



**GOLDEN DEEPS**  
LIMITED

Investor Presentation  
September 2019

**Production on Target 2020**

**World's Next Primary  
Vanadium Producer**



- On target to become a  $V_2O_5$  producer from the Abenab Project in 2020
- Unique geology and operating model delivers a very low capex and competitive opex
- Low capital cost enables the project to proceed without the usual high capital cost barrier to development
- Continuing exploration success potentially extends the life of the Abenab Project
- The Company, once in production, will be only the third stock exchange listed pure play vanadium producer
- GED well placed to benefit from a recovery in vanadium prices

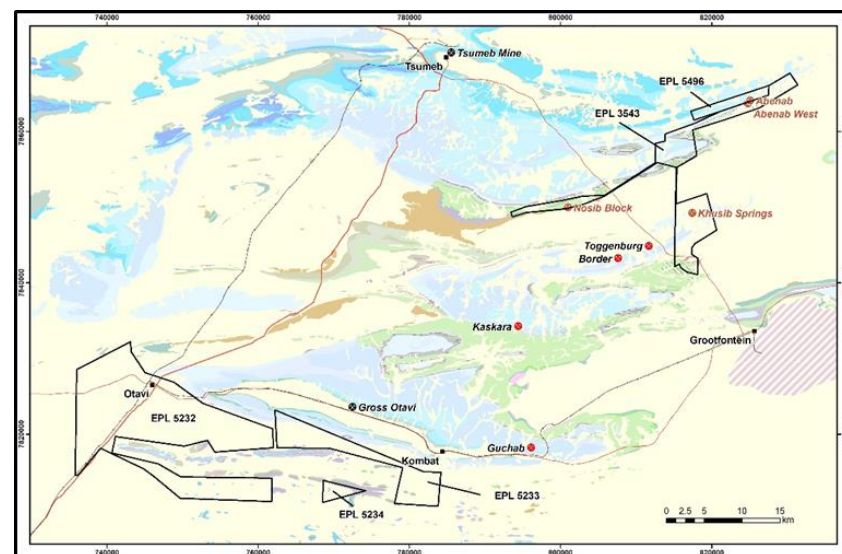
- The Abenab Project covers 35km of the prospective Abenab mineralised trend and is host to:
  - *Abenab Mine*
  - *Abenab West Mine*
  - *Nosib Mine*
  - *Okarundu Pipe Vanadium Mine*
  - *Nine additional vanadium occurrences have been identified*
- Current (additional exploration results pending) Inferred Mineral Resource of 2.80Mt @ 0.66% V<sub>2</sub>O<sub>5</sub> (vanadium pentoxide), 2.35% Pb (lead), 0.94% Zn (zinc) at a 0.2% V<sub>2</sub>O<sub>5</sub><sup>1</sup> cut-off
- Metallurgical test work on Abenab demonstrates up to 30 times upgrade using simple gravity separation<sup>2</sup>
- Initial production fully funded by JV with Generous Metals Company Ltd
- Abenab Project on target for 2020 production

<sup>1</sup> Refer to GED:ASX announcement dated 31 January 2019 and titled 'Major Resource Upgrade at Abenab Vanadium Project'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

<sup>2</sup> Refer to GED:ASX announcement dated 22 August 2019 and titled 'Path to Production – 30x Increase Vanadium Concentrate Grade'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

# Abenab Project Location

- Located in the mineral-rich Otavi Mountain Land in northern Namibia
- GED controls key mines and prospects along a 35km long lithological and structural trend
- Five granted EPLs
- 434km<sup>2</sup> of highly prospective ground for vanadium, copper, lead and zinc
- Historic Vanadium mines located in the GED's ground :
  - **Abenab**  
(produced 102,000 T concentrate @ 18% V<sub>2</sub>O<sub>5</sub>, 13% Zn, 42% Pb)<sup>1,2</sup>
  - **Abenab West**  
(produced 74,000 T concentrate @ 13% V<sub>2</sub>O<sub>5</sub>, 72% Pb)<sup>1,2</sup>



<sup>1</sup> Refer to GED:ASX announcement dated 9 May 2018 and titled 'Raising Completed to Drill and Develop Abenab Vanadium Project'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

<sup>2</sup> Refer to The Mineral Resources of Namibia, Ministry of Mines and Energy, Geological Survey 1992.

The Abenab Project presents a fundamental difference from (all) other primary vanadium projects as its ore is simple to beneficiate and concentrates to a very high level.

