

5 November 2012

## **MUMBWA PROJECT: ASSAYS FROM THE FIRST TWO KAKOZHI HOLES CONFIRM A SEPARATE MINERALISED SYSTEM AT THE MUMBWA PROJECT**

### **KEY POINTS**

- **Assays have been received for drill holes KAKDD\_001, KAKDD\_002 and KITDD\_003.**
- **The following best copper intersections were identified:**
  - **KAKDD\_001 (azimuth 270. Dip -70, EOH 614m)**
    - **202.54m at 0.35% Cu from 15.9m to 218.44m, including**
      - **31.55m at 0.42% Cu from 147m to 178.55m**
      - **8.56m at 0.78% Cu from 185.44m to 194m.**
  - **KITDD\_003 (azimuth 270, dip -85, EOH 602.65m)**
    - **4m at 0.71% Cu from 376m to 380m.**
- **Four drill rigs operating on site have completed 13 holes for approximately 8076m.**

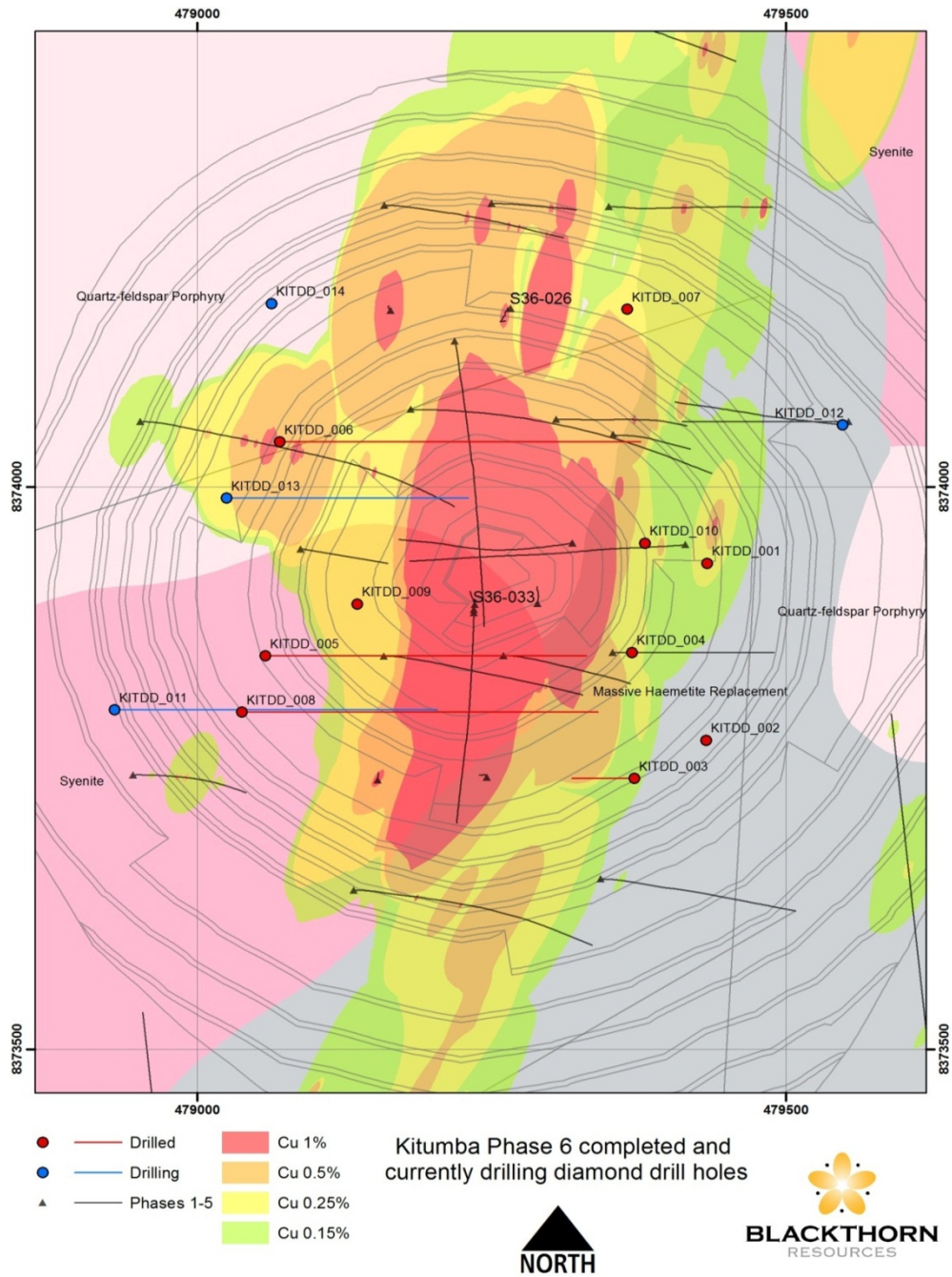
Blackthorn Resources Limited (ASX: BTR) (“the Company” or “Blackthorn Resources”) is pleased to provide assay results for drill holes KAKDD\_001, KAKDD\_002, and KITDD\_003.

