Leaching was conducted by applying cyanide solution at a concentration of 1.0 g/L NaCN at a rate of 0.20 Lpm/m^2 (0.005 gpm/ft^2) and pregnant effluent solutions were collected for each 24 hour period. Pregnant solution volumes were measured by weighing, and samples were assayed for gold and silver using conventional AA methods.

Overall metallurgical results from column tests after 103-108 days of leaching are shown in Table 2.9.3.5 and gold leach rate profiles are shown graphically in Figures 2.9.3.1 through 2.9.3.3. Gold extractions at the P_{80} -9.5 mm crush size averaged 80.2% (ranging from 70.3 to 85.7%) and gold extractions at the P_{80}-32 mm crush size have averaged 79.0% (ranging from 69.2 to 86.4%).

Table 2.9.3.5: Summary Metallurgical Results, Column Percolation Leach Tests, Himmetdede Drill Core Composites

Composite	Test No.	Crush Size mm	Leach Days	G Au/mt ore		Au Extraction %	NaCN Consumed kg/mt ore	Lime Added kg/mt ore	Cement Added kg/mt ore
				Extracted	Calc. Head				
C-1	P-1	80%-32mm	108	2.79	3.42	81.6	1.01	2.2	2.0
C-1	P-7	80%-9.5mm	106	2.92	3.59	81.3	1.05	2.2	2.0
C-2	P-2	80%-32mm	104	0.85	1.01	84.2	0.55	2.0	2.0
C-2	P-8	80%-9.5mm	102	0.85	1.00	85.0	1.09	2.0	2.0
C-3	P-3	80%-32mm	104	0.38	0.44	86.4	0.47	1.8	2.0
C-3	P-9	80%-9.5mm	104	0.34	0.40	85.0	0.75	1.8	2.0
C-4	P-4	80%-32mm	103	0.27	0.39	69.2	0.55	1.4	1.0
C-4	P-10	80%-9.5mm	103	0.26	0.37	70.3	0.63	1.4	1.0
C-5	P-5	80%-32mm	103	0.47	0.57	82.5	0.51	1.9	2.0
C-5	P-11	80%-9.5mm	104	0.48	0.56	85.7	0.66	1.9	2.0
C-6	P-6	80%-32mm	103	0.33	0.47	70.2	0.38	1.6	1.0
C-6	P-12	80%-9.5mm	104	0.37	0.50	74.0	0.62	1.6	1.0