Comparison	Abenab Ore	Typical Vanadium Source
Ore Type	Descloizite	Titano-magnetite
Concentrate	18-21% V <sub>2</sub> O <sub>5</sub>	1-2% V <sub>2</sub> O <sub>5</sub>
Crushing and Concentrating	Crushing circuit with gravity separation	Crushing, grind & regrind required to support effective magnetic separation
Concentrator CAPEX & OPEX	Very low due to simplicity of the gravity separation process and higher grade concentrate produced	High, represents ~35 -40% of total plant operating cost attributable to the multi stage grinding, magnetic separation, roasting circuit and reagents
Refinery Process	Concentrate to be refined by third party contract refineries.	Downstream processing (salt roast / leach) is typically larger & more complex due to pyro & hydro metallurgical processes required and process reagent losses to waste
Refinery CAPEX & OPEX	Not applicable – No CAPEX	High, due to energy intensive multi stage hydro & Pyro met processes required
By - products	Pb & Zn recoverable	Low grade Iron Ore and TiO <sub>2</sub>

- Joint Venture entered with Hong Kong based metals trading company Generous Metals Company Limited (GMC)
- Stage 1 Metallurgical Testwork complete - Stage 2 Trial Operation underway
- JV will produce high-grade vanadium concentrate in Namibia which will be shipped to China for refining into vanadium products and sale of vanadium end products
- GED to provide existing material from Abenab Project stockpile and tailings and oversee operations in Namibia
- GMC will pay all costs of crushing, concentrating and refining the stockpile and tailings into vanadium products and oversee operations in China and marketing of vanadium products
- Joint Venture profits will be shared equally by GED and GMC



*\* Refer to ASX announcements dated 8<sup>th</sup> April 2019 & 16<sup>th</sup> September 2019*



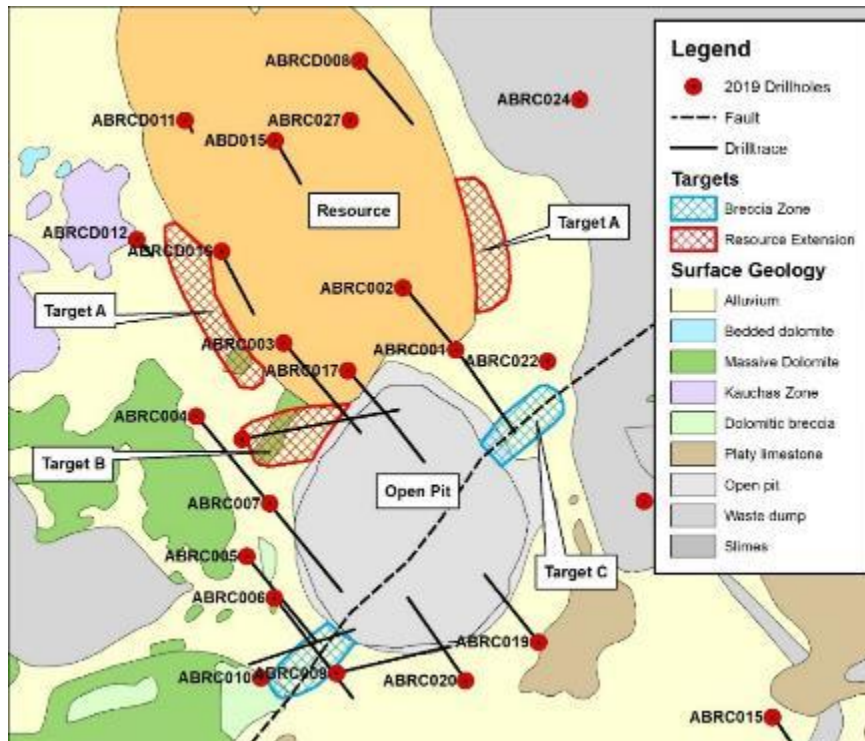
# Development Pathway

- Initial operations : process existing surface mineralised materials followed by development of below ground mineral resources
- Further drilling of surface mineralised areas to identify additional material
- Additional resource definition drilling to develop the below ground mineral resources
- Detailed engineering study to develop a 250,000 tpa modular concentrator process plant to produce high value concentrate for supply to third party contract refineries
- Identification and firm pricing for refining of concentrate from existing low cost contract refineries

2019 to Date	Q4 2019 - Q1 2020	2020
Drilling	Initial (above ground minerals) operations – detailed design and engineering	Plant commissioning
Metallurgical Test Work	Bankable Feasibility Study	Initial operations commence
Develop Process Flow Sheet Design	Plant Construction	Production of V <sub>2</sub> O <sub>5</sub> , Pb and Zn Concentrate
Preliminary Scoping Study		Concentrate supply to refineries
		Below ground mineral resources development

# Abenab Mine Exploration Program

- Phase 1 Resource Definition and Development Drilling Complete:
  - Resource Definition Drilling Program
  - Mine Development Evaluation Drilling Program
  - Surface Mineralised Ore and Tails Drilling Program



