

#### **ASX ANNOUNCEMENT**

3 April 2019

**ASX code: GED** 

## **Drilling to Commence at Abenab Vanadium Project**

### Highlights:

- Drilling contract for resource definition drilling at Abenab awarded and drilling scheduled to commence this week.
- 22 holes for 2,900m planned with drilling designed to in-fill and extend the current Inferred Mineral Resource at Abenab.
- The drilling program is designed to underpin the Company's plans of developing an initial mining operation of 500,000tpa with the aim of contributing to a 10-year life for the Abenab Vanadium Project.
- Additional exploration targets have been identified near the Abenab mine, at the Nosib Mine and other locations along the 40km Abenab mineralised trend.
- Channel sampling along development drives at Nosib Mine include:

NOUG020 25m at 2.05% V₂O₅
 NOUG010 9m @ 3.25% V₂O₅
 NOUG006 5m at 1.32% V₂O₅

Golden Deeps Limited (Golden Deeps) is pleased to announce plans for its next phase of drilling at the Abenab Vanadium Project in Namibia.

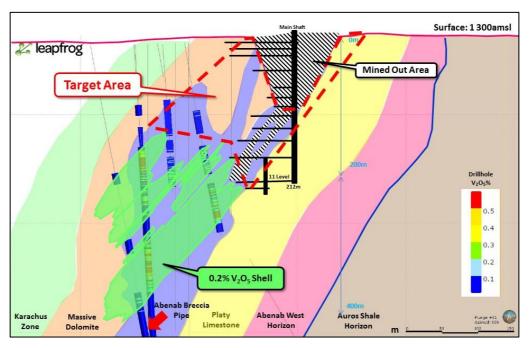


Figure 1: Cross section of Abenab mine showing the resource boundary at a  $0.2\% V_2O_5$  cut off. Priority targets for resource extension drilling (red) include areas peripheral to the pit shell and extending down to the upper boundary of the resource.



This phase of drilling will be a resource definition drilling program, designed to underpin the Company's near-term plans to develop an initial 500,000tpa mining operation at Abenab, and ultimately contribute to the objective of a 10-year vanadium mine at the Project.

Golden Deeps plans to drill up to 22 holes for 2,900m at the Abenab Mine. The drilling program has the dual aim of in-filling existing drilling and extending the resource.

The in-fill drilling will improve confidence in the current Inferred Mineral Resource of 2.8Mt at  $0.66\% \ V_2O_{5}$ ,  $2.35\% \ Pb$ ,  $0.94\% \ Zn$  conducted by Shango Solutions (Shango), and advance understanding of the geological controls on mineralisation resulting in an updated geological model. Resource extension drilling will target areas peripheral to the current resource with particular emphasis on the area around and below the pit shell to the upper boundary of the resource (Figure 1). Holes will range from 50m to a maximum of 460m.

Drilling contractor Ferrodrill Namibia (Pty) Ltd has been awarded the contract for this drilling, site preparation work is nearing completion and all approvals for the drilling have been completed. Drilling is expected to commence in early April with results to be released as they become available.

#### Background to current phase of drilling at Abenab

In November 2018, the Company engaged highly experienced and recognised geological consultancy Shango to conduct a comprehensive geological review and drill targeting study on the Abenab Vanadium Project. The scope of work included data capture and collation, extensive data validation, geological interpretation, 3D modelling and target generation. The main deliverable was the ranking and prioritisation of targets in the Abenab Mine area and the design of a drilling program.

In addition to the drilling at Abenab, the Company will commence near-mine and regional exploration for vanadium on Golden Deeps' two granted Exploration Prospecting Licences (EPLs 5496 and 3543). A compilation and review of historical exploration data at the licence area has identified a number of high-priority targets.

#### **Near-Mine Exploration**

Abenab West (formerly Christiana Mine) is an underground mine located a few hundred metres to the southeast of Abenab. The mine produced lead-zinc and vanadium with historic concentrate production of 90,000 tonnes at 72% Pb and 13% vanadium pentoxide. Shango has identified three high-priority vanadium targets at Abenab West that require drilling.

#### **Regional Exploration**

The Company holds over 40km of the prospective Abenab mineralised trend on EPL3543 that includes the Okarundu Pipe vanadium mine and the Nosib Mine. Previous geological mapping has identified nine vanadium occurrences along the trend and several base metal occurrences. There has been only minor recent exploration of these targets. As part of the regional exploration strategy, the Company has begun field reconnaissance and sampling of these occurrences.

