Sulphur Springs: a compelling Greenfields Cu-Zn project



**Near-term production opportunities** 



# EXTRACTING VALUE IN A NEW REALITY

Building a robust copper-zinc company

Resources Rising Stars, 24-25 May 2016 John Nitschke, Managing Director







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#### **Competency Statement**

The information in this presentation that relates to Exploration Results, Mineral Resources and Ore Reserves is based on information compiled or reviewed by James Guy who is a Member of the Australasian Institute of Mining and Metallurgy. The information contained in this presentation was previously released in announcements Company Resource and Reserve Statement – Revised released 8 October 2013, Kangaroo Caves Resource Upgrade issued 22 September 2015 and Sulphur Springs Resource Update issued 11 May 2016.

#### The Company confirms that:

- a. The form and context of the material in this presentation has not been materially modified from the above previous announcements;
- b. It is not aware of any new information or data that materially affects the information included in the 8 October 2013 announcement and that all material assumptions and technical parameters underpinning the estimate in the 8 October 2013, 22 September 2015 and 11 May 2016 announcements continue to apply and have not materially changed; and
- c. It is uncertain that following further exploration and evaluation that the historical estimates will be able to be reported as mineral resources or ore reserves in accordance with the JORC 2012 Code.



# An extensive, high quality Resource inventory in a premier mining jurisdiction



- Two advanced copperzinc projects
- Large Resource inventory
- Premier mining jurisdiction
- World-class infrastructure
- \$60 million and 6 years to assemble



Total Mineral Resource of ~300,000t of contained copper and ~900,000t of contained zinc

# Corporate Overview

#### **Capital Structure**

ASX Code	VXR
Issued Shares	1,746M
Market Capitalisation (at 0.5c)	\$8.7M
Cash and receivables (as at 30 April 2016)	\$0.9M

#### **Key Shareholders**



#### **Experienced Board**

**Anthony Kiernan** LLB - *Non-Executive Chairman* Solicitor with +35 years experience with public companies

**John Nitschke** B.Eng (Hons), MSc - *Managing Director* Mining engineer with +40 years' experience

**Anthony Reilly** B.Ec - *Non-Executive Director* 20 years investment banking experience

**Darren Stralow** B.Eng, GAICD, GCAF - *Non-Exec. Director* Mining engineer with +15 years' experience







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# Management & Consultants: Focus on Delivering Technical Excellence

#### Skilled and Experienced Management Team ...... Hand Picked Consultants

**John Nitschke** B.Eng (Hons) MSc - *Managing Director* Over 40 years experience in evaluation, project development, operations management and optimisation of gold and base metal resources

**Trevor Hart** – *Company Secretary* & *CFO* 20 years' experience including 15 years in resources and mining services

**Stefan Gawlinski** M.Sc – *Consultant Geologist* Geologist with outstanding discovery track record, ex-Golden Grove

**Reg Beaton** B.Sc (Hons) – *Consultant Geologist* Geologist with demonstrated discovery track record, ex-Jabiru Metals

**James Guy** – *Consultant Geologist* Geologist who has led the revitalisation of Venturex's exploration

**David Milton** -*Consultant Geologist* Geologist who developed new Resource models for Sulphur Springs and Kangaroo Caves

#### **Blackrock Metals**

Mick Cudby - Metallurgist with 20 years experience in developing and operating heap leach operations Brendan James - Metallurgist with 20 years experience in hydrometallurgy and private equity Peter Benjamin - Geologist with 35 years experience in exploration and operations geology and project evaluation Ruj Limpraset - Mining Engineer with 10 years experience in open pit planning and scheduling



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## Venturex Resources – Three Strategies for Extracting Value

Existing cash-flow

- Increase and extend cash-flow from SX-EW heap leach operation at Whim Creek:
  - Agreement for production of copper cathode extended to December 2018
  - Venturex NPI share increased from 15% to 30% for 2016 and 49% thereafter



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- Identify near-term low CAPEX production opportunities that are achievable:
  - Whim Creek: extensive infrastructure, high grade options from large Resource base
  - Sulphur Springs: high-grade supergene resource



- Continue to optimise greenfields Sulphur Springs Copper-Zinc Project:
  - Shovel ready now
  - Ongoing optimisation producing compelling project economics









### Whim Creek Heap Leach – Current Production Providing Cash-flow

Existing cash-flow

Near-term production opportunities

- > VXR share of profit
  - FY 2016 (22.5%) \$783,000 from ~1,008t
  - FY 2017 share will be 39.5% from ~1,200t
  - FY 2018 share will be 49% from ~1,000t
- Highly experienced heap leach operator
- Operated by Blackrock Metals

