



M I D N I G H T   S U N   M I N I N G

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T R A N S F O R M A T I V E   C O P P E R   D I S C O V E R I E S  
I N   T H E   H E A R T   O F   Z A M B I A

November 13th, 2023

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**ALL DOLLAR AMOUNTS ARE IN CAD UNLESS OTHERWISE NOTED.**

All true widths are calculated using cross-sectional analysis.

Qualified Person: Richard Mazur, P.Ge., a Director of the Company and a Qualified Person under NI 43-101, has reviewed and approved the technical data and contents herein.

# The Opportunity

Our property is large, highly prospective, and located in Zambia, in the heart of the Zambian-Congo copper belt, the second largest Copper Producing region in the world

We are surrounded by world-class producing copper mines and operators including First Quantum, Barrick, Rio Tinto and Ivanhoe. First Quantum's Kansanshi Mine, Africa's largest copper producer, is located right next door

Our geological environment is conducive to world-class, large, high-grade and scalable copper deposits

Our vast **506 km<sup>2</sup>** property features multiple opportunities for a transformative discovery, including numerous structural and mineralized targets

We have already made two high-grade discoveries: at Kazhiba (22 Zone) and Mitu, and both have similar geological characteristics and grades to operating mines located just next door

Timing is everything. Copper is forecast to see unprecedented demand and market pricing in the near future, and for many years to come

## Why Copper?

**Copper is “The metal of electrification”.**

*“The world is currently facing a global copper shortage, fueled by increasingly challenging supply streams in South America and higher demand pressures.”<sup>1</sup>*

# Zambia – A World Class Copper District

A globally ranked “top copper producer” and mining powerhouse for +100 years

Mining is crucial to the Zambian economy, responsible for 75% of Zambia’s export earnings

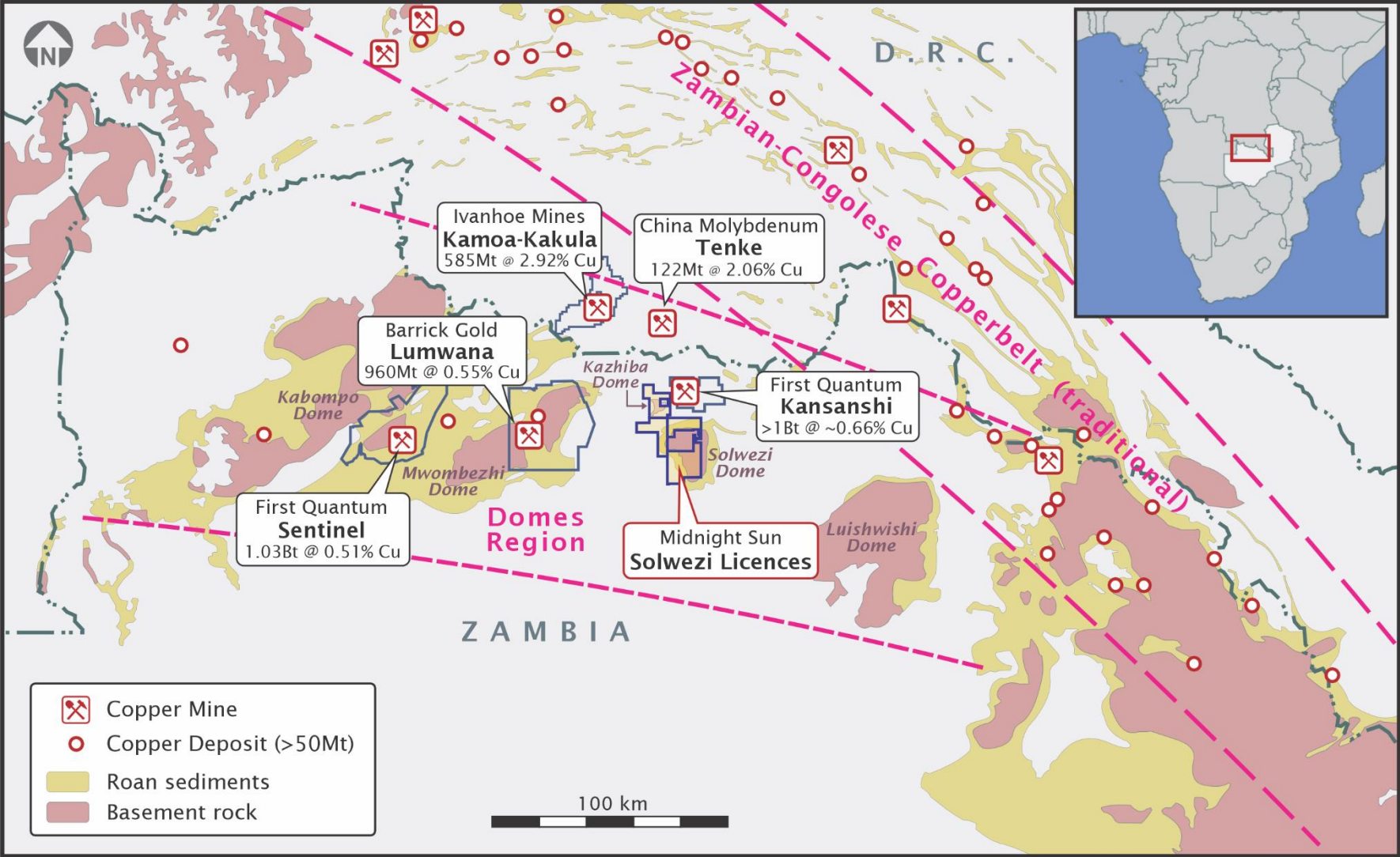
Led by an elected, pro-mining government, the Zambian mining sector is governed and regulated by the Mines and Minerals Development Act No. 11 of 2015

Geological environment is conducive to large, high-grade and scalable copper deposits, in fact Zambia possesses one of the world’s highest-grade deposits of copper

Home to world class mines and world operators including First Quantum, Barrick, Rio Tinto, Anglo and KoBold

English language, Trained population/workforce

# The Heart of The Zambian Congo Copper Belt Surrounded by World-Class Producers



# Our Discoveries VS World-Class Producers

## Comparison by Grade

**LUMWANA**  
0.51% Cu

**KANSANSHI**  
0.66% Cu

**SENTINEL**  
0.51% Cu

### MIDNIGHT SUN

Dumbwa Soil Anomaly >20 km up to 0.728% Cu

#### Drill highlights include

11.3 m of 5.71% Cu (Kazhiba Dome)

21 m of 3.26% Cu (Kazhiba Dome)

6.4 m of 5.08% Cu (Kazhiba Dome)

16.5 m of 0.93% Cu incl 5 m of 1.36% Cu (Dumbwa)

11.6 m of 3.44% Cu (Mitu)

