



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

August 15th, 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.Geo., 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, including Africa's largest copper producer 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 have increased demand and market pricing over the next decade

We have an experienced geological team with multiple discoveries and mines around the world to their credit

A close-up photograph of several copper rods. The rods are arranged in a way that their circular cross-sections are visible, creating a pattern of overlapping circles. The copper has a warm, golden-brown hue. The lighting is soft, highlighting the metallic texture.

## Why Copper?

“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

Led by a Pro Mining Government, Zambia has been a mining powerhouse for +100 years and is one of the largest copper producers in Africa

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

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

Geological environment conducive to large, high grade and scalable copper deposits

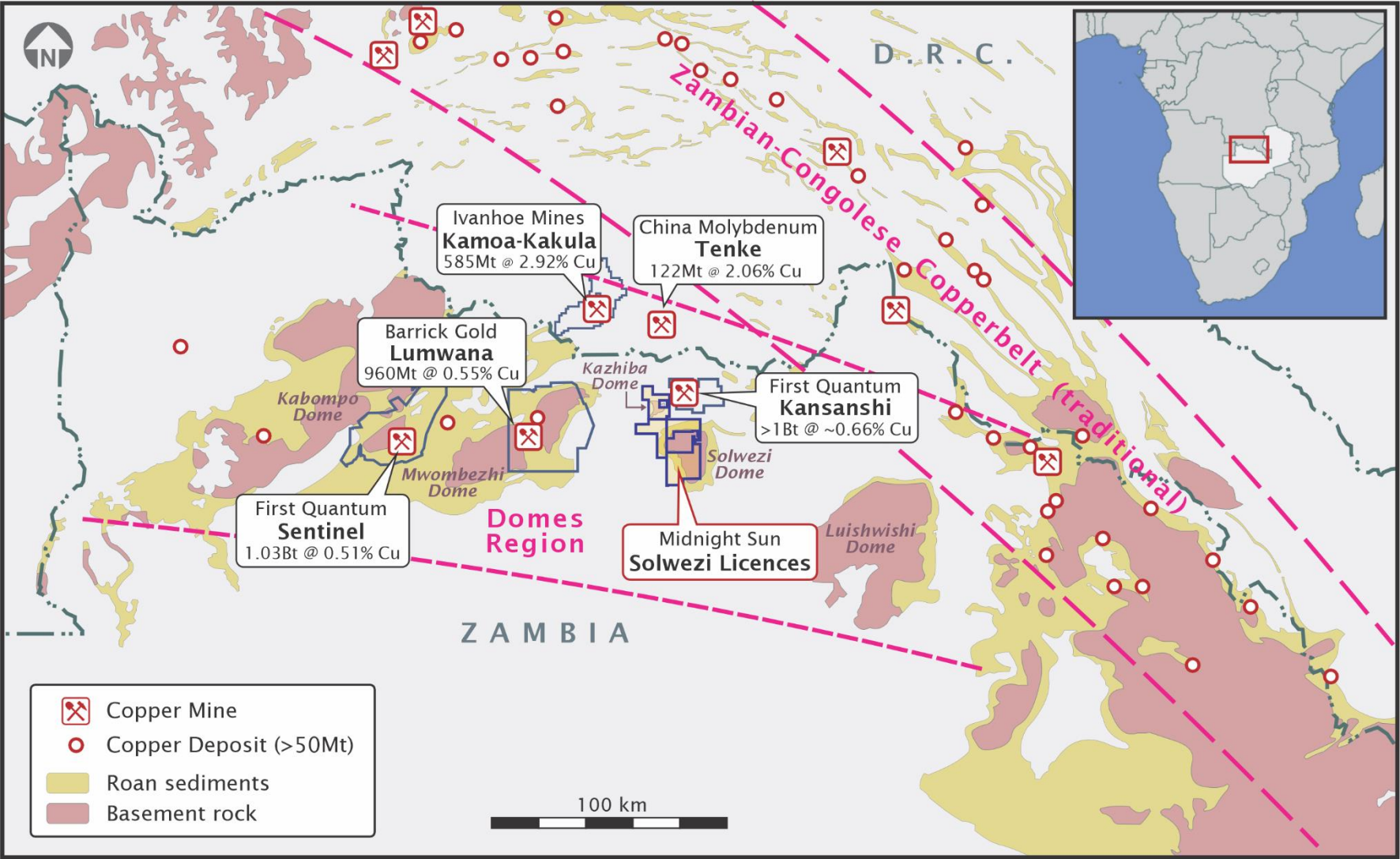
Home to world class mines and world class mining companies including First Quantum, Barrick, Rio Tinto, Anglo and KoBold

English language, Trained population/workforce

Zambia possesses one of the world's highest-grade deposits of copper and is globally ranked as a top copper producer



# Located In The Heart Of The **Zambian-Congo Copper Belt**



# Surrounded By World-Class Producers

## KANSANSHI (First Quantum)

**>1 billion tonnes at ~0.66% Cu** and 4 million oz of Au  
~10 km from Midnight Sun  
**Africa's largest copper mining complex<sup>1</sup>**

## LUMWANA (Barrick)

**960 million tonnes at 0.55% Cu<sup>2</sup>**  
~20 km from Midnight Sun

## SENTINEL (First Quantum)

**1.03 billion tonnes at 0.51% Cu<sup>3</sup>**  
~120 km from Midnight Sun

## KAMOA KUKULA (Ivanhoe)

**585 million tonnes at 2.92% Cu<sup>4</sup>**  
~190 km from Midnight Sun, located in DRC

## TENKE FUNGURUME (China Moly)

China Molybdenum acquired **80% of the asset for \$3.79B USD<sup>5</sup>**  
~90 km from Midnight Sun

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

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

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

4) Source: <https://ivanhoemines.com/projects/kamoa-kakula-project/>

5) Public Information

# Surrounded by World-Class Producers

## The Importance of 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)

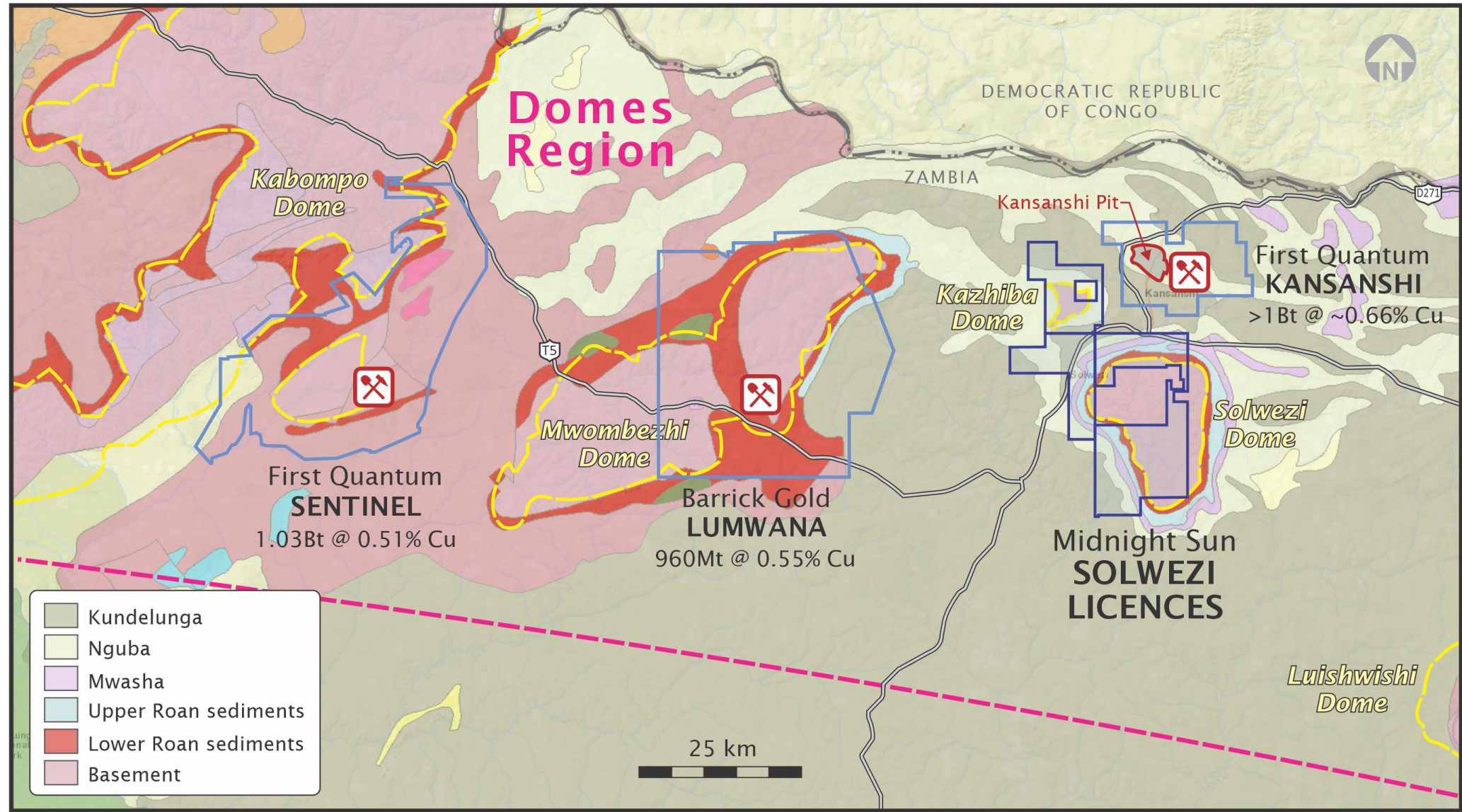
16.5 m of 0.93% Cu incl 5 m of 1.36% Cu (Dumbwa)