Source: McClellan, 2012



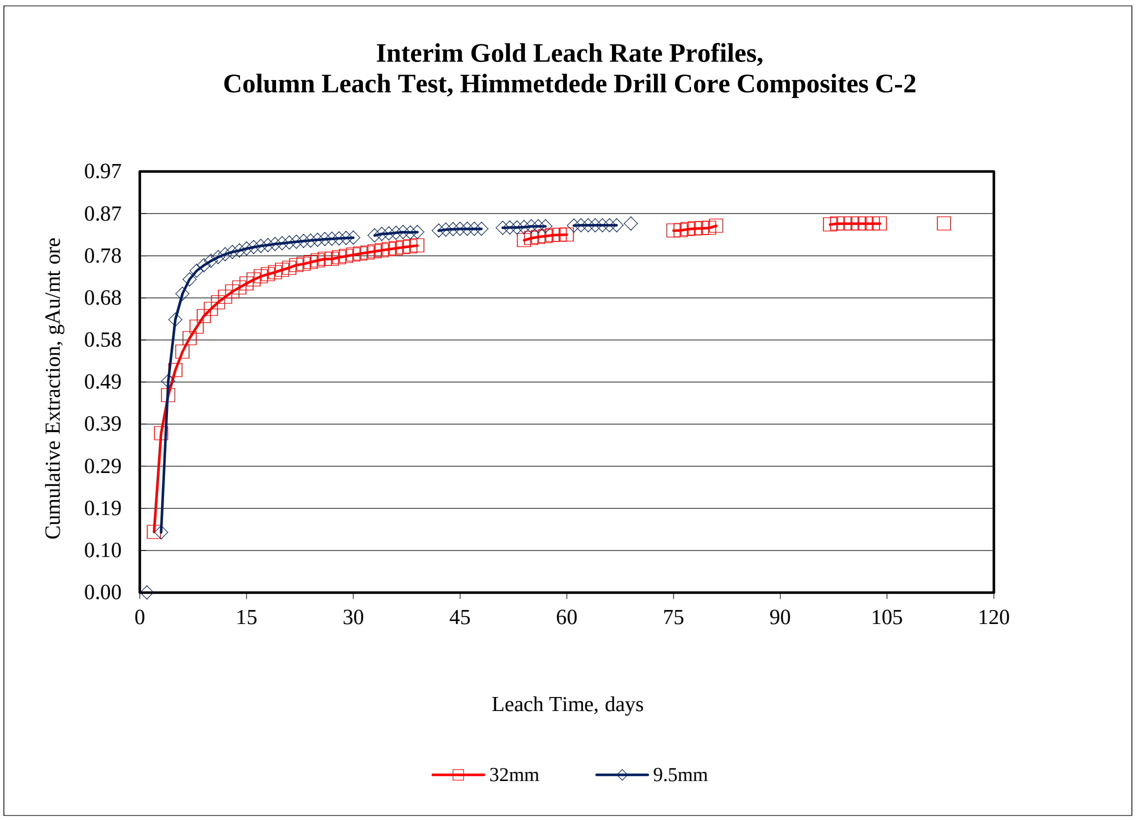
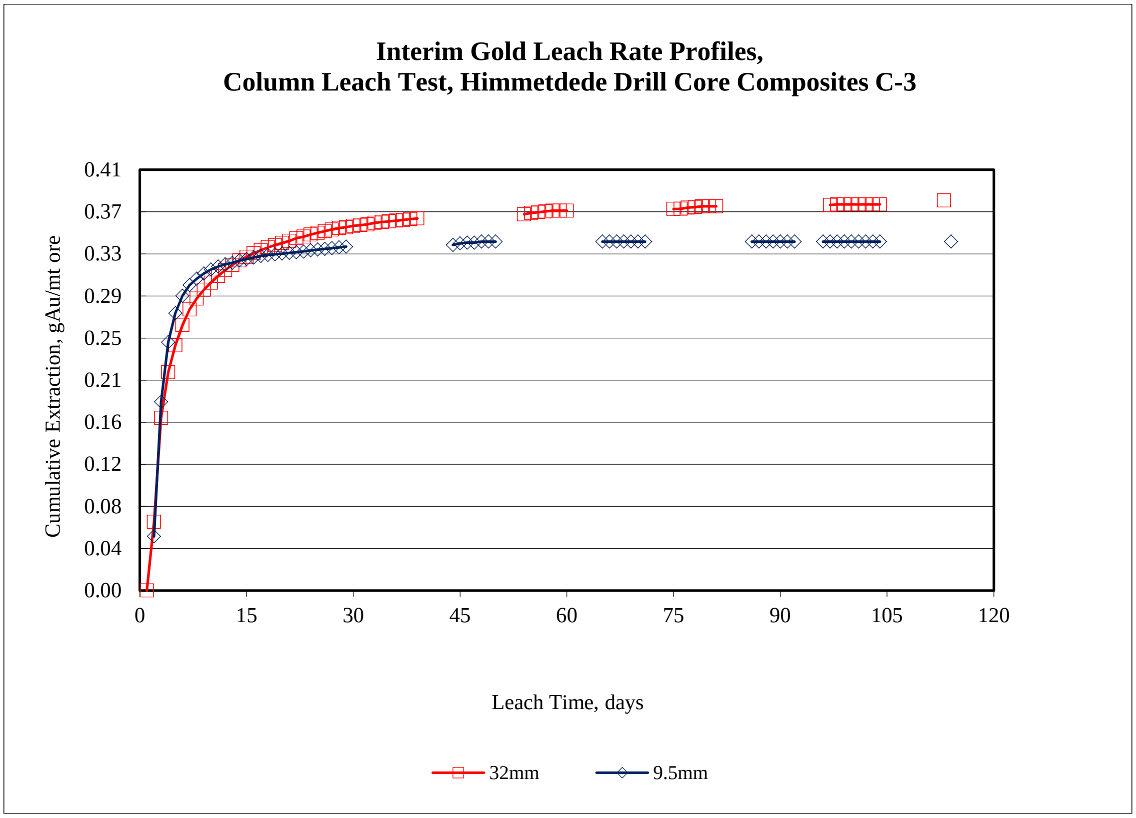