At the Nosib Mine, 27km WSW of Abenab, on the Abenab mineralised trend, channel sampling along development drives returned high-grades of vanadium and copper from three levels of the mine to a vertical depth of 60m. **Results from Level 1 at 20m below surface include:** 

NOUG020 25m at 2.05% V₂O₅, 2.01% Cu, 7.38% Pb
 NOUG010 9m at 3.25% V₂O₅, 2.78% Cu, 7.80% Pb
 NOUG006 5m at 1.32% V₂O₅, 1.22% Cu, 4.99% Pb



Previous exploration at Nosib targeted the copper mineralisation and not the vanadium. Following the Abenab Mine drilling program, the Company plans to follow up the channel sampling with drilling and to generate a resource to add to the current resource inventory at the Abenab Mine.

The Company's near-mine and regional exploration strategy is outlined in detail in the exploration update released today.

**ENDS** 

For further information, please refer to the Company's website or contact:

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#### **Caution Regarding Forward-Looking Information**

This document contains forward-looking statements concerning Golden Deeps Ltd. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on the company's beliefs, opinions and estimates of Golden Deeps Ltd as of the dates the forward looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

#### **Competent Person Statement**

The information in this announcement that relates to Exploration Targets and Exploration Results is based on information compiled by Mr. Martin Bennett. Mr Bennett is an employee of Golden Deeps Limited and is a member of the Australian 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 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'. Mr Bennett consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

**APPENDIX 1** 

Nosib Mine

Underground Channel Sample Results – Cu, Pb, Zn, V<sub>2</sub>O<sub>5</sub>

Channel_ID	From	То	Cu_pct	Pb_pct	Zn_pct	V2O5_pct
NOUG0005	5	6	5.19	17.23	0.05	6.50
NOUG0006	1	2	1.59	8.26	0.03	1.32
NOUG0006	2	3	1.25	5.67	0.03	1.45
NOUG0006	3	4	1.245	3.23	0.05	0.75
NOUG0006	4	5	1.273	4.72	0.02	1.87
NOUG0006	5	6	0.76	3.09	0.04	1.20
NOUG0008	3	4	0.68	2.34	0.03	0.76
NOUG0008	4	5	1.04	5.10	0.03	0.57
NOUG0008	5	6	1.04	3.40	0.04	0.73
NOUG0009	0	1	2.97	8.35	0.05	3.11
NOUG0009	1	2	1.62	5.64	0.04	1.60
NOUG0009	2	3	0.80	4.45	0.02	0.79
NOUG0009	3	4	1.38	5.81	0.06	1.27
NOUG0009	4	5	1.26	3.75	0.18	1.13
NOUG0010	0	1	3.42	10.30	0.07	4.41
NOUG0010	1	2	3.21	9.90	0.18	4.28
NOUG0010	2	3	3.76	11.80	0.18	4.77
NOUG0010	3	4	2.89	8.62	0.01	3.68
NOUG0010	4	5	5.77	14.80	0.04	7.39
NOUG0010	5	6	1.48	3.53	0.05	1.05
NOUG0010	6	7	1.57	3.84	0.00	1.21
NOUG0010	7	8	1.47	3.53	0.01	1.14
NOUG0010	8	9	1.41	3.86	0.00	1.34
NOUG0020	1	2	1.30	12.40	0.07	1.11

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NOUG0020	2	3	3.85	13.40	0.08	4.68
NOUG0020	3	4	0.89	9.55	0.05	0.25
NOUG0020	4	5	4.44	13.40	0.06	4.94
NOUG0020	5	6	1.40	3.05	0.08	0.67
NOUG0020	6	7	2.89	9.26	0.10	3.48
NOUG0020	7	8	0.67	1.83	0.09	0.65
NOUG0020	8	9	0.88	2.76	0.08	0.96
NOUG0020	9	10	0.68	2.20	0.11	0.77
NOUG0020	10	11	0.21	0.62	0.04	0.21
NOUG0020	11	12	0.41	1.21	0.10	0.42
NOUG0020	12	13	0.56	1.67	0.06	0.59
NOUG0020	13	14	0.21	0.52	0.05	0.19
NOUG0020	14	15	1.38	4.05	0.06	1.37
NOUG0020	15	16	2.18	9.72	0.06	2.46
NOUG0020	16	17	4.02	14.70	0.02	4.71
NOUG0020	17	18	1.78	10.10	0.04	1.32
NOUG0020	18	19	4.06	15.50	0.05	4.80
NOUG0020	19	20	2.89	11.70	0.04	2.98
NOUG0020	20	21	3.85	15.30	0.04	4.48
NOUG0020	21	22	3.31	11.00	0.04	2.73
NOUG0020	22	23	2.63	6.29	0.04	2.34
NOUG0020	23	24	1.93	5.02	0.11	1.57
NOUG0020	24	25	3.43	8.02	0.06	3.14
NOUG0020	25	26	0.50	1.34	0.05	0.53
NOUG0023	0	1	1.16	3.32	0.08	1.29