11.6 m of 3.44% Cu (Mitu)

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



# Surrounded By World-Class Producers and Operators



# Size and Scale – The Great Differentiator

## Our **Zambian Targets**

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

**B**illions of tonnes of copper ore

not

**M**illions of tonnes of copper ore

We are targeting the discovery of multi-generational copper deposits.

# Multiple Unique Opportunities For A Transformative Discovery

## DUMBWA

- Continuous high-grade copper-in-soil anomaly for **over 20 km** along strike and about 1 km wide with peak values up to **0.728% Cu**
- Multiple stacked mineralized horizons analogous to Lumwana deposit
- Extensive oxide copper

## KAZHIBA DOME (22 ZONE)

- Multiple drill intercepts of high-grade copper oxide
- Kazhiba Dome – 22 Zone discovery hole: **11.3 m grading 5.71% Cu**, near surface
- Extensive oxide copper

## MITU TREND

- Copper mineralisation style and grade similar to Sentinel Mine, associated with cobalt, nickel, and anomalous gold
- Series of near surface Cu-Co-Ni-Au intercepts
- Copper / cobalt mineralization in shales and Kansanshi style veins, including **11.6 m grading 3.44% Cu and 11.5 m of 1.41% Cu**
- Extensive oxide copper

## CRUNCH ZONE

- Newly identified structural target
- Major structural boundaries compressed between domal structures
- Potential for localizing & concentrating Cu-bearing fluids
- Geochemical anomalism confirmed
- Largely untested VTEM conductive anomaly
- Occuring in the same stratigraphy as First Quantum's Kansanshi Mine

## OVERALL OXIDE POTENTIAL

- Goal: >50 million tonnes at 0.3% Cu
- Represents an attractive opportunity for an existing local operator or new entrant to the world-class Zambia-Congo Copperbelt to achieve near-term production

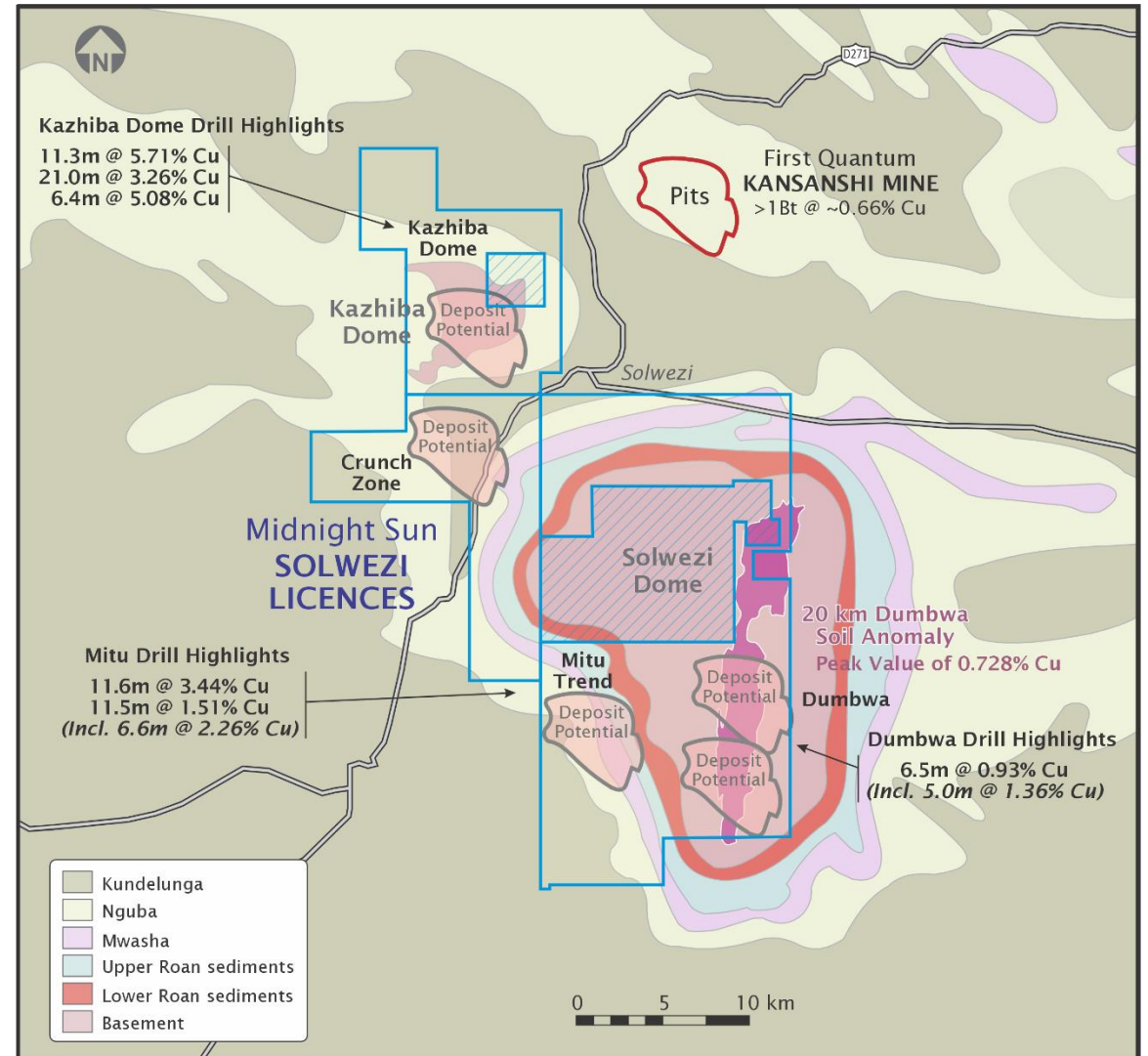


# Multiple Unique Opportunities For A Transformative Discovery

506<sup>2</sup> kilometres of key geology, and room for multiple, separate geological systems within the boundaries of our property