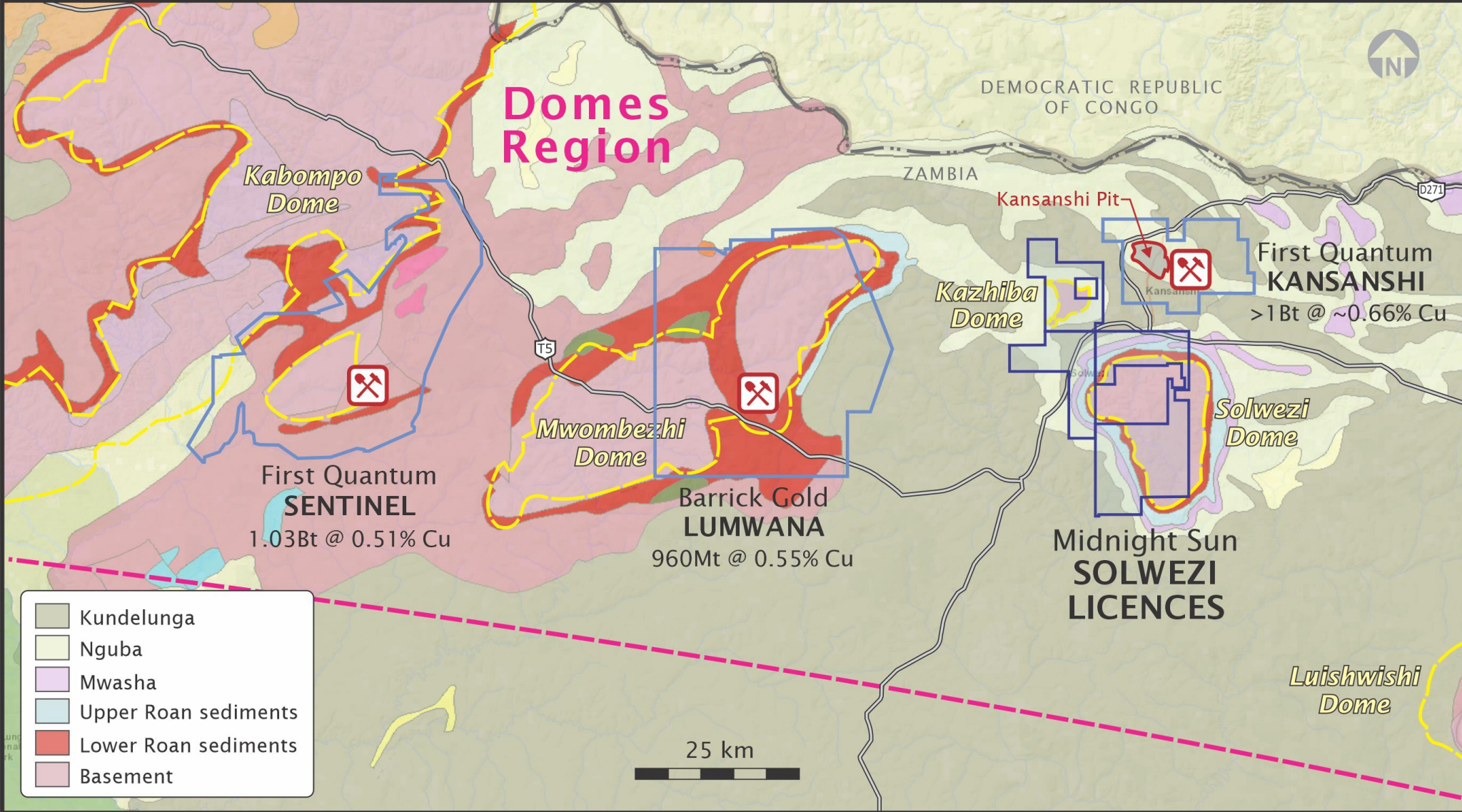
11.5 m of 1.51% Cu incl 6.6 m of 2.26% Cu (Mitu)

1) Source: <https://www.first-quantum.com/English/our-operations/default.aspx#module-operation--kansanshi>

2) Source: "First Quantum says new Zambia mine, smelter to cost \$2.4bn". Mining Weekly, 26 March 2012. Retrieved 19 November 2018.

3) Source: <https://www.barrick.com/operations/lumwana/default.aspx>

# Zambia - The Domes Region





# Size and Scale – The Great Differentiator

## Our Target

Deposits in the Zambian-Congo Copper Belt contain....

**B**illions of tonnes of copper

**Not**

**M**illions of tonnes of copper

We are targeting the discovery of multi-generational copper deposits

# Multiple Unique Opportunities For A Transformative Discovery

506<sup>2</sup> km's of optimal geology

Multiple, separate geological systems within the boundaries of our property

**5 targets** - Each representing a significant and unique opportunity for discovery of a transformative, multi-generational deposit