Figure 2.9.3.1: Interim Gold Leach Rate Profiles C-1 and C-2



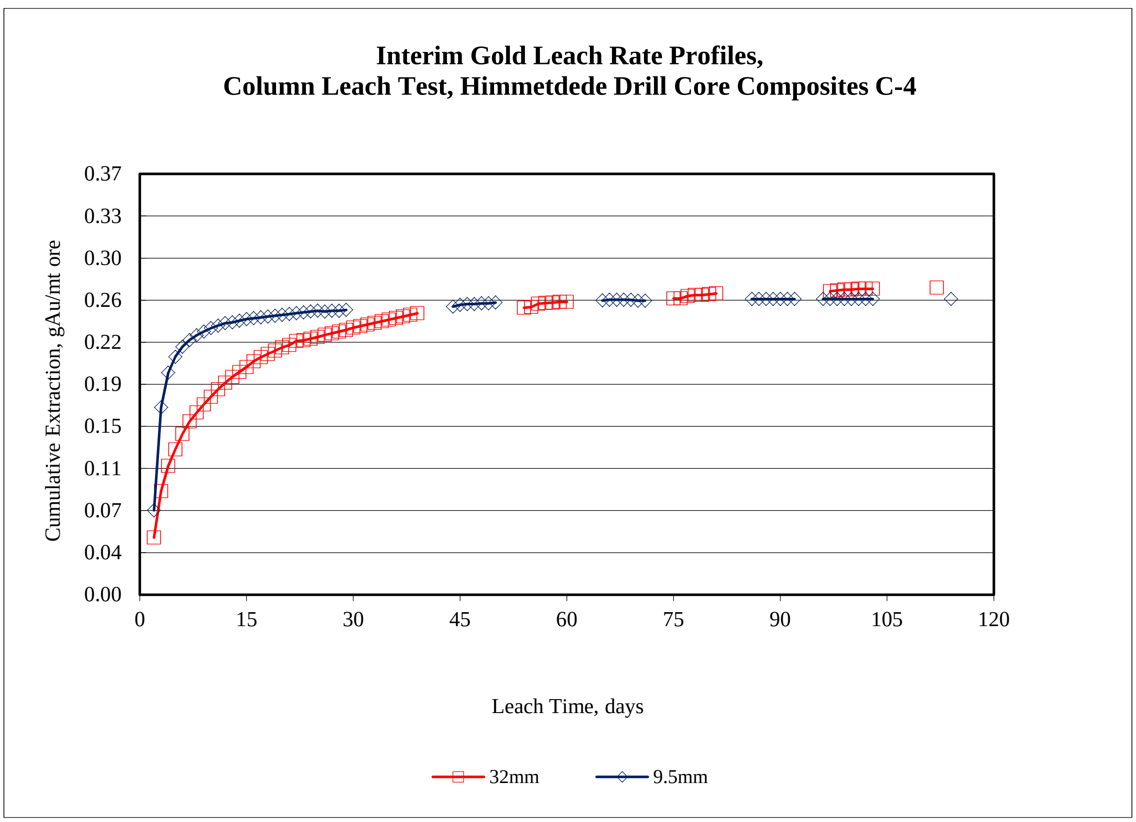
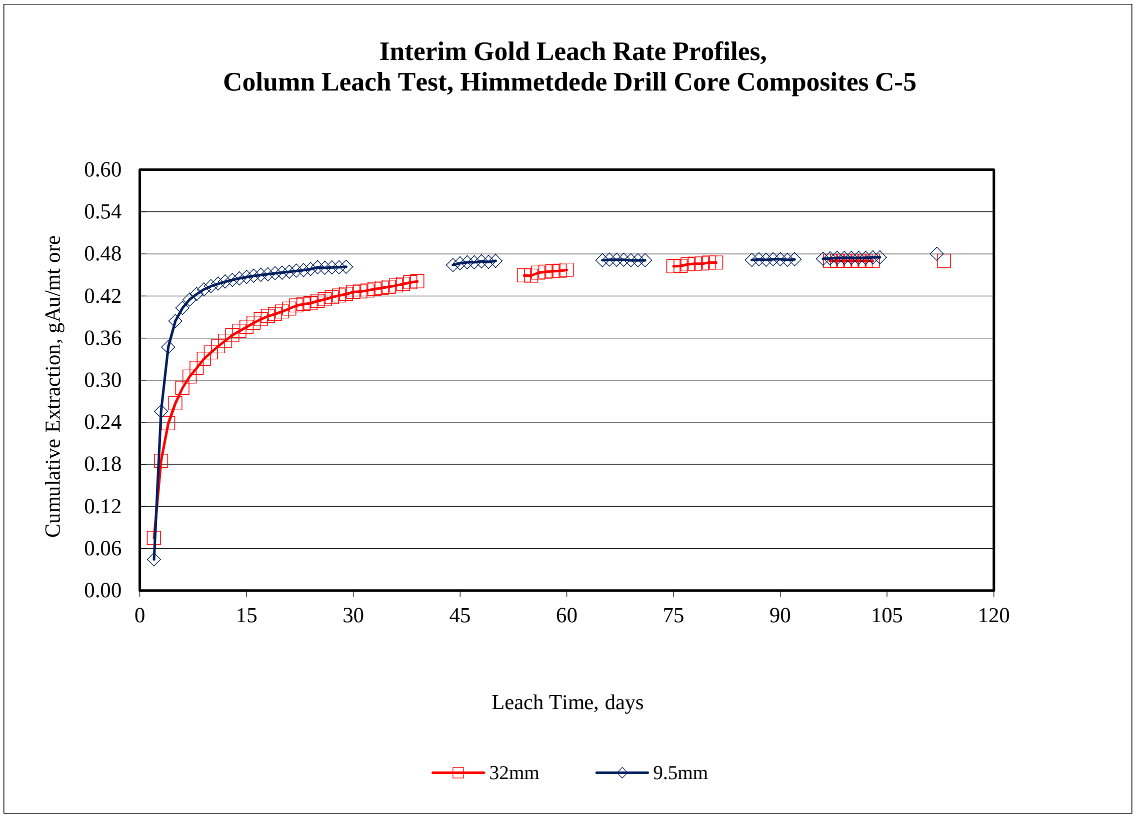