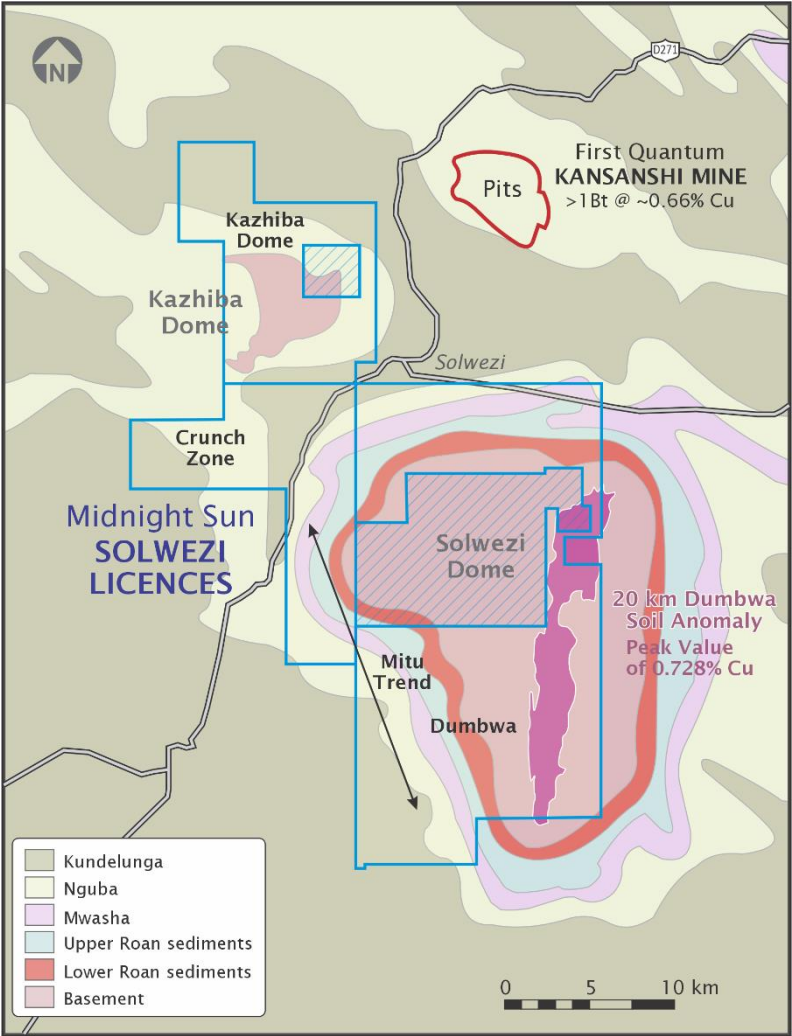
Dumbwa, Kazhiba, Crunch and Mitu, each represent a significant and unique opportunity for a transformative, multi-generational deposit

Multiple significant discoveries already made, across our property



# Multiple Targets - Multiple Opportunities

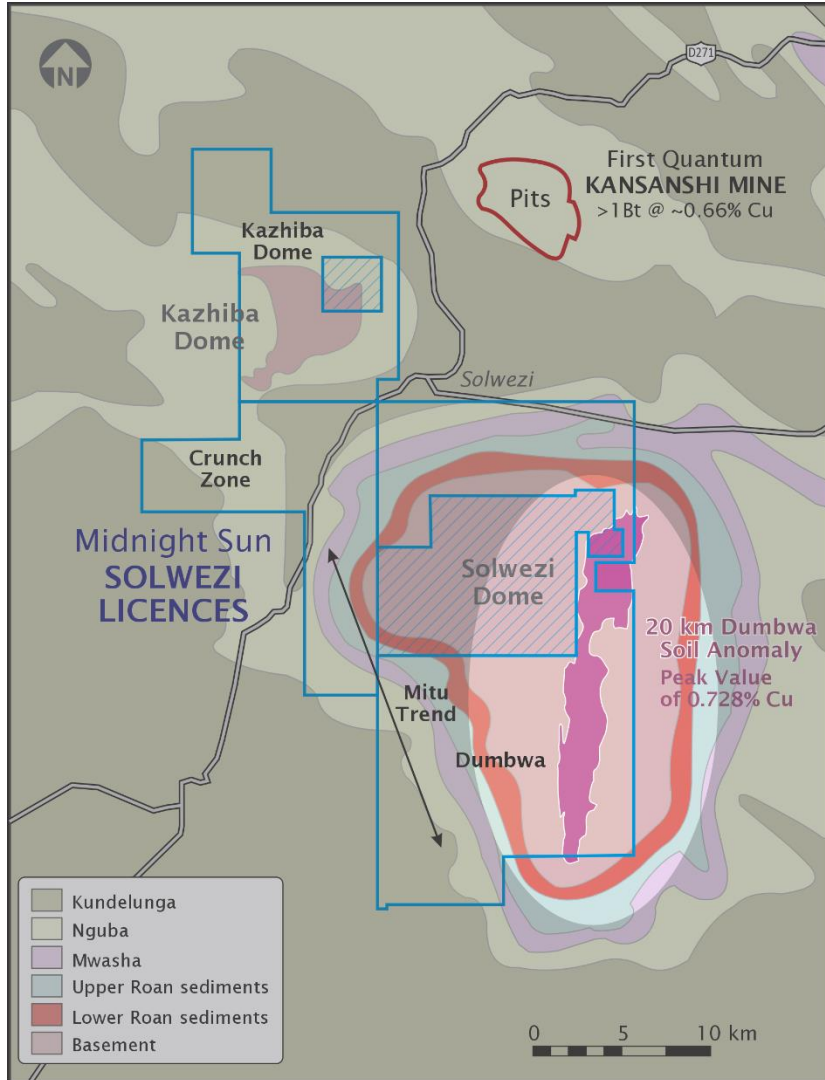
## MULTIPLE OPPORTUNITIES FOR TRANSFORMATIVE DISCOVERY



- Dumbwa
- Kazhiba Dome (22 Zone)
- Mitu Trend
- Crunch Zone
- Oxide Potential (Entire property package)

# Multiple Targets

## 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 Dumbwa soil anomaly is the strongest on record in Zambia

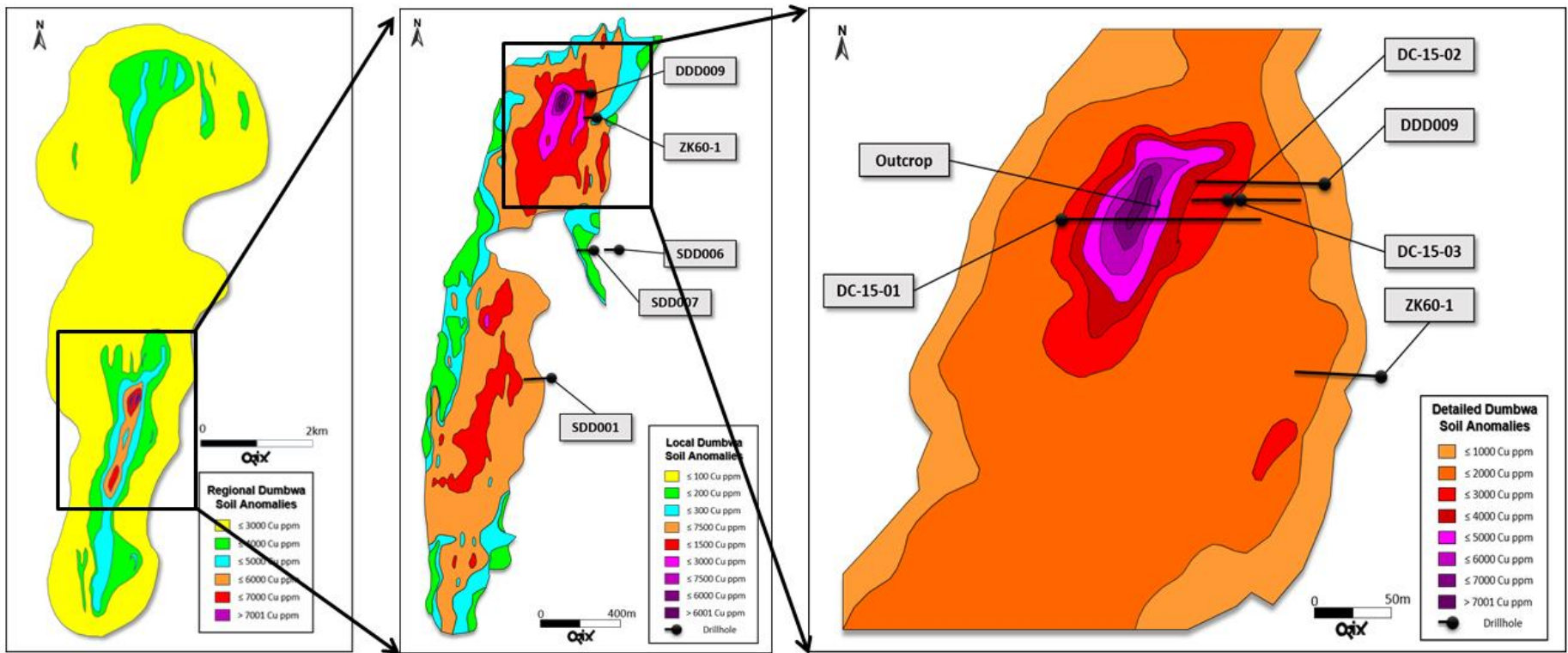
Multiple stacked mineralized horizons analogous to Barrick's Lumwana