Target 1 - Dumbwa

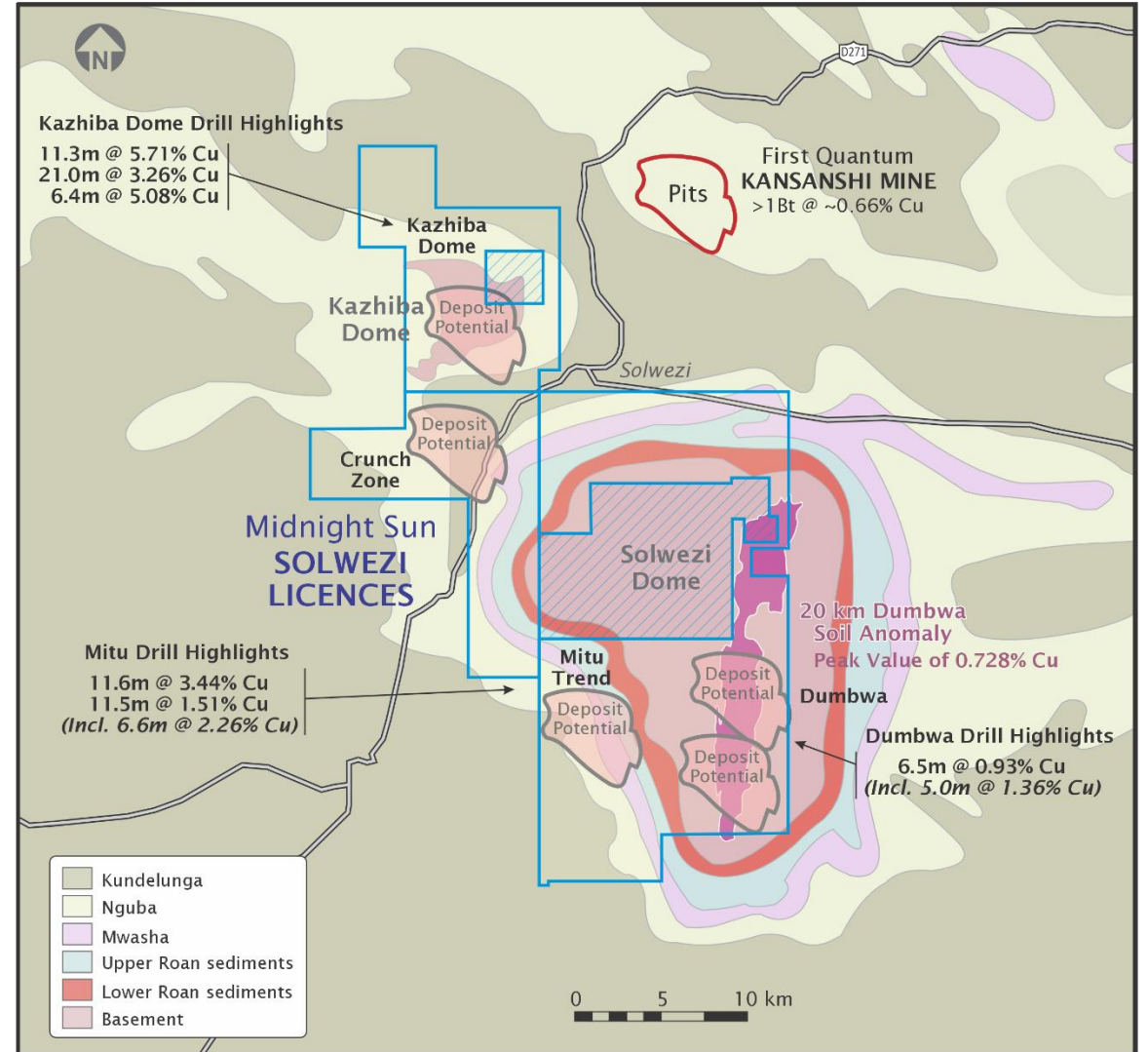
Target 2 - Kazhiba

Target 3 - Mitu

Target 4 - Crunch

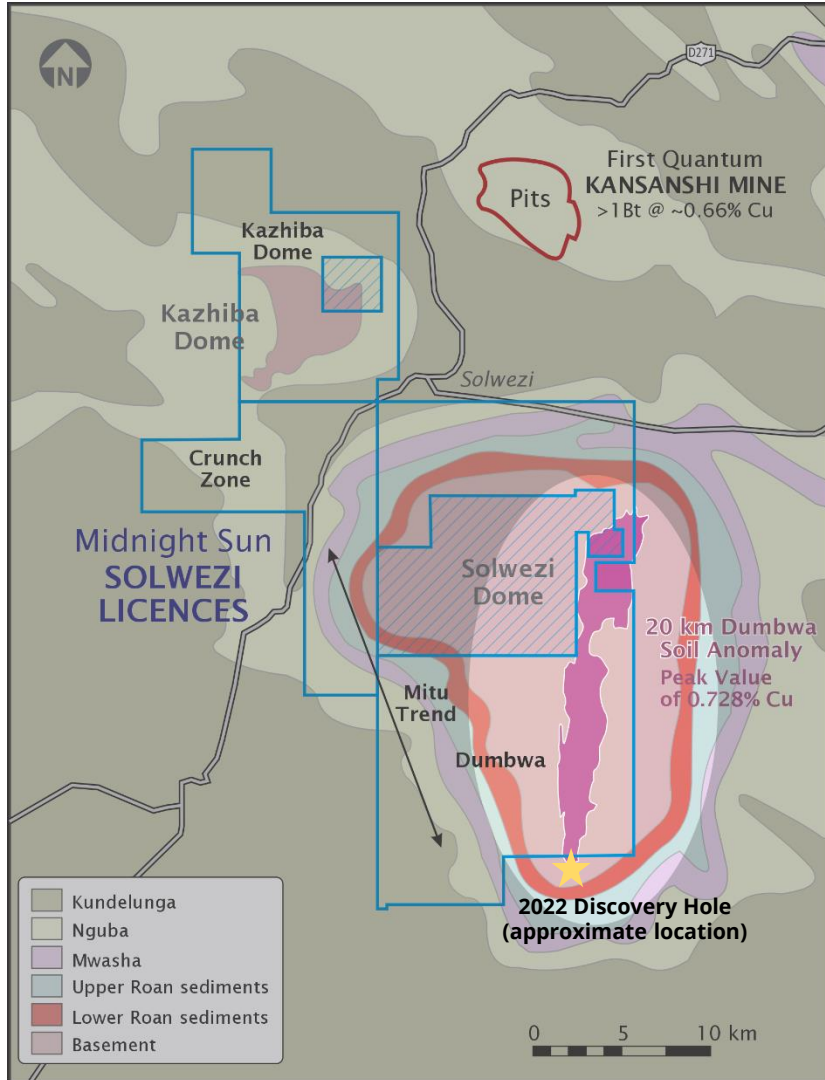
Target 5 - Copper Oxides

Multiple significant discoveries already made, across our property



# Multiple Targets

## Target 1 - Dumbwa



### DUMBWA HIGHLIGHTS

Tier-One Exploration Target

Continuous high-grade copper-in-soil anomaly for over 20 km along strike and ~1 km wide with peak values up to **0.728% Cu**

The strongest soil anomaly on record in Zambia

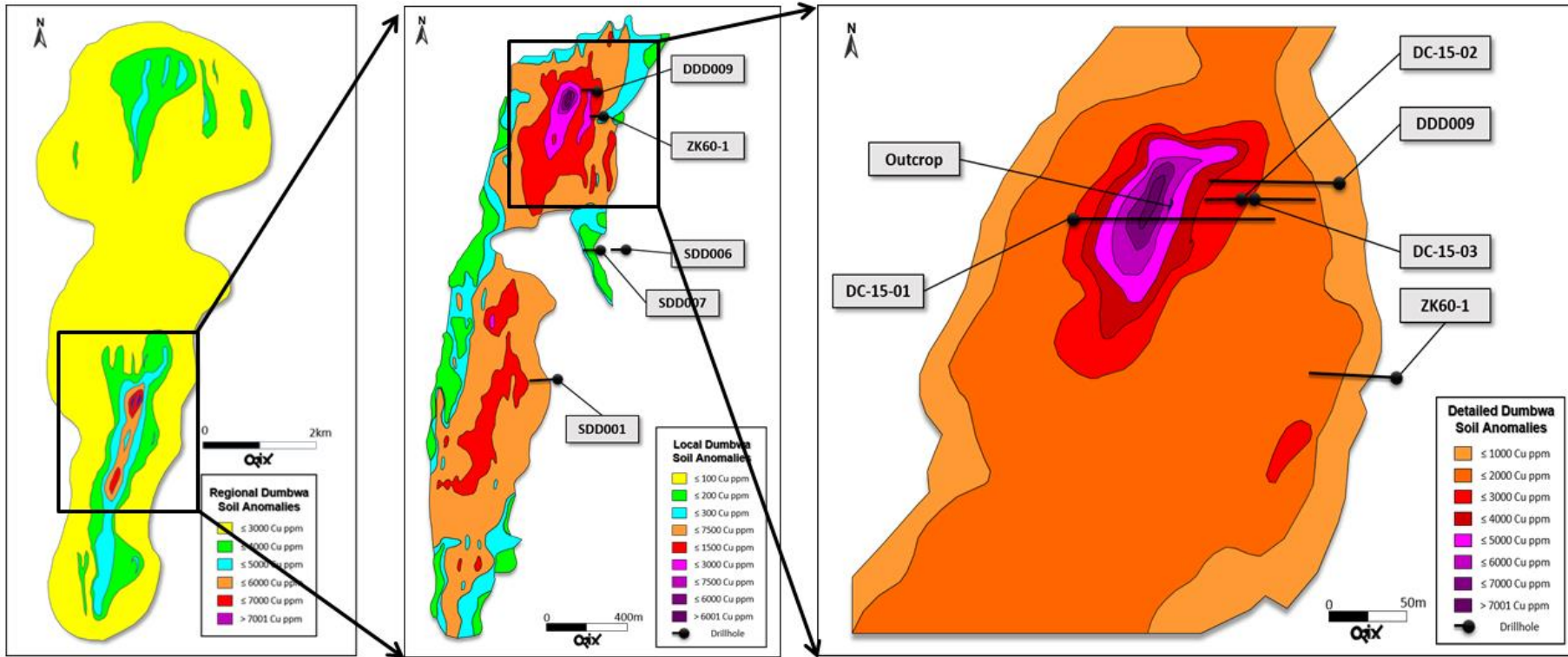
Multiple stacked mineralized horizons analogous to Barrick's Lumwana