A compelling copper-zinc project

Access agreement to residual dumps

# Our focus is on extending and expanding







# Whim Creek Heap Leach – Expanding and Extending

Existing cash-flow

Near-term production opportunities

A compelling copper-zinc project

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- Turning over and restacking existing heap leach dumps
- Installation of Fenix Ion
  Exchange Unit to supplement
  Heap Leach production
- Copper production expected to increase from the June 2016 Quarter
- Potential Oxide Copper sources include:
  - Whim Creek Open Pit
  - Salt Creek
  - Evelyn
- Fully funded by Blackrock Metals





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## Whim Creek Project – An Outstanding Near Term Production Opportunity

- Existing cash-flow
- Large brownfields project located 122km from Port Hedland
- VMS District including Mons Cupri, Whim Creek, Evelyn and Salt Creek copperzinc-lead and precious metal Resources plus18,500ha of exploration tenements

Near-term production opportunities

A compelling copper-zinc project

- Focus on achieving near-term low CAPEX production from the existing copperzinc sulphide resources by:
  - Assessing the viability of high grade production from the existing Resources; and
  - Increasing the size and/or grade of the existing Resources through exploration







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#### Whim Creek Project – Disciplined Systematic Approach to Exploration



### Mons Cupri – Largest Resource\* at Whim Creek



\* 4.6 Mt @ 0.9% Copper, 1.3% zinc, 0.5% lead, 24 g/t silver

- Controls for high grade stringer style copper and overlying high grade zinc-lead-silver mineralisation identified
- Potential down plunge extensions of high grade ore
- Post mineralisation fault north of Mons Cupri NW pit opens potential for Mons Cupri host at depth
- Mons Cupri host extends 4km to east
- Alteration Zones potential VMS related



## Sulphur Springs Copper Zinc Project – Ready for Development

- VMS district including Sulphur Springs and Kangaroo Caves Resources and tenements over 27km of under-explored stratigraphy along the Panorama Trend
- Sulphur Springs Underground Project is shovel-ready with Definitive Feasibility Study, approved Mining Leases, Environmental Approval and Native Title Agreements
- Optimisation phase on Sulphur Springs ongoing:
  - Proposal to mine upper part of Resource using open pit
  - Inclusion of Kangaroo Caves Resource in mining inventory
  - Upgrade of Resource estimate

The LoM schedule is derived from a mining inventory of which 67% is Indicated Resources and 33% is Inferred Resources, the LoM mining inventory does not constitute an Ore Reserve. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.

Sulphur Springs Abyelos (Atlas Iron) -Kangaroo Caves





A compelling copper-zinc project

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Existing cash-flow

Near-term

production

opportunities

# Sulphur Springs Project – Ongoing Optimisation Phase

cash-flow Near-term production

opportunities

Existing

A compelling copper-zinc project

#### **Opportunity for Near Term Production**

- > Updated Mineral Resource estimate for Sulphur Springs:
  - 13.4Mt grading 1.5% Cu and 4.0% Zn for 194,000t of contained copper and 530,000t of contained zinc \*
  - 6% increase in contained copper
- Now includes Supergene resource of 800,000 tonnes grading 4.2% Cu for 34,000t of contained copper
  - Enriched copper mineralisation near the surface in the valley floor
- Supergene copper expected to be amenable to heap leach SX/EW recovery
  - Potential for near-term low CAPEX production
- New resource model allows opportunities and risks associated with the Project to be identified and evaluated

Key Optimisation Outcomes to Date: Same production Simpler to mine and operate Significantly lower risk profile Significantly improved financial metrics:

- 28% reduction in pre-production CAPEX to A\$202M
- ➢ 30% increase in mine life to 11 years \*\*
- 46% reduction in OPEX: C1 copper cash cost of A\$0.84 per pound

Increased copper Resource

**Opportunity for near term production** 

\*\* The LoM schedule is derived from a mining inventory of which 67% is Indicated Resources and 33% is Inferred Resources, the LoM mining inventory does not constitute an Ore Reserve. There is a low level of geological confidence associated with Inferred Mineral Resources and

there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the production target itself will be realised.