Further drill campaigns guided by structural controls are necessary to establish dip direction, continuity, size, and scale

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



# 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

## Kazhiba Dome

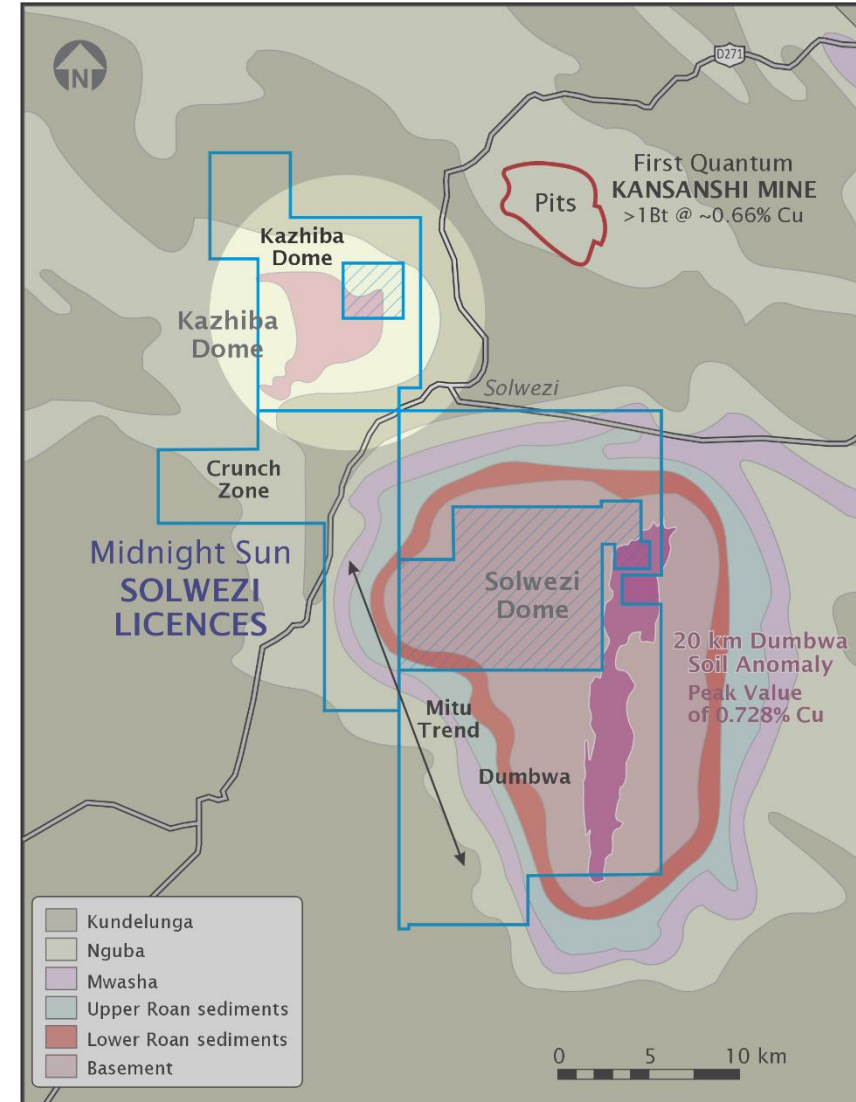
### KAZHIBA DOME HIGHLIGHTS

Located ~20 km NW of the Solwezi Dome and less than 10km from the western gate of 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

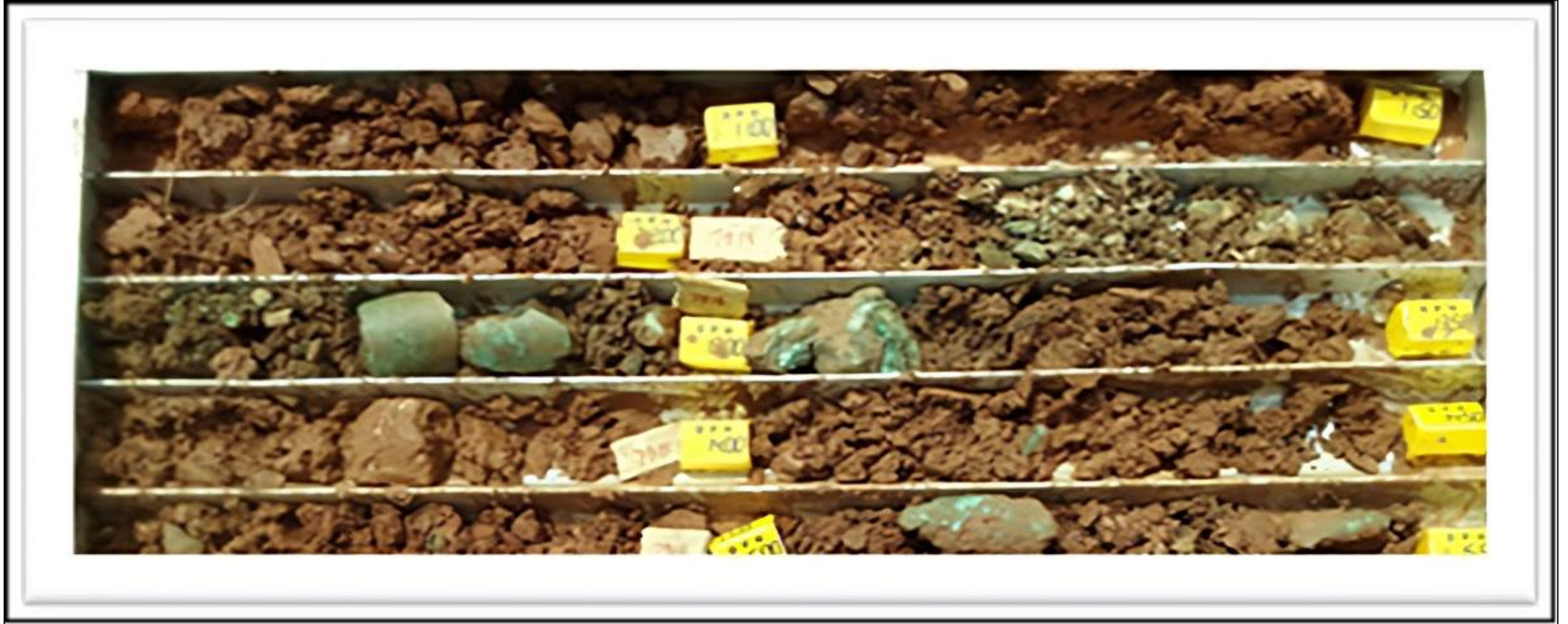
## DRILL HIGHLIGHTS AT KAZHIBA DOME INCLUDE:

- 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

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



High grade oxide copper mineralization (malachite) from SLZ-DD-14-010 drilled on the 22 Zone: **5.71% Cu over 14.2 (11.3 true) metres**

# Multiple Targets

## Mitu

### MITU HIGHLIGHTS

Analog - Copper mineralisation style and grade similar to Sentinel Mine just 100 km to the west<sup>2</sup>

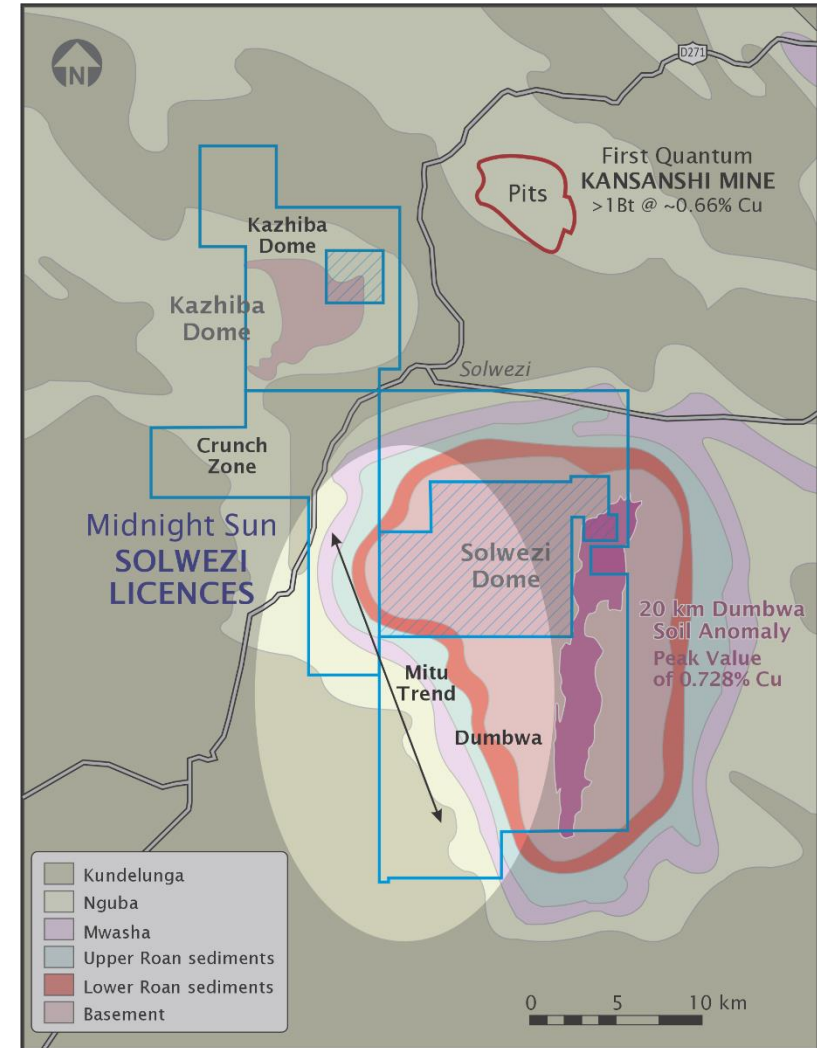
Copper mineralisation intercepted at Mitu is associated with cobalt, nickel, and anomalous gold

2022 field season, consisted of 7 holes at the Mitu Trend target area

Drilling intercepted Copper/cobalt mineralization in shales and Kansanshi style veins, including **11.6 m of 3.44% Cu** and **11.5 m of 1.41% Cu**

“Ore-shale” type mineralization on the flank of the Solwezi Dome

Recent discovery of structurally controlled Kansanshi-style mineralized veins which represent an additional mineralizing event in the area





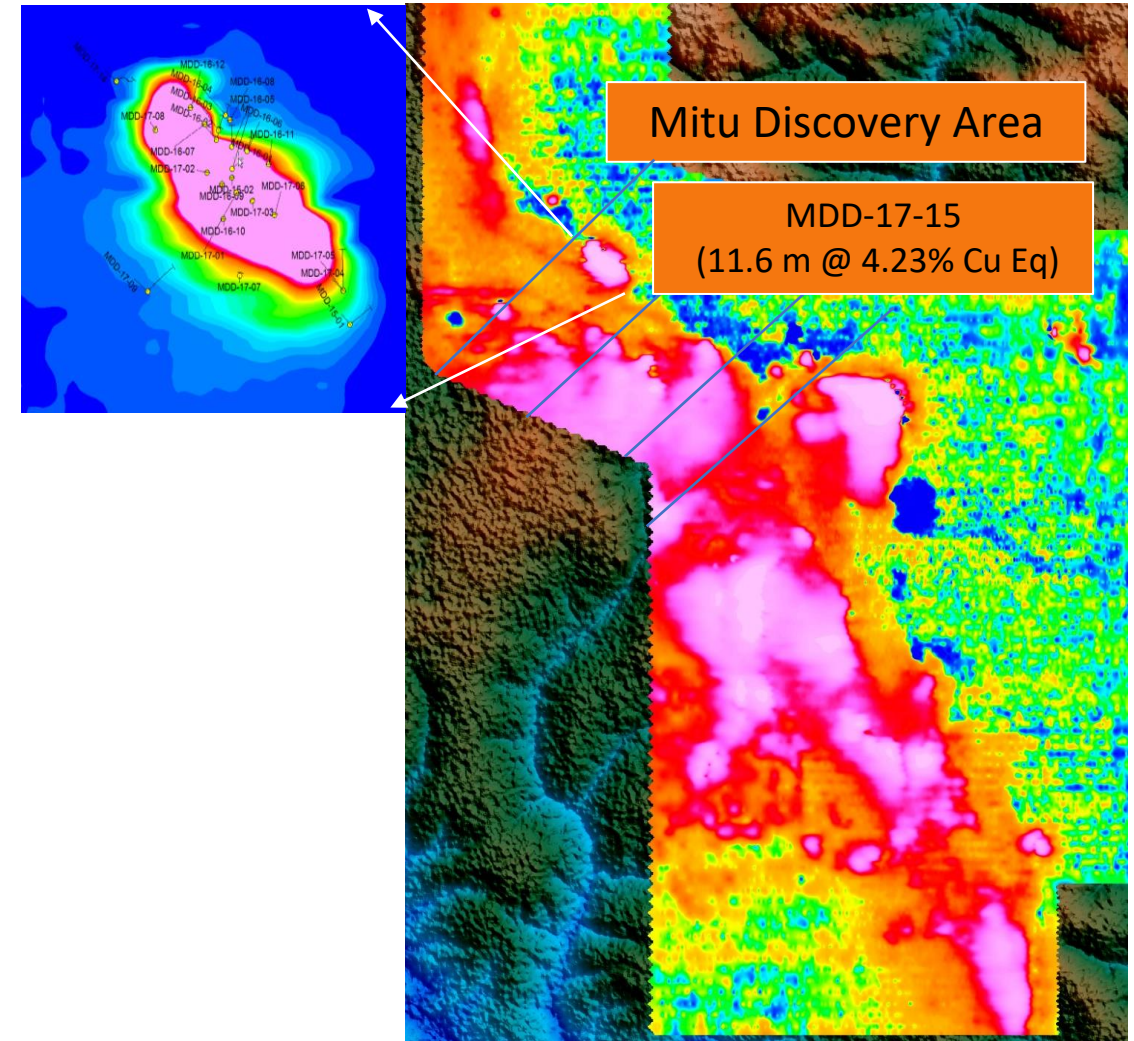
# Mitu

New geophysical and geochemical data highlighted NE/SW structural controls cross cutting the Mitu Trend