Systematic drilling guided by structural controls, necessary to establish dip direction, continuity, size, and scale

Extensive soil sampling, and shallow drilling have established extensive oxide copper potential

2022 Discovery Hole on southern boundary of our property

# Dumbwa



A +20 km long north-south trending soil anomaly peaking at 7,280 ppm (**0.728% Cu**)

6 diamond drill holes returned Cu and Co intercepts, in near surface oxide or deeper sulfide zones

**Highlights include:**

- Drillhole DC-15-03: **13 m @ 0.63% Cu incl. 3 m @ 1.3% Cu**
- Drillhole DC-16-01: **12 m @ 0.72% Cu**
- Drillhole DCAC-16-39: **12 m @ 0.65% Cu incl. 6 m @ 1.06% Cu**

# Multiple Targets

## Target 2 - Kazhiba Dome

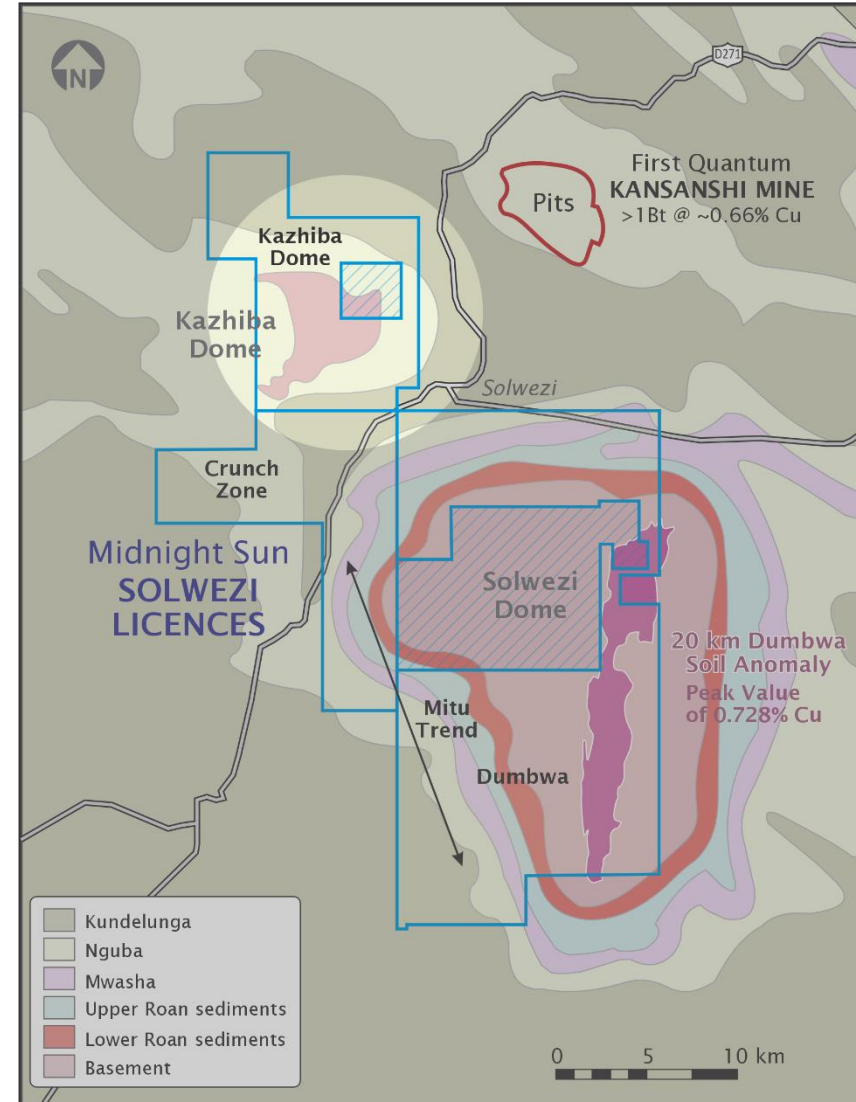
### KAZHIBA DOME HIGHLIGHTS

<10km from the Kansanshi Mine Complex

Discovery hole: **11.3 m of 5.71% Cu**, near surface. Additional intercepts include **21 m of 3.26% Cu**, and **6.4 m of 5.08% Cu**<sup>1</sup>

Multiple drill intercepts identified a high-grade copper oxide blanket, the source of which is yet to be found

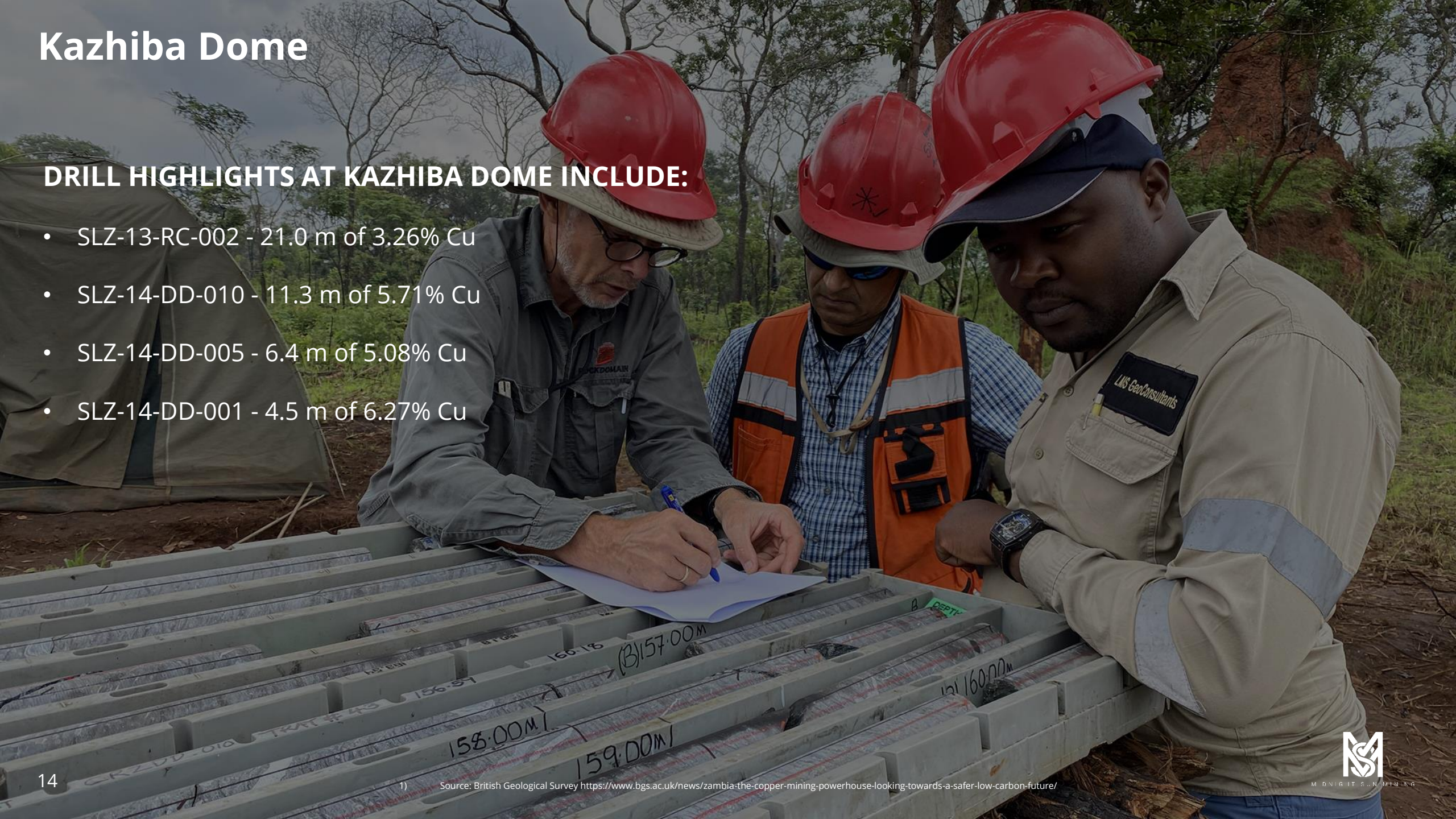
Underlain by a previously undiscovered basement dome similar to those at Kansanshi and Solwezi. Domes are believed to be associated with the copper mineralization at each of Kansanshi, Lumwana, and Sentinel



