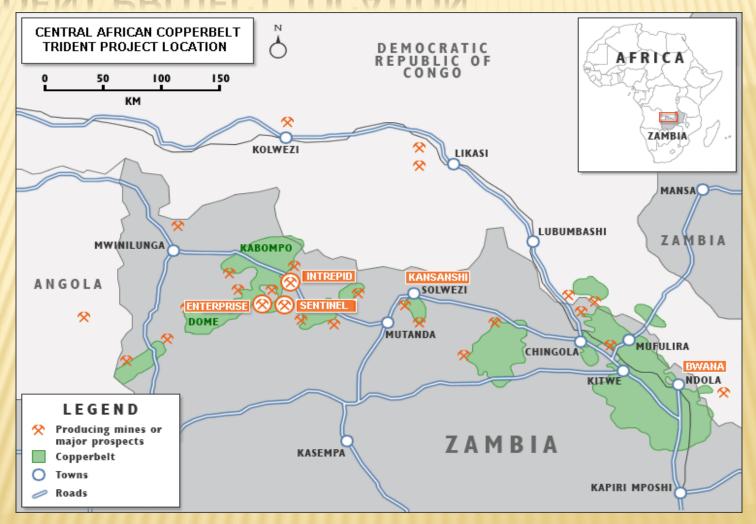


# TRIDENT PROJECT LOCATION





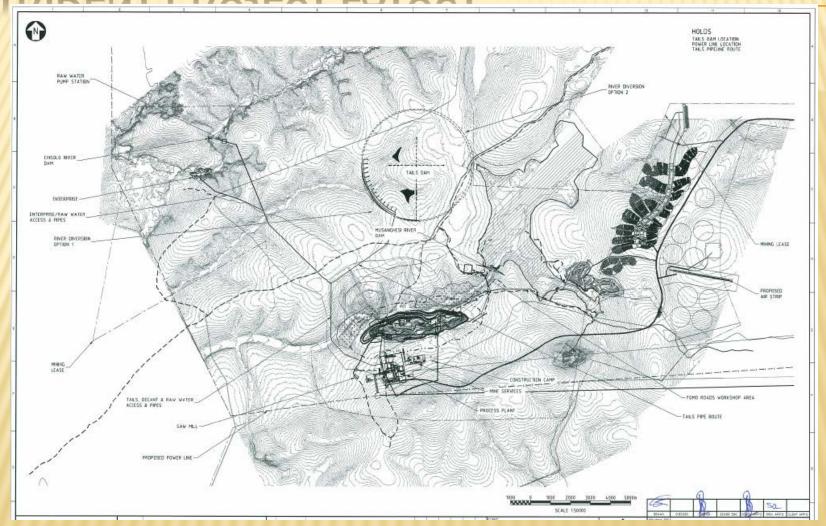
## ABOUT THE TRIDENT PROJECT

#### **Trident Project:**

- Located in the Solwezi District of Northwestern Province, Zambia
- Approximately 150km from Solwezi on the T5 main road to Mwinilunga
- Comprises five prospecting large scale licences
- A number of attractive base metal prospects including the Sentinel deposit and the Enterprise deposit
- 5 x large-scale mining licences awarded 20 April 2011 for 25 years tenure
- Land use agreement signed 14 July 2011
- EIA approved 8 July 2011 and Addendum 12 August 2013
- Resettlement Action Plan approved 15 October 2013



# TRIDENT PROJECT LAYOUT





### SENTINEL MINE

## IN CONSTRUCTION - COMMISSIONING MID 2014

#### **Updated resource published May 2012:**

514 boreholes for 172,692m defined an NI43-101 resource of:

Total measured & indicated : 1,027Mt @ 0.51% Cu

Inferred: 165Mt @ 0.42% Cu

Cut-off: 0.2% Cu

Mineral Reserve: 774 Mt @ 0.50% Cu

Proved: 476 Mt @ 0.52% Cu

Probable : 298 Mt @ 0.47%Cu.

Strip ratio 2.2 : 1

#### Mine planning:

 Grade of 0.5% Cu requires a high throughput of 55 Mtpa to achieve production target of 280 – 300,000t Cu per annum.

