

# **Quarterly Activities Report**

for the Quarter Ended 30 September 2018

## HIGHLIGHTS

- During the quarter the company refocused on its vanadium, zinc and lead project in northern Namibia known as the Abenab Vanadium Project (the Project).
- Highly experienced South African exploration and mining consultant group, Shango Solutions, has been engaged to conduct a comprehensive geological study at Abenab including the review of over 55Gb of valuable exploration and mining data held in respect of the Project area.
- Scope of geological study includes geological modelling, target generation, drill program design.
- The Abenab deposit resource estimate has been updated to JORC Code (2012) guidelines:

1.12 Mt grading 1.28% vanadium pentoxide (V<sub>2</sub>O<sub>5</sub>), 3.05% lead and 1.25% zinc

This resource update is an early step in the assessment of the full potential of the Project that includes the Abenab West Mine.

- Review of previous metallurgical test work and mine data confirms that the typical ores from the Anenab Project area are very amenable to cost effective gravity concentration which will result in very significant capital cost and operating cost savings compared to the typical titano magnetite vanadium based projects.
- Previous metallurgical testwork in 2012 on Abenab ore has achieved a concentrate grade of up to 21% V<sub>2</sub>O<sub>5</sub>, 14% Zn and 53% Pb. Historical production from the Abenab Mine produced concentrate grading 18% V<sub>2</sub>O<sub>5</sub>, 13% Zn and 42% Pb.

# ABENAB VANADIUM PROJECT

Golden Deeps Limited (ASX: GED or the Company) holds an 80% interest in the Abenab Vanadium Project (the Project). The Project is located in the Otavi Mountain Land, north-east Namibia (Figure 1) approximately 400 km north of the capital Windhoek.

The Project, formerly known as the Grootfontein Vanadium and Base Metal Project, contains the historic Abenab Vanadium Mine and the historic Abenab West Mine formerly known as the Christiana Mine.

# Activities during the Quarter

#### Refocus

During the quarter the company refocussed on its vanadium, zinc and lead project in northern Namibia with a view to bringing forward the potential development of the Project.

The company will release a full presentation of its plans for progressing the Project during the current quarter.

Golden Deeps Limited (ABN 12 054 570 777)





Figure 1: Abenab Vanadium Project location plan

# **Geological and Target Generation Study**

During the quarter, GED engaged highly experienced and recognised consultancy Shango Solutions, (Shango), to conduct a comprehensive geological and drill targeting study on the Project. Shango is an highly respected exploration and mining consultancy based in Johannesburg, South Africa, that has worked on in excess of 600 projects over a 14 year period.

The study will facilitate full integration of newly acquired historical exploration data for Abenab obtained from AVZ Limited, (formerly Avonlea Minerals Limited), into the data held by GED. This comprehensive 55Gb data package was collected by Avonlea as part of their Abenab vanadium exploration project between 2011 and 2013 and includes geological mapping, diamond drilling and sampling database, a regional geophysical database, metallurgical testwork reports and a resource estimation report.

GED intends to utilise the combined exploration data for a new geological interpretation that will be used to generate targets for drill testing.

The program of RC percussion and diamond drilling planned in September has been postponed, pending completion of the comprehensive geological study currently being undertaken by Shango. The study is scheduled for completion in late November 2018 with drilling to commence thereafter.

#### **Resource Estimate Update**

In September 2018, GED engaged SRK Consulting Pty Ltd to review and update the Abenab deposit resource estimate released by Avonlea in 2012 under the JORC 2004 code<sup>1</sup>.



The updated total Inferred Mineral Resource<sup>2</sup> under the JORC Code (2012) guidelines is 1.12 million tonnes grading 1.28% vanadium pentoxide ( $V_2O_5$ ), 3.05% lead (Pb) and 1.25% zinc (Zn) at a cut-off of 0.5%  $V_2O_5$ .

This resource update is the first step in developing an understanding of the full potential of the Abenab Project. It should be noted that the current resource estimate is limited to part of the historic Abenab Mine extensions and does not include any part of the Abenab West Mine (Christiana) where GED is planning a drilling program.

Reporting lower cut-off (V <sub>2</sub> O <sub>5</sub> %)	Tonnes (Mt)	V <sub>2</sub> O <sub>5</sub> (%)	V (%)	Pb (%)	Zn (%)
0	1.12	1.28	0.72	3.05	1.25
0.25	1.12	1.28	0.72	3.05	1.25
0.5	1.12	1.28	0.72	3.05	1.25
0.75	1.07	1.31	0.73	3.12	1.28
1	0.87	1.40	0.78	3.34	1.36
1.25	0.35	1.78	1.00	4.11	1.70
1.5	0.17	2.21	1.24	4.85	2.01

The Inferred Mineral Resource estimate grade tonnage is set out in Table 1 below.

Table 1: Mineral Resource statement grade and tonnage for the Abenab deposit at 27 September 2018 – Inferred Mineral Resource – preferred lower cut off  $0.5\% V_2O_5$ 

#### **Metallurgical Testwork**

Historical records indicate that between 1921 and 1938 the Abenab Mine produced 1.8 Mt @  $1.05\% V_2O_5$  (plus lead and zinc) for 102,000t of concentrate grading 18%  $V_2O_5$ , 13% Zn and 41% Pb<sup>3</sup>. Three phases of metallurgical testwork on Abenab surface stockpile material (ROM) conducted by Allied Minerals Ltd for Avonlea Minerals Ltd in 2012 reported exceptional heavy mineral concentrate grades of up to 21%  $V_2O_5$ , 14% Zn and 53% Pb using simple gravity separation techniques<sup>3</sup>.