Recent drilling has confirmed these structures contain Kansanshi-style mineralized veins

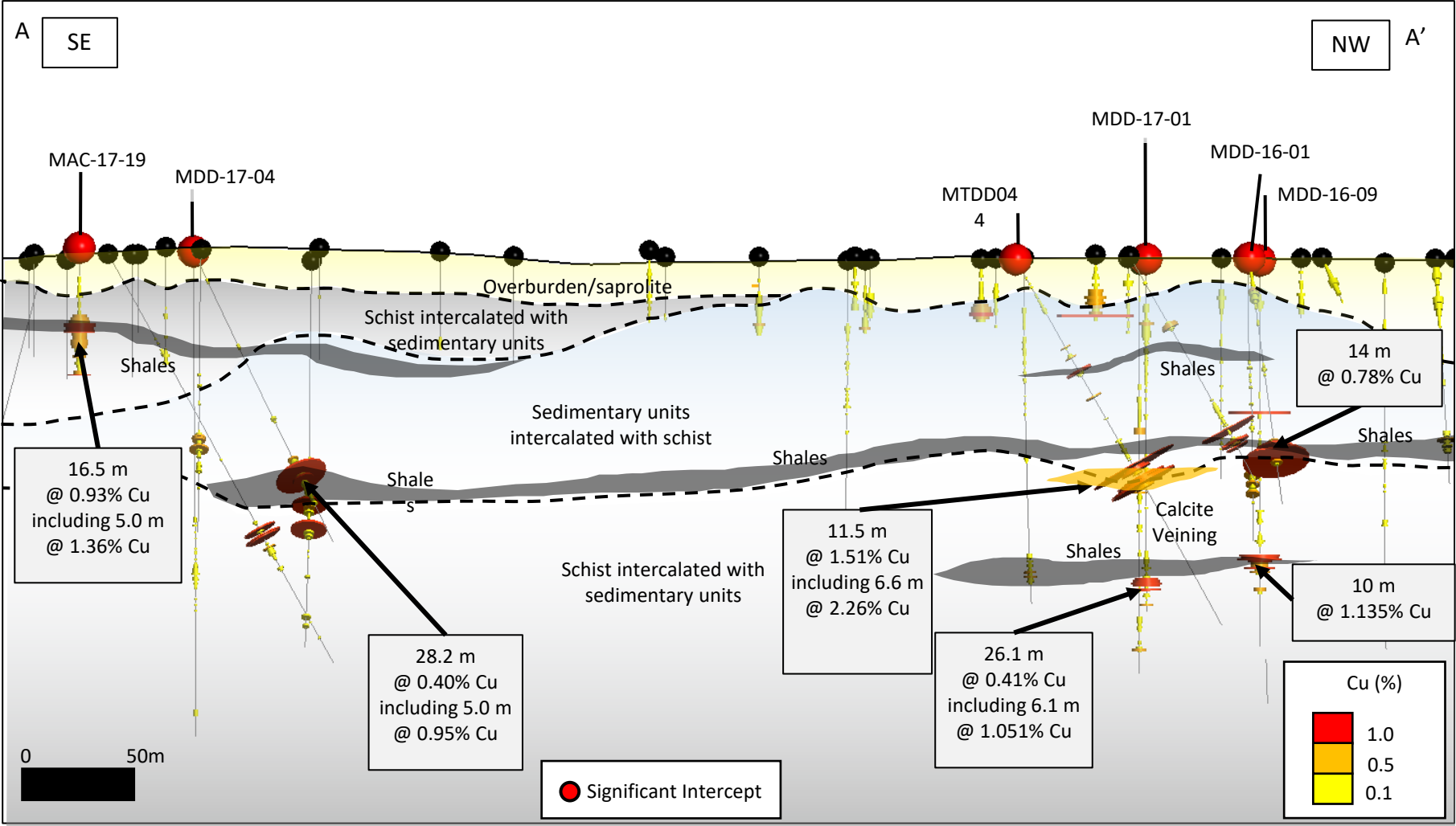
To date, drilling has primarily been done on the Mitu Discovery Area