Figure 2.9.3.2: Interim Gold Leach Rate Profiles C-3 and C-4



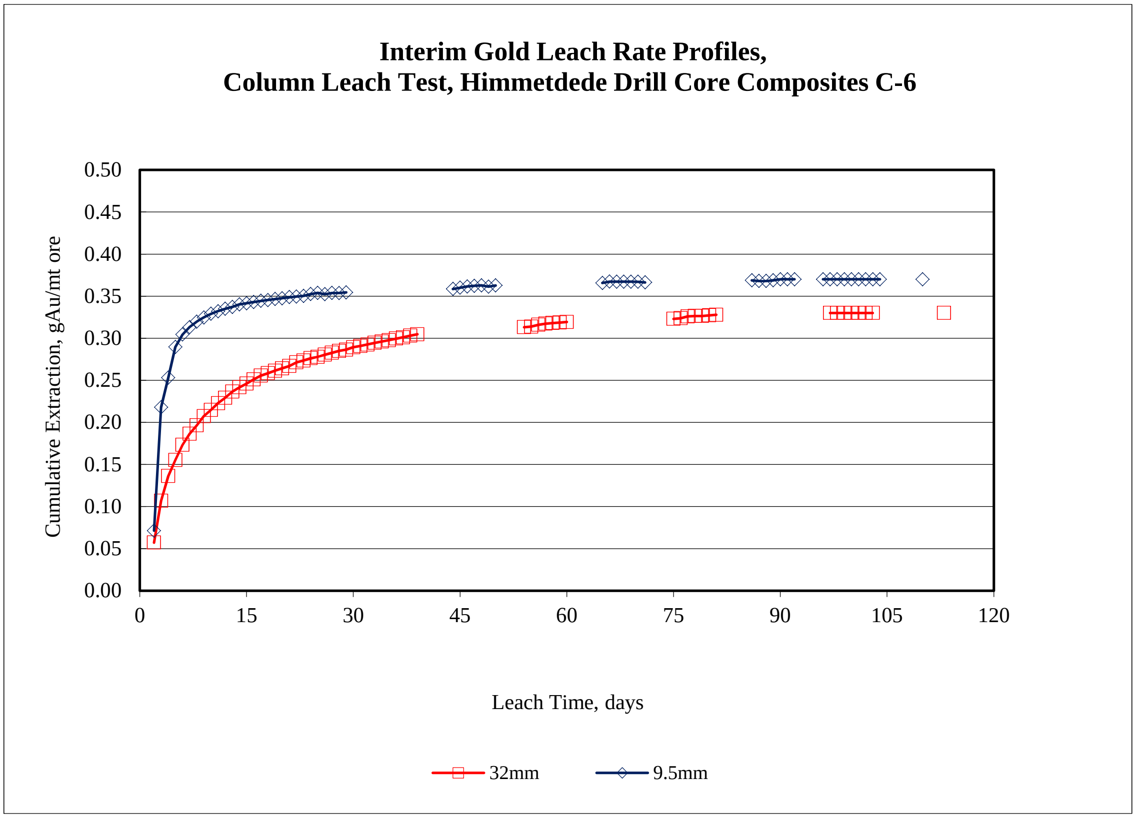


Figure 2.9.3.3: Interim Gold Leach Rate Profiles C-5 and C-6

2.9.4 Column Testwork: Koza

Koza conducted additional metallurgical testing throughout 2014 to further investigate heap leach characteristics of the upper, middle and lower zones of the Himmetdede deposit. This work included drilling a total of nine metallurgical PQ drill core holes to achieve lithology and spatial representation throughout the deposit. The purpose of this test program was to:

- Determine the optimum crush size for heap leaching;
- Determine the size by size gold distribution;
- Establish whether agglomeration is required;
- Determine optimum reagent additions for column leach tests;
- Test the percolation properties versus simulated heap height;
- Test the effect of agglomeration; and
- Confirm the optimum cement addition rate.

Head analyses of the upper zone composite (D1), middle zone composite (D2) and lower zone composite (D3) are shown in Table 2.9.4.1 for each of the column crush sizes tested and Table 2.9.4.2 shows the gold extraction obtained from at each crush size. It was found that the upper zone and middle zone composites were relatively insensitive to crush size (test result for D2 50mm crush appears anomalous). A crush size of – 50 mm would be adequate for the upper and middle ore zones. The lower zone composite was shown to be very sensitive to crush size and that a crush size of -9.5 mm is indicated.

Table 2.9.4.1: Test Composite Head Analyses

Composite	Au, g/t	Ag, g/t
Composite D1		
70 mm crush	0.57	0.27
50 mm crush	0.77	0.84
32 mm crush	0.68	0.79
Composite D2		
70 mm crush	0.56	1.06
50 mm crush	0.61	1.09
32 mm crush	0.64	1.27
Composite D3		
70 mm crush	0.55	1.45
50 mm crush	0.67	1.64
32 mm crush	0.64	1.76

Source: Koza

Table 2.9.4.2: Column Gold Extractions From on Upper, Middle and Lower Ore Zones

Crush size	D1 Au Ext%	D2 Au Ext%	D3 Au Ext%
-70mm	87.7	80.4	37.5
-50mm	89.6	66.8	26.1
-32mm	86.1	82.2	35.4
-9.5mm	N/A	N/A	50.0

Source: Koza

Conclusions

- The Himmetdede oxide ore type material is readily amenable to simulated heap leach cyanidation treatment, at both the P_{80} -32 mm and P_{80} -9.5 mm crush sizes;
- Leach cycle times are much faster at the P_{80} -9.5 mm, however, after extended leach time (~60 days) gold extraction at the P_{80} -32 mm crush size tends to converge with gold extractions at the P_{80} 9.5 mm crush size;
- Cyanide consumptions for the oxide ore type material were low to moderate, and are not expected to exceed 0.2 kg/t ore, in commercial production;
- The oxide ore type material generally contained a relatively high percentage of clay fines, and will require agglomeration pretreatment during commercial heap leaching. Binder additions equivalent to 80% of the lime required for pH control, along with 1.0-2.0 kg/t cement was found to be optimum agglomeration pretreatment of the oxide ore type; and
- The high clay fines content of the oxide ore may present material handling difficulties during commercial crushing, agglomerating and heap leaching. In particular, difficulties can be expected if the high clay ore has significant moisture content when fed to the crushing plant. After crushing, moisture content of the ore feeding the agglomerating circuit will need to be significantly lower than the indicated optimum agglomeration moisture, for successful agglomeration.

