

GOLDEN DEEPS LIMITED









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High-Grade Battery Metals for Global Markets

Jon Dugdale, CEO, Golden Deeps Limited

High-Grade Battery Metals Projects:

Namibia

World Class Otavi-Mountain-Land Copper Belt:

- Tsumeb Mine produced 30Mt @ 4.3% Cu, 10% Pb and 3.5% Zn
- . Kombat Mine produced 32Mt @ 2.21% Cu, 1.33% Pb, 4.4 g/t Ag

Brownfields copper-vanadium drilling and development studies:

- Abenab high-grade vanadium (zinc-lead) resource metallurgical testwork.
- Nosib high-grade copper-vanadium-lead drilling intersections from surface.
- Khusib Springs high-grade production 300,000t @ 10% Cu, 584g/t Ag, open at depth, deeper drilling planned.

Australia

World Class Lachlan Fold Belt copper-gold district:

- Havilah Copper-Gold: Extensive Cu anomalies potential new discovery.
- Tuckers Hill Gold: High-grade gold lode targets to be drilled.

Canada

Professor and Waldman High-Grade Cobalt-Silver Targets.



¹ Tsumeb, Namibia. PorterGeo Database: www.portergeo.com.au/database/mineinfo.asp?mineid=mn290

² Porter Geo Database: http://www.portergeo.com.au/database/mineinfo.asp?mineid=mn2905

¹ Melcher, F. et. al. 2005. Geochemical and mineralogical distribution of germanium in the Khusib Springs Cu-Zn-Pb-Ag sulphide deposit. Otavi Mountain Land. Namibia.

Key Namibian High-Grade Copper-Vanadium (Pb, Zn, Ag) Projects

Nosib <u>high-grade copper-vanadium-lead-silver project:</u>

- Thick, high-grade, Intersections from surface.
- · Open at depth (primary Cu-Ag) and along strike.
- Near term open-pit production target.

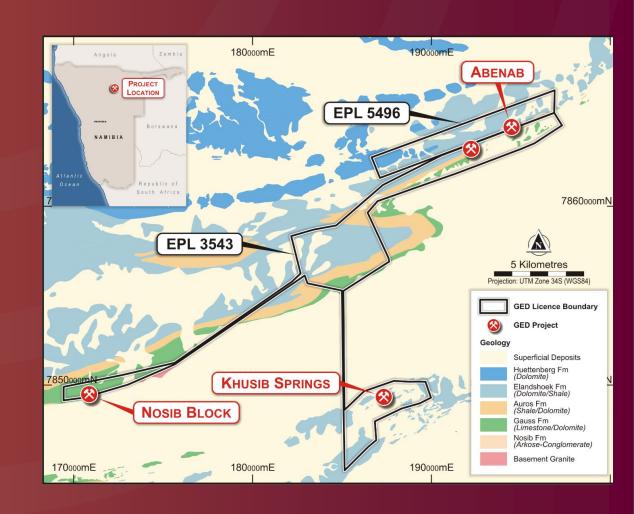
Abenab High-grade vanadium-lead-zinc project:

- Mining Study highlights potential for economic underground development.
- Two stage Processing Study in progress for:
 - high-grade vanadium gravity concentrate, then,
 - hydrometallurgical leaching to produce highvalue vanadium products for VRFBs as well as lead, zinc and possibly copper by products.

Khusib Springs

Previously very high-grade copper-silver mine

- Recent production 300kt @ 10% Cu, 584g/t Ag¹.
- Deeper targets for repeat of very-rich Cu-Ag shoot identified - to be drilled.



³ Melcher, F. et. al. 2005. Geochemical and mineralogical distribution of germanium in the Khusib Springs Cu-Zn-Pb-Ag sulphide deposit, Otavi Mountain Land, Namibia.

Nosib: High-grade Copper, Vanadium (and Lead) from Surface:

- Minor historical copper development.
- RC then diamond drilling produced exceptional copper, vanadium & lead intersections from surface:
 - 53.52m @ 1.15% Cu, 0.62% V₂O₅, 3.49% Pb, 4.57 g/t Ag⁴ from surface Incl. 25.74m @ 1.75% Cu, 1.17% V_2O_5 , 6.57% Pb, 4.92 g/t Ag incl. 11.74m @ 2.67% Cu, 1.42% V₂O₅, 9.21% Pb, 7.12 g/t Ag incl. 2.00m @ 7.73% Cu, 0.07% V₂O₅, 10.1% Pb, 18.9 g/t Ag
 - 45.70m @ 1.0% Cu, 0.72% V₂O₅, 2.8% Pb, 4.00 g/t Ag⁵ from surface, incl. 20.85m @ 2.0% Cu, 1.54% V₂O₅, 6.0% Pb, 7.7 g/t Ag incl. 12.10m @ 3.2% Cu, 2.54% V₂O₅, 9.8% Pb, 8.0 g/t Ag incl. 3.00m @ 6.3% Cu, 7.82% V₂O₅, 21.9% Pb, 6.4 g/t Ag

Next steps:

- Low cost mining potential open pit resource estimation.
- Drill-core and trial mining bulk sample for gravity concentration testwork.
- Hydrometallurgical leach testing to incorporate with Abenab Phase 2 studies for downstream, high-value vanadium production with copper, zinc and lead by-products.

