

ASX Announcement 26 August 2013

# HIGH GRADE COPPER AND LEAD AT NOSIB BLOCK



High grade azurite mineralisation in underground exposure at Nosib Block

# **HIGHLIGHTS**

- Mapping and channel sampling has located high grade copper, lead, vanadium and silver at the historic Nosib Block underground mine, which is located on the Abenab-Nosib trend, approximately 30km west of the historic high-grade Abenab base metal mine in Northeast Namibia.
- Underground channel sampling from Level 1 has returned high grade copper results including:

NOUG0001 6 m @ 9.30% Cu, 4.72% Pb & 7.92 g/t Ag NOUG0005 6 m @ 1.51% Cu, 10.59% Pb, 7.15 g/t Ag & 1.12% V205

- The Nosib Block N°. 2 Shaft is developed on three levels, to a depth of approximately 60m. Additional channel samples from levels 2 and 3 are currently being analysed.
- Extensive zones of copper mineralisation remain unmined in situ, and very little historic drill testing is evident
- The Nosib Block area hosts several high priority, poorly explored copper targets over a distance of at least 1,600m.
- Nosib Block complements Deeps' impressive inventory of emerging copper prospects in the Otavi Mountain Land, which include Khusib Springs, Deblin, Deblin West and Redrob.

Golden Deeps Limited (ABN 12 054 570 777)



## 1 UNDERGROUND SAMPLING AND MAPPING

Golden Deeps' geologists have accessed three levels of the historic Nosib Block copper/lead mine from the historic  $N^{\circ}$ . 2 shaft. High grade copper, lead, vanadium and silver are hosted in a sequence of tillites, conglomerates and feldspathic sandstones (mine sequence) in contact with massive dolomites to the north (hanging wall) and basement granites to the south (footwall). The sequence is dipping moderately to the north and the mineralisation appears to be plunging to the north east.

An important aspect of the mineralisation style at Nosib Block is the consistency in grade and width. For this reason Nosib Block has very good potential for future exploration success.

Most of the copper mineralisation remains in situ in the areas accessed so far. Level 1, 20m below surface, Level 2, 40m below surface and Level 3, 60m below surface have been accessed, mapped and sampled from  $N^{\circ}$ . 2 shaft. Broad zones of strong copper, lead, vanadium and silver have been encountered on all levels. This demonstrates the strong potential for an "open pittable" mineral resource at Nosib Block.<sup>1</sup>

<sup>1</sup>At this stage, the potential quantity and grade of the Nosib Block mine is conceptual in nature, as Golden Deeps has determined that insufficient work has been undertaken to define a mineral resource and it is uncertain if further exploration will result in the determination of a mineral resource.

Figure 1 shows the Level 1 plan, indicating zones of mineralisation. Best channel results include;

- NOUG0001 6 m @ 9.30% Cu, 4.72% Pb & 7.92 g/t Ag
- NOUG0005 6 m @ 1.51% Cu, 10.59% Pb, 7.15 g/t Ag & 1.12% V2O5

Additional Channel Results confirm the pervasive nature of the mineralisation at Nosib (See Table 1 for detailed results from Level 1);

- NOUG0004 9 m @ 1.37% Cu, 10.37% Pb & 14.4 g/t Ag
- NOUG0006 6 m @ 1.38% Cu, 4.19% Pb, 3.53 g/t Ag, 0.45% Zn & 1.09% V2O5
- NOUG0003 16 m @ 0.68% Cu, 6.58% Pb & 5.5 g/t Ag





Figure 1- Geological map of the Nosib Block area showing the main targets of interest and level one channel sampling inset

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### **2 TARGETING**

The Nosib Block mine sequence is an east-west striking, mineralised sedimentary sequence of tillites, conglomerates and feldspathic sandstones.

A significant strike length covering more than 1,600 metres of this highly prospective horizon is located within EPL 3543. Several high priority exploration targets have been located along strike, to both the east and west, of the Nosib Block  $N^{\circ}$ . 2 shaft, (Figure 1).