KAKDD\_001 was designed to test a coincident gravity anomaly and soil copper geochemical anomaly, drilling west (270) in lithologies prospective for IOCG style mineralisation at the Kakozhi prospect.

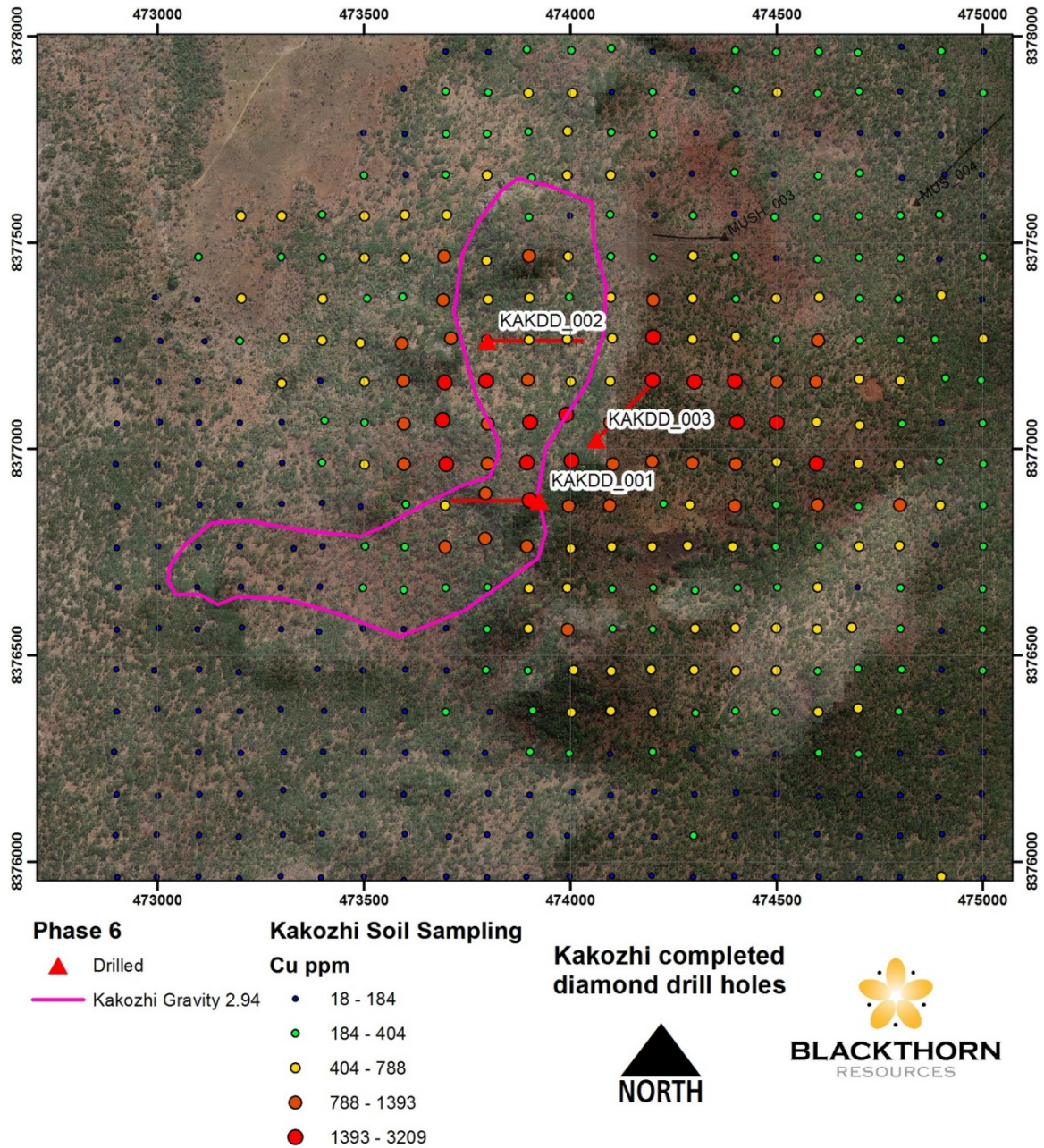
KAKDD\_002 was also designed to test the Kakozhi prospect, drilling east (090) scissoring KAKDD\_001 387m to the north and also through the gravity anomaly.