*Vanadium mineralisation in brecciated carbonate in Abenab pit wall*



- **Resource Definition Drilling Program** intersects broad zones of high-grade vanadium pentoxide mineralisation including:
  - ABD0015 64.18m at 0.90%  $V_2O_5$ , 2.01% Pb, 0.65% Zn from 207m<sup>1</sup> (Total 80m of mineralization above cut-off grade)
  - ABRC011 23m @ 1.34%  $V_2O_5$ , 3.33% Pb, 1.25% Zn from 167m<sup>2</sup> (Total 43m of mineralization above cut-off grade)  
includes 1m @ 7.84%  $V_2O_5$  19.0% Pb, 6.52% Zn from 186m)
- **Existing Inferred Mineral Resource calculated at a cut-off grade of 0.2%  $V_2O_5$ <sup>3</sup>** – latest intersections from the Resource Definition Drilling likely to result in an increase in the resource tonnes
- **Mine Development Drilling** supports pit cut-back potential of the Abenab pit through discovery of multiple zones of remnant vanadium mineralisation 30m from the southern wall of the pit, including
  - ABRC019 2m @ 1.8%  $V_2O_5$ , 5.07% Pb, 2.53% Zn from 64m<sup>4</sup>\*
  - Channel Sampling of southern pit wall completed. Assay results awaited.
- **Surface Mineralised Materials and Tails Drilling Program** intersects substantial vanadium mineralisation around the open pit:
  - ABRC023 2m @ 1.42%  $V_2O_5$ , 3.33% Pb, 1.15% Zn from surface<sup>5</sup>
- **Phase 2 drilling program planned for Q4 2019**

<sup>1</sup> Refer to GED:ASX announcement dated 14<sup>th</sup> August 2019 and titled 'Phase 1 Drilling Complete – High Grade Vanadium Intersected'.

<sup>2</sup> Refer to GED:ASX announcement dated 17<sup>th</sup> September 2019 and titled '7.8%  $V_2O_5$  Intersected at Abenab Project'.

<sup>3</sup> Refer to GED:ASX announcement dated 31<sup>st</sup> January 2019. The Company confirms that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed since the announcement of 31 January 2019.

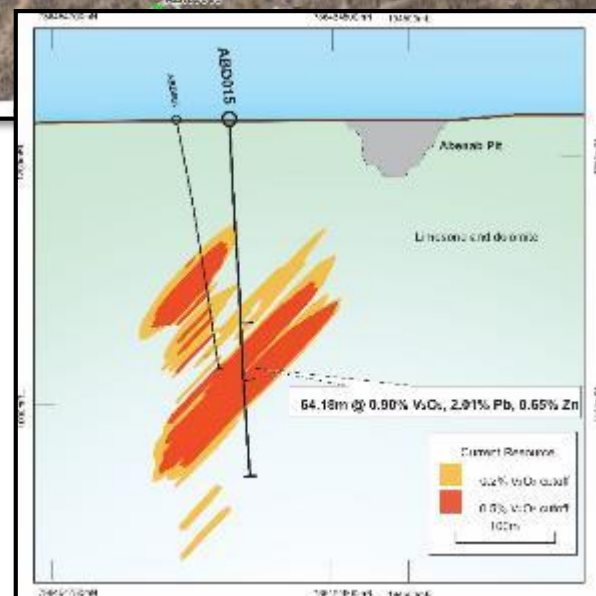
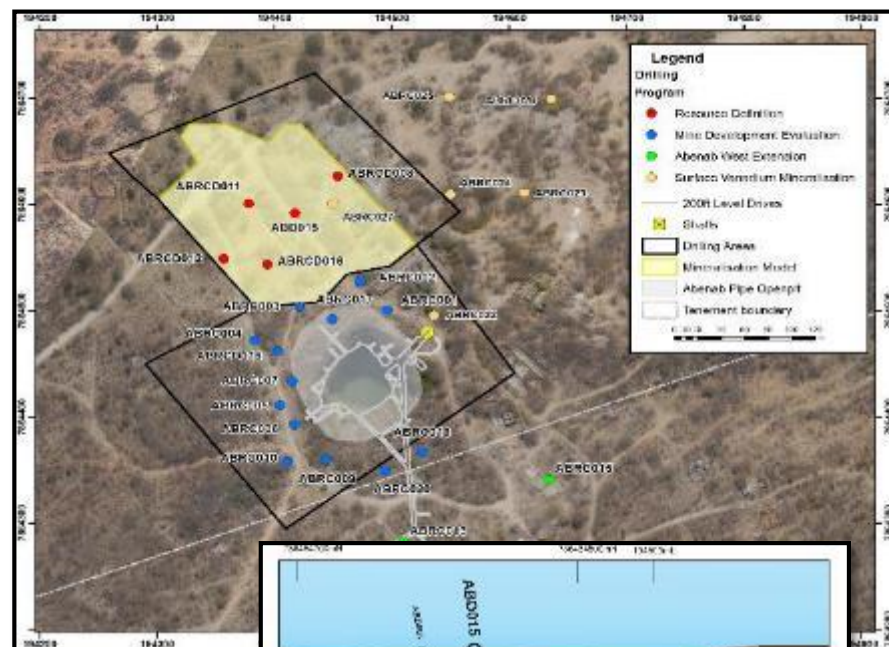
<sup>4</sup> Refer to GED:ASX announcement dated 9<sup>th</sup> September 2019 and titled 'Drilling Intersects Previously Unidentified Extension'.