Sentinel will put Zambia at the forefront of global mining technology



## **ENTERPRISE MINE**

# IN APPROVAL - EARLY WORKS UNDERWAY

#### Maiden resource published December 2012:

- 359 boreholes for 116,000m defined an NI43-101 resource of:
  - Total measured indicated : 40.1Mt @ 1.07% Ni
  - Inferred: 7.1Mt @ 0.70% Ni
  - Cutoff : 0.15% Ni
- Mineral Reserve: 32.7 Mt @ 1.10% Ni
- Further potential to expand Mineral Resource and Reserve on the Enterprise
  South West Zone

#### Mine planning:

 Resource confirms potential for an operation producing on average 38,000 Ni per annum with scope to increase to 60,000t Ni per annum

**Enterprise to share infrastructure with Sentinel** 



## REGIONAL EXPLORATION

#### Regional exploration:

- Over US\$60m expenditure on exploration to date across Trident.
  - Airborne magnetic, radiometric and time domain electromagnetic surveys and geological mapping over all licences
  - Soil geochemical sampling over all licences amounting to 20,652 samples
- Regional target drilling to date amounts to 101 boreholes for 26,960m

Potential for further expansion of the mines, including possibly at Intrepid



# SENTINEL MINE UNDER CONSTRUCTION



## ABOUT THE SENTINEL MINE - PROJECT SCOPE

- 55Mtpa target throughput
- 3 semi mobile in pit crushers and assembly of large scale mining equipment
- Largest operating SAG/Ball mill trains in the world (100MW milling power)
- 265,000t of freight = 14,500 truckloads of materials
- 2 rivers to be dammed/diverted
- Life of mine TSF
- 600km of ZESCO 330kV power transmission lines from Lumwana Kalumbila Lusaka
  West
- 690 staff houses plus 590 houses in resettlement
- Development of a new town, airport, clinic, school etc....

Zambia's largest single development project in recent times



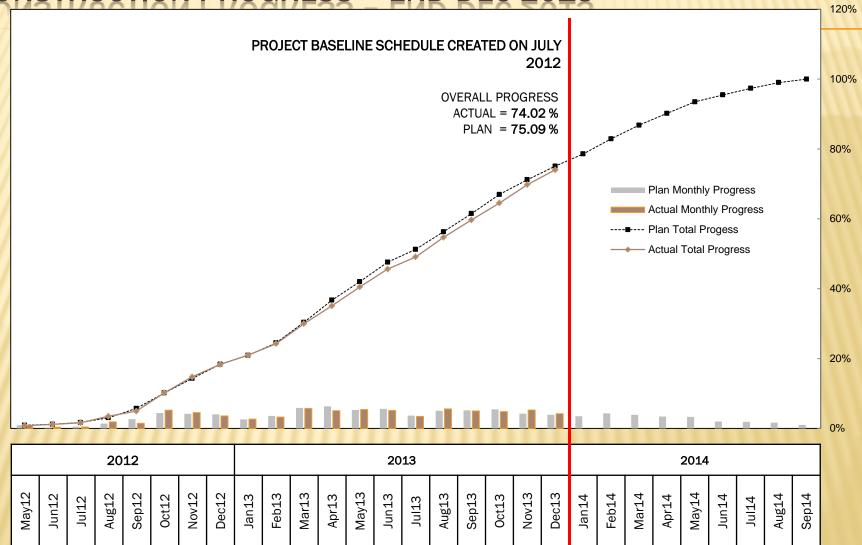
#### PROGRESS PHOTOS – SENTINEL PLANT AREA



AERIAL PHOTO 31-DEC-2013



### CONSTRUCTION PROGRESS - END DEC 2013





# CAPITAL EXPENDITURE - END DEC 2013

SENTINEL PROJECT COST REPORT						
AREA / COST \$M	Budget Estimate	Approved Changes	Current Budget	Committed	Forecast	Incurred to Date
TOTAL	\$1,725.0	\$159.8	\$1,884.8	\$1,706.9	\$1,884.8	\$1,213.3

#### Schedule:

Train 1 = commissioning Q2 2014

Train 2 = commissioning Q4 2014, depending on smelter and power

Achievement of commercial production levels will run into 2015.