KITDD\_003 was drilled at -85 to the west (270) and designed to test for shallow mineralisation at the south-eastern extent of Kitumba and several chargeable zones at depth.

The location of drill hole KITDD\_003 is shown in Figure 1 and drill holes KAKDD\_001 and KAKDD\_002 in Figure 2. Drilling parameters for all completed and currently drilling holes are shown in Table 1.



**FIGURE 1** - Phase 6 drill hole location plan for the Kitumba Mineral Resource area showing collar location for KITDD\_003 on surface geology and the surface projections of the 1%, 0.5%, 0.25% and 0.15% Cu shells.



**FIGURE 2** - Kakozhi drill hole location plan showing collar locations for KAKDD\_001, KAKDD\_002 and KAKDD\_003 (results pending) on GeoEye satellite image with the outline of the SG 2.9 gravity anomaly.

**TABLE 1 – Phase 6 completed and currently drilling holes**

BH_ID	X	Y	Z	Azimuth	Dip	EOH
KAKDD_001	473925	8376875	1406	270	-70	614
KAKDD_002	473800	8377262	1373	90	-70	671.5
KAKDD_003	474067	8377029	1422	45	-70	664.9
KITDD_001	479433	8373932	1483	0	-90	329.72
KITDD_002	479432	8373775	1490	0	-90	555.85
KITDD_003	479371	8373741	1481	270	-85	602.65
KITDD_004	479369	8373853	1470	0	-90	598.5
KITDD_005	479058	8373850	1413	90	-65	620.65
KITDD_006	479070	8374040	1407	90	-65	725.36
KITDD_007	479356	8374158	1450	0	-90	548.5
KITDD_008	479038	8373800	1411	90	-70	884.14
KITDD_009	479136	8373896	1423	0	-90	640.1
KITDD_010	479380	8373950	1474	0	-90	620.1
KITDD_011	478930	8373802	1397	90	-70	Drilling
KITDD_012	479548	8374055	1448	0	-90	Drilling
KITDD_013	479025	8373990	1403	90	-70	Drilling
KITDD_014	479063	8374163	1421	0	-90	Drilling

Sampling and assaying of the drill core collected follows a standard site protocol, with samples of half core being submitted to the Intertek Genalysis laboratory preparation facility in Chingola, Zambia before being shipped to South Africa for gold fire assay with an AAS finish and Perth for multi-element ICP analysis.

A cut-off grade of 0.25% Cu is applied when delineating the drilled thickness intervals of mineralisation, with length-weighted average grades reported. True-widths are not quoted, as further work is required to determine the geometry of the mineralisation. No upper limit has been applied to copper or gold grades in these exploration results.

Final assays were expected approximately one month after submission; the delay in receipt of final assays was due to shipping and customs constraints. The laboratory has indicated the samples are now clearing customs more readily and reporting times should improve accordingly.

### KAKDD\_001 – Assay Results

A series of 417 samples, including quality control samples, were submitted to the laboratory for analysis. A mineralised interval of over 202m from 15.9 to 218.44m at 0.35% copper was identified. This includes an interval of 8.56m at 0.78% copper from 185.44 to 194m. Final results having passed QAQC are summarised in Table 2.

