



**“Koka Deposit:
Discovery & Resource Development of a Lode Gold Deposit
in the Neoproterozoic Terrain of Northern Eritrea.”**

**New Generation Gold 2009 Presentation
Dan Hamer – Country Manager (Eritrea)**

www.chalicegold.com

Disclaimer



- The material used in this presentation is intended to be a Case History of the Koka Gold Deposit and includes activities that are current and proposed based on the information available to Chalice Gold Mines Limited as at 24th November 2009.
- This presentation may contain value references and "forward looking statements" which are subject to various risks and uncertainties that could cause actual results and future events to differ materially from those expressed or implied by such statements. Investors are cautioned that such statements are not guarantees of future performance and results.
- This presentation does not include all available Information on Chalice Gold Mines Limited and should not be used in isolation as a guide to investing in the Company. Any potential investor should also refer to Chalice Gold Mines Limited Annual Reports and to ASX releases and take independent professional advice before considering investing in the Company.
- For further information about Chalice Gold Mines Limited, visit the website at www.chalicegold.com

CHN Overview



- **Approx 137M shares on issue**
- **Market Cap of ~A\$60M (based on Chalice share price of \$0.50)**
- **Focus on developing the high-grade Zara Gold Project in Eritrea, East Africa**
- **Targeting near-term production of ~100,000 ozpa from ~1Moz resource**
- **Scoping Study at Koka Gold Deposit completed in October 2009, Feasibility Study in May 2010**
- **Strategic landholding in emerging Arabian-Nubian gold & base metal province (Sukari, Bisha) – major exploration upside**

Board

Tim Goyder (Executive Chairman)

Doug Jones (Managing Director)

Mike Griffiths (Executive Director)

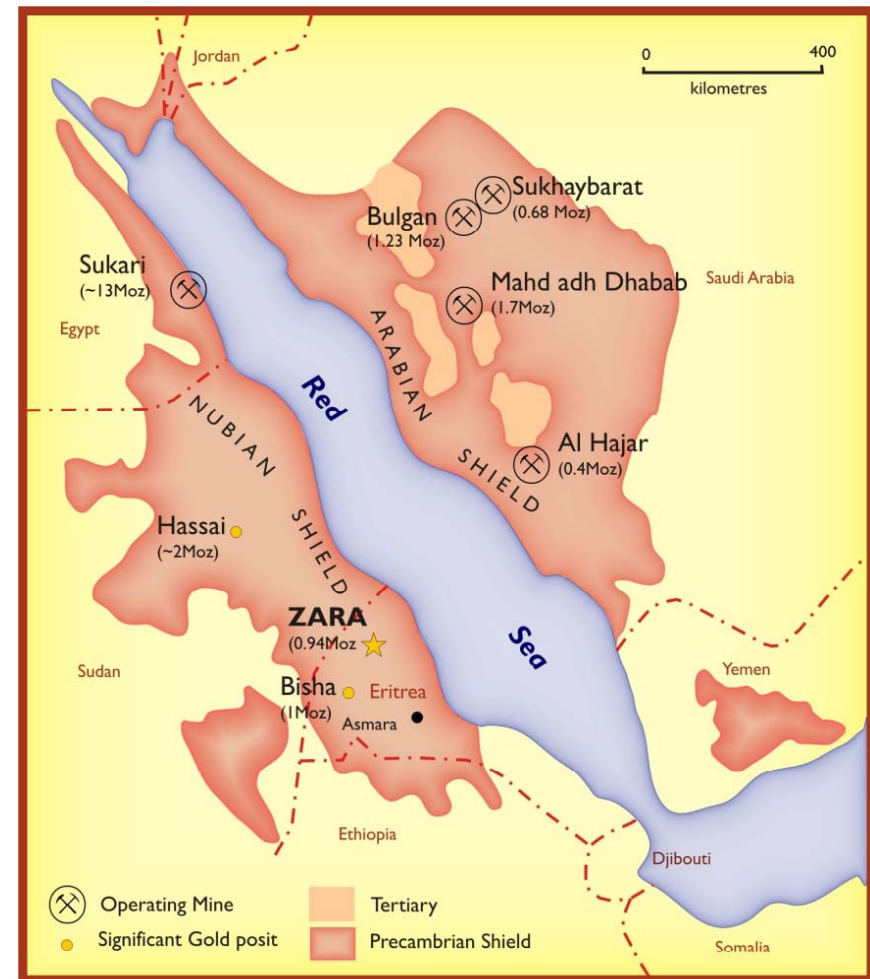
Anthony Kiernan (Non-executive Director)

Substantial Shareholders

Tim Goyder	13.5%
Anvil Mining	6.1%

Gold in the Arabian-Nubian Shield

- Emerging gold & base metal province – current gold endowment >20Mozs
- Numerous multi-million oz gold deposits & mines dating back to ancient times
- Largely unexplored in modern times
- Centamin's 13Moz Sukari Gold Mine in Egypt commenced production
- Nevsun's \$250M Bisha gold & base metal mine under construction in Eritrea – 1Moz gold, 750Mlb copper, 1Blb zinc & 9Moz silver)