2.9.5 Process Plant

Process Description

Metallurgical testwork has demonstrated that gold from Himmetdede oxide ore is readily recoverable using standard heap leach cyanidation technology. Koza has prepared a process design report, “Himmetdede Process Plant Prefeasibility Report”, July 16, 2012, which documents process design requirements for heap leaching Himmetdede ore at the rate of 6 million tonnes per year using the conceptual process flowsheet shown in Figure 2.9.5.1. Run-of-mine (RoM) ore would be crushed in either a two- or three-stagee crushing plant operated in closed circuit with a vibrating screen to produce a final crushed product. In addition, a two-stage MMD sizer circuit would be provided in order to process the high clay ores. The crushed ore will be agglomerated with lime and cement and then conveyed to the heap leach pad with a series of grasshopper-type conveyors and then loaded onto the heap with a radial stacker. The ore will then be leached with a weak cyanide solution (~400 ppm NaCN). The leach cycle time required to achieve ultimate projected gold recoveries may require 120 to 180 days. The column leach tests demonstrated that gold extraction in the columns was essentially complete after 15 to 20 days of leaching at the P_{80} 9.5 mm crush, and after about 60 days at the P_{80} 32 mm crush size. In order to scale-up to a commercial operation a 3X factor is typically applied to scale from 3 m high laboratory columns to full size heap leach operations.

Gold contained in the pregnant leach solution will be recovered in a five-stage carbon-in-column (CIC) carbon adsorption circuit where the carbon is moved through the circuit counter-currently to the flow of the pregnant leach solution. It is expected that gold will load onto the carbon to a concentration of about 4,000 g/t Au. The loaded carbon will then be pumped to the carbon strip circuit where the gold will be stripped from the carbon with a hot caustic solution containing about 3% NaCN. The redissolved gold will then be recovered in electrolytic cells to produce a precious metal cathode sludge, which will then be filtered, retorted to remove mercury, and then refined to produce a final doré product. It should be noted that the mercury content of the Himmetdede ore is sufficiently high that retorting will be required in the gold recovery circuit to remove the contained mercury prior to refining.

The barren solution exiting the CIC circuit will be pumped to the barren pond where the alkalinity and cyanide concentration will be adjusted to the proper levels prior to being recycled back to the heap leach.