<sup>\*</sup> Refer ASX Release 11 May 2016

# Sulphur Springs Project – Ongoing Optimisation Activities

#### Assessing Supergene Copper

- > Infill drilling
- Metallurgical test work
- > Basic infrastructure requirements
- > Permitting

#### New mine plan to support new Reserve estimate

- > Further optimisation of underground mine plans
- > Bulk mining to reduce costs
- Permitting once project plan finalised
- > Environmental risks much better understood
- > Referral to EPA for level of assessment

#### ...significant value being added through optimisation stage



...Supergene copper within VXR capabilities, even in this market



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Existing

cash-flow

Near-term

production opportunities

A compelling

copper-zinc

project

# Sulphur Springs – Lithium Exploration Potential

Existing cash-flow

Near-term production opportunities

A compelling copper-zinc project

- Sulphur Springs located 30km from Pilbara Minerals (ASX: PLS) world-class
   Pilgangoora Lithium-Tantalum Project
  - Located within the highly prospective Shaw River District:
    - Major regional geological feature where neighbouring explorers are targeting new lithium discoveries
  - Review of the lithium potential now underway:
    - Desktop review of available historical data
    - Expected to be completed by the end of June 2016

Sulphur Springs is located on the doorstep of the world's premier emerging lithium province, the Pilgangoora district





# Pilbara Copper-Zinc Projects – Next Steps

#### Heap Leach Operation at Whim Creek – Funded by Blackrock Metals

- > Continue to turn heap leach dumps with excavator
- ➤ Commission Fenix Ion Exchange plant ⇒ 4 tpd
- ➤ Actively assess additional sources of heap leachable material surface stockpiles, Whim Creek open pit, Salt Creek, Evelyn etc ⇒ 6 tpd

#### Whim Creek Sulphide Copper Zinc Project

- > High grading existing Resources at Mons Cupri with low CAPEX processing plant
- Generate high grade drill targets (if they are there)
- Drill (subject to prospectivity and funding)

#### **Sulphur Springs Project**

- > Assess potential for low CAPEX early production from newly-discovered supergene zone
- > Optimise underground mining and complete new Reserve estimate
- Refer optimised project to EPA to determine the level of assessment
- Evaluation of lithium potential









# Venturex Resources – Key Investment Takeaways

Ongoing income stream





Near term production opportunities

Greenfields Sulphur Springs copper-zinc project

Substantial Resource Base

World-class mining jurisdiction





FY 2016 VXR share - \$783,000 FY 2017 VXR Share ~\$1,600,000

Low CAPEX high grade Targeted exploration generating results

Shovel-ready – ongoing optimisation making it even more attractive

High leverage to base metals prices



...unlocking the value of one of the largest base metal portfolios in Australia





Two advanced copper-zinc projects in WA's Pilbara

Extensive resources with outstanding growth potential

Poised for production at the right time

- John Nitschke, Managing Director
- e: john.nitschke@venturexresources.com
- Anthony Reilly, Non-Executive Director
- e: anthony.reilly@venturexresources.com
- Trevor Hart, Company Secretary/CFO
- e: trevor.hart@venturexresources.com

#### Registered Office Level 2, 91 Havelock Street West Perth WA 6005

T: +61 8 6389 7400

F: +61 8 9463 7836

admin@venturexresources.com

www.venturexresources.com





## Appendix – Mineral Resource Summary

	Mt	Cu%	Zn%	Pb%	Ag g/t	Au g/t					
Combined Sulphur Springs Region											
Indicated	10.5	1.4	4.4	0.2	17.1	0.2					
Inferred	6.5	1.2	4.4	0.2	18.0	0.2					
Sub-Total	17.0	1.4	4.4	0.2	17.4	0.2					
Combined Whim Creek Region											
Measured	1.3	1.5	1.7	0.8	41.1	0.28					
Indicated	5.1	1.2	2.3	0.7	23.3	0.13					
Inferred	0.2	2.6	0.3	0.1	4.1	0.03					
Sub-Total	6.6	1.3	2.1	0.7	26.3	0.15					
Liberty Indee Joint Venture (70%)											
Indicated	0.45	2.2	4.5	0.4	42.0	0.9					
Inferred	0.20	1.0	1.8	0.2	22.4	0.4					
Sub-Total	0.7	1.8	3.7	0.3	35.9	0.8					
TOTAL *	24.2	1.3	3.6	0.3	18.0	0.1					

\* Rounding errors may occur



#### Three other deposits yet to be upgraded to ore reserve status

ORE RESERVE										
	Classification	Tonnes ('000t)	Cu %	Zn %	Pb %	Ag g/t	Au g/t			
Whim Creek	Probable	221	2.7	0.9	0.1	8.5	0.1			
Mons Cupri	Probable	951	1.7	2.2	1.0	47.1	0.3			
Sulphur Springs	Probable	7,200	1.8	4.3	0.1	18.5	0.0			
	Total	8,372	1.8	4.0	0.3	21.4	0.1			