# EMPLOYMENT - END DEC 2013

Department	Local	Expat	Filipinos / Indonesians	TOTAL
Infrastructure	524	11	105	640
FQML Plant	688	26	412 / 144	1270
Operations and Support	526	30	-	556
FQMO Roads	670	15	-	685
Subcontractors	1456	115	-	1571
Overall Manpower	3,864	197	661	4,722
Percentage (%)	82%	4%	14%	100%

#### Safety record:

 The project has recorded a total of five lost time incidents at 13,415,504 man-hours completed. LTI rate is 0.060



# 3 X ROPE SHOVELS - 1,350T, 57M3 BUCKET







# 3 X PCX5500 LOADERS - 205T, 21M3 BUCKET





# 36 X TRUCKS - 21 X 960E + 15 X 860E



# IN PIT CRUSH - 3 X (THYSSENKRUPP) 63-89 20MTPA





# 100MW MILLING - 2 X 40'SAG + 2 X 28'BALL





#### PROGRESS PHOTOS – PLANT AREA



MILL BUILDINGS 31-DEC-2013



STOCKPILE VAULT 20-JAN-2014



FLOTATION AREA 31-DEC-2013



**CONVEYOR LINE 21-JAN-2014** 



#### PROGRESS PHOTOS – PLANT AREA



CABLE PULLING 31-DEC-2013



**CLEANER FLOTATION 2-JAN-2014** 



**ROUGHER FLOTATION 31-DEC-2013** 



TAILS THICKENER 31-DEC-2013



#### PROGRESS PHOTOS – PLANT AREA



REAGENTS, DEPRESSANTS AREA & PIPERACK LINE 31-DEC-2013



CRUSHER ASSEMBLY YARD 31-DEC-2013

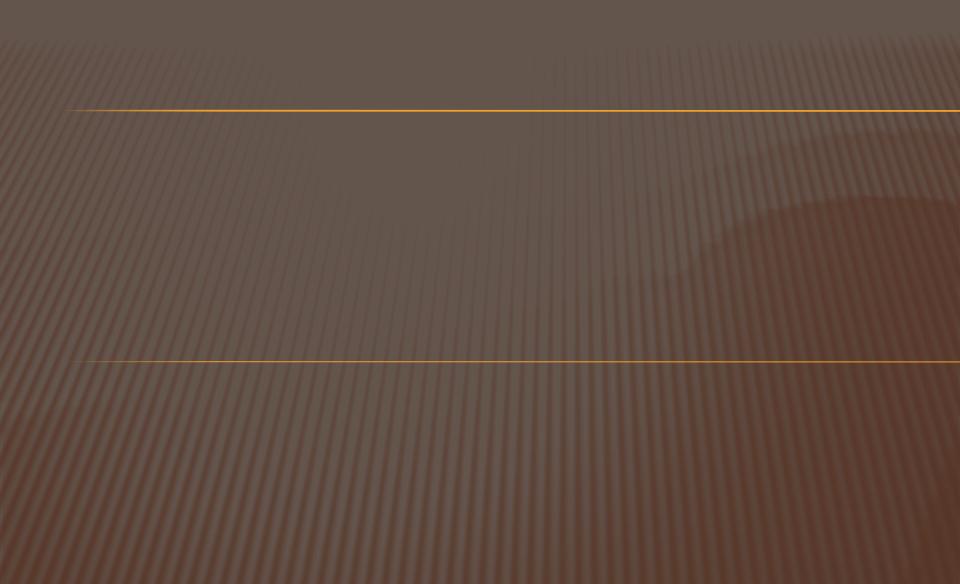


CONCENTRATE STORAGE BUILDING 31-DEC-2013



CAT EQUIPMENT ASSEMBLY YARD 31-DEC-2013







#### PROGRESS PHOTOS – MINE AREA



MSA, RUBBER TYRE WORKSHOP 31-DEC-2013



MINING EQUIPMENT AT BOX CUT 2-JAN-2014



MSA, KOMATSU ASSEMBLY YARD 31-DEC-2013



NORTHWEST BOXCUT AERIAL PHOTO 01-DEC-2013



#### PROGRESS PHOTOS – INFRASTRUCTURE



CHISOLA DAM INLET 20-JAN-2014