# Kazhiba Dome

## DRILL HIGHLIGHTS AT KAZHIBA DOME INCLUDE:

- SLZ-13-RC-002 - 21.0 m of 3.26% Cu
- SLZ-14-DD-010 - 11.3 m of 5.71% Cu
- SLZ-14-DD-005 - 6.4 m of 5.08% Cu
- SLZ-14-DD-001 - 4.5 m of 6.27% Cu



# Multiple Targets

## Target 3 - Mitu

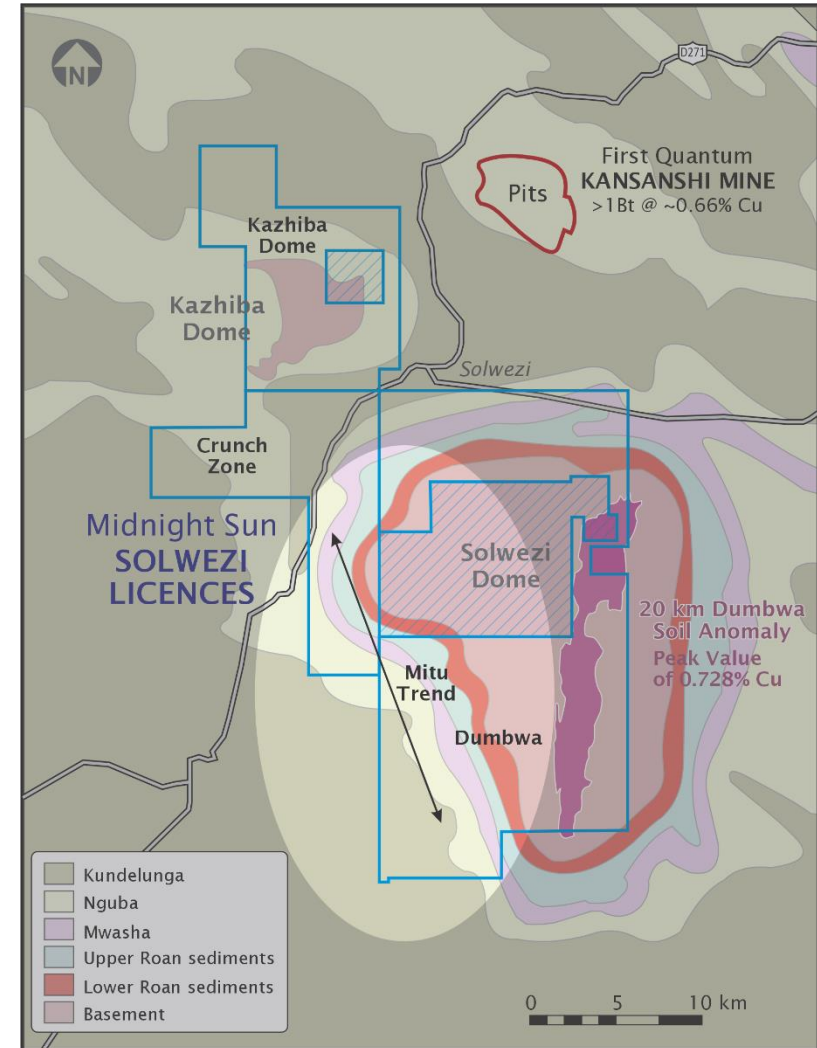
### MITU HIGHLIGHTS

2022 Drilling intercepted Copper/Cobalt mineralization in ore shales and Kansanshi style veins, including **11.6 m of 3.44% Cu and 11.5 m of 1.41% Cu<sup>1</sup>**

New Analog - Copper mineralisation style (Cu-Co-Ni-Au) and grade similar to Sentinel Mine just 100 km to the west<sup>2</sup>

Proof of concept – One of multiple unique mineralized systems on the property

Discovery of structurally controlled Kansanshi-style mineralized veins, represent an additional mineralizing event in the area



1) <https://www.midnightsunmining.com/2014/midnight-sun-reports-additional-drill-results-from-solwezi-property/>  
2) <https://midnightsunmining.com/2023/midnight-sun-confirms-high-grade-drill-intercepts-at-mitu/>

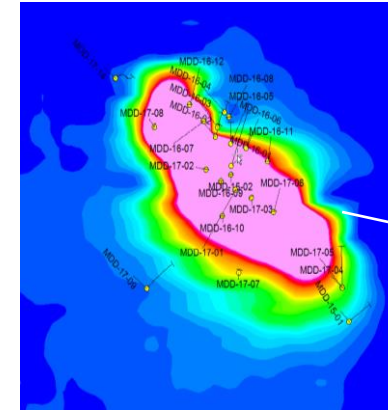
# Mitu

Geophysical and geochemical data highlighted NE/SW structural controls crosscutting the Mitu Trend

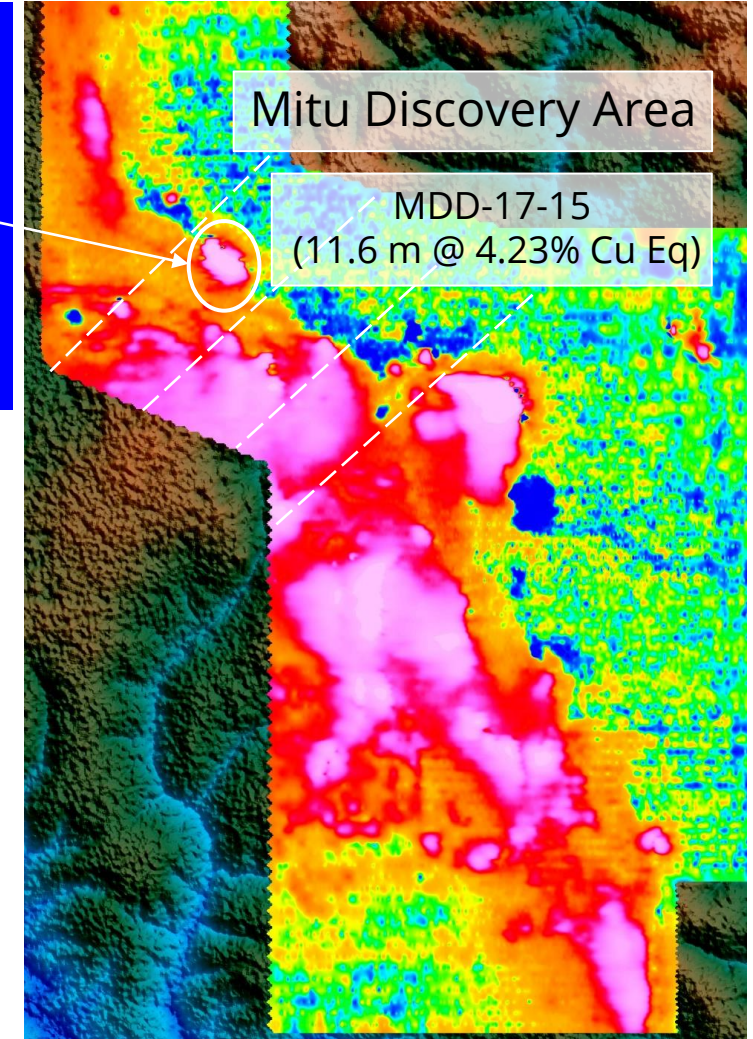
Drilling has confirmed these structures contain Kansanshi-style mineralized veins