<sup>5</sup> Refer to GED:ASX announcement dated 5<sup>th</sup> September 2019 and titled 'Shallow Drilling Extends Surface Mineralised Material'.

The Company is not aware of any new information or data that materially effects the information included in these announcements.

# Resource Definition Drilling

- 5 diamond holes for 1,781m
- Results in from 4 holes with 1 hole to be reported
- Hole ABD015<sup>1</sup>
  - **64.18m at 0.90% V<sub>2</sub>O<sub>5</sub>, 2.01% Pb, 0.65% Zn from 207m**
  - **Includes 19m at 1.25% V<sub>2</sub>O<sub>5</sub>, 2.73% Pb, 0.878% Zn from 230m**
- Hole ABRCD016<sup>1</sup>
  - **10.68m at 0.26% V<sub>2</sub>O<sub>5</sub>, 0.57% Pb, 0.17% Zn from 167m**
  - **5.8m at 0.3% V<sub>2</sub>O<sub>5</sub>, 0.92% Pb, 0.30% Zn from 203m**
  - **6.9m at 0.25% V<sub>2</sub>O<sub>5</sub>, 0.58% Pb, 0.32% Zn from 216.1m**
- Hole ABRCD011<sup>2</sup>
  - **23m @ 1.34% V<sub>2</sub>O<sub>5</sub>, 3.33% Pb, 1.25% Zn from 167m**
  - **Includes 1m @ 7.84% V<sub>2</sub>O<sub>5</sub>, 19.0% Pb, 6.52% Zn from 186m**
  - **80m of V<sub>2</sub>O<sub>5</sub> mineralization above cut-off grade**

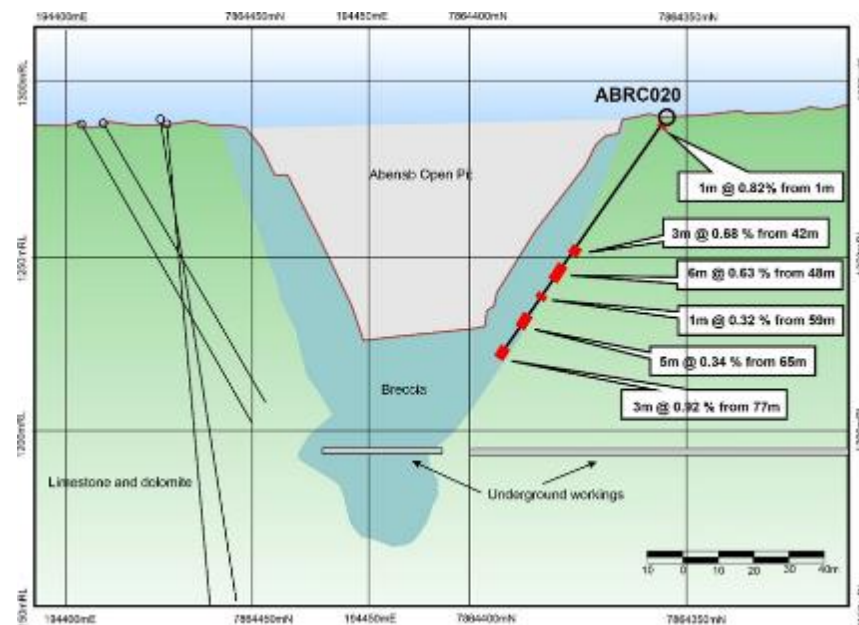


<sup>1</sup> Refer to GED:ASX announcement dated 14<sup>th</sup> August 2019 and titled 'Phase 1 Drilling Complete – High Grade Vanadium Intersected'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

<sup>2</sup> Refer to GED:ASX announcement dated 17<sup>th</sup> September 2019 and titled '7.8% Vanadium Intersected at Abenab Project'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