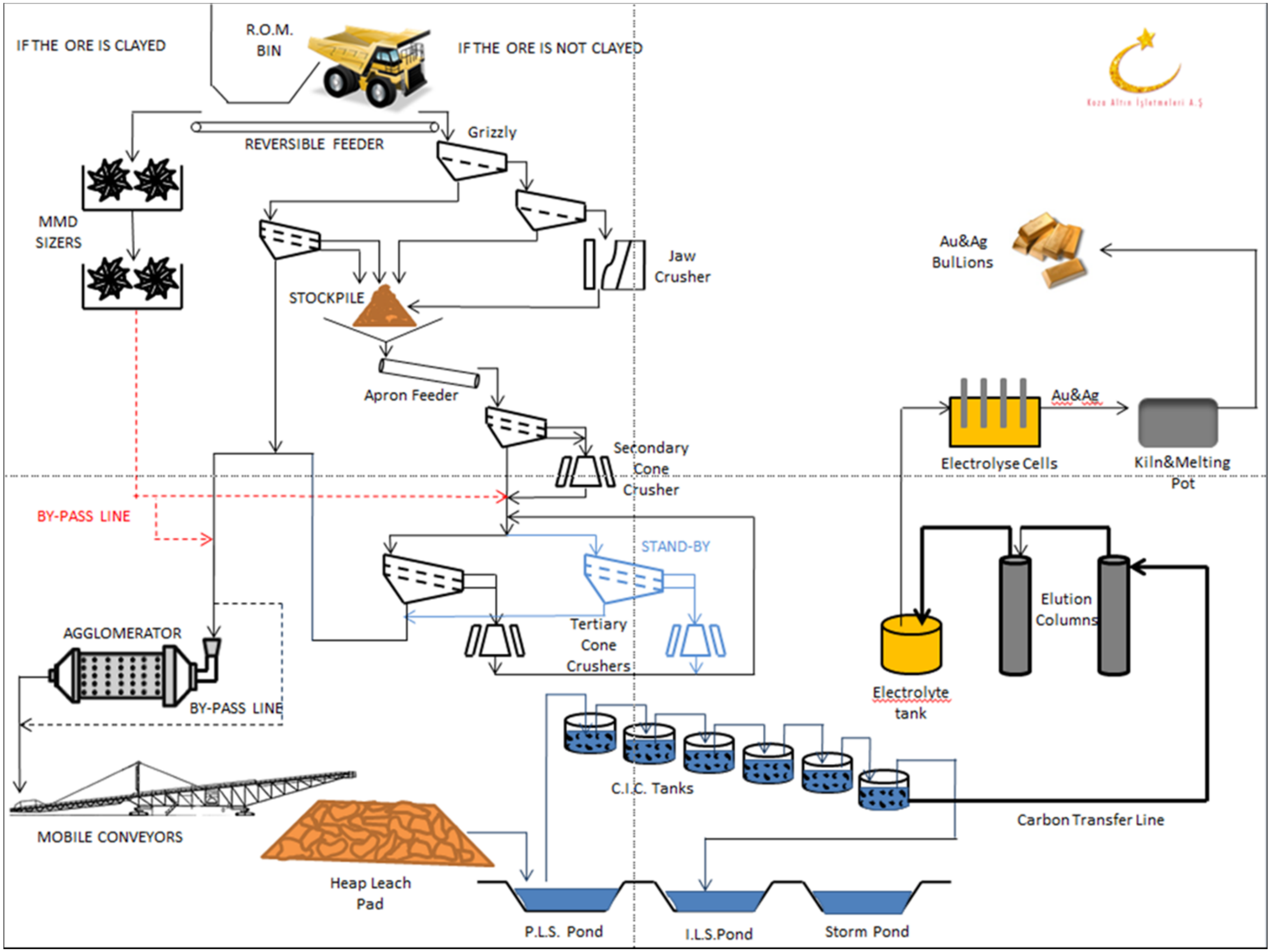


Figure 2.9.5.1: Himmetdede Process Flowsheet

Estimated Recovery

As shown in Table 2.9.5.1, gold extraction from the Himmetdede oxide ore is estimated at 74% at a P_{80} 32 mm. This recovery estimate includes a 5% reduction in gold extraction to account for inefficiencies normally encountered in a commercial heap.

Table 2.9.5.1: Estimated Gold Recovery for Himmetdede Ore Composites, - 32 mm Crush Size

	Assay Head	Au Extraction	Reagent Consumption		
	Au g/t	%	NaCN, Kg/t	Lime, kg/t	Cement, Kg/t
Composite 1	3.34	81.6	1.01	2.2	2.0
Composite 2	0.97	84.2	0.55	2.0	2.0
Composite 3	0.40	86.4	0.47	1.8	2.0
Composite 4	0.38	69.2	0.55	1.4	1.0
Composite 5	0.57	82.5	0.51	1.9	2.0
Composite 6	0.50	70.2	0.38	1.6	1.0
Average	**1.03**	**79.0**	**0.58**	**1.8**	**1.7**
Adjusted (1) (2)		**74.0**	**0.29**	**1.8**	**1.7**

Source: SRK (based on McClelland 2012)
(1) Extraction reduced by 5% to account for inefficiencies in Heap Operation; and
(2) Cyanide Consumption Reduced by 50% to account for lower cyanide leach solution concentrations and cyanide recirculation in a commercial heap

The results of column testing conducted by Koza in 2014, on upper, middle and lower ore zones indicate that gold recoveries of 86%, 76% and 45%, respectively, can be expected after discounting extraction by 5% to allow for heap leach inefficiencies. This would require crushing the upper and middle ore zones to -50 mm and crushing the lower ore zone to -9.5 mm.

Estimated Plant Operating Cost

Process plant operating costs are estimated at about US$3.69/t and assume conventional multi-lift heap leach operation with ore crushed to P_{80} 50 microns. This cost estimate is based on Koza's initial run-of-mine (ROM) heap leaching costs experienced during the fourth quarter 2013 and adjusted for additional costs associated with primary and secondary crushing once construction of the crushing facilities is completed and commissioned.

Estimated Process Facility Capital Costs

Koza has developed a capital cost estimate of US$130.5 million for the Himmetdede processing facilities. These costs were developed from both equipment vendor and contractor quotations provided to Koza. Table 2.9.5.2 presents of summary of Koza's capital cost estimate.

Table 2.9.5.2: Capex Summary for Himmetdede Process Facilities

Cost Area	Source (1)	US$
Infrastructure	IK (1)	5,950,000
CIC & Reagents	IK	7,750,000
Crushing Plant	Metso, MMD, IK	40,150,000
Heap Leach Pad	IK	55,750,000
Electrical/Automation	IK	2,500,000
Indirect Costs	IK	18,400,000
Total		**$130,500,000**

Source: Koza, 2013
(1) Turkish Construction Contractor - IK Adademi

2.10 Environmental

The first EIA Permit for three operation licenses was obtained on March 15, 2012. The EIA for an increase in capacity was presented on July 14, 2014 and the process is ongoing. The project is located on privately owned agricultural land. The land acquisition process is ongoing. Other environmental permits have not yet been obtained. These will have to be obtained during the operation of the mine. Koza has applied for a Temporary Operation License which has not yet been received. There are no areas with particular environmental protection in the vicinity of the license areas. There is no Mine Closure and Reclamation Plan in place, and therefore, no estimate of the mine closure costs.

3 Conclusions and Recommendations

3.1.1 Geology and Resources

Koza has done more drilling at Himmetdede and thereby increased the size of the resource and the confidence level. Drilling between Himmetdede Main and Himmetdede North does not indicate that there is a geological distinction between the two and SRK suggests that the two areas be included in a single block model in the future.