The mine sequence continues to the east of the N°. 2 shaft for approximately 600m where it "pinches out" against the basement granites. However the sequence also continues to the west for at least 1,000 metres. N°. 3 shaft is located approximately 400 metres to the west of N°. 2 shaft and hosts a set of workings that extend to at least 160 metres below surface. These workings have yet to be explored by the Company.

The South West Africa Co conducted channel sampling and mapping of the Nosib area in the 1950s, however there appears to have been little work undertaken since. Golden Deeps will investigate this high priority target area in detail in the coming months.

#### **Competent Person Declaration**

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Luke Marshall, who is a member of The Australasian Institute of Geoscientists. Mr Marshall 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 Marshall consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### 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.

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Golden Deeps Limited (ABN 12 054 570 777)



Golden Deeps Limited is an ASX listed company (ASX:GED) focused on the exploration for gold and base metals. The Company has projects in the Republic of Namibia, Western Australia and Victoria.

The Company's current focus is its 1,100km<sup>2</sup> Grootfontein Base Metal Project located in the Otavi Mountain Land (OML) of Northern Namibia, an area roughly bounded by a triangle linking the towns of Tsumeb, Grootfontein and Otavi. The region hosts several globally significant copper, zinc, lead, silver and vanadium mines, including the **Tsumeb, Khusib** Springs, Abenab, Berg Aukas & Kombat mines.

The region is well served by sealed roads, rail to port, high voltage power, telephone and water, and is close to major towns and mining processing facilities, including the Kombat copper concentrator and Tsumeb Smelter complex (one of only five operating smelters in Africa).

The Grootfontein Project has a number of significant prospects near historical production centres located on its licence package. These prospects include the Askevold Copper trend, the Abenab/Christiana Zinc-Vanadium Lead trend and the Khusib Springs Copper prospect.



The Company is actively exploring its Project area with a view to an early definition of mineral resources.

Figure 9 - The Grootfontein Base Metal Project, Otavi Mountain Land, Namibia

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# APPENDIX 1 – Nosib Block Level 1Channel Sampling Results

Hole ID	Length	Collar Location WGS84 Z33			<b>D</b> ' 1		From	То	Cu Grade	Width	Internetting Description
		East	North	RL	DIP	Azimuth	m	m	%	m	Intersection Description
NOUG0001	6	800998	7849975	1430	0	275	0	6	9.30	6	6m @ 9.30%Cu, 4.72% Pb, 7.92g/t Ag
NOUG0002	13	800998	7849974	1430	0	261	0	13	1.54	13	Assays Awaited
NOUG0003	16	800973	7849966	1430	0	31	0	16	0.68	16	16m @ 0.68% Cu, 6.58% Pb, 5.51g/t Ag
NOUG0004	9	800975	7849972	1430	0	283	0	9	1.37	9	9m @ 1.37% Cu, 10.37% Pb, 14.41g/t Ag
NOUG0005	6	800970	7849983	1430	0	208	0	6	1.50	6	6m @ 1.51% Cu, 10.59% Pb, 7.15g/t Ag, 1.12% V2O5
NOUG0006	6	801006	7849983	1430	0	213	0	6	1.38	6	6m @ 1.38% Cu, 4.19% Pb, 3.53g/t Ag, 0.45% Zn, 1.09% V2O5

#### Notes:

Assays completed at Bureau Veritas Laboratory in Swakopmund by a four acid digest with a combination if ICP-OES and ICP-MS finish.