**RAW WATER LINE 2-JAN-2014** 



CHISOLA DAM, OUTLET PIPE & TUNNEL 2-JAN-2014



33KV SITE POWER 02-SEPT-2013



#### PROGRESS PHOTOS – ZESCO SUBSTATION



ABB SWITCHYARD, EAST GANTRY FOOTINGS 01-NOV-2013



POWERLINE CLEARING & EARTHWORKS 20-DEC-2013



ABB SWITCHYARD, CONTROL BUILDING FDN 01-NOV-2013



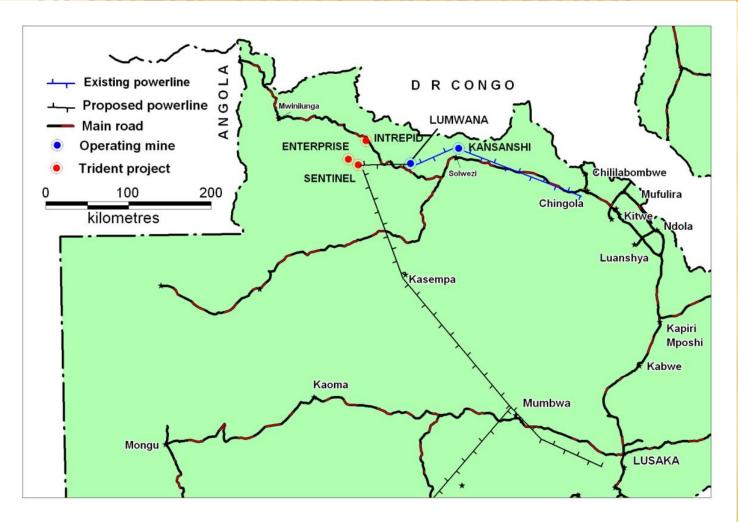
ABB SWITCHYARD 30-DEC-2013



# POWER LINE DEVELOPMENT CONNECTING THE WEST OF ZAMBIA



## **UPGRADES TO ZESCO NETWORK**





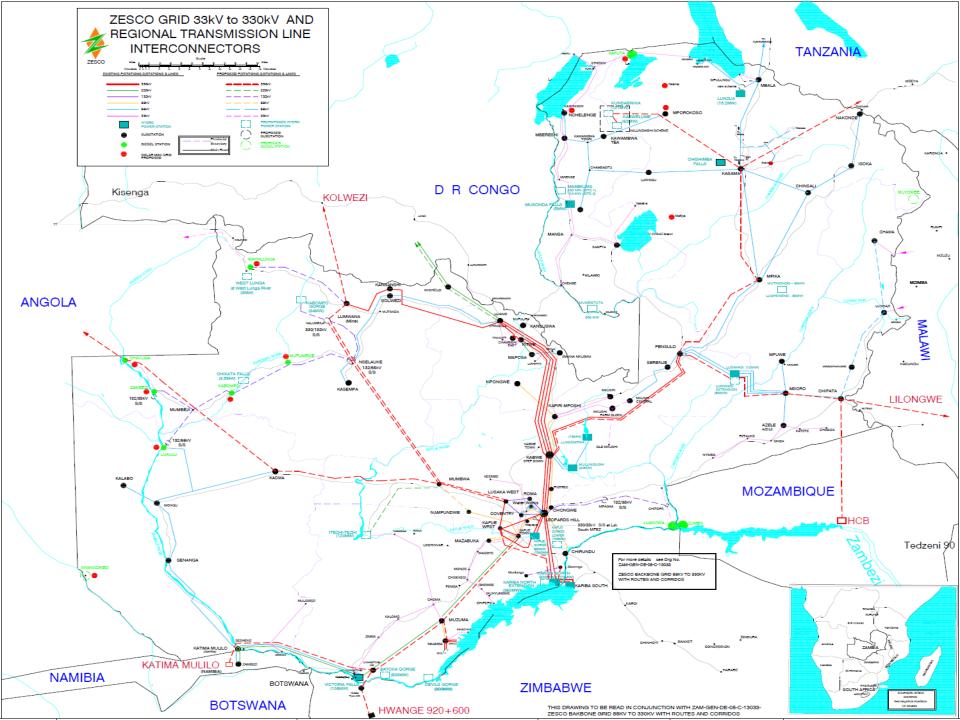
## ZESCO POWER INFRASTRUCTURE PROJECT

#### First Quantum commitments to ZESCO grid upgrades:

- First Quantum to provide upfront finance :
  - 68km Lumwana Kalumbila 330kV transmission line + substations;
  - 400km Kalumbila Mumbwa 330kV transmission line;
  - 145km Mumbwa Lusaka West 330kV transmission line;
  - Upgrades to Kansanshi substation.
- ZESCO (ADB & EIB finance) will build:
  - Lusaka West + Mumbwa substation.



ZESCO KANSANSHI SUBSTATION WORKS 20-JAN-2014



# TOWN DEVELOPMENT UPFRONT INVESTMENT IN THE COMMUNITY



## **ABOUT THE NEW TOWN**

Located in the Solwezi District of Northwestern Province, Zambia:

- Approximately 150km from Solwezi on the T5 main road to Mwinilunga
- At the heart of the 'New Copperbelt'

Proper planning and services for 10,000 homes

- Town plan approved by Solwezi Council on 7 March 2012
- EIA approved by ZEMA on 12 August 2013

Town name must be chosen and approved by Government

**Vision Statement** 

Kalumbila town to grow into one of the best new towns in Zambia, if not Africa.



## TOWN - POTENTIAL SCOPE



Potential employment	Total
Direct – KML Operations	2,000
Indirect – Mine Contractors	1,000
Multiplier Jobs	6,000 – 8,000
TOTAL	Approximately 10,000

Potential housing	Total
KML committed – Phase 1	690
KML likely – Phase 2	900
Third parties	7,000 – 9,000
TOTAL	Up to 10,000

At these numbers the new town at Kalumbila will reach possibly 50,000 residents within 3-5 years.



# **EXPERTLY DESIGNED & FULLY SERVICED TOWN**



Town design by Zambian and international firms.

Water, sewerage and waste

- 11 Jul 2012 MOU signed with NWW
- Weekly waste collection

Metered electrical reticulation

- 31 Jan 2013 Contracts signed with NWEC
- 28 Nov 2012 ZESCO agreement signed

#### Roads:

- First Quantum construction RDA
- Paved roads with street lights and separate bike paths & sidewalks

Clinics, schools, police station and recreation.



## MFEZ TO ENCOURAGE LOCAL BUSINESSES

#### Application to ZDA for MFEZ status:

- Substantial tax incentives to businesses setting up in the area:
  - 1. 0% tax for first 5 years, next 3 years at 50%, next 2 years at 75%;
  - 2. 0% tax on dividends for a period of 5 years;
  - 3. 0% import duties on raw materials, capital goods, machinery for 5 years;
  - 4. Deferment of VAT on machinery and equipment.
- Further the MFEZ will facilitate increased home ownership:
  - 0% VAT on home purchase, passed through to the homeowner.

The MFEZ provides no direct benefit to the mine – rather it stands to encourage local and international businesses to develop in the town.

This is good for local procurement and regional development. And will generate its own multiplier employment.



### ZAMBIAN INVESTMENT AND JOB OPPORTUNITIES



Business opportunities for:

- Retail;
- Hospitality and tourism;
- Financial services;
- Construction;
- Mine services;
- Manufacturing and light industrial;
- Warehousing and logistics;
- Agricultural services;
- Forestry; and
- Other.

#### Accommodation:

Purchase, rent or self-build

An opportunity to 'get in on the ground floor' of a new sustainable town in Zambia



## WORKER HOUSING - FOR HOME OWNERSHIP



## RESETTLEMENT AND LIVELIHOOD PROGRAM



#### PROGRESS PHOTOS - SENIOR HOUSING



SPORTS FACILITY 04-NOV-2013



SENIOR HOUSING AREA 28-FEB-2013



SENIOR HOUSING - SINGLES 31-MAR-2013



TRIDENT PREPARATORY SCHOOL 05-NOV-2013



#### PROGRESS PHOTOS - AFFORDABLE HOUSING



AFFORDABLE HOUSING LAYOUT



TRUST SCHOOL 05-NOV-2013



TEACHER'S HOME 3-JAN-2014



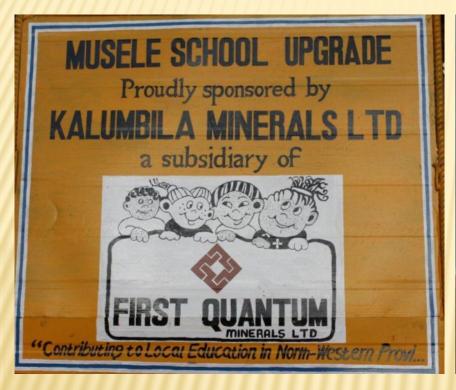
COMPLETED 4-BEDROOM HOUSE 3-JAN-2014



#### **BLOCK PLANT - LOCAL FABRICATION**



## **COMMUNITY PROJECTS - UNDERWAY**







#### PROGRESS PHOTOS - RESETTLEMENT



**RESETTLEMENT HOUSES** 



RESETTLEMENT SCHOOL



RESETTLEMENT HOUSES



RESETTLEMENT CLINIC



#### PROGRESS PHOTOS - CSR



MALARIA SCREENING 01-DEC-2014



LIVELIHOOD SUPPORT 01-DEC-2014



MALARIA SCREENING 01-DEC-2014



LIVELIHOOD SUPPORT



MOSQUITO SPRAYING