NOUG0023	1	2	0.45	1.07	0.07	0.43
NOUG0023	2	3	0.94	2.64	0.03	1.03
NOUG0023	3	4	0.48	1.16	0.63	0.47
NOUG0023	4	5	0.78	2.09	0.33	0.84
NOUG0023	5	6	1.05	3.00	0.39	1.16
NOUG0023	6	7	0.19	0.29	0.25	0.11
NOUG0023	7	8	0.41	0.77	0.12	0.31

NOUG0023	8	9	0.36	0.66	0.21	0.27
NOUG0023	9	10	0.49	1.10	0.07	0.45
NOUG0023	10	11	0.39	0.99	0.14	0.32
NOUG0023	11	12	0.63	1.86	0.98	0.61
NOUG0023	12	13	0.56	1.54	0.63	0.52
NOUG0023	13	14	0.79	2.06	0.68	0.77
NOUG0023	14	15	0.75	1.86	0.05	0.73



## **APPENDIX 2**

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<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 so a channel cutting machine was not required.</li> <li>All drill samples submitted to the laboratory are 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). Sample preparation and analysis are undertaken at Bureau Veritas Laboratory in Swakopmund, Namibia.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so,</li> </ul>	<ul> <li>Underground channel samples are collected as 1m composite samples by hammer and chisel.</li> </ul>



Criteria	JORC Code explanation	Commentary
	by what method, etc).	
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	• N/A.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>All logging is completed according to industry best practice.         Channel samples are mapped and logged at point of collection.</li> <li>Detailed information on lithology, sample quality, structure, alteration and mineralisation are collected in a series of detailed self-validating logging templates.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the</li> </ul>	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered adequate as per industry best practice.</li> <li>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.</li> <li>Sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>



Criteria	JORC Code explanation	Commentary
	material being sampled.	
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>The samples have been sorted, dried, crushed and pulverised. Primary preparation has been by crushing the whole sample (if required). 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.</li> <li>The sample(s) have been digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest.</li> <li>Ag, As, Cd, Co, Ga, In, Mo, Sn, W have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry.</li> <li>Al, Ca, Cu, Fe, K, Mg, Mn, Na, Pb, S, V, Zn have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.</li> <li>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</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>size of the batch.</li> <li>All significant intercepts are reviewed and confirmed by at least three senior personnel before release to the market.</li> <li>No adjustments are made to the raw assay data. Data is imported directly to Datashed in raw original format.</li> </ul>
	,,,,	<ul> <li>All data are validated using the QAQCR validation tool with Datashed. Visual validations are then carried out by senior staff members.</li> </ul>



Criteria	JORC Code explanation	Commentary
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	The shaft at Nosib 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	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>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.</li> <li>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.</li> </ul>
Orientation of data in relation to	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	<ul> <li>Orientation of sampling is as unbiased as possible based on the dominating mineralised structures and interpretation of the deposit geometry.</li> </ul>
geological structure	<ul> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>If structure and geometry is not well understood, sampling is orientated to be perpendicular to the general strike of stratigraphy and/or regional structure.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>All samples remain in the custody of company geologists, and are fully supervised from point of field collection to laboratory drop-off.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	None yet undertaken for this dataset



# Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The Nosib Mine lies within one exploration licence, EPL3543.         The exploration licence is held Huab Energy Ltd, an 80% owned Namibian subsidiary of Golden Deeps Limited.     </li> <li>The Government of Namibia has a 3% royalty on any base metal production.</li> <li>There are no material issues, native title or environmental constraints known to GED which may be deemed an impediment to the continuity of EPL3543.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>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.</li> <li>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.</li> <li>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.</li> </ul>



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>At Nosib, 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.</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	All relevant channel sampling information is supplied in Appendix 1 of the announcement.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>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.</li> <li>A nominal low-grade cut-off of 0.2% V₂O₅ is used with a maximum internal dilution of 1m for reporting of results.</li> </ul>



Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being</li> </ul>	<ul> <li>Mineralisation at Nosib is interpreted to be striking at 80 degrees true azimuth with a dip of -45 to -55 degrees towards 350 true azimuth.</li> <li>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.</li> <li>A plan of the Nosib Level 1 workings is provided in Appendix 1.</li> </ul>
Balanced reporting	reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.  • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Relevant assay results from the reported intervals are provided in Appendix 2.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	No other data is material to this report.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Refer to the main body of the report and the presentation in Appendix 1 for details of planned exploration programs.