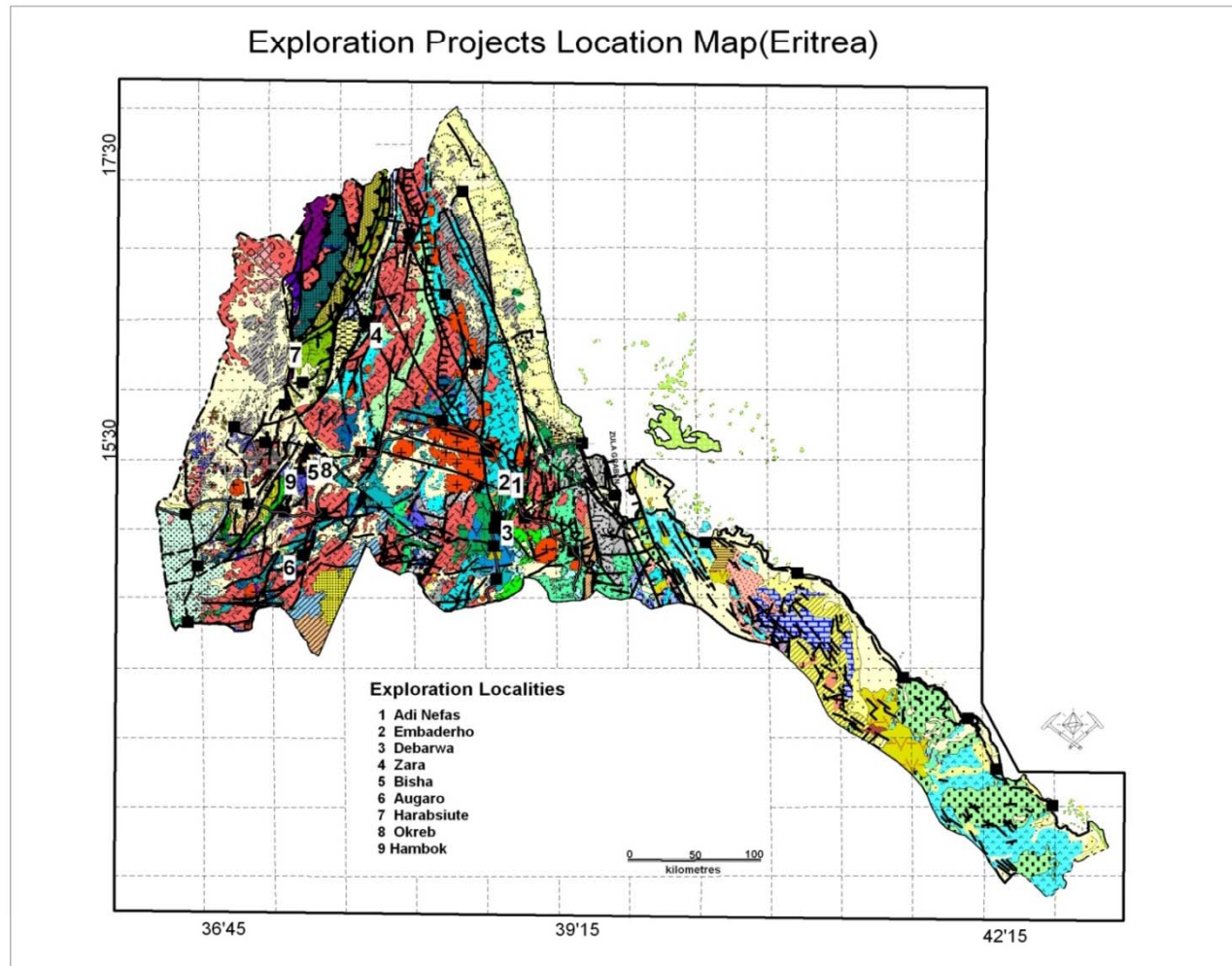


Eritrea Overview

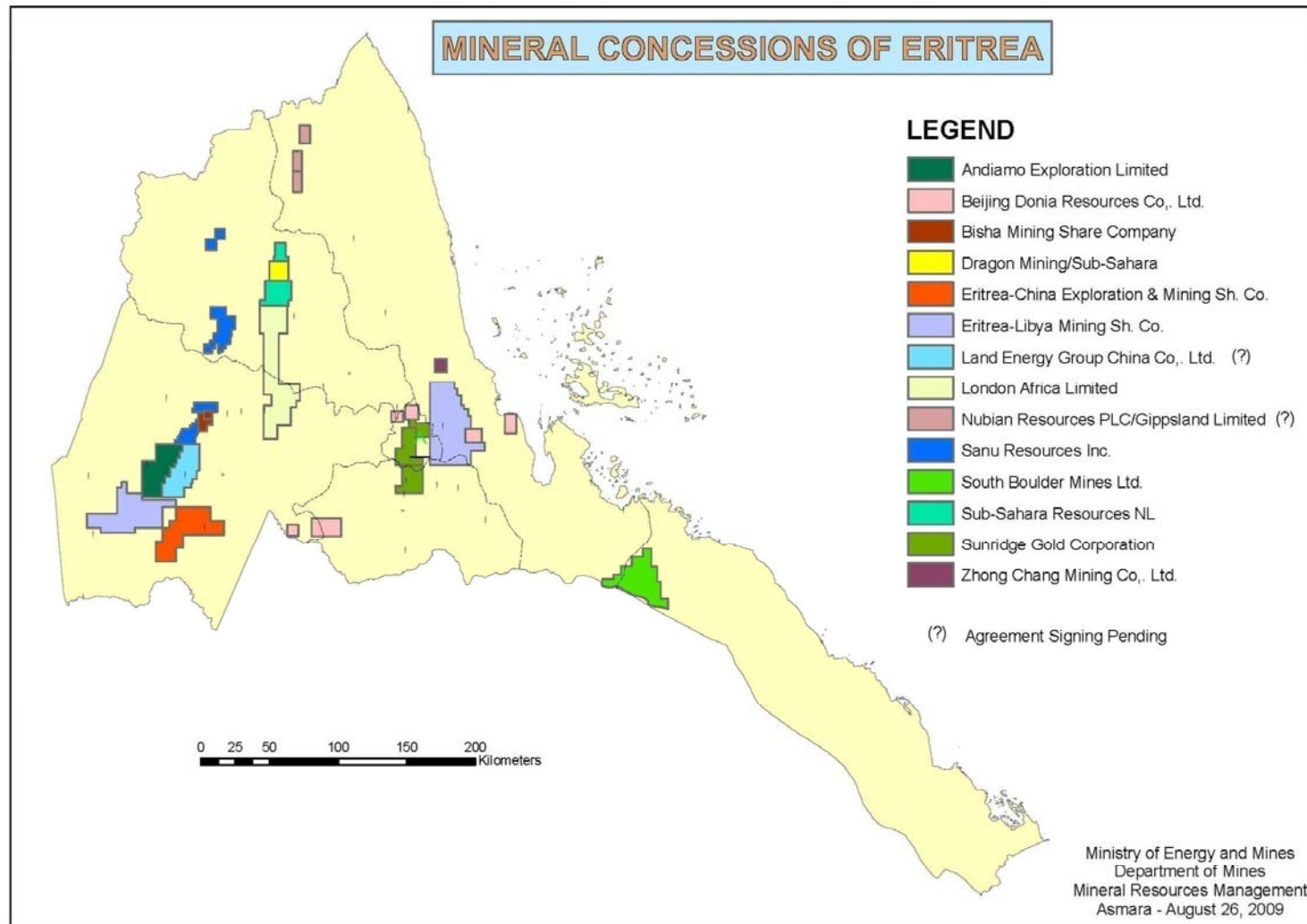
- Independent since 1993
- Stable operating & social environment
- Pro-active Government stance on mining developments – “open for business”
- Modern Mining Code
- Increasing foreign exploration & mining investment – 14 groups now active in country
- First modern mine (Bisha VHMS Deposit) – under construction



Eritrea – Regional Geology



Eritrea – Tenements



Zara Project - Location

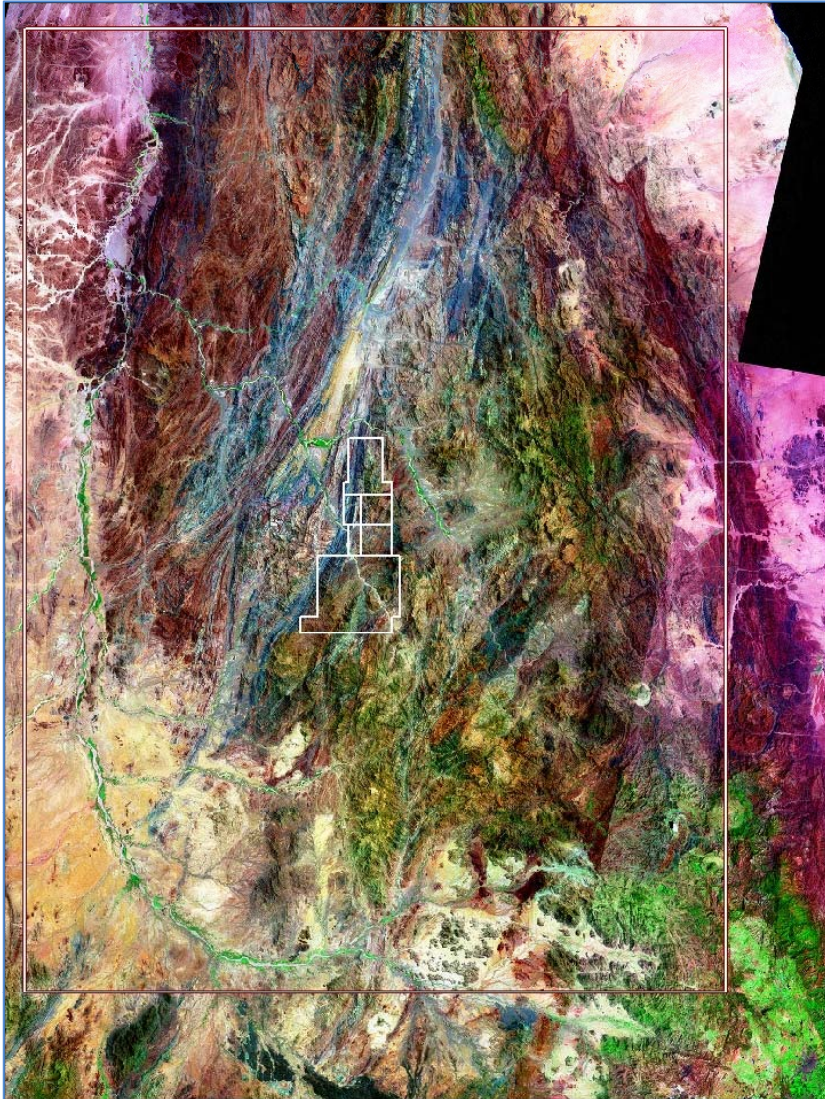


Zara Project – a short history

- Artisanal workings since mid-1990s
- 400km² Zara Prospecting License granted to Dragon Mining in 1998
- Reduced to 4x50km² Exploration licenses in 2000
- JV between Dragon & Sub-Sahara in 2003, Sub-Sahara took over management of exploration at Zara
- Reduced to 147km² in November 2008
- Sub-Sahara Resources NL merged with Chalice Gold Mines Limited in August 2009
- Two new Prospecting Licenses approved in 2009
- Current status:
 - Chalice Gold Mines Limited 80%
 - Dragon Mining NL 20%