The oxide/sulfide surface is quite irregular and may not be predicting the amounts of oxide material as accurately as possible. SRK suggests that the surface be reviewed.

The sulfide material is included in the resource with the assumption that it can be processed by heap leaching. Metallurgical tests have not been conducted on the sulfide material that supports this assumption, and SRK strongly recommends that this test work be done or that the sulfide material be left out of the resource statement.

SRK suggests that the Himmetdede resource be limited by a pit shell as this practice has become the norm in modern mining companies.

SRK has the following recommendations:

- Plot the standards against time to determine if the laboratory has trouble during a certain period,
- Duplicate samples should be chosen from mineralized zones and should be submitted blind to the lab;
- Pulp duplicates should be prepared and submitted the lab;
- Continue submitting check samples to a secondary laboratory as a check of the Himmetdede lab; and
- Insert CRM samples with the check assay samples at a frequency of one CRM per five to six samples.

SRK also recommends contacting SGS to confirm that the analytical methods used at SGS match those used at Himmetdede for future analysis.

3.1.2 Mining and Reserves

Mining operations at Himmetdede were shut down due to the government failing to provide an operations permit for the project. In January 2015, the project received its permit after legal proceedings were implemented by Koza Gold. Operation of the 20,000 t/d heap leach operation is expected to commence immediately.

SRK recommend that the pit walls currently designed be straightened and noses removed from the design. Any local changes in rock strength will be amplified by these noses and can lead to pit wall instability.

SRK recommends that integrated phase design and scheduling be conducted at Himmetdede for several reasons:

- Koza have purchased a dedicated fleet and the purpose of the production schedule is to operate that fleet at maximum capacity. This will entail balancing haul profiles with pit sinking rates and waste dump development while meeting production requirements. On a life of mine time frame the dump sequencing is much more important for owner operating mines than contractor operations where the mine fleets are flexible;

- Phases will allow the material properties (crushing, clay, perculation, hardness, etc.) from the pit surface to depth be understood from an operational perspective and provide sump capability if groundwater inflow becomes an issue. Multiple phase excavation provides for multiple ore faces rather than a single source leading to operational flexibility and blendability of material types;
- Geotechnical information learned from phase excavation can allow for refinement of highwall parameters before they are excavated; and
- Phase excavation does not burden the initial mine fleet with excessive pre-stripping while cash-flows are minimal.

There is a crushing and sizer circuit at Himmetdede to handle unknown material properties. As mining progresses these properties should be defined from an operational perspective. The particular parameters to understand are moisture content, swell factor, loose density, dry density and clay content. If operational issues arise these should be estimated into an operational block model and scheduled accordingly. A pit recipe that controls ore hardness, clay content, grade and moisture may be required.

3.1.3 Metallurgy and Process

Koza conducted additional metallurgical testing throughout 2014 to further investigate heap leach characteristics of the upper, middle and lower zones of the Himmetdede deposit. This work included drilling a total of nine metallurgical PQ drill core holes to achieve lithology and spatial representation throughout the deposit.

It was found that the upper zone and middle zone composites were relatively insensitive to crush size (test result for D2 50 mm crush appears anomalous). A crush size of – 50 mm would be adequate for the upper and middle ore zones. The lower zone composite was shown to be very sensitive to crush size and that a crush size of -9.5 mm is indicated.

The results of Koza’s 2014 metallurgical test program indicated that gold recoveries of 86%, 76% and 45%, respectively, can be expected after discounting extraction by 5% to allow for heap leach inefficiencies.

3.1.4 Environmental

The project is located on privately owned agricultural land. The land acquisition process is ongoing. Other environmental permits have not yet been obtained. These will have to be obtained during the operation of the mine. Koza has applied for a Temporary Operation License which has not yet been received.

4 References

Albayrak, Ö., 2015, personal communication.

Bloom, L, 2013. *Ankara geochemistry, assaying and quality control sessions* report to Koza Gold, dated May 31, 2013, 15p.

ESRI Basemap NatGeo_World_Map, 2013. National Geographic, Esri, DeLorme, NAVTEQ, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, iPC, Accessed January 2013.

Koza Altın İşletmeleri A.Ş. (2014). Mineral Resource Estimate for the Himmetdede Project, Turkey.

Koza Altın İşletmeleri A.Ş. (2014a). Mineral Resource Estimate for the Himmetdede North Project, Turkey.

Koza Altın İşletmeleri A.Ş. (2013a). Unpublished Description of Himmetdede Mineralization, 1p.

Koza Altın İşletmeleri A.Ş. (2012 GIS). GIS Database.

Koza Altın İşletmeleri A.Ş. (2012b). Himmetdede Project Slope Stability Analysis, Turkey.

Koza Altın İşletmeleri A.Ş. (Fall 2012c). Himmetdede Project Slope Stability Analysis, Turkey.

Okay, A. I. (2008). Geology of Turkey: A Synopsis, Anschnitt, Vol. 21, pp 19-42.

Okay, A.I. and Whitney, D.L., 2010. Blueschists, ophiolites, and suture zones in northwest Turkey, in: Tectonic Crossroads: Evolving Orogens of Eurasia-Africa-Arabia October 4-8, 2010, Ankara, Turkey Conference Paper, 54p.