## Mine Development Evaluation RC Drilling Program

- Targeted shallow vanadium mineralisation adjacent to the historic Abenab open pit
- ABRC019-20 intersect multiple zone of vanadium mineralization<sup>1</sup>:
  - **ABRC019** 2m @ 1.8%  $V_2O_5$ , 5.07% Pb, 2.53% Zn from 64m
  - **ABRC020** 6m @ 0.92%  $V_2O_5$ , 1.53% Pb, 0.58% Zn from 48m
- ABRC020 intersects 1.8%  $V_2O_5$ <sup>1</sup> at end of hole
- Part of a broader study evaluating mining options ie open-pit or underground mining method
- Channel sampling of south wall of open pit completed. Results pending.
- Further drilling planned to in-fill coverage around RC holes ABRC019 and ABRC020 at south edge of the open pit

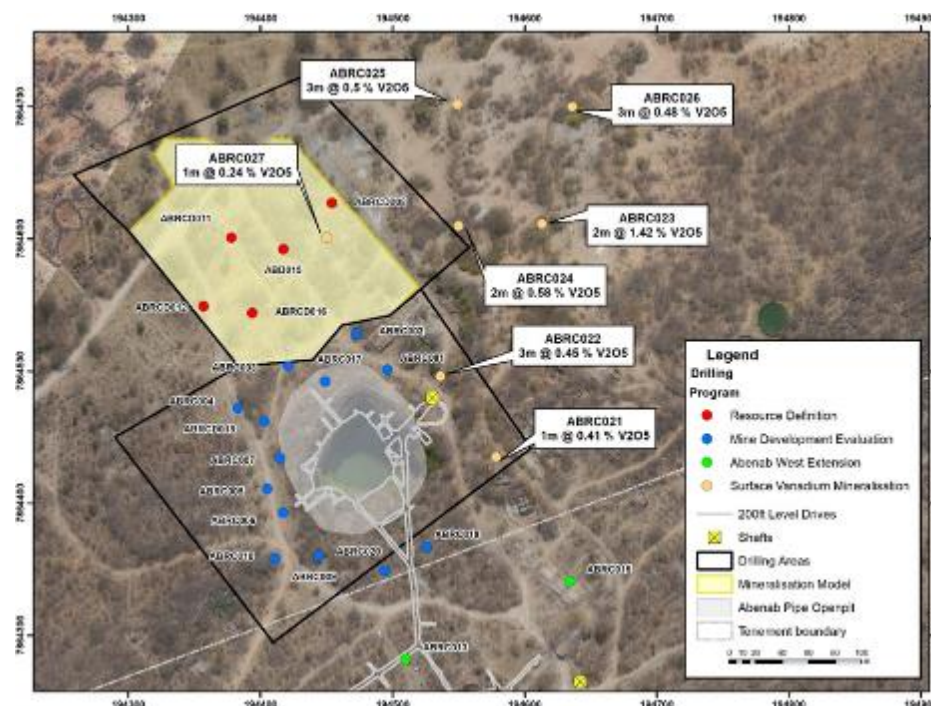


Cross section showing vanadium mineralization in ABRC020

<sup>1</sup> Refer to GED:ASX announcement dated 9th September 2019 and titled 'Drilling Intersects Previously Unidentified Extension'. The Company is not aware of any new information or data that materially effects the information included in this announcement

# Surface Mineralisation Drilling

- RC drilling tested surface mineralised material and tails over a broad area around the pit
  - *Considered to be vanadium pentoxide bearing material from earlier mining operations that includes old stockpiles and tails*
- The surface mineralised material and tails has a vanadium grade commonly ranging from 0.1 to 0.5%  $V_2O_5$  with high-grade zones of up to 1.45%  $V_2O_5$ <sup>1,2</sup>
  - *Evaluation of the surface mineralised material is underway with potential for it to form part of the joint venture with GMC*
- The best intersections from the surface vanadium mineralisation drilling include:
  - **ABRC023**      **2m @ 1.42%  $V_2O_5$  from surface<sup>1</sup>**
  - **ABRC026**      **3m @ 0.48%  $V_2O_5$  from surface<sup>2</sup>**
  - **ABRC023**      **2m @ 1.42%  $V_2O_5$  from surface<sup>2</sup>**
  - **ABRC024**      **2m @ 0.58%  $V_2O_5$  from surface<sup>2</sup>**
  - **ABRC022**      **3m @ 0.45%  $V_2O_5$  from surface<sup>2</sup>**
  - **ABRC021**      **1m @ 0.41%  $V_2O_5$  from surface<sup>2</sup>**