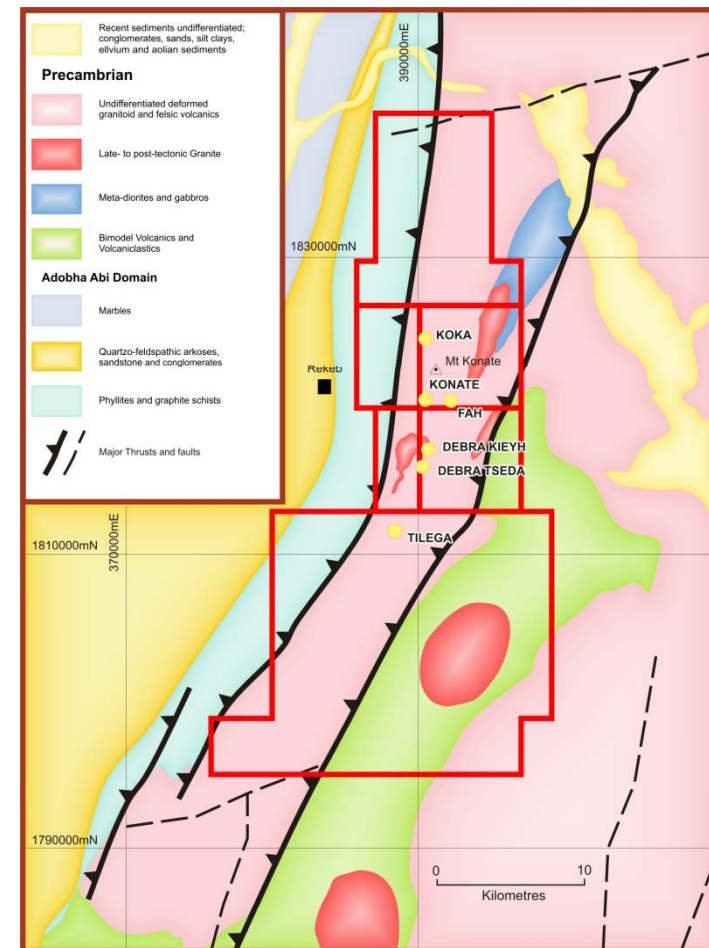
Zara Project – Satellite Imagery



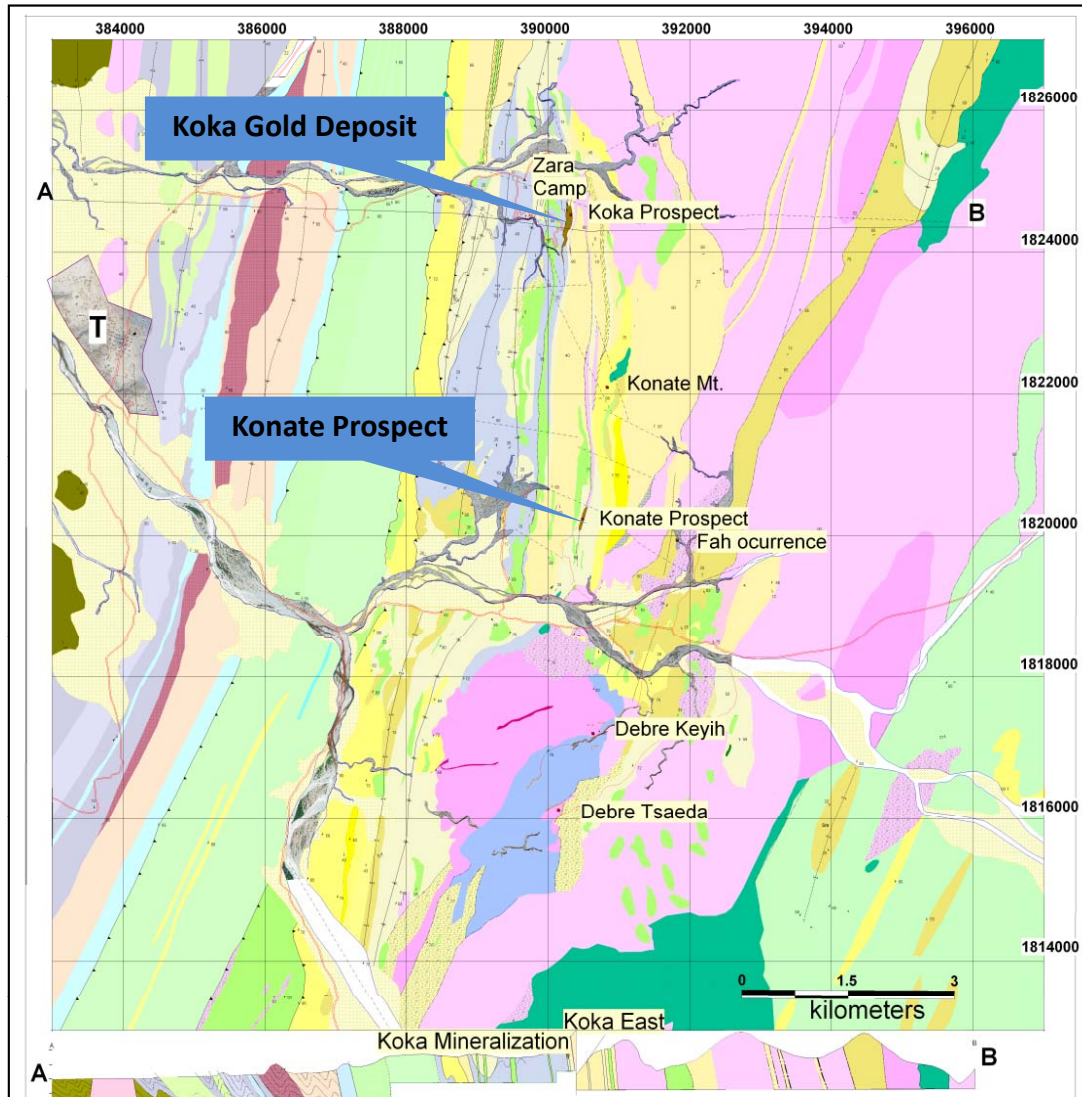
- Landsat 742 Image of northern Eritrea
- NNE trending structural domains
- Blue – Adobha Abiy Terrain
- Green – Nacfa Terrain
- Chalice Tenements outlined in white
- Prominent regional flexure visible

Zara Project – Regional Setting

- Major regional structural corridor controls mineral occurrences
- Tenements cover 50km strike on this corridor (~600km²)
- Numerous prospects identified from artisanal gold workings & gossans
- Koka Gold Deposit has been main focus of exploration to date

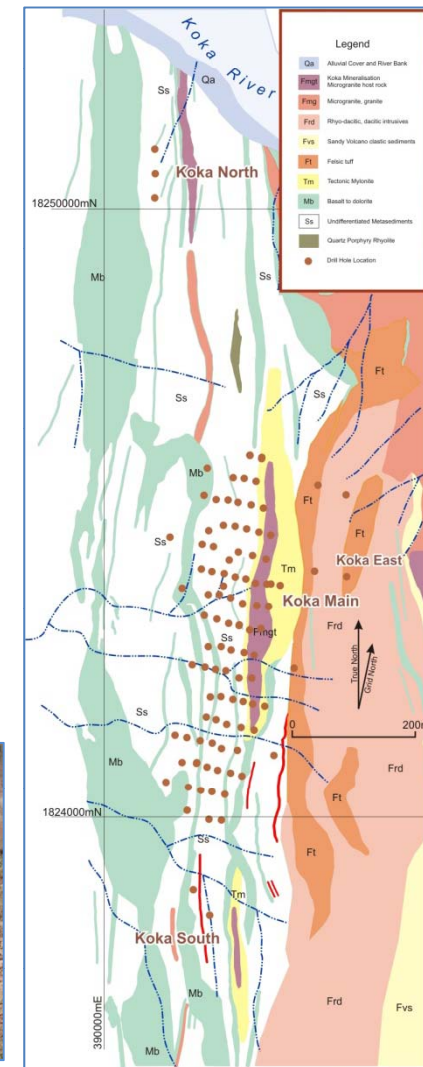


Zara Project – Tenement Geology



Koka Gold Deposit – Exploration

- **Gechemical Surveys** included rock chip, gridded soil sampling and trenching for gold & multi-elements
- **Geological Mapping** at 1:4,000
- **Phase 1 Exploration Drilling** – 4 holes at 160m spacing 2005-6
- **Drilling results included:**
ZARD002 33.00m @ 4.17g/t Au from 156m-189m
ZARD003 43.00m @ 6.80g/t Au from 89m-132m



Koka Gold Deposit – looking north



Koka Gold Deposit – looking north



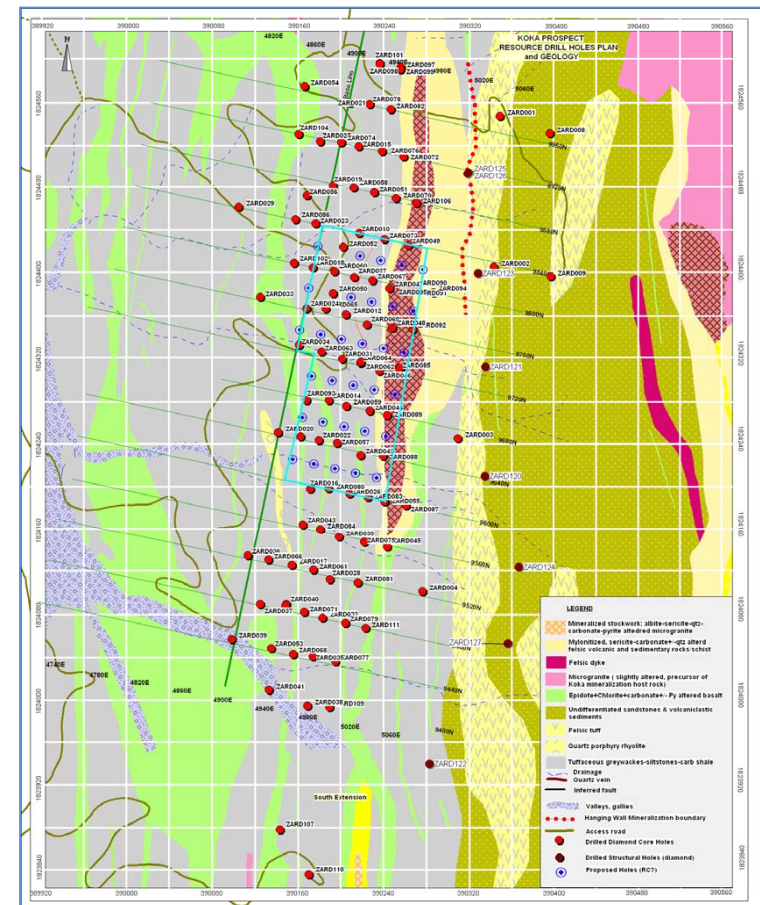
Koka – Resource Drilling

- **Phase 2 Resource Drilling** – 40mx40m spacing (29 holes) 2006-7
- **Phase 3 Resource Drilling** – 40mx20m spacing (46 holes) 2007
- **Phase 4 Resource Drilling** – additional shallow, strike extension, structural & metallurgical drilling (43 holes) 2007-8
- **Phase 5 Resource Infill Drilling** – 20x20m spacing over central 200m of strike (32 holes) in progress