To date, drilling focused on the Mitu Discovery Area

Drilling delineated a +1 km x 500 m area of mineralization



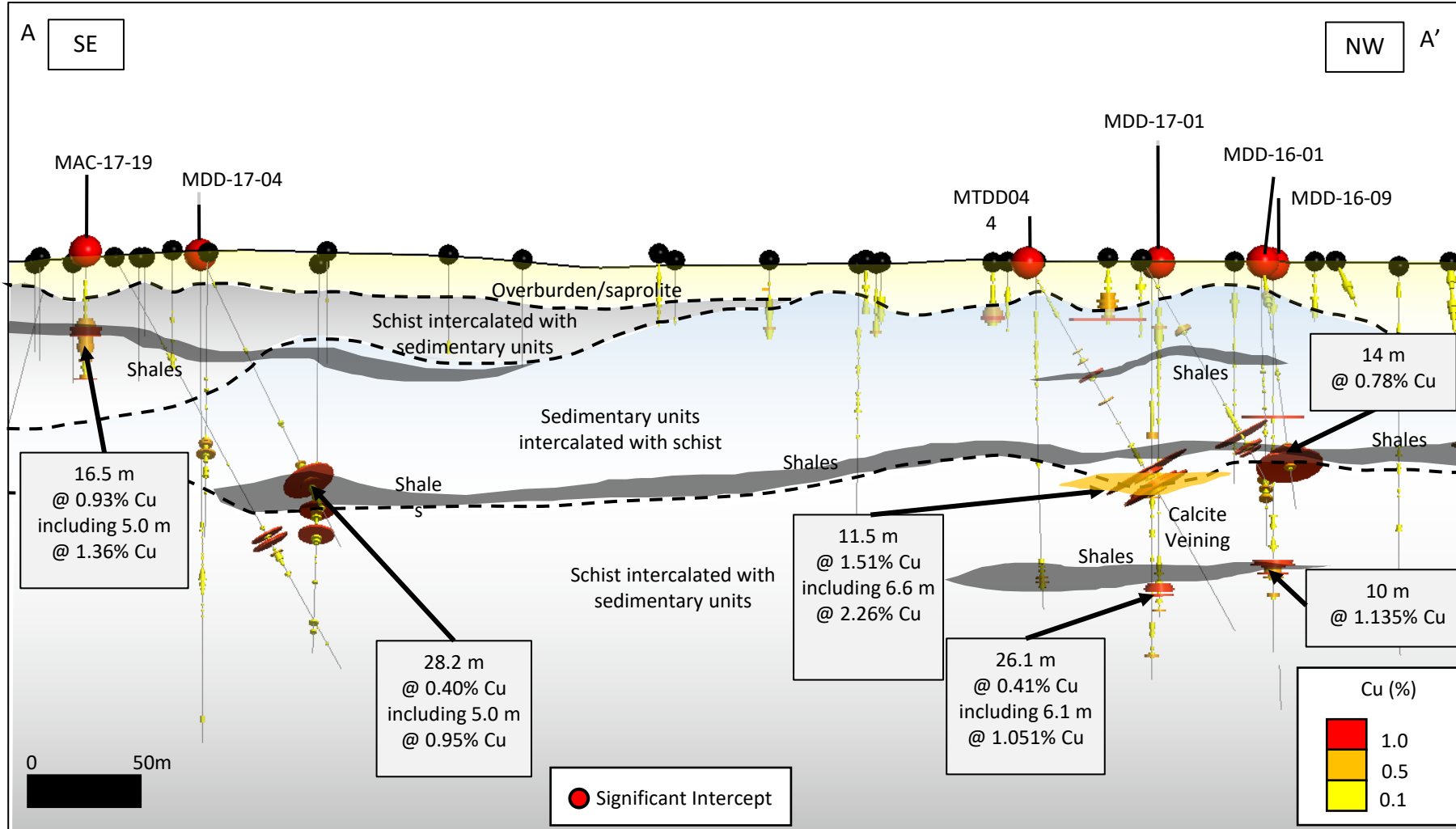
Zoom showing drill hole locations





# Mitu

## CROSS SECTION OF MITU DISCOVERY AREA



# Mitu Drill Highlights

## DRILL HIGHLIGHTS AT MITU INCLUDE:

- MDD-16-01 - 8.0 m of 1.22% Cu, 0.09% Co, and 0.05% Ni and 14.0 m of 1.02% Cu, 0.03% Co, 0.06% Ni
- MDD-16-06 - 30.3 m of 0.49% Cu, 0.03% Co, and 0.05% Ni and 9.0 m of 0.49% Cu, 0.02% Co, 0.03% Ni
- MDD-16-09 - 9.4 m of 1.03% Cu, 0.14% Co, and 0.04% Ni
- MDD-16-11 - 28 m of 0.82% Cu, 0.03% Co, and 0.05% Ni
- **MDD-17-15 - 11.6 m of 3.44% Cu, 0.07% Co, and 0.06% Ni** ←