**TABLE 2** - Summary of assay results for drill hole KAKDD\_001 (Azimuth 270, dip -70, EOH 614 m)

From	To	Interval m	Cu%	ASCu%	Ag ppm	Au ppm
15.90	218.44	202.54	0.35	0.01	0.59	0.005
Including						
147.00	178.55	31.55	0.42	0.01	0.20	0.005
<b>185.44</b>	<b>194.00</b>	<b>8.56</b>	<b>0.78</b>	<b>0.01</b>	<b>0.15</b>	<b>0.005</b>
246.00	262.00	16.00	0.49	0.01	0.37	0.005
280.00	285.00	5.00	0.26	0.01	0.46	0.006
293.00	294.00	1.00	0.26	0.01	0.40	0.005

### KAKDD\_002 – Assay Results

A series of 412 samples, including quality control samples, were submitted to the laboratory for analysis. Final results having passed QAQC are summarised in Table 3.

**TABLE 3** - Summary of assay results for drill hole KAKDD\_002 (Azimuth 090, dip -70, EOH 671.5 m)

From	To	Interval m	Cu%	ASCu%	Ag ppm	Au ppm
13.00	14.00	1.00	0.31	0.00	0.20	0.005
20.00	22.00	2.00	0.30	0.00	0.30	0.007
230.00	246.00	16.00	0.36	0.00	2.08	0.008
282.00	286.00	4.00	0.35	0.00	0.35	0.005
312.00	328.00	16.00	0.28	0.00	1.02	0.006
340.00	342.00	2.00	0.27	0.01	0.40	0.010
352.00	354.00	2.00	0.30	0.00	0.05	0.020
364.00	366.00	2.00	0.39	0.00	0.20	0.010
<b>390.00</b>	<b>392.00</b>	<b>2.00</b>	<b>0.28</b>	<b>0.00</b>	<b>0.05</b>	<b>0.020</b>
398.00	406.00	8.00	0.23	0.00	0.34	0.010
464.00	470.00	6.00	0.35	0.00	0.05	0.005
<b>519.00</b>	<b>521.00</b>	<b>2.00</b>	<b>0.25</b>	<b>0.00</b>	<b>0.05</b>	<b>0.005</b>

KAKDD\_001 and KAKDD\_002 confirm another mineralised system at the Mumbwa project and display a replacement style of mineralisation. Iron rich hydrothermal fluids, possibly driven by the mineralised intrusive drilled in MUSH\_003, have concentrated hematite and in the process scavenged copper in Kundulungu metasediments, which are brecciated and heavily altered in places. In KAKDD\_001 and to a lesser degree in KAKDD\_002 supergene processes have enriched and oxidised the upper part of the hole and traces of minor primary copper mineralisation in the form of chalcopyrite can be found in the bottom part (transitioning around 300m).

### **KITDD\_003 – Assay Results**

A series of 339 samples, including quality control samples, were submitted to the laboratory for analysis. Final results having passed QAQC are summarised here.

Best intersections from KITDD\_003 are shown in Table 4.

**TABLE 4 - Summary of assay results for drill hole KITDD\_003 (EOH 602.65 m)**

From	To	Interval m	Cu%	ASCu%	Ag ppm	Au ppm
64.00	76.00	12.00	0.28	0.21	11.53	0.067
84.00	86.00	2.00	0.30	0.17	10.60	0.080
116.00	118.00	2.00	0.29	0.17	15.90	0.110
242.00	244.00	2.00	0.28	0.00	0.60	0.010
286.00	292.00	6.00	0.31	0.01	0.63	0.133
<b>376.00</b>	<b>380.00</b>	<b>4.00</b>	<b>0.71</b>	<b>0.00</b>	<b>0.20</b>	<b>0.210</b>
398.00	410.00	12.00	0.47	0.00	0.20	0.065

KITDD\_003 failed to penetrate shallow mineralisation and the chargeable zones at depth identified in the Orion 3D IP data can be explained by pyrite mineralisation.