NOSIB CROSS SECTION 80,990ME WITH KEY HIGH-GRADE INTERSECTIONS

⁵ Golden Deeps Pty Ltd announcement 15 June 2021 "Nosib Exceptional Copper, Lead & Vanadium Intersections"



⁷⁸⁴⁹⁹⁵⁰mN 7850000mN 53.52m @ 1.15% Cu, 0.62% V,O,, 3.49% Pb, 4.57 g/t Ag - Surface incl. 28m @ 1.71% Cu, 1.17% V₂O₃, 6.57% Pb, 4.92 g/t Ag ncl. 11.74m @ 2.67% Cu, 1.42% V₂O₄, 9.21% Pb, 7.12 g/t Ag 21.40m @ 2.0% Cu, 5.3% Pb, 0.29% V,O, & 7.9g/t Ag incl. 10.25m @ 3.5% Cu, 9.2% Pb, 0.34% V,O, & 12.7g/t Ag incl. 5.88m @ 4.9% Cu, 8.4% Pb & 11.2g/t Ag 10.60m @ 0.75% Cu, 3.75 g/t Ag ncl. 2.47m @ 1.75% Cu, 8.05 g/t A Significant Cu Intersection ncl. 16.45m @ 0.46%Cu, 4.31 g/t Ag ncl. 1.19m @ 2.00% Cu, 28.2 g/t Ag Historic Drill Hole Significant Cu Intersection 44.54m @ 0.38% Cu, 3.6g/t Ag Copper Mineralisation ncl. 22.71m @ 0.54% Cu, 4.6g/t Ac incl. 4.68m @ 1.02% Cu, 8.5g/t Ag Hangingwall Dolomite Footwall Felsic ----- Base of Oxidation

⁴ Golden Deeps Pty Ltd announcement 04 April 2022 "Exceptional Copper-Vanadium Intersection at Nosib"

Abenab: High-grade vanadium

- Highest grade vanadate deposit in the world. Operated 1921-1947, produced 176kt @ 16% V₂O₅, 13% Zn, 54% Pb⁶.
- > Drill defined an Inferred Resource⁶ below the mine of:
 - 2.80Mt @ 0.66% V₂O₅, 2.35% Pb, 0.94% Zn (0.2% cut-off)
 - 1.12Mt @ 1.28% V₂O₅, 3.05% Pb, 1.25% Zn (0.5% cut off)
- ➤ Barra mining study⁷ indicates potential for high-margin, vanadium leadzinc underground mining operation¹¹
- Gravity concentration studies⁸ indicate exceptionally high-grade gravity concentrate grades achievable:
 - up to 21% V₂O₅, 14% Zn and 53% Pb in concentrate⁹
- Phase 1 Hydrometallurgical leach testwork on lower grade concentrate produced vanadium extraction of up to 95.4%, with zinc and lead byproducts⁹
- Phase 2 testwork underway to develop two-stage processing flowsheet of gravity concentration then leaching to produce high-value vanadium products for e.g. VRFBs, as well as zinc, lead and copper

ABENAB BRECCIA CROSS SECTION, PREVIOUS WORKINGS AND INTERSECTIONS

¹⁹⁴⁵⁰⁰mF **Existing Pit** Workings **ABD008** 1000mRL **ABD008** ABRCD011 100 metres 750mRL Dolomite

⁶ Golden Deeps Ltd ASX 31/1/19: Golden Deeps confirms major Resource Upgrade at Abenab

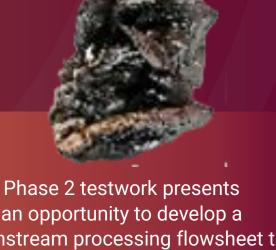
Golden Deeps Ltd 11/6/21: Abenab Vanadium Project Positive Results of Mining Study

⁸ Avonlea Minerals Limited (ASX:AVZ) 8/3/12: Positive Vanadium Gravity Separation Test Work

⁹ Golden Deeps Ltd announcement, 21st March 2022. Outstanding Vanadium Extraction of up to 95% from Abenab.