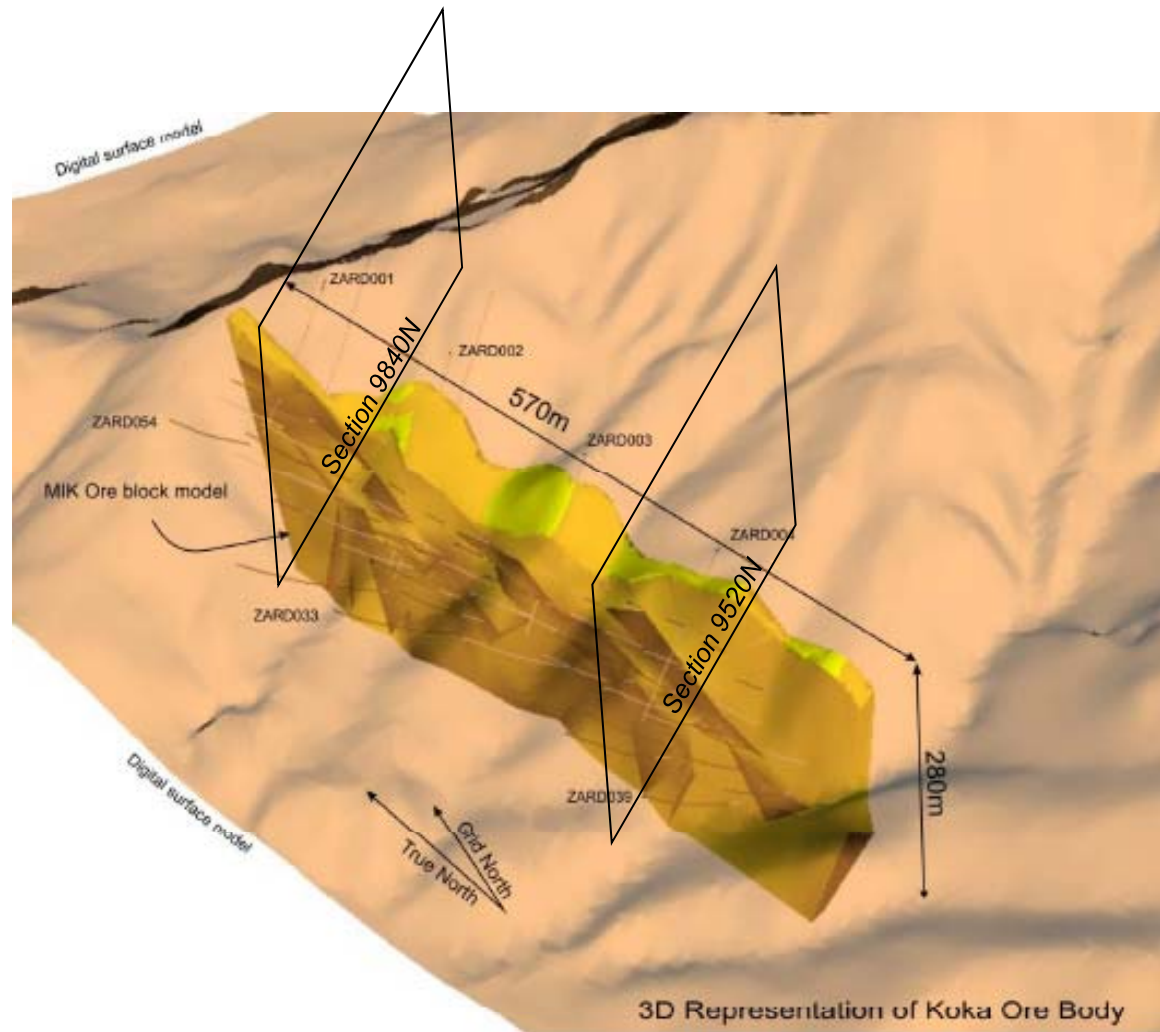


Koka – Resource Estimation

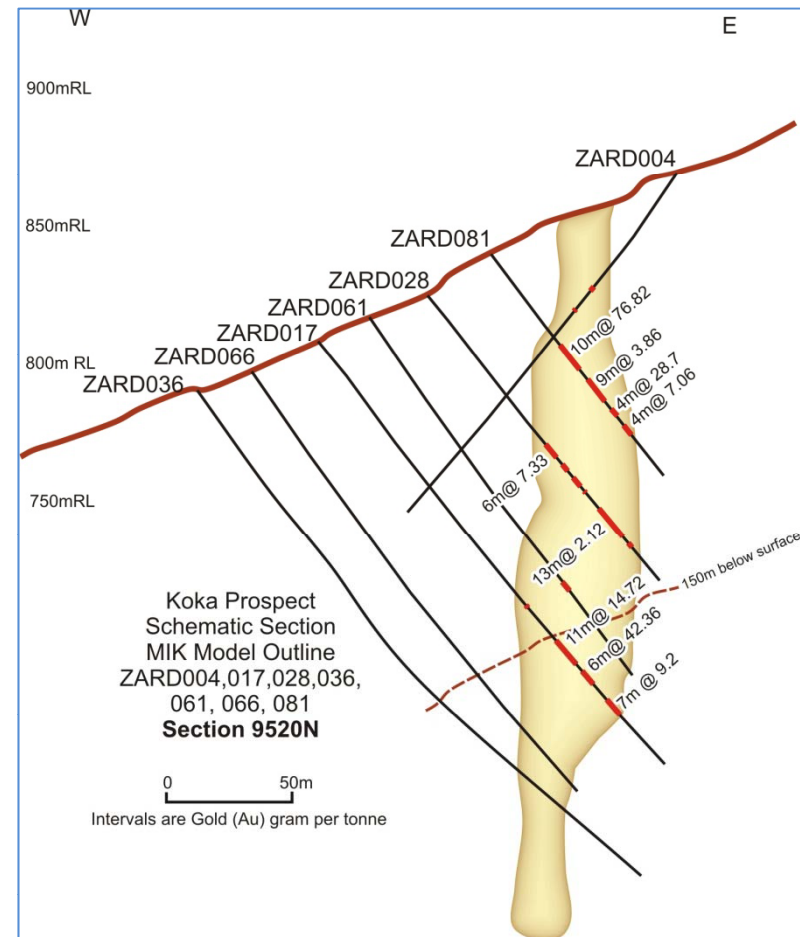
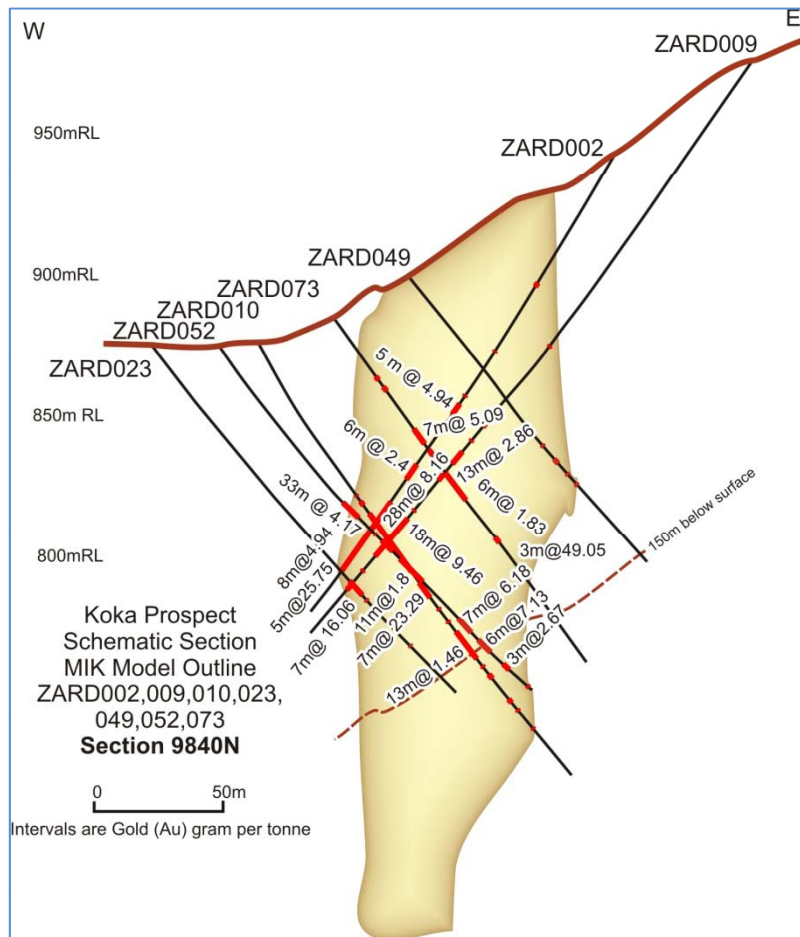
- **Snowden Mining Industry Consultants** (May 2007) - reported an Inferred Resource at Koka of 7.00Mt @ 3.40g/t for 0.76Moz of gold from drill holes ZARD001-038
- **Coffey Mining** (February 2008) – estimated 1.04Moz of gold from 5.13Mt ore at an average grade of 6.31g/t Au and at a cut off of 1.50g/t Au from drill holes ZARD001-084
- **Coffey Mining** (March 2009) - revised resource estimate of 0.94Moz of gold from 5.04Mt ore at an average grade of 5.80g/t Au and at a cut off of 1.20g/t Au from drill holes ZARD001-127