## **Managing Director's Comments**

Managing Director, Mr Scott Lowe said:

*"We are pleased to have confirmed further mineralisation on our Mumbwa Project by vectoring in on these results from the Phase 5 "Mush" drilling. With a new style of mineralisation evident at Kakozhi, we look forward to carrying out further work on this prospect in the future.*

*Our main focus and priority will remain completing the current drilling phase and progressing Kitumba through the project pipeline. However, we are greatly encouraged that there are other interesting prospects at Mumbwa that are yet to be assessed.*

## **About The Phase 6 Drilling Program**

Drilling restarted on both the Kitumba and Kakozhi prospects in July 2012. Four diamond drill rigs are now operating on Kitumba hills following the completion of three planned holes on Kakozhi, with 13 holes having been completed for a total of approximately 8076 meters.

The Company has made provision for \$11m to drill 16,000m for the financial year ending 30 June 2013.

### **Kitumba**

The planned drilling includes both infill and step-out drilling. Infill drilling is designed to add to the confidence level of the recently released Kitumba Mineral Resource estimate and upgrade areas of the resource from the Inferred to Indicated categories.

The design of the step-out drilling seeks to expand the area of known mineralisation and potentially increase total tonnes at Kitumba.

### **Kakozhi**

At the Kakozhi high-priority satellite target, drilling is focused on testing a coincident soil geochemical and airborne gravity anomaly. The three holes in the planned drill program have been designed to gain the best stratigraphic coverage and are centred on the gravity and soil copper geochemical anomalies.

**Notes:**

A total of 48 elements were analysed. Gold analyses were performed using conventional fire assay procedures with an Atomic Absorption Spectroscopy (AAS) finish on 25g aliquots by the fully SANAS accredited Intertek Genalysis Laboratory in Johannesburg, South Africa. Multi-element analyses (including copper) were performed using Inductively Coupled Plasma – Mass Spectrometry (ICP-MS) and Inductively Coupled Plasma – Optical Emission Spectroscopy (ICP-OES) analyses by the fully NATA accredited Intertek Genalysis Laboratory in Perth, Australia. Samples were analysed for total copper by 4-acid digest with an ICP-OES finish and acid soluble copper (ASCu) by cold acid leach with an AAS finish.

A Quality Assurance/Quality Control (QA/QC) program includes chain of custody protocol, a systematic submittal of 20% QA/QC samples including field duplicates, field blanks and certified reference samples into the flow of samples submitted to the laboratory as well as re-assaying of the mineralised zones.