Two Phase Production of High-Value Vanadium **Products with Copper, Lead and Zinc**

- Abenab is one of the highest-grade vanadate deposits in the world the main "ore" mineral being descloizite, a lead-zinc vanadate (Pb,Zn)₂(OH)VO₄.
- Ore type is different to (all) other primary vanadium projects simple beneficiate via gravity concentration to a very high level for further processing either on-site or by other off-takers.
- Previous gravity concentration showed 15 times upgrade potential to produce high concentrate grades of up to 21% V₂O₅, 14% Zn and 53% Pb⁸ from primary material.
- Hydrometallurgical leach test-work (Phase 1) on lower grade concentrate produced outstanding vanadium extraction of up to 95.4% into solution.
- Direct ion-exchange (IX) on the leach solution produced high vanadium recoveries into IX resin, that can be processed to produce high-value end products such as vanadium electrolyte for vanadium redox flow batteries (VRFBs) used in renewable energy storage.
- Further gravity concentration testwork commenced on bulk sample of the high-grade resource, targeting a 15 times upgrade to 15%V, 30%Pb, 12%Zn⁹, for Phase 2 hydrometallurgical leach testing designed to optimise vanadium leach and direct IX recovery as well as zinc with lead recovery from the residue.
- Next step repeat the testwork on bulk sample of Nosib high-grade vanadium-copper-lead mineralisation and develop an integrated mining and processing plan.



an opportunity to develop a downstream processing flowsheet to allow mining development and initial gravity concentrate processing on site followed by downstream processing to high-value vanadium products and also recovery of zinc, lead and potentially copper

Khusib Springs upside potential for high-grade copper-silver discovery

Outstanding opportunity to extend exceptionally high-grade copper-silver mine.

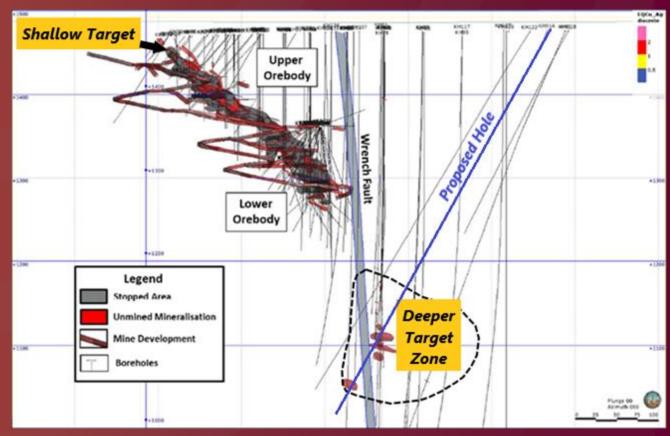
Closed 2003, decline intact after producing a very highgrade:

300kt @ 10% Cu, 584 g/t Ag¹ to only 300m depth.

- > Structural modelling highlighted potential for deeper extensions across a late wrench fault.
- ➤ Initial drilling program of 10 RC holes tested shallow target, intersecting in KHRC004:

6m @ 1.07% Cu, 86g/t Ag incl. 2m @ 2.59% Cu, 180 g/t Ag¹⁰

Drilling planned to test for a repeat of this very high-grade copper-silver ore-body at relatively shallow depth, south of late offsetting fault.



CROSS SECTION OF KHUSIB SPRINGS SHOWING STOPED AREAS AND KEY TARGETS

¹⁰ Golden Deeps Ltd ASX 28/06/21: Drilling to Further Test High-Grade Copper-Silver at Nosib and Khusib

NSW, Lachlan Fold Belt PRIME Cu-Au LOCATION

World-Class Lachlan Fold Belt Copper-Gold District:

- Cadia-Ridgeway pre-mining resource: 456Mt @ 0.24% Cu, 0.83 g/t Au¹¹
- North Parkes production: 32Mt @ 2.21% Cu, 1.33% Pb, 4.4 g/t Ag¹¹

Havilah Project:

- In Rockley-Golgong Volcanic Arc parallel to Molong Arc (Cadia- Ridgeway).
- Other resources in district indicate major porphyry system e.g. Bowdens Ag¹².
- Extensive Cu anomalies in soil on margin of Aarons Pass granite/porphyry
- Follow-up located extensive area of sub-cropping copper mineralisation
- Further soils, rockchips then Geophysics (IP) and drilling planned.