#### Sampling of tailings and surface rock piles

In August, GED completed sampling of the historical Abenab Mine tailings and broken ore stockpiles. The stockpiles and tailings were also surveyed to provide estimates of volume.

Rock chip samples were taken on a nominal 10m x 10m grid over the Abenab broken ore stockpile with 100 samples submitted for analysis. The broken ore material is unprocessed and known to contain vanadium, lead and zinc.

Auger sampling of the Abenab tailings impoundment has also been completed. A total of 172 auger holes were drilled on a nominal 10m x 10m grid. On average the tailings are two metres in thickness. Samples obtained from the drilling of the tailings have been submitted for analysis. The tailings are known to contain vanadium-lead-zinc mineralisation that was not recovered by the historical processing.

#### **ONTARIO COBALT-SILVER PROJECTS**

The Projects are located within the Cobalt Mining Camp which is historically the most prolific silver-cobalt mining camp in Canada, with some 50 million pounds of cobalt and 600 million ounces of silver mined over a 60-year period with peak production from 1919 to 1931.

The Company is awaiting the necessary permits to commence exploration.



# CORPORATE

### **Executive Chairman**

In September, Mr Michael Minosora was appointed the company's Executive Chairman. Mr Minosora has had many years of experience in the corporate and resource sectors. He has been Managing Partner of Ernst & Young; Managing Director of advisory firm Azure Capital Limited and Chief Financial Officer of Fortescue Metals Group. From 2009 to 2014 he was the Executive Chairman and Managing Director of Atlantic Limited, the owner and operator of the Windimurra Vanadium Project. He is currently the Chief Executive Officer and shareholder of Seaborn Capital Pty Ltd.

#### **Exploration Manager**

In October, Mr Martin Bennett was appointed Exploration Manager for Golden Deeps Limited, replacing Mr Lachlan Reynolds. Mr. Bennett was previously Exploration Manager at BCI Minerals, and has held senior roles at KGL Resources, Endeavour Mining and La Mancha Resources. He has exploration experience in Australia and Africa.

<sup>1</sup> Avonlea Minerals Limited (ASX:AVZ) ASX announcement 1<sup>st</sup> August 2012.

<sup>2</sup> Golden Deeps Limited (ASX:GED) ASX announcement 11<sup>th</sup> October 2018.

<sup>3</sup> Golden Deeps Limited (ASX:GED) ASX announcement 9<sup>th</sup> May 2018.

#### ENDS

For further information please consult our website:

goldendeeps.com

#### **Competent Person Declaration**

The information in this report that relates to Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves is based on information compiled by Martin Bennett, who is a consultant to Golden Deeps Limited and a member of The Australasian Institute of Geoscientists. Mr Bennett has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resource and Ore Reserves". Mr Bennett consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Pursuant to ASX Listing Rule 5.23.2, the Company confirms that it is not aware of any new information or data that materially affects the information included in the announcements referenced in this report. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

#### Forward-Looking Statements

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Golden Deeps Limited's planned exploration programme and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Golden Deeps Limited believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.



#### **APPENDIX I – Schedule of Tenements Namibia**

Country	State/Region	Project	Tenement ID	Area km <sup>2</sup>	Grant Date	Expiry Date	Interest
Namibia	Otjozondjupa	Grootfontein Base Metals	EPL 3543	89	12/09/2006	11/09/2019	80%
			EPL 5232	260	Application	-	NA
			EPL 5233	63	Application	-	NA
			EPL 5234	8.4	Application	-	NA
			EPL 5496	13	07/04/2016	06/04/2019	100%
			EPL 5509	56	07/04/2016	06/04/2019	100%
			EPL 5510	73	07/04/2016	06/04/2019	100%

\* EPL currently under renewal

# **APPENDIX II – Schedule of Tenements Canada**

Country	State/Region	Project	Claim No.	Claim Type	Area ha	Expiry Date	Interest*
Canada	Ontario	Professor Co-Ag	A100	Patent	5.96	-	70%
			A96	Patent	7.71	-	70%
			C1000	Patent	8.48	-	70%
			C1376	Patent	6.78	-	70%
			C1383	Patent	8.28	-	70%
			C1384	Patent	6.61	-	70%
			C976	Patent	7.29	-	70%
			T18798	Lease	10.84	31/01/2019	70%
			T19086	Patent	7.90	-	70%
			T19481	Patent	7.29	-	70%
			T19492	Patent	8.77	-	70%
			T25837	Lease	7.83	31/07/2022	70%
			T25838	Lease	8.03	31/07/2022	70%
			T27896	Lease	8.26	31/08/2022	70%
			T27897	Lease	7.06	31/08/2022	70%
	Waldman Co-Ag		T43067	Lease	10.23	30/04/2023	70%
		3007689	Mining Claim	2.85	22/06/2019	70%	
			4275151	Mining Claim	7.98	19/01/2019	70%
			4275174	Mining Claim	70.13	30/10/2018	70%
			4276127	Mining Claim	9.33	19/01/2019	70%
			4278605	Mining Claim	5.56	24/02/2019	70%
			4278606	Mining Claim	8.35	24/02/2019	70%
			4278616	Mining Claim	21.15	8/12/2018	70%
			4278619	Mining Claim	31.49	4/05/2019	70%
			4282360	Mining Claim	10.27	10/05/2019	70%
			4283637	Mining Claim	10.16	15/12/2019	70%
			4283638	Mining Claim	11.37	15/12/2019	70%

\* Option to acquire 100% subject to terms of binding agreement