# APPENDIX 2 – JORC 2012

JORC TABLE 1

Section 1 Sampling Techniques and Data

Criteria	Explanation						
Sampling techniques	<ul> <li>Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures. Underground channel samples are collected as 1m composite samples by hammer and chisel. The ground is relatively soft at Nosib Block so a channel cutting machine was not required. Each 1m composite sample is analysed with a handheld XRF analyser. Reverse circulation (RC) drilling samples are collected as 1m composite samples through a cyclone which are riffle or cone split for analysis. Each 1m split sample is analysed with a handheld XRF analyser. Anomalous samples are submitted to Bureau Veritas Laboratory in Swakopmund for more precise analysis. Core samples are taken as half NQ core and sampled on nominal 1m intervals, with sampling breaks adjusted to geological boundaries where appropriate. For soil samples, a bulk sample is collected from approximately 10cm below surface with analyses undertaken by handheld XRF analyser.</li> <li>All drill samples submitted to the laboratory are crushed and pulverised followed by a four acid total digest and multi-element analysis by inductively coupled plasma optical emission spectrometry (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS). Gold and precious metal analysis are completed by a 50g fire assay collection and Atomic Absorption Spectrometer analysis (AAS). Sample preparation and analysis are undertaken at Bureau Veritas Laboratory in Swakopmund, Namibia and Ultratrace Laboratory in Perth, Western Australia.</li> </ul>						
Drilling	RC drilling is completed by a 5 1/2 inch diameter hole drilled with a face sampling hammer						
techniques	Diamond drillholes are collared using HQ2 and switch to NQ2 when the formation becomes solid. In some cases where the target is deep, RC pre-collars are drilled, cased off and tailed with NQ2 diamond tails. All coordinates are quoted in WGS84 datum unless otherwise stated.						
Drill Sample Recovery	The quality of RC drilling samples is optimised by the use of riffle and/or cone splitters and the logging of various criteria designed to record sample size, recovery and contamination, and use of field duplicates to measure sample precision.						
	The quality of diamond core samples is monitored by the logging of various geotechnical parameters, and logging of core recovery and competency.						
	The quality of analytical results is monitored by the use of internal laboratory procedures together with certified standards, duplicates and blanks and statistical analysis on a monthly basis to ensure that results are representative and within acceptable ranges of accuracy and precision.						
Logging	All logging is completed according to industry best practice. Channel samples are mapped and logged at point of collection. RC drill chips are wet sieved on 1m intervals, logged and then stored in plastic chip trays for future reference. Diamond core is stored in clearly labelled core trays. Logging is completed using a standard Maxwell logging template. The resulting data is uploaded to a Datashed database and validated. Once validated, the data is exported to 3D modelling software for visual validation and interpretation.						
	Detailed information on lithology, sample quality, structure, geotechnical information, alteration and mineralisation are collected in a series of detailed self-validating logging templates.						
Sub- sampling techniques and	Core is cut using a brick saw fitted with a special blade designed for cutting core. Half core is taken for sampling.						
sample preparation	RC samples are riffle split on 1m intervals when dry. When wet, samples are dried out before riffle splitting takes place. RC drilling is generally stopped when samples become wet.						
	For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered adequate as per industry best practice.						