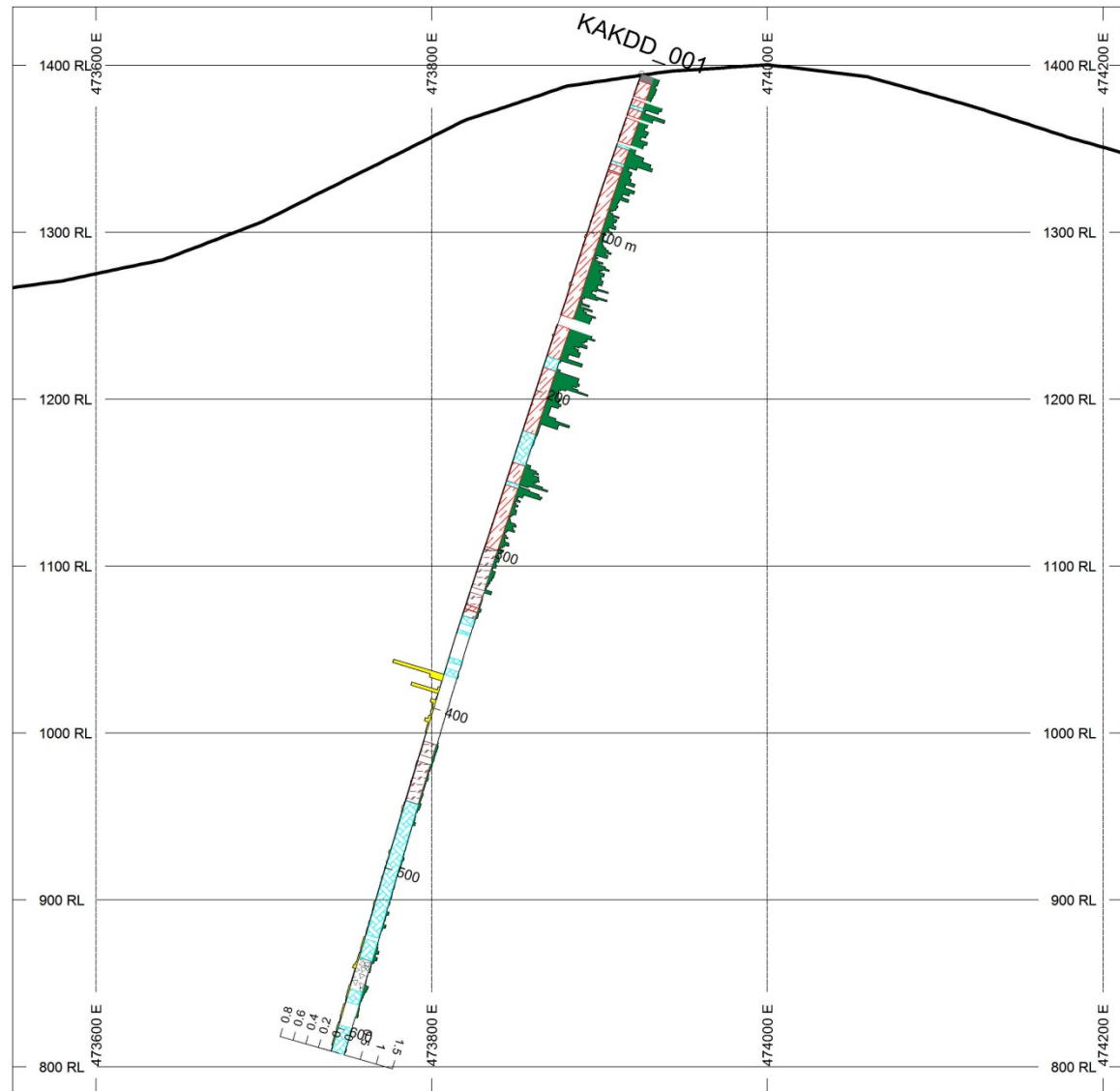
**ATTRIBUTION**

The information in this report which relates to exploration results at the Mumbwa Project in Zambia is based on information compiled by Mr Michael J Robertson, MSc, Pr.Sci.Nat., MSAIMM who is a member of The South African Institute of Mining and Metallurgy, which is a Recognised Overseas Professional Organisation ('ROPO'). Mr Robertson has 22 years' experience in mineral exploration and is a full-time employee of The MSA Group. Mr Robertson has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which is being undertaken to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Robertson consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Should you require further information please contact:

**Scott Lowe**  
**Managing Director**  
**Ph: + 61 2 9357 9000**





**HOLES PLOTTED**

TOTAL 1

KAKDD\_001

**TOPOGRAPHY**

DEM.GRD

**PROFILES**

L/R

COL

Au\_AAS\_ppm

L

COL

Cu\_Combined\_Perc

R

COL

**ROCK CODES**

PAT

LABEL

DESCRIPTION

LITH

BREC

breccia

DOLS

dolomitic limestone

IORE

Iron oxide replacement

OVER

Overburden

MTSD

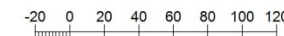
Metasiltstone

**SECTION SPECS:**

REF. PT. E, N	473881 m	8376880 m
EXTENTS	665.6 m	650 m
SECTION TOP, BOT	1435 m	785 m
TOLERANCE +/-	63 m	

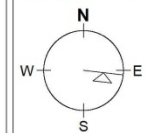
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(m)