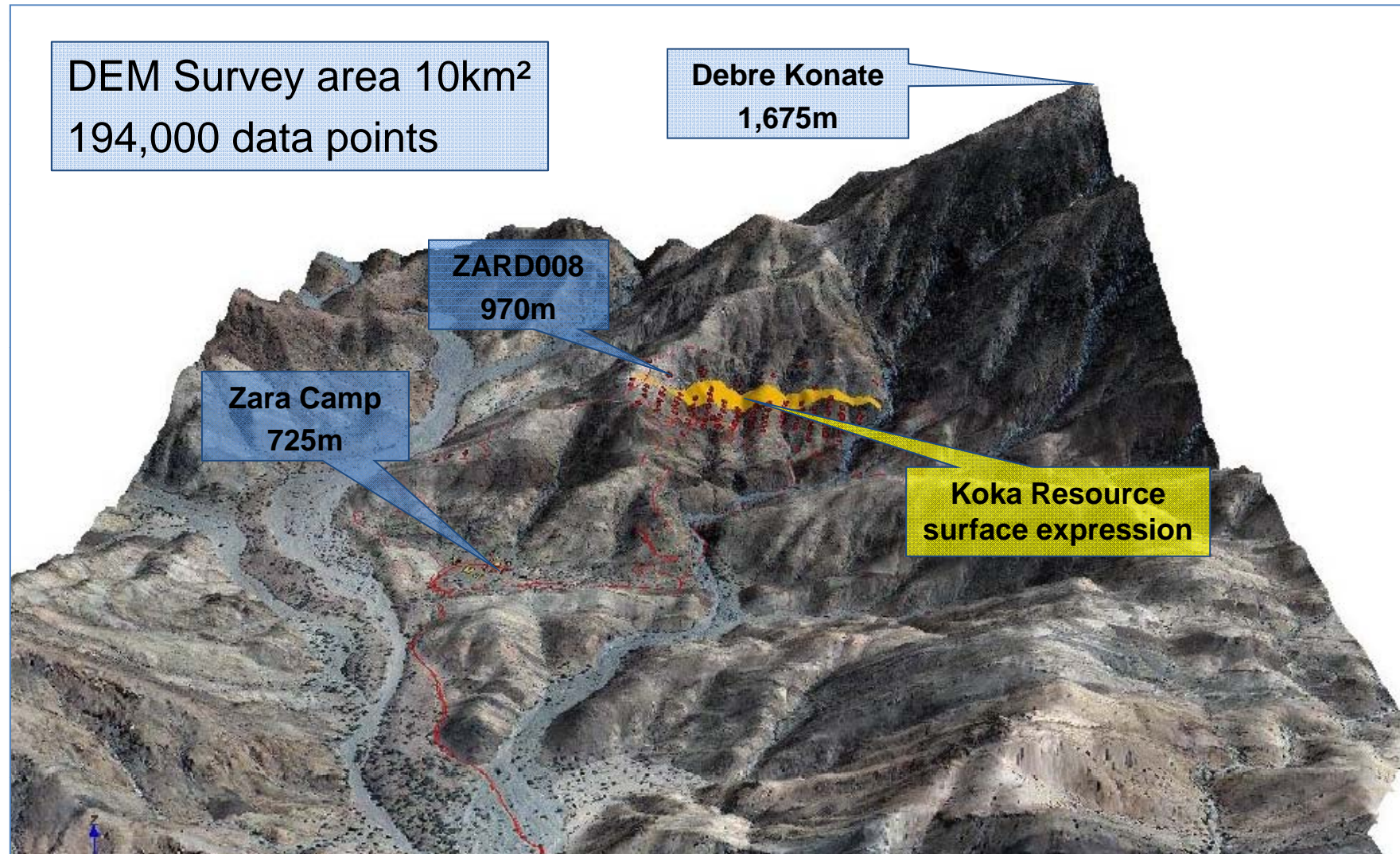
Koka Gold Deposit – 3D Model



Koka Gold Deposit – X Sections



Koka Gold Deposit – DEM

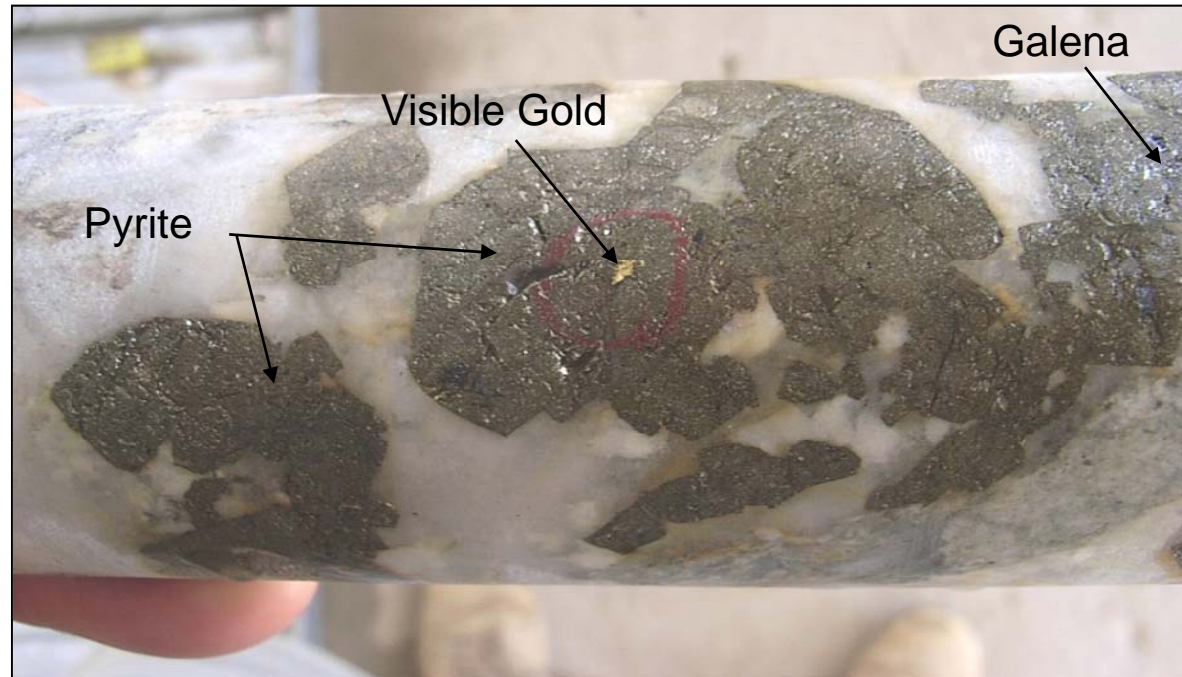


Koka Gold Deposit - Petrography



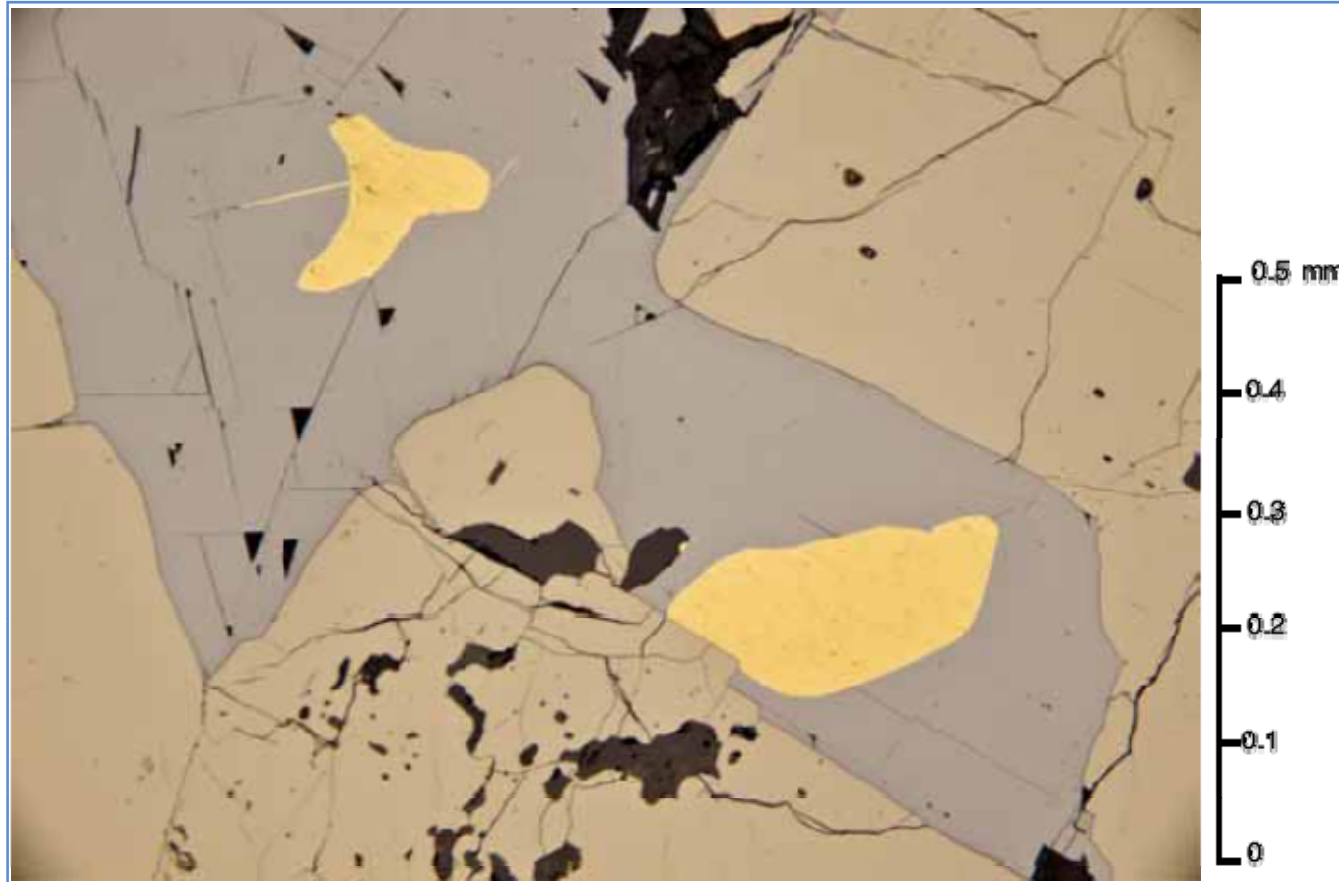
- Micro-granitic host rock showing prismatic phenocrysts of plagioclase (altered to albite) and micrographic intergrowths of quartz and K-spar (altered to albite)