	Field duplicates are taken every 20 samples to ensure the samples are representative. Quality control reports are undertaken routinely to monitor the performance of field standards and duplicates, and laboratory accuracy and precision.
	Sample sizes are appropriate to the grain size of the material being sampled
Quality of assay data and laboratory tests	The samples have been sorted, dried, crushed and pulverised. Primary preparation has been by crushing the whole sample. The samples have been split with a riffle splitter, if required, to obtain a 3kg sub-fraction which has then been pulverised in a vibrating pulveriser.
	The sample(s) have been digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest.
	Ag, As, Cd, Co, Ga, In, Mo, Sn, W have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.
	Al, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, V, Zn have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.
	Au and PGEs are determined by a 40g fire assay collection with Inductively Coupled Plasma (ICP) Optical Emission Spectrometry finish.
	Field Standards and Blanks are inserted every 20 samples, Laboratory inserts its own standards and blanks at random intervals, but several are inserted per batch regardless of the size of the batch.
Verification of	All significant intercepts are reviewed and confirmed by at least three senior personnel before release to the market.
assaying	No adjustments are made to the raw assay data. Data is imported directly to Datashed in raw original format.
	All data are validated using the QAQCR validation tool with Datashed. Visual validations are then carried out by senior staff members.
Location of data points	Holes are set out using a handheld 12 channel GPS. Collars are picked up by a licenced surveyor by Real Time Differential GPS on completion of the hole. At Nosib Block the shaft collar was picked up by a handheld 12 channel GPS and channel sample locations were surveyed from the shaft using a tape measure and compass.
Data spacing and distribution	Data spacing and distribution used to determine geological continuity is dependent on the deposit type and style under consideration. Where a mineral resource is estimated, the appropriate data spacing and density is decided and reported by the competent person.
	For mineral resource estimations, grades are estimated on composited assay data. The composite length is chosen based on the statistical average, usually 1m. Sample compositing is never applied to interval calculations reported to market. A sample length weighted interval is calculated as per industry best practice.
Orientation of data in relation	Orientation of sampling is as unbiased as possible based on the dominating mineralised structures and interpretation of the deposit geometry.
to geological structure	If structure and geometry is not well understood, sampling is orientated to be perpendicular to the general strike of stratigraphy and/or regional structure.
	If the relationship between the drilling or channel sampling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this would be assessed and reported if considered material.
	Drilling is at an angle to surface and drilled to maximise perpendicular intersection with the known interpretation of the strike of previously intersected mineralisation.
Sample security	All samples remain in the custody of company geologists, and are fully supervised from point of field collection to laboratory drop-off.
Audits and reviews	None yet undertaken for this dataset



# Section 2 Reporting of Exploration Result s

Criteria	Explanation
Mineral tenement and land tenure	The Company controls four Exclusive Prospecting Licences (EPL's) in the Otavi Mountainland, namely EPL3743, EPL3745, EPL3744 and EPL3543. All tenure was in good standing at the time of reporting. There are no known impediments with respect to obtaining a licence to operate in the area.
status	The Company maintains an 80% interest in the aforementioned EPL's, and a 3% government royalty is in place on any base metal production. There are no known native title interests, historical sites, wilderness or national park areas of environments impediments.
Exploration done by other parties	Several other parties have undertaken exploration in the area between the early 1900's through to 1997. These parties include South West Africa Company, Goldfields Namibia and Tsumeb Corporation.
by other parties	At this stage it is unknown who undertook the mining operations via several small shafts but it was most likely during the early 1900s. South West Africa Company undertook detailed mapping and sampling on the surface during the 1950s. Goldfields Namibia undertook detailed mapping and shallow percussion drilling during the 1990s.
	Appraisal of previous work has been limited to high level review of historical reports as very limited data are available in either digital or hardcopy format. In most cased Golden Deeps Limited has had to re-collect the field data.
Geology	At Nosib Block, copper mineralisation is concentrated in a package of feldspathic sandstones, conglomerates and tillites which are bounded by dolomites to the north and basement granites to the south.
Drill hole Information	All relevant channel sampling information is supplied in appendix 1 of the announcement
Data aggregation	All exploration results are reported by a length weighted average. This ensures that short lengths of high grade material receive less weighting than longer lengths of low grade material.
methods	No high grade cut-offs are applied. A nominal low grade cut-off of 0.3% Cu is used with a maximum internal dilution of 3m for reporting of results.
Relationship between	Mineralisation at Nosib Block is interpreted to be striking at 80 degrees true azimuth with a dip of -45 to -55 degrees towards 350 true azimuth.
mineralisation widths and	All holes are drilled to be as perpendicular as practicable to the above orientation. Therefore intercept lengths are interpreted to be close to true thickness.
intercept lengths	Underground channel samples are taken along the walls of the underground workings, which run in several directions. Therefore intercept widths may not always reflect true width.
Diagrams	A comprehensive set of relevant diagrams are included in the body of the announcement.
Balanced	All background available information is discussed in the body of the announcement
Further work	Plans for further work are outlined in the body of the announcement