# Multiple Targets

## Target 4 - Crunch

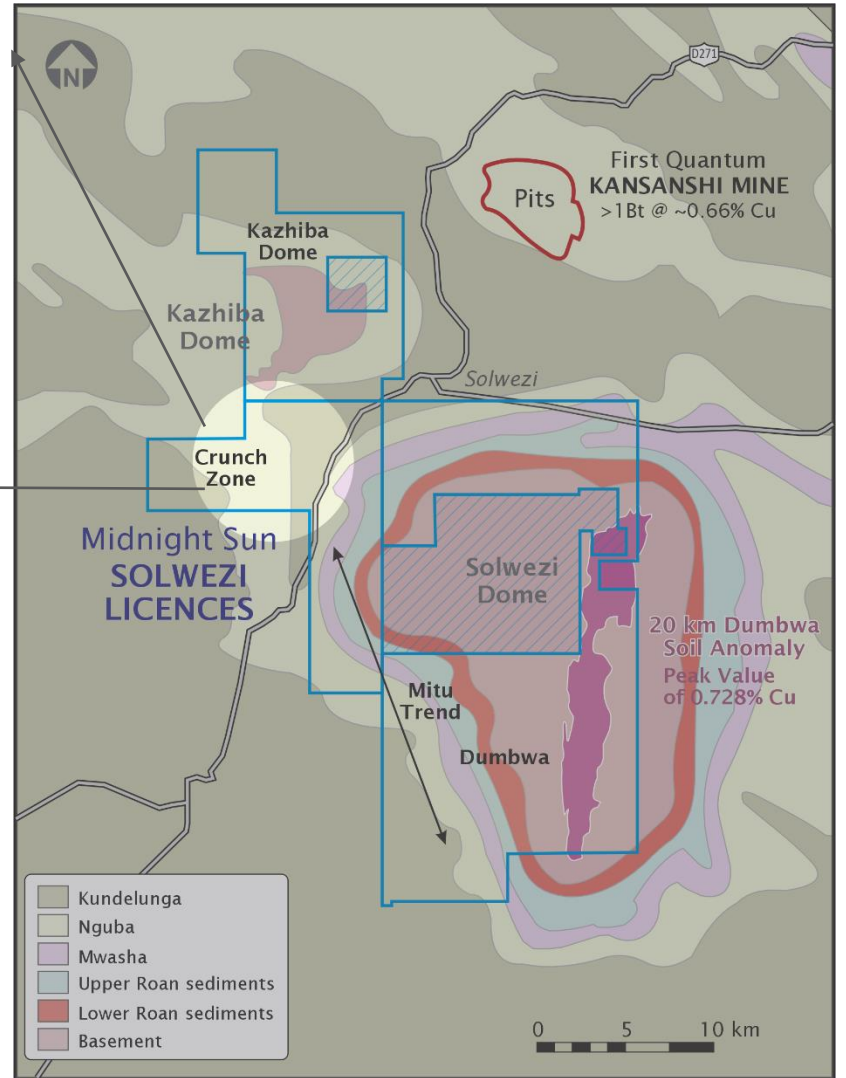
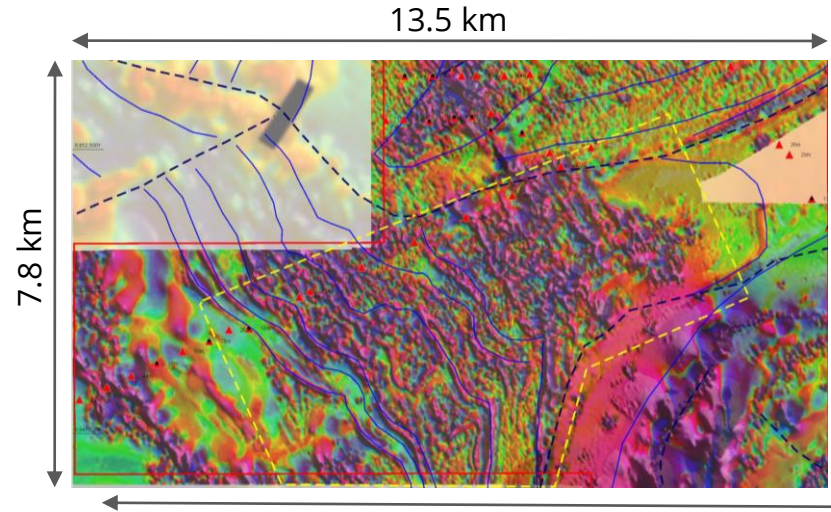
### CRUNCH ZONE HIGHLIGHTS

Newly identified structural target

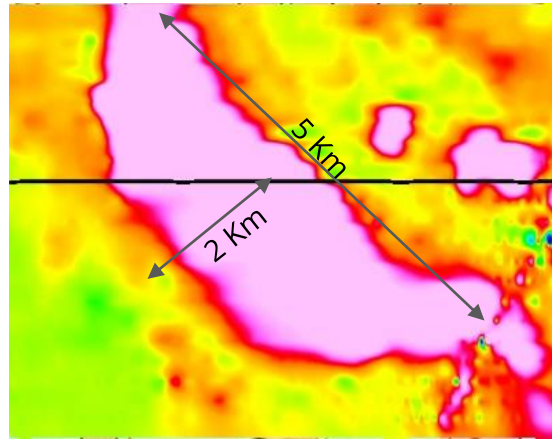
Wedged fan of tight structural folds

Located between domal structures and linked to Kansanshi via a succession of sedimentary host rock

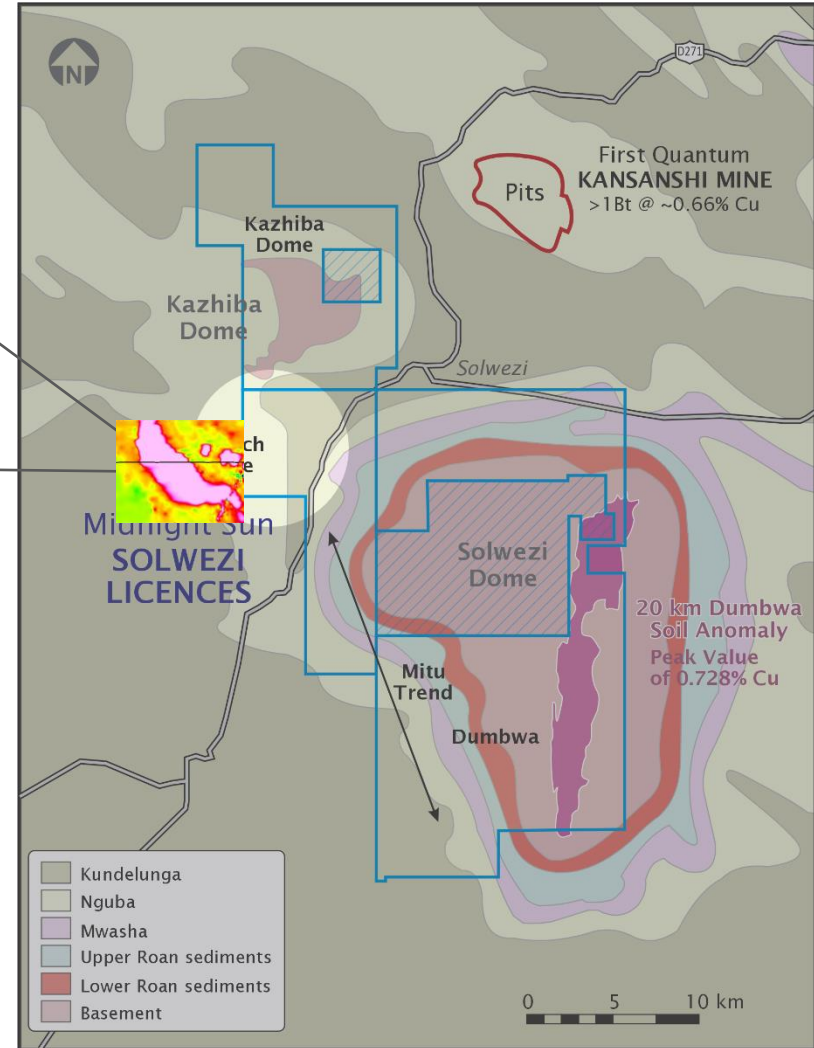
A VTEM survey identified the largest untested continuous EM conductive target/anomaly on the property



# Crunch Zone



- Untested & continuous for +5 km in length and 2 km strike
- Size and scale of the anomaly warrants systematic exploration
- This conductive trend represents a potential new discovery
- The trend occurs in the same stratigraphy as that surrounding the neighbouring Kansanshi Mine