Koka Gold Deposit Mineralisation



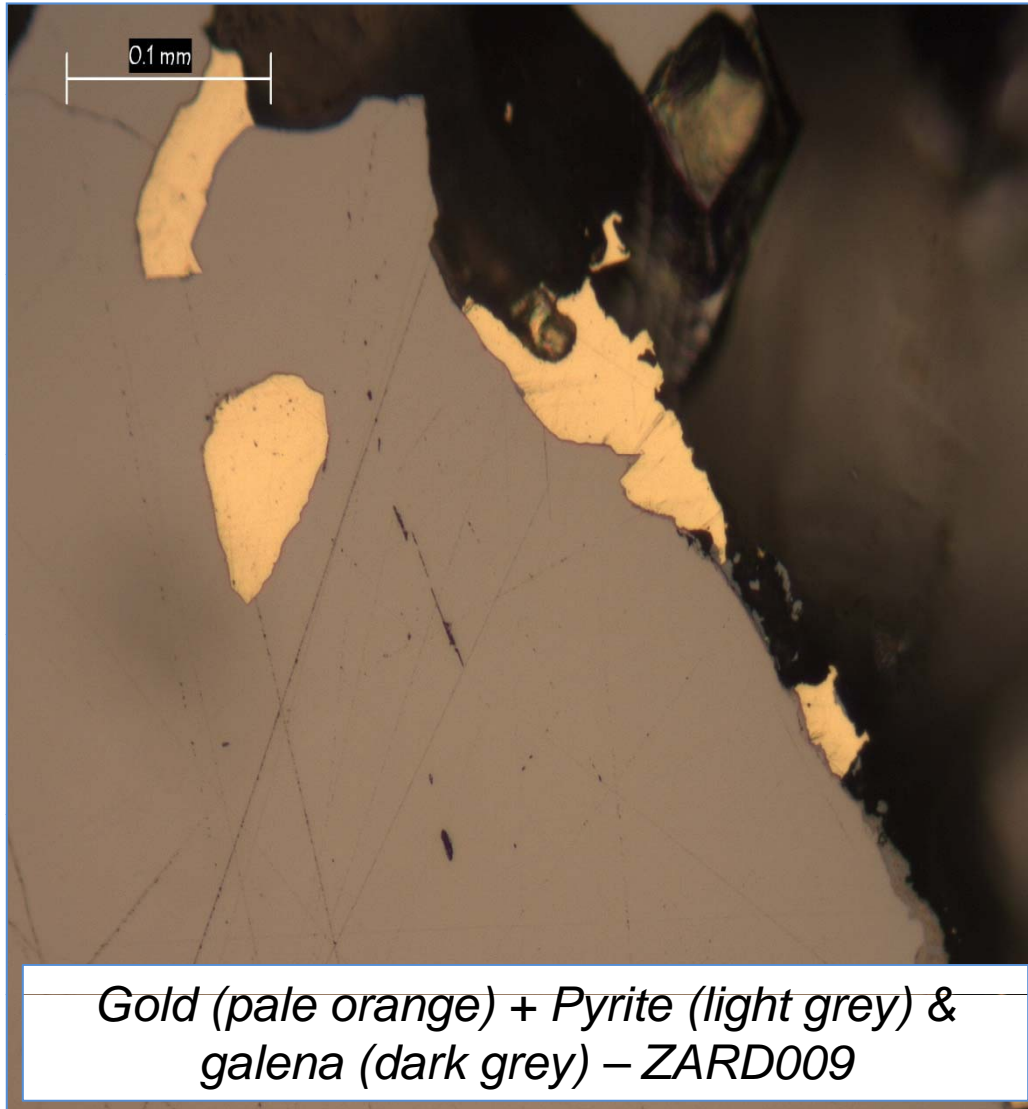
- Stockwork of quartz veins cutting micro-granite; similar in style to Sukari gold mineralisation
- Visible gold & high gold values associated with sulphides (pyrite, sphalerite, galena & chalcopyrite in quartz veins) – very little oxide

Koka Gold Deposit - Sulphides



- Native gold in galena with accompanying pyrite as sulphidic aggregates in quartz-sulphide veins cutting the micro-granite

Koka Gold Deposit – Metallurgy 1



Ammtec Limited Phase 1 Test Work (2007)

- 3 x 10kg samples of split core from 3 drill holes
- Acid Mine Drainage - moderate to high acid generating potential
- Gravity test work indicates potential for high level of gold recovery
- Cyanidation gold extraction test work shows >96% recovery after 24 hour leach tests
- Low reagent consumption

Koka Gold Deposit – Metallurgy 2

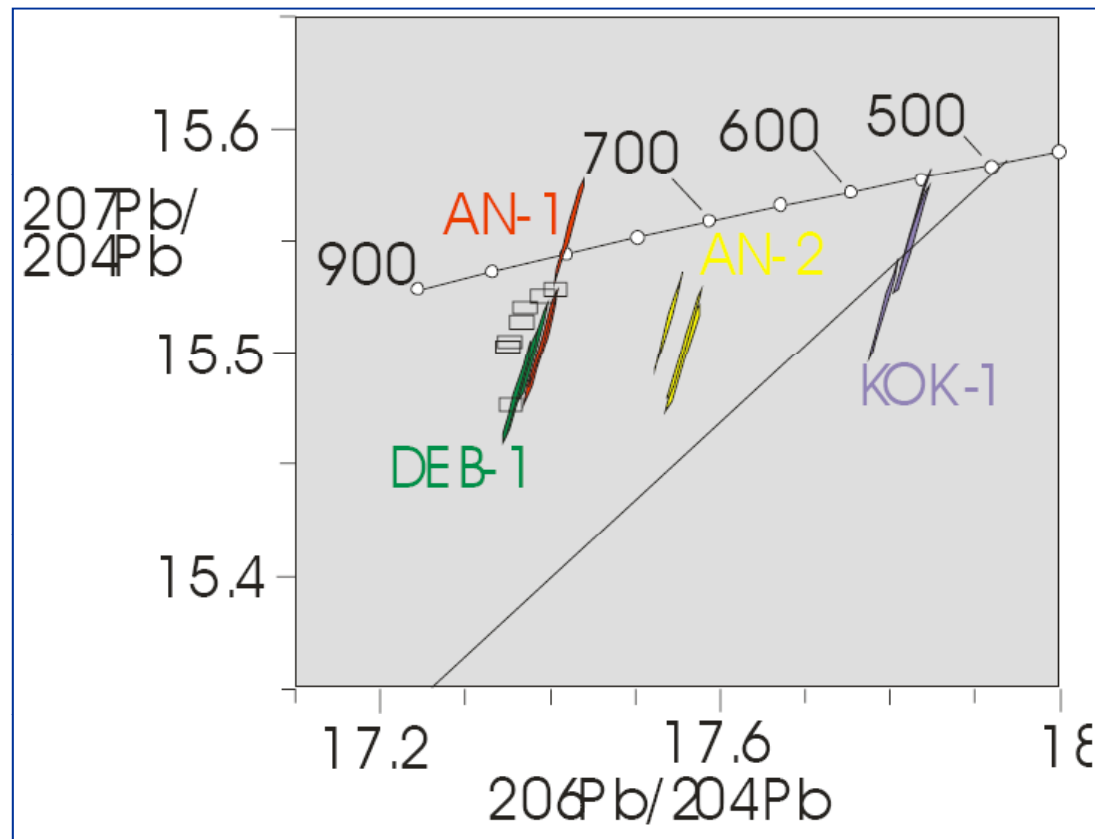


Phase 2 Metallurgical Test Work (2008-2009)

7 metallurgical drill holes (HQ) completed in 2008 & a 3 tonne bulk sample sent to Ammttec Limited. Initial results confirm findings of the Phase 1 Test Work:

- 60% recovery by gravity
- Overall recoveries 95-97% for grind size 80% passing 150-75 microns
- Low reagent consumption of 0.50kg/t for both lime and cyanide

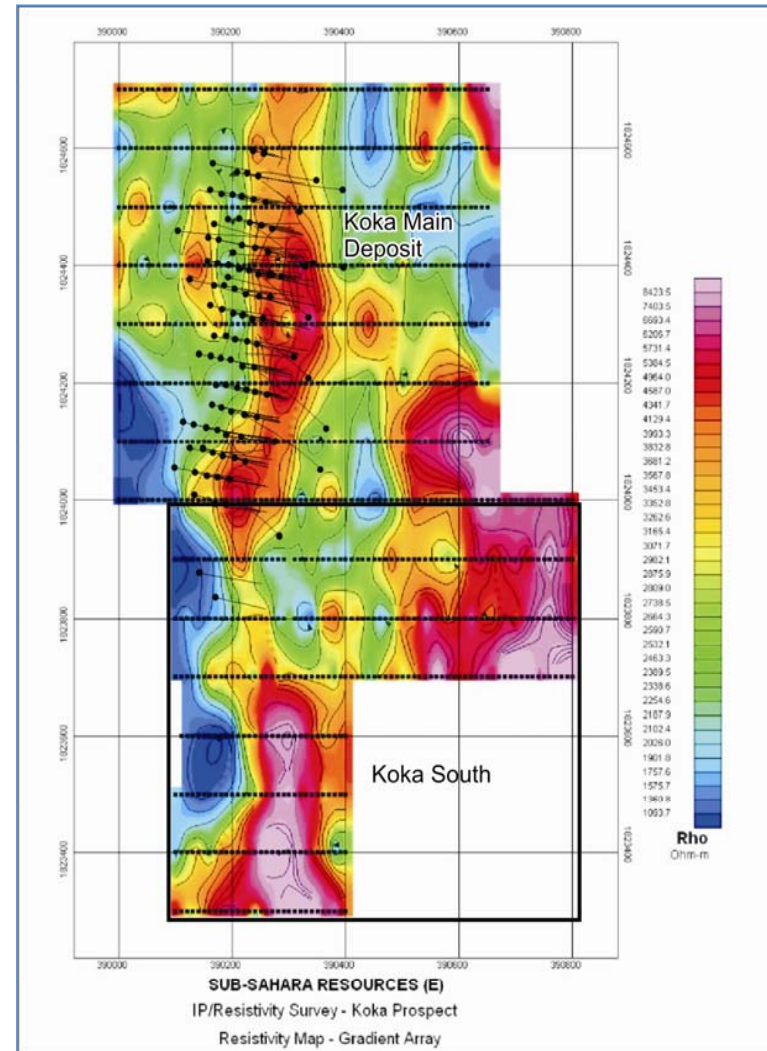
Koka Gold Deposit – Age Dating



- Lead isotope radiometric dating of galena from the Koka Gold Deposit gives a model age of $495 \pm 30\text{Ma}$
- Emplacement is coeval with the late-stage plutonism associated with the Pan African Cycle