Tuckers Hill:

- EL9014 surrounds Hargraves deposit, part of the Hill End Goldfield total Mineral Resource: 4.6Mt @ 3.3 g/t Au (0.5Moz Au)¹³
- Previous high-grade production from high-grade quartz "reefs" and veins
- Diamond drilling program planned to test plunging "saddle-reef" system across anticline for Bonanza gold target (Fosterville)

Boda **Bowdens North Parkes** Cowal (Gidginbung C The Dam) Ardlethan Woodlawn A Majors Ck

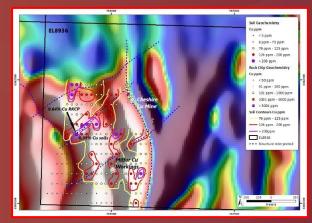
¹¹ www.porterged

¹² Silver Mines Ltd (ASY-SVI) 30/5/18: Maiden are reserve - Rowdens Silver Mine Golden Deens Lt

¹³ Peak Minerals Ltd (ASX:PUA) 29/5/20: Hargraves Mineral Resource estimate update

Havilah MAJOR PORPHYRY CU-AU TARGET

- Soil sampling over margin of Aaron's Pass Granite/Porphyry produced extensive copper anomalies up to 3,460ppm (0.35%) copper at Hazelbrook Prospect over 1.5km northeast trending anomalous corridor, open to NE
- Follow-up field work discovered copper mineralisation (malachite-azurite) in highly-altered Sofala Volcanics, with initial rockchips up to 6,380ppm (0.68%) copper.
- Hazelbrook represents a major new porphyry copper-gold target in volcanic & intrusive rocks similar to other major Cu-Au deposits in region (e.g. Cadia-Ridgeway)
- **Next Steps:**
 - Infill/extension soil sampling,
 - further rockchip sampling, and,
 - IP geophysics to define targets, then,
 - drilling to test potential new Cu discovery



Havilah EL8936 on TMI with Cheshire and Milfor Cu workings in

magnetic aureole of Aarons Pass Granite

¹⁴ Golden Deeps Ltd ASX 03/02/22: Outstanding Copper Soil & Rockchip Results from Havilah Project, NSW

Why Invest? HIGH-GRADE BATTERY METALS - COPPER AND VANADIUM

Prime location in Otavi Copper Belt in Namibia, with previous highgrade production of copper, vanadium, lead, zinc and silver.

- Key battery metals targeted, with very positive price outlook for vanadium and copper.
 - Thick, high-grade, copper-vanadium-lead intersections from surface at **Nosib** – potential open-pit development.
 - Abenab high-grade vanadium resource, pathway to production of highvalue vanadium products for VRFBs.
 - High-Grade Copper-silver targets for longer term resource growth at Khusib Springs and Nosib at depth.
- > Potential new copper discovery in Lachlan Fold Belt of NSW analogous to Cadia-Ridgeway.
- Management team with a strong track record of discovery in Brownfields environments - like these.





Jon Dugdale, CEO Talk with:

+61 8 9481 7833

jdugdale@goldendeeps.com

Disclaimer and Declarations

Overview

This presentation has been prepared by Golden Deeps Ltd (GED) as a summary of the company's exploration and development activities, with particular reference to the exploration programs in Namibia at Khusib Springs and the Nosib Prospect and development and processing studies on the Abenab V-Pb-Zn Project in Namibia.

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Competent Person Declaration

The information in this report that relates to exploration results has been reviewed, compiled and fairly represented by Mr Jonathon Dugdale. Mr Dugdale is a consultant to Golden Deeps Limited and a Fellow of the Australian Institute of Mining and Metallurgy (FAusIMM). Mr Dugdale has sufficient experience, including over 34 years' experience in exploration, resource evaluation, mine geology and finance, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Dugdale consents to the inclusion in this presentation of the matters based on this information in the form and context in which it appears.

Resource Estimate

The resource estimate stated in this presentation was compiled by Mr Manie Swart of Shango Solutions and announced to the ASX on January 31, 2019. Mr Swart is a Member of the South African Council for Natural Scientific Professions and a full-time employee of Shango Solutions. Mr Swart has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. The announcement is available for download from the GED website (http://goldendeeps.com/investors.php).

Mr Jon Dugdale, a consultant to GED and who is a Fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM), has reviewed the information provided in this presentation and considers that it is an accurate representation of the data and studies for the Abenab Project. Mr Dugdale has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'.

Historical Exploration Results

Exploration Results for drilling, metallurgical testwork and other exploration at the Abenab Mine stated in this presentation have previously been reported by Avonlea Minerals Limited (Avonlea, now AVZ Minerals Ltd). The relevant public announcements made by Avonlea are available for download from the ASX website (www.asx.com.au) under the code AVZ.

This presentation was authorised for release by the Board of Directors.