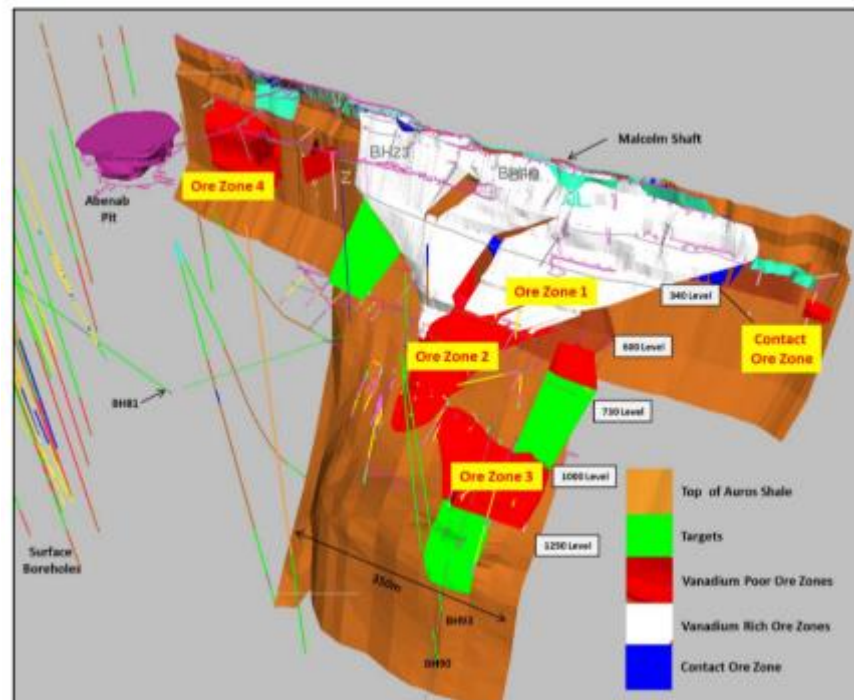
<sup>1</sup> Refer to ASX announcement dated 5th September 2019 and titled 'Shallow Drilling Extends Surface Mineralised Material'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

<sup>2</sup> Refer to ASX announcement dated 14th August 2019 and titled 'Phase 1 Drilling Complete – High Grade Vanadium Intersected'. The Company is not aware of any new information or data that materially effects the information included in this announcement.



**Abenab West (Christiana Mine) is located along strike, approximately 300m west of Abenab Mine**

- Historic production 74,000 tonnes of concentrates grading, 13%  $V_2O_5$  72% Pb from 540,000t<sup>1,2</sup>
- Underground mapping and channel sampling reveals remnant vanadium mineralisation
- Three high priority targets for vanadium identified - Ore Zones 1-3 require drilling



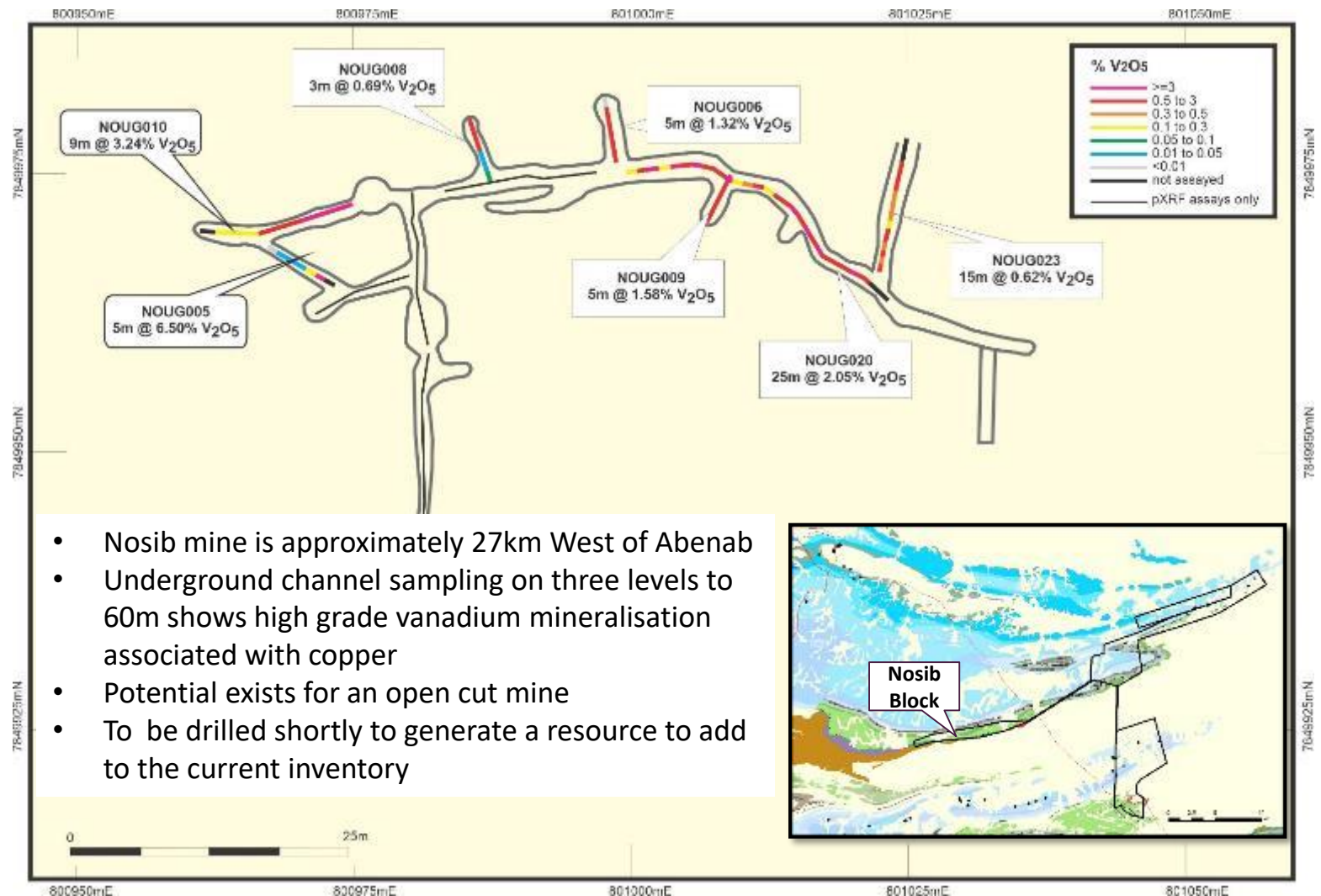
Abenab West Mine 3D model showing mined area of vanadium mineralisation (white) and vanadium target zones 1-3