This drilling delineated a 1 km x 500 m area of mineralization

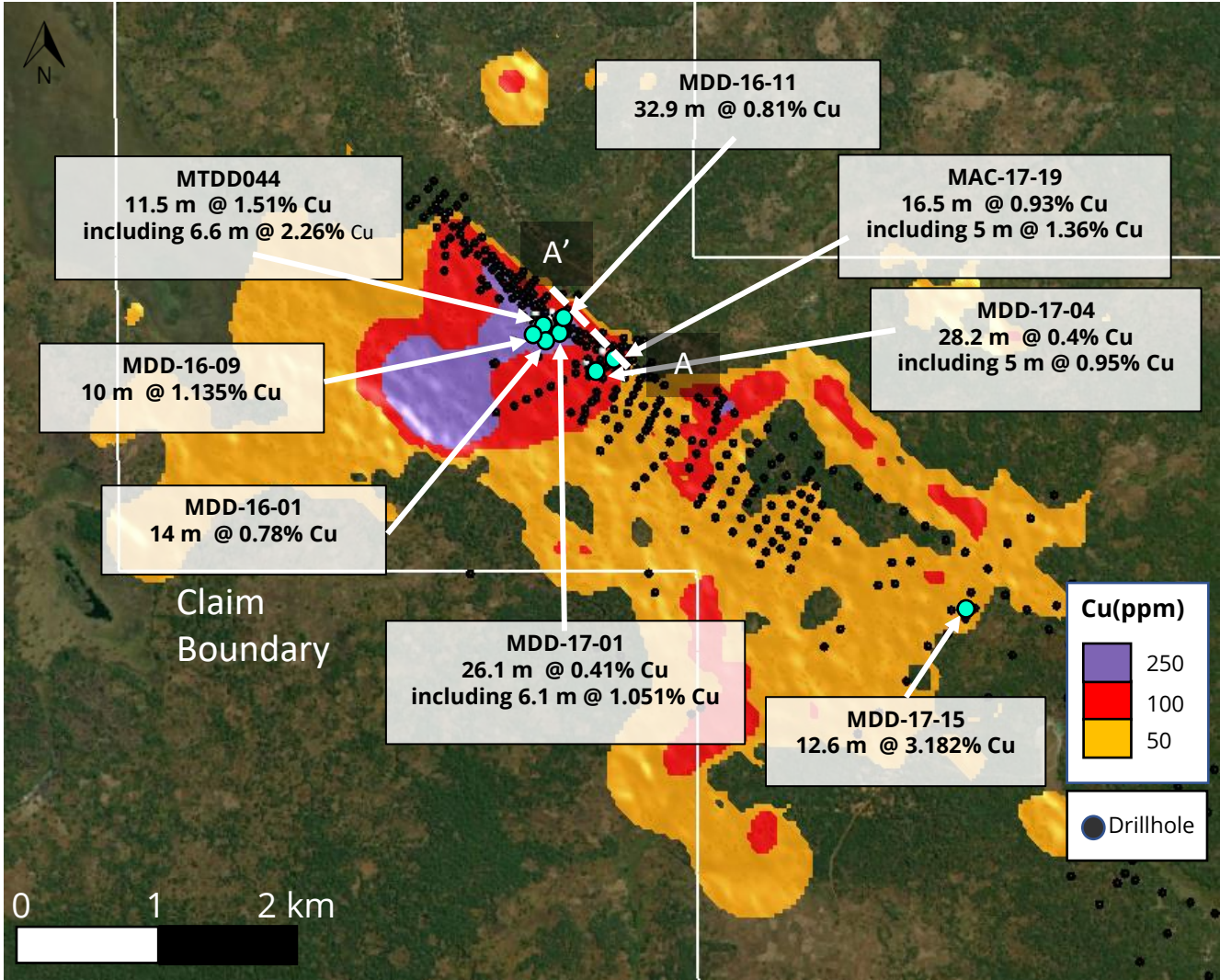




CROSS SECTION OF MITU DISCOVERY AREA



PLAN VIEW OF ORIGINAL DISCOVERY AT MITU





# 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

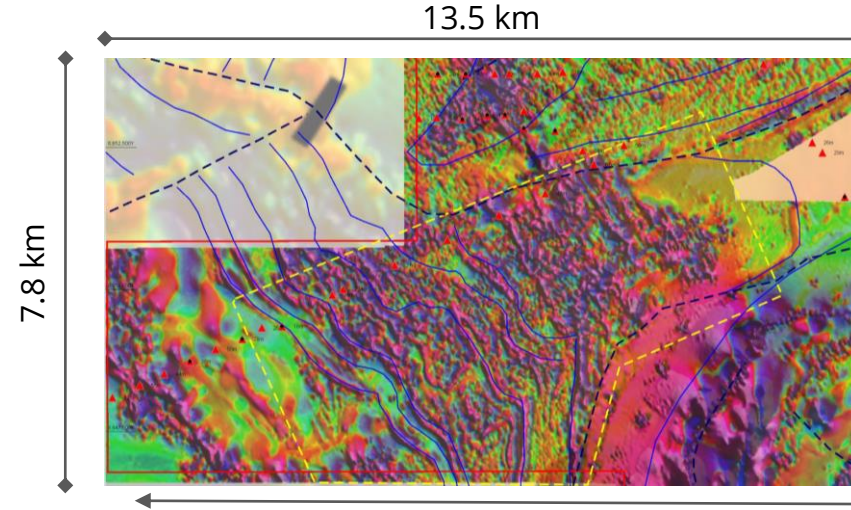
MDD-16-09 - 9.4 m of 1.03% Cu, 0.14% Co, and 0.04% Ni

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 – Crunch Zone

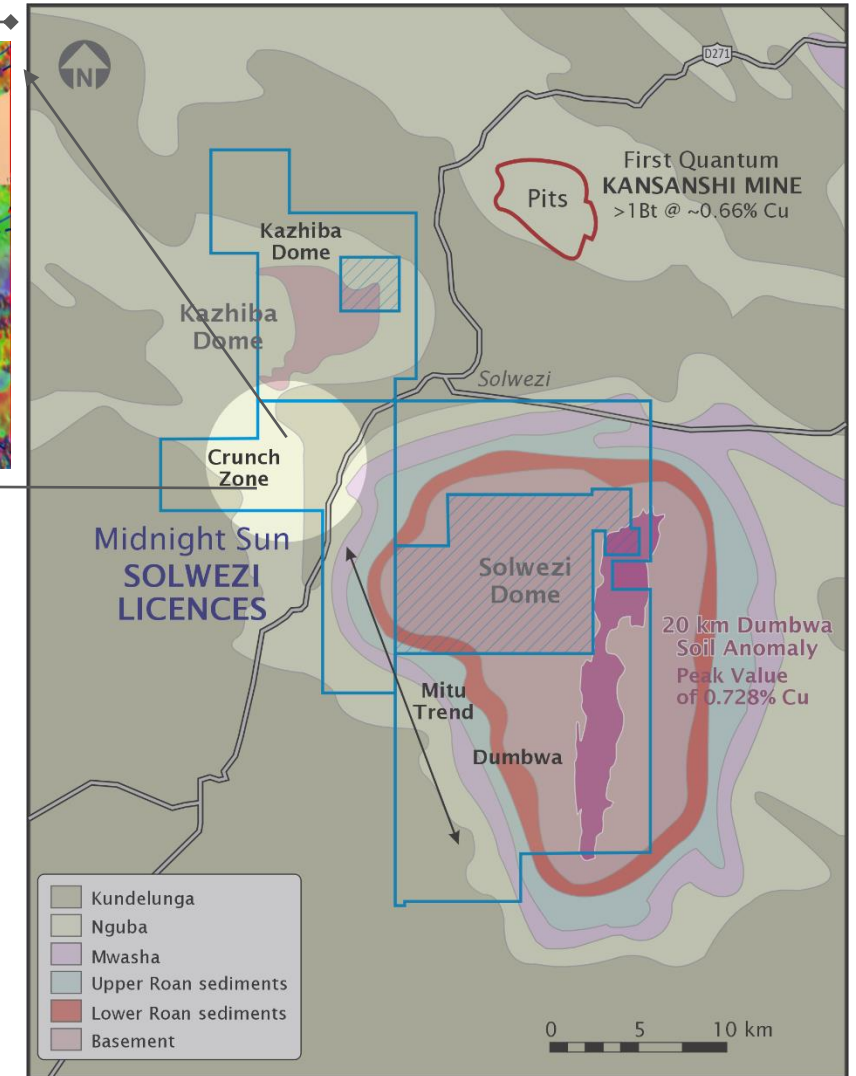


## CRUNCH ZONE HIGHLIGHTS

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



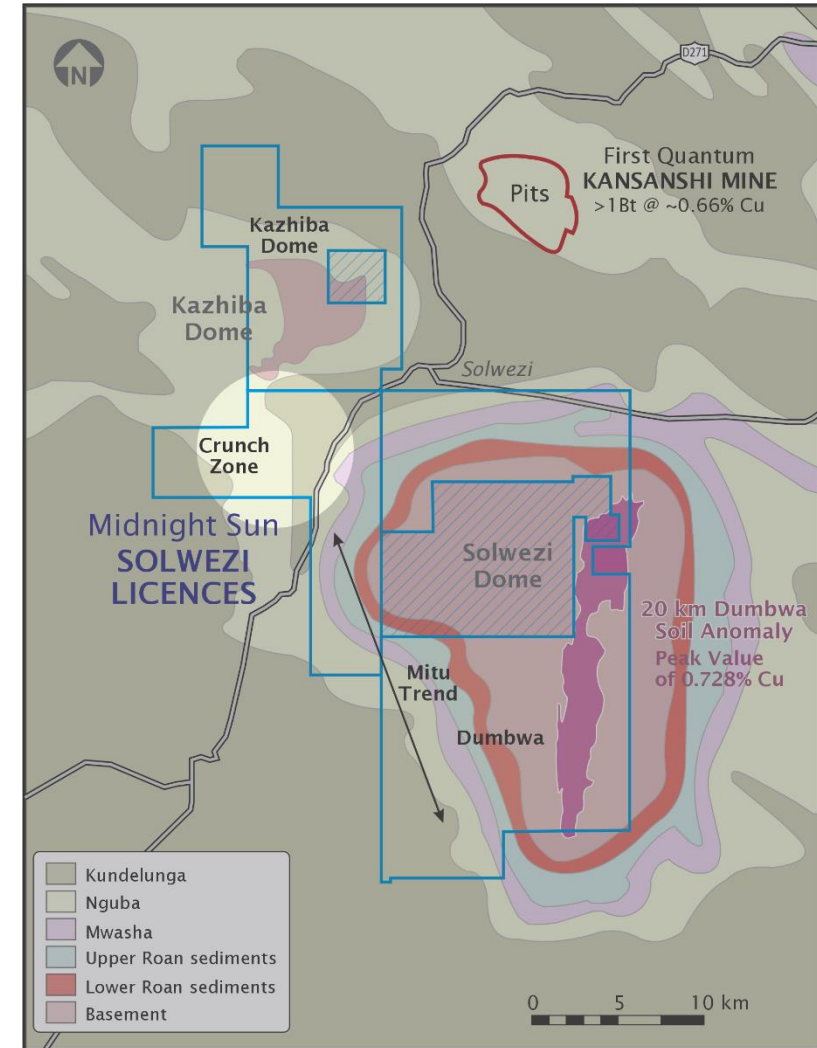


# Crunch Zone

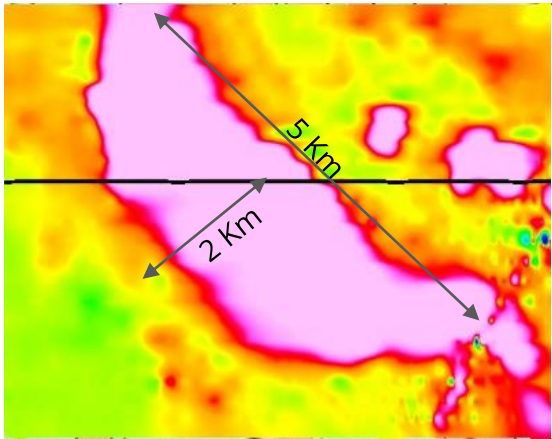
A VTEM survey identified the largest untested continuous EM conductive target/anomaly on the property