Koka Gold Deposit – Geophysics

- **Orientation Survey (Ground-based IP and Resistivity) in 2007 covered Koka Main Zone**
- **Mineralised micro-granite corresponds to conspicuously high resistivity zone**
- **IP Resistivity Survey extended southwards after surface geochemistry highlights potential southern extension**



Koka Gold Deposit – EBS/EIA



Funeral
mounds

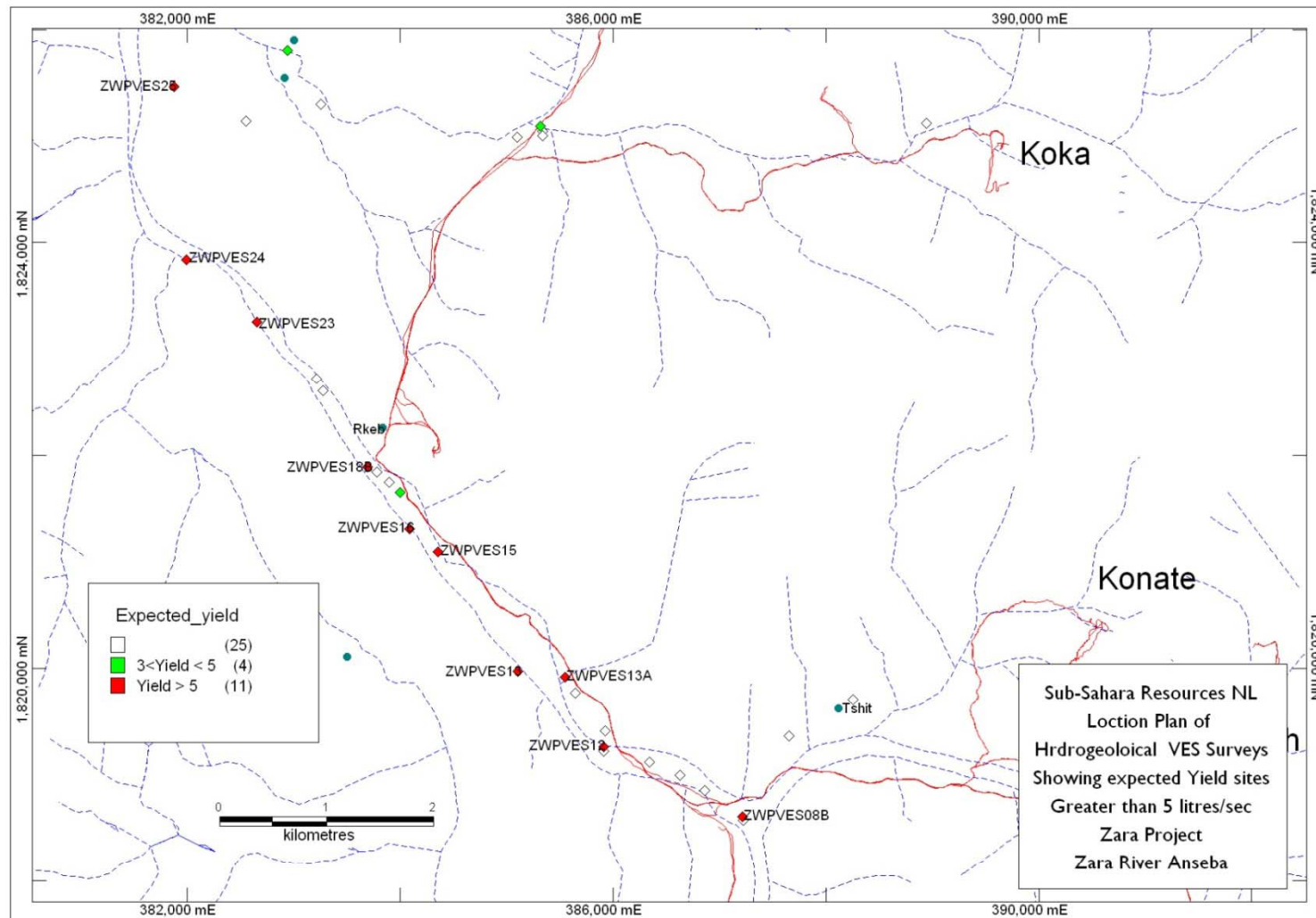


Nubian
Ibex

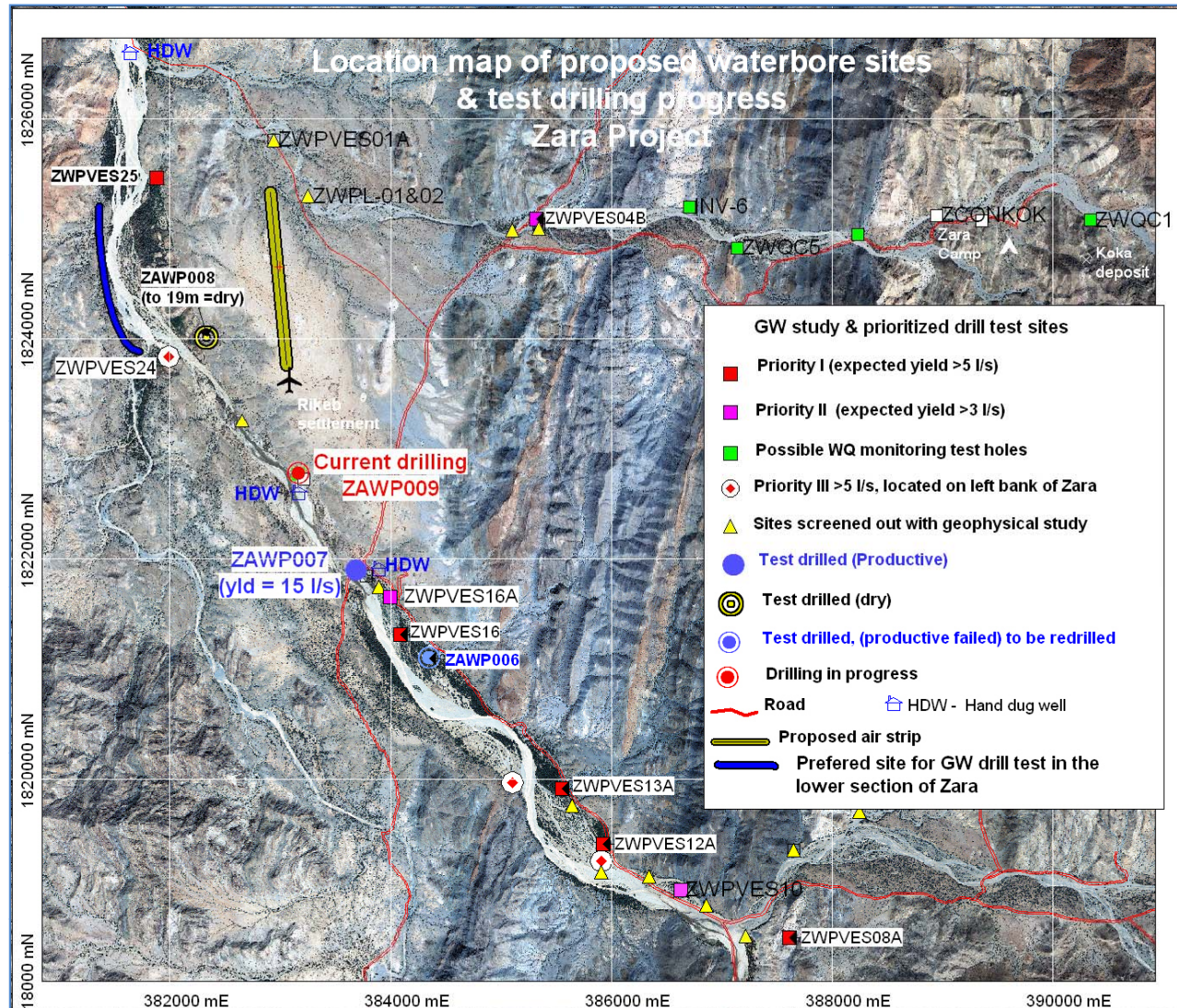
Environmental Baseline Study

- Atmospheric environment – meteorology, air quality & noise
- Aquatic environment – surface hydrology & water quality; hydrogeology & ground water quality
- Waste survey – waste rock & tailings characterisation & acid rock drainage potential
- Land resources – soils & vegetation
- Biophysical environment – wildlife & habitat; benthic invertebrates and fish
- Socio-economic and human environment – socio-economic study, land use survey, livestock, archaeology and cultural heritage