# Multiple Targets

## Target 5 – Oxide Copper

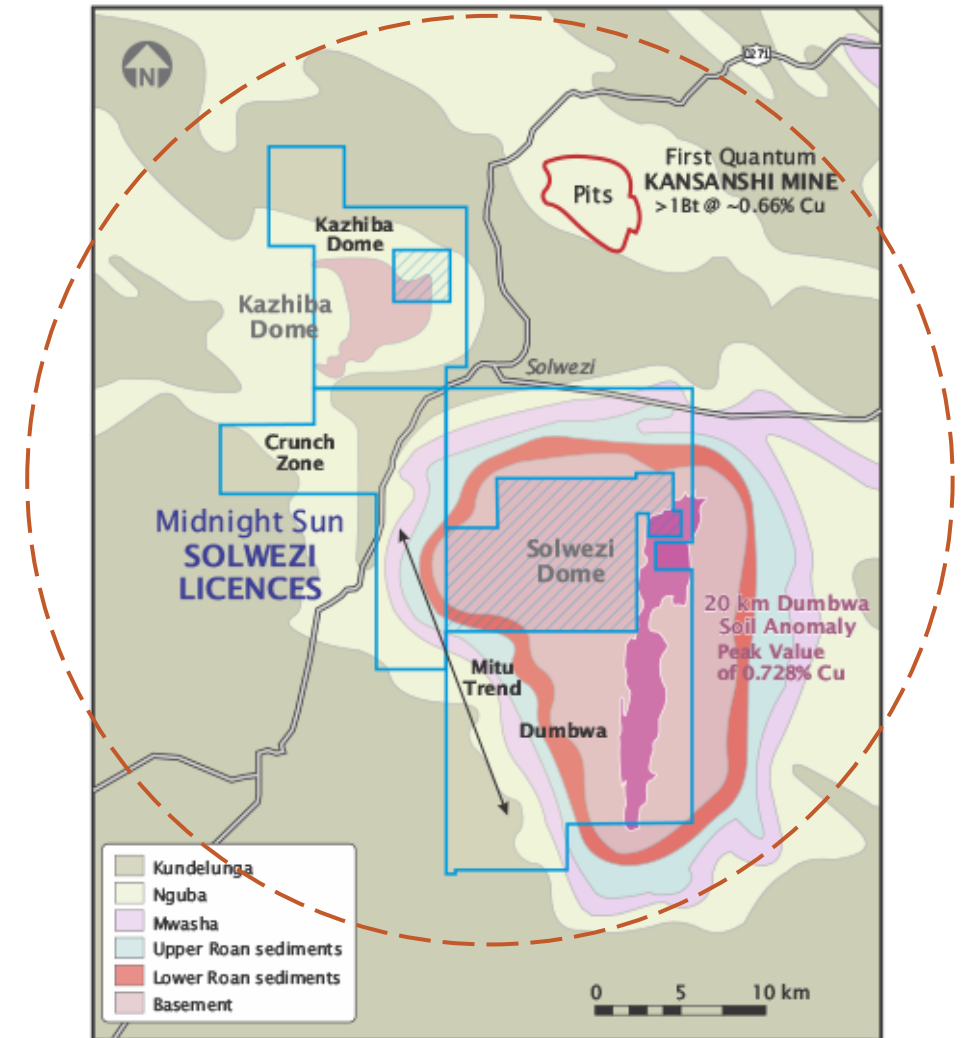
### OXIDE COPPER - A NEAR-SURFACE, NEAR TERM MINING OPPORTUNITY

Goal: >50 million tonnes at 0.3% Cu

Extensive oxide copper potential exists across entire property package

Represents an attractive opportunity for an existing local operator or new entrant to the World-Class Zambia-Congo Copperbelt to achieve near-term production

Oxide copper mining could represent a turn-key mining opportunity, and significant annual revenue for Midnight Sun



# The Opportunity - Takeaway

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We are surrounded by world-class producing copper mines and operators including First Quantum, Barrick, Rio Tinto and Ivanhoe. First Quantum's Kansashi Mine, Africa's largest copper producer, is located right next door

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# Midnight Sun – Capital Structure

## CAPITAL STRUCTURE

Basic Shares Outstanding	118.2 million
Warrants	10.6 million
Options Outstanding	8.95 million
Share Price	\$0.23
Market Capitalization	\$27.2 million
Management & Directors	10%
52 Week Range	\$0.11 - \$0.35



1) As at July 11, 2023

# Directors & Management



## **Al Fabbro**

### **PRESIDENT, CEO & DIRECTOR**

- Finance and mining executive and entrepreneur
- +40 years' experience
- Former head retail trading of Yorkton Securities, and Yorkton's Natural Resources Group
- +10 years IA Canaccord Capital, specializing in the natural resource sector and former Lead Director of Roxgold



## **Robert Sibthorpe**

### **VICE PRESIDENT, EXPLORATION & DIRECTOR**

- Geologist, executive and mining entrepreneur
- +50 years' experience
- Experience includes Noranda, Falconbridge and Ivanhoe. Former analyst for Midland Doherty, Yorkton Securities, and Canaccord
- Former President/CEO Roxgold and recipient of AMEBC Colin Spence Award



## **Brett A. Richards**

### **DIRECTOR**

- Mining and Metals Executive with Senior level experience
- +30 years' experience
- Former CEO of African Thunder Platinum, Renew, Octéa, Roxgold, Avocet, and founder of Katanga. Held senior executive positions with Kinross Gold and Co-Steel. Current CEO of Goldshore Resources



## **Alastair Brownlow**

### **CFO**

- CPA, U.S. CPA (Washington) Extensive experience as CFO of publicly listed resource companies, spanning exploration, development, and production stage.
- Former auditor in the British Virgin Islands
- Began career at CPA firm specializing in the mining industry



## **Rick Mazur**

### **DIRECTOR**

- P.Geo, Geoscientist, Project geologist, financial analyst and senior executive
- +45 years' experience
- Former Analyst, Former Director of Roxgold, Current Director of Big Ridge Gold, Impact Silver, and CEO of Forum Energy Metals



## **Matt MacKenzie**

### **VP CORPORATE DEVELOPMENT, CORPORATE SECRETARY**

- MBA and JD
- +12 years' experience
- Former finance positions with GE Capital Markets and BMO Capital Markets. Experience in mineral exploration, production, oil and gas services
- Former Manager of Business and Legal Affairs of Roxgold



## **Wayne Moorhouse**

### **DIRECTOR**

- CFA – Experienced mining and construction executive
- Experience from exploration to mine operations to M&A
- Former Director of Genco, Stealth Energy, and former CFO/COO Roxgold. Current President/CEO of EnviroMetal Technologies



## **Adrian O'Brien**

### **DIRECTOR MARKETING & COMMUNICATIONS**

- Executive and Senior Marketing Executive
- +25 years' experience
- Former Director of Marketing and Communications PureGold Mining, former Director & President Kermode Resources, former Vice President Apella Resources, and former Director PDAC





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**CORPORATE INQUIRIES**

Adrian O'Brien  
Director Marketing & Communications  
**604 809 6890**  
[adrian@midnightsunmining.com](mailto:adrian@midnightsunmining.com)

**CORPORATE ADDRESS**

#1205 - 789 West Pender Street  
Vancouver, BC V6C 1H2  
Canada

**TSX.V: MMA**  
**OTCQB: MDNGF**  
[www.midnightsunmining.com](http://www.midnightsunmining.com)