WGS 84 / UTM zone 35S

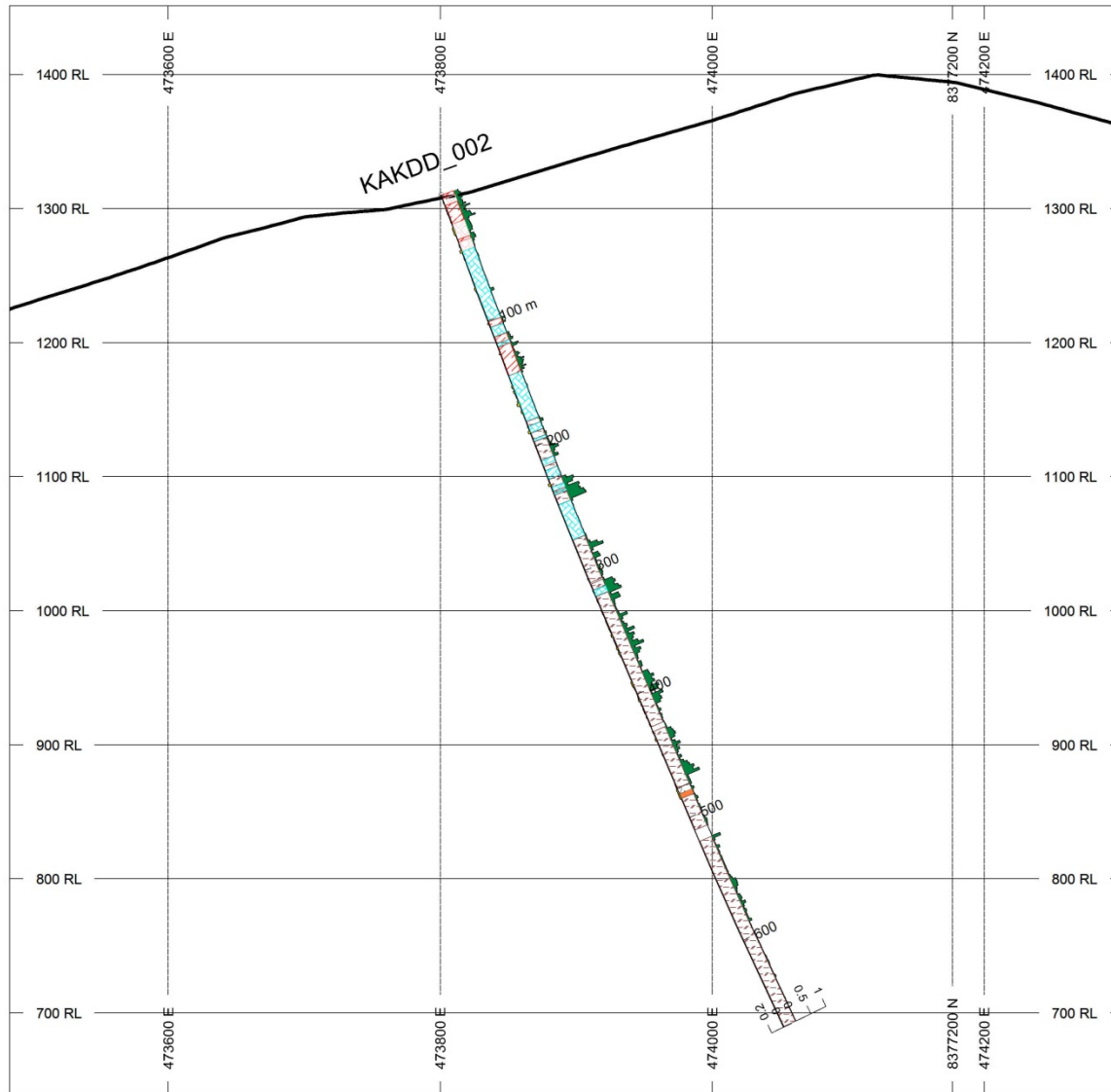
AZIMUTH = 96.3°



**Blackthorn Resources**

**Mumbwa Project**

**Phase 6 drilling**



### HOLES PLOTTED

TOTAL 1

KAKDD\_002

#### TOPOGRAPHY

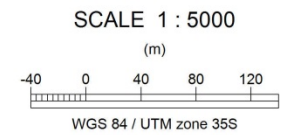
— DEM.GRD

PROFILES	L/R	COL
Au_AAS_ppm	L	Yellow
Cu_Combined_Perc	R	Green

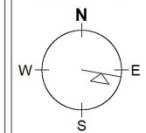
ROCK CODES	PAT	LABEL	DESCRIPTION
LITH	BREC	breccia	breccia
	DOLS	dolomitic limestone	dolomitic limestone
	IORE	Iron oxide replacement	Iron oxide replacement
	SAPR	saprolite	saprolite
	SYEN	syenite	syenite
	MTSD	Metasiltstone	Metasiltstone