Koka Gold Deposit - Hydrogeology



Koka Gold Deposit – Water Drilling

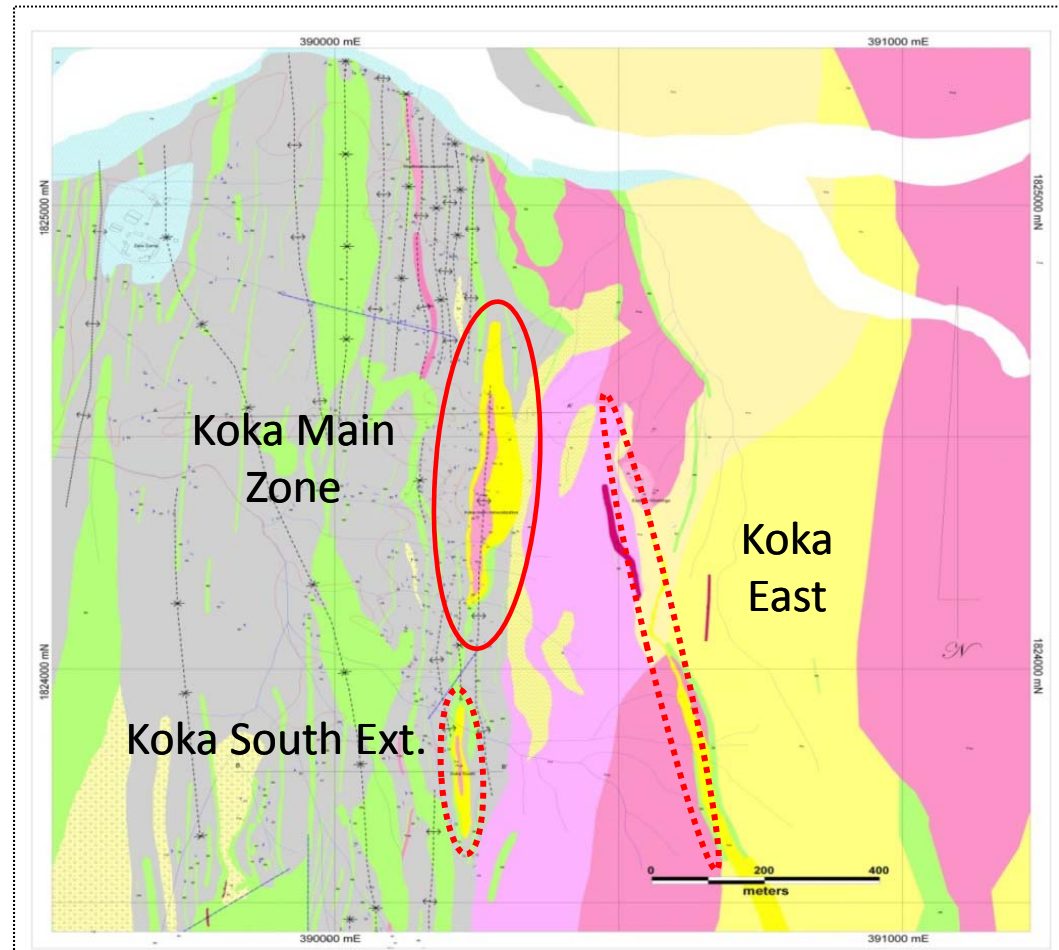


Water Drilling 7 water drill holes (8") completed:

- ZAWP007 – 15 l/sec
- ZAWP009 – 7 l/sec
- ZAW/P010 – 20 l/sec
- ZAWP011- >20 l/sec
- Two drill holes collapsed
- One drill hole dry

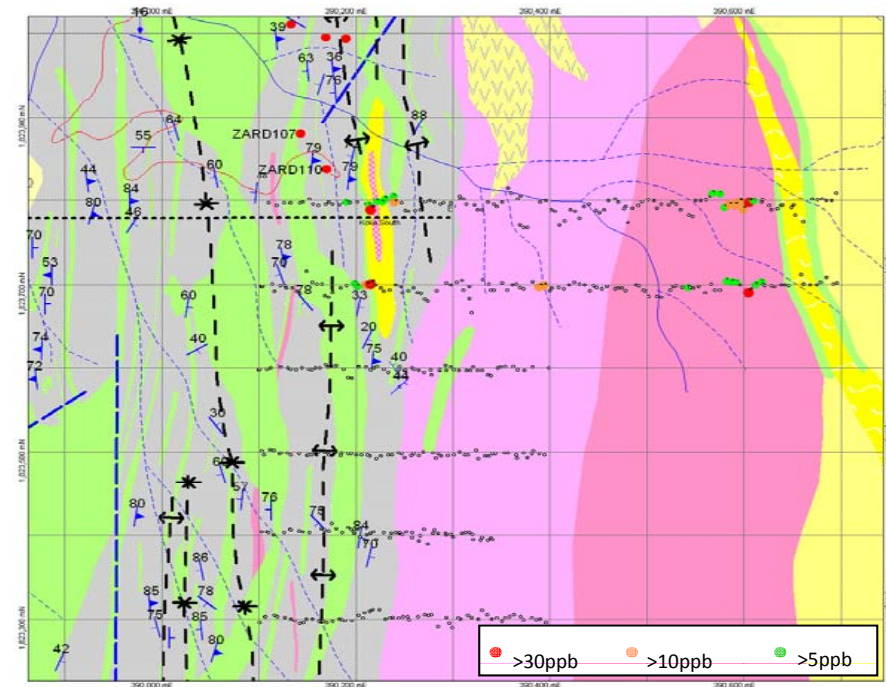
Koka Exploration – ‘Near Mine’

- Exploration to date focused on Koka Main Zone – very little drilling outside this target
- Other targets identified include:
 - Koka East – artisanal workings on high-grade quartz vein zone
 - Koka South Extension – IP resistivity anomaly



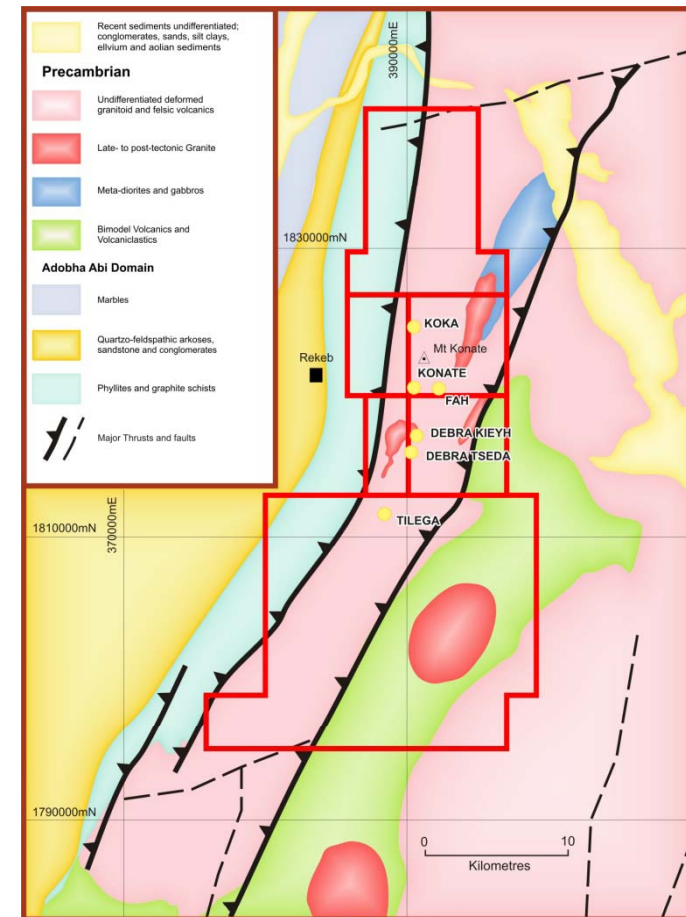
Koka South Extension

- Strong IP resistivity anomaly identified 500m to the south of Koka
- Ground follow-up confirmed zone of silica-sericite altered micro-granite
- Drilling confirmed Koka-style alteration and mineralization
- Potential 'blind' system open down plunge to south
- Koka East extension also confirmed
- Represent drill-ready targets



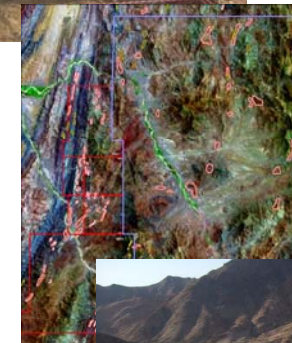
Zara Project – Regional Setting

- No systematic exploration in district before 1997 when Koka discovered
- Koka geological setting extends throughout ~600km² tenement block
- Numerous prospects identified from artisanal gold workings
- Drainage BLEG geochemical anomalies identified – to be followed up
- >60 gold & VHMS targets identified from Landsat Imagery Study



CHN Forward Program

- Lycopodium appointed to lead engineering studies
- Experienced 'Owner's Representative' appointed – metallurgist Steven Chadwick
- Koka Scoping Study completed in October 2009
- Complete Koka Feasibility Study in May 2010
 - 5,000m of diamond drilling to upgrade resource – in progress
 - Hydrogeological drilling – completed
 - EIA Water Monitoring holes – in progress
 - Metallurgical test work completed – press release made in October 2009
 - Socio-economic studies & EIS - ongoing
- Regional exploration program commenced
 - Landsat study covering 35,000km² completed - >60 gold & VHMS targets on tenements
 - Ground-based gravity survey at Jani VMS occurrence – in progress
- 2,500m of exploration drilling planned



Summary

- Focused growth strategy via development of high-grade Koka Gold Deposit
- Targeting near-term production of ~100,000 ozpa from current ~1.00Moz resource
- Scoping Study completed in October 2009, Feasibility Study to be completed in May 2010
- Strategic ground position in highly gold endowed (+VHMS), under-explored Arabian-Nubian Shield
- Aggressive exploration programme underway to expand resource base – numerous identified targets
- Experienced Board and Management with extensive expertise in African mineral sector



Risk versus reward.....



If you want to make a splash.....

TAKE THE PLUNGE!

Competent Persons Statement



The information in this report that relates to Exploration Results is based on information compiled by Mr Dan Hamer, a full-time employee and Country Manager (Eritrea) of Chalice Gold Mines Limited, who is a Chartered Professional Geologist. Mr Hamer has sufficient experience in the field of activity being reported to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, and consents to the release of information in the form and context in which it appears here.

The September 2009 Independent Resource Estimate for the Koka Gold Deposit was prepared by Mr Brian Wolfe, whilst employed as a Specialist Resource Geologist for Coffey Mining Pty Ltd. Mr Wolfe, who is a Member of the Australasian Institute of Mining and Metallurgy, has sufficient experience in the field of Resource Estimation to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves, and consents to the release of information in the form and context in which it appears here.