<sup>1</sup> Refer to GED:ASX announcement dated 9th May 2018 and titled 'Raising Completed to Drill and Abenab Vanadium Project'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

<sup>2</sup> Refer to The Mineral Resources of Namibia, Ministry of Mines and Energy, Geological Survey 1992.



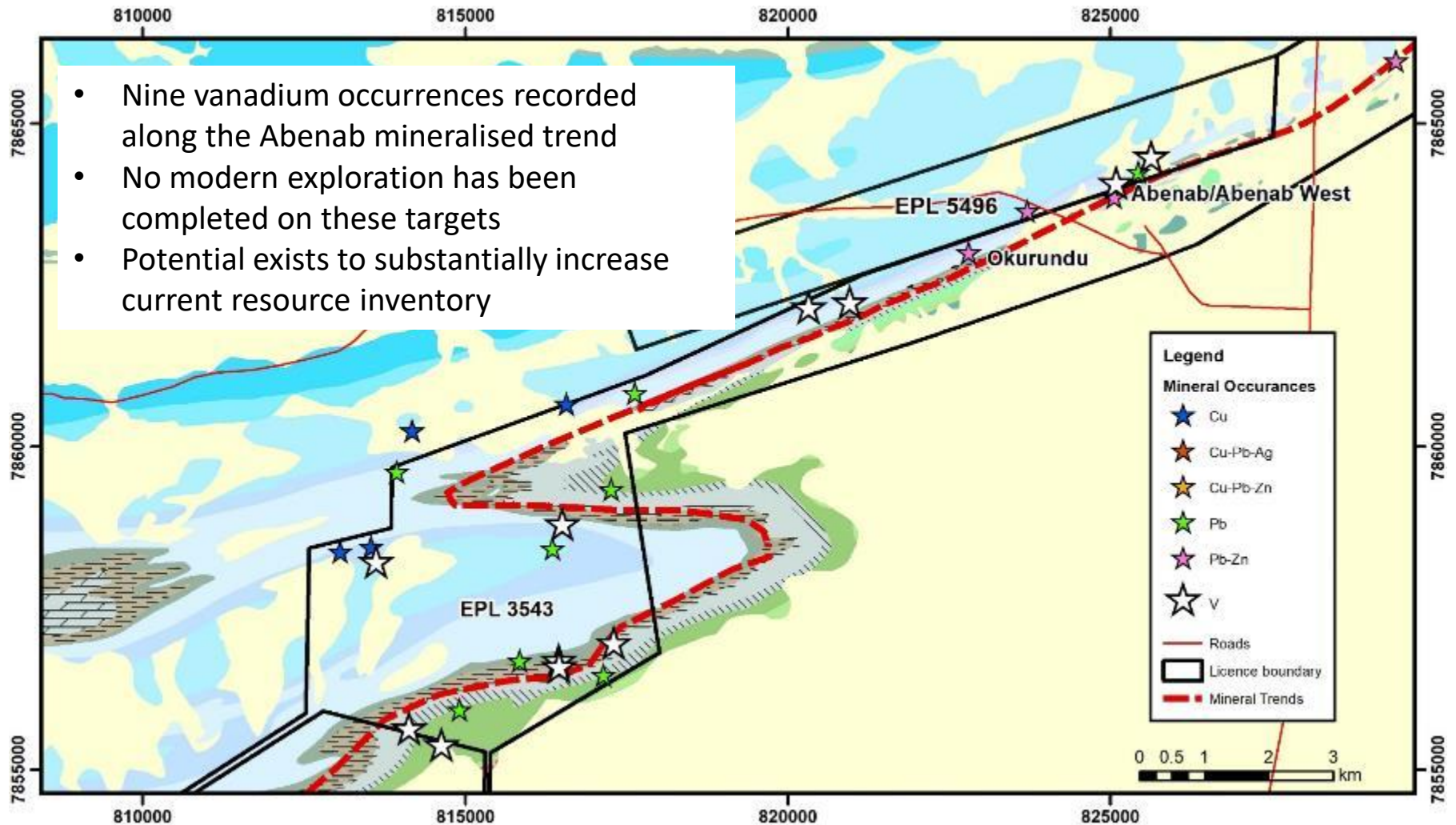
# Nosib Block Mine



- Nosib mine is approximately 27km West of Abenab
- Underground channel sampling on three levels to 60m shows high grade vanadium mineralisation associated with copper
- Potential exists for an open cut mine
- To be drilled shortly to generate a resource to add to the current inventory

Refer to GED:ASX announcement dated 3th April 2019 and titled 'Abenab Vanadium Project Exploration Update'. The Company is not aware of any new information or data that materially effects the information included in this announcement.

# Regional Exploration



## Shares



Share Price

\$0.025



Market Cap

\$5.9M



Shares on Issue

236.3m



Options on Issue

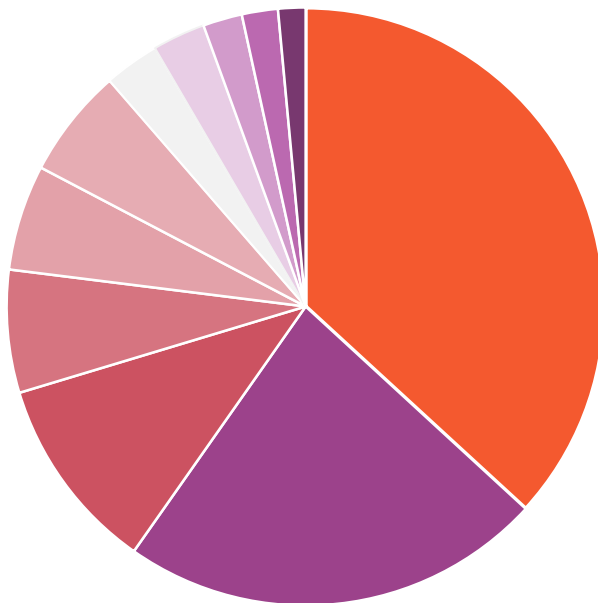
- 4.25m @ \$0.15 1 Sep 2020

- 4.25m @ \$0.20 1 Sep 2020



Cash at June 30 2019

\$493k



## Board and Management

<b>Michael Minosora</b>	Chairman
<b>Robert Collins</b>	Director
<b>Michael Norburn</b>	Director
<b>Michael Rodriguez</b>	Director
<b>Michael Scivolo</b>	Director

## Top Shareholders

- Others
- Coniston Pty Ltd
- Kalgoorlie Mine Management Pty Ltd
- Tempio Corporate Consultants Limited
- Herlequin Investments Limited
- Pio Services Limited
- Shah Nominees Pty Ltd
- McNeil Nominees Pty Ltd
- Metals Australia Ltd
- I-Can Limited
- Mr P.G. Sharbanee

# Why Invest?

- Opportunity to invest in a very low capex and opex near term production play
- On target for initial production 2020
- Multiple high quality mineral targets at Abenab and other GED tenements provides further potential resources for Abenab production
- Company well placed to benefit from a recovery in vanadium prices

## ***The GED Difference***

- *Abenab* is simple to beneficiate and concentrates to a very high level
- Abenab Project benefitted by high quality existing infrastructure and services
- Very low capital hurdle to achieve production
- GED is led by a management team with significant vanadium and base metals experience

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

*This document contains forward-looking statements concerning Golden Deeps. 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, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Martin Bennett. Mr Bennett is a consultant to 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.*



# Thank You.

For further information please contact:

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