Yigit, O., 2006. Gold in Turkey—a missing link in Tethyan metallogeny, in: Ore Geology Reviews, Volume 28 Issue 2, pp 147-179.

5 Glossary

5.1 Mineral Resources and Reserves

The JORC Code 2012 was used in this report to define resources and reserves.

A ‘Mineral Resource’ is a concentration or occurrence of material of intrinsic economic interest in or on the Earth’s crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories.

An ‘Inferred Mineral Resource’ is that part of a Mineral Resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes which may be limited or of uncertain quality and reliability.

An ‘Indicated Mineral Resource’ is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed.

A ‘Measured Mineral Resource’ is that part of a Mineral Resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes. The locations are spaced closely enough to confirm geological and grade continuity.

5.2 Glossary of Terms

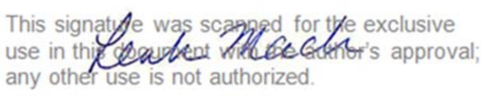
Table 5.2.1: Glossary

Term	Definition
Assay	The chemical analysis of mineral samples to determine the metal content.
Capital Expenditure	All other expenditures not classified as operating costs.
Composite	Combining more than one sample result to give an average result over a larger distance.
Concentrate	A metal-rich product resulting from a mineral enrichment process such as gravity concentration or flotation, in which most of the desired mineral has been separated from the waste material in the ore.
Crushing	Initial process of reducing ore particle size to render it more amenable for further processing.
Cutoff Grade	The grade of mineralized rock, which determines as to whether or not it is economic to recover its gold content by further concentration.
Dilution	Waste, which is unavoidably mined with ore.
Dip	Angle of inclination of a geological feature/rock from the horizontal.
Fault	The surface of a fracture along which movement has occurred.
Flitch	Mining horizon within a bench. Basis of Selective Mining Unit and excavator dig depth.
Footwall	The underlying side of an orebody or stope.
Grade	The measure of concentration of gold within mineralized rock.
Haulage	A horizontal underground excavation which is used to transport mined ore.
Igneous	Primary crystalline rock formed by the solidification of magma.
Kriging	An interpolation method of assigning values from samples to blocks that minimizes the estimation error.
Level	Horizontal tunnel the primary purpose is the transportation of personnel and materials.
Milling	A general term used to describe the process in which the ore is crushed and ground and subjected to physical or chemical treatment to extract the valuable metals to a concentrate or finished product.
Mining Assets	The Material Properties and Significant Exploration Properties.
SAG Mill	Semi-autogenous grinding mill, a rotating mill similar to a ball mill that utilizes the feed rock material as the primary grinding media.
Sedimentary	Pertaining to rocks formed by the accumulation of sediments, formed by the erosion of other rocks.
Sill	A thin, tabular, horizontal to sub-horizontal body of igneous rock formed by the injection of magma into planar zones of weakness.
Smelting	A high temperature pyrometallurgical operation conducted in a furnace, in which the valuable metal is collected to a molten matte or doré phase and separated from the gangue components that accumulate in a less dense molten slag phase.
Spigotted	Tap/valve for controlling the release of tailings.
Stope	Underground void created by mining.
Strike	Direction of line formed by the intersection of strata surfaces with the horizontal plane, always perpendicular to the dip direction.
Sulfide	A sulfur bearing mineral.
Tailings	Finely ground waste rock from which valuable minerals or metals have been extracted.
Thickening	The process of concentrating solid particles in suspension.
Variogram	A statistical representation of the characteristics (usually grade).

6 Date and Signature Page

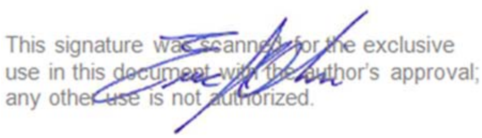
Signed on this 31st Day of January, 2015.

Endorsed by CPs:



Leah Mach, MSc Geology, CPG

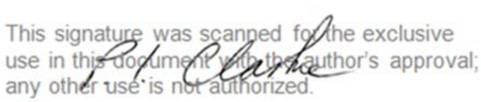
Bret Swanson, BEng Mining, MAusIMM, MMSAQP



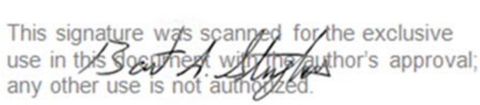
Eric Olin, MSc, MBA, SME-RM

Dorinda Bair, BSc Geology, CPG PG

Reviewed by:



Peter Clarke, BSc Mining, MBA, PEng



Bart Stryhas, PhD. CPG

All data used as source material plus the text, tables, figures, and attachments of this document have been reviewed and prepared in accordance with generally accepted industry practices.

Disclaimer

The opinions expressed in this Report have been based on the information supplied to SRK Consulting (U.S.), Inc. (SRK) by Koza Altın İşletmeleri A.Ş. (Koza). These opinions are provided in response to a specific request from Koza to do so, and are subject to the contractual terms between SRK and Koza. SRK has exercised all due care in reviewing the supplied information. Whilst SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them. Opinions presented in this report apply to the site conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report.

Copyright