#### SECTION SPECS:

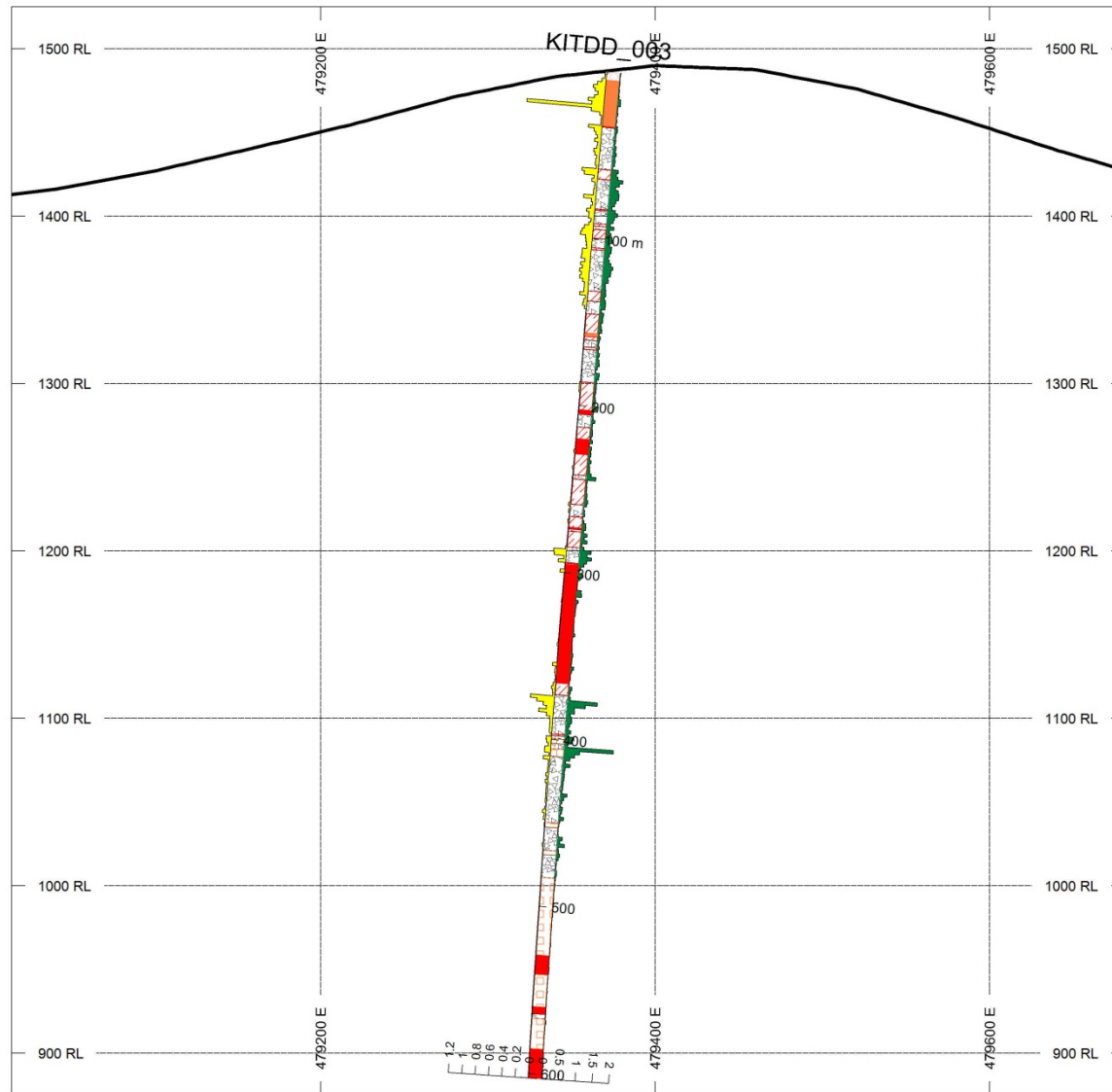
REF. PT. E, N	473893 m	8377250 m
EXTENTS	832 m	812.5 m
SECTION TOP, BOT	1451 m	638.8 m
TOLERANCE +/-	61.5