The trend occurs in the same stratigraphy as that surrounding the neighbouring Kansanshi Mine

Untested & continuous for +5 km in length and 2 km strike

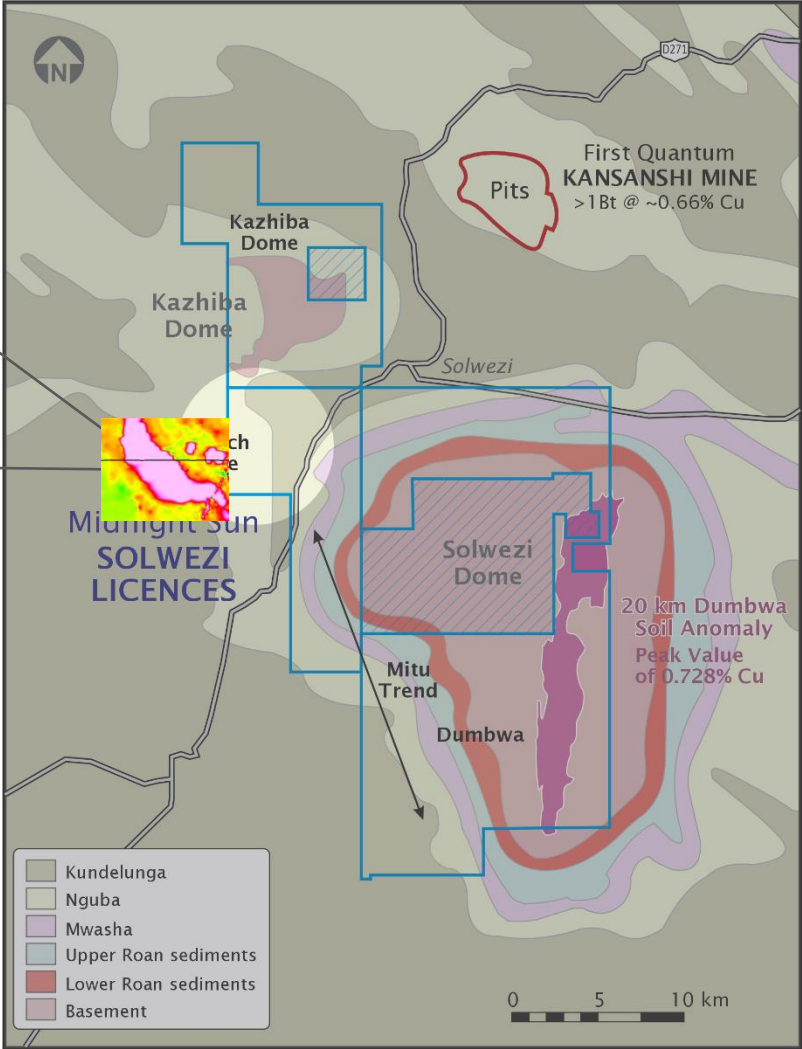


# Crunch Zone



Size and scale shown by this anomaly makes it clear that appropriate investigation and attention is warranted

This conductive trend represents a potential new discovery



# Oxide-Copper Across Our Property

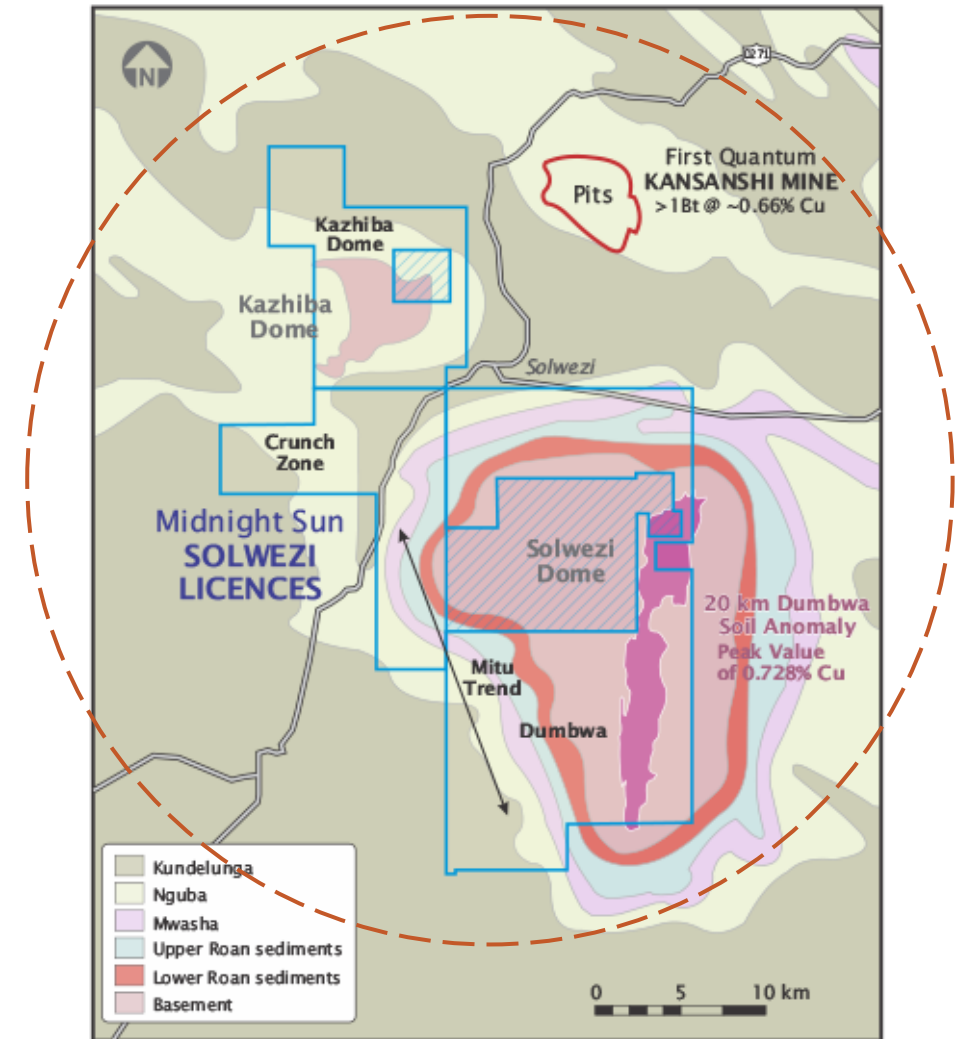
## OXIDE COPPER - A NEAR-SURFACE, NEAR TERM MINING OPPORTUNITY

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 significant annual revenue for Midnight Sun





# 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, including Africa's largest copper producer 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 have increased demand and market pricing over the next decade
- We have an experienced geological team with multiple discoveries and mines around the world to their credit





# 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



# 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



## **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



## **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



## **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



## **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



## **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



## **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



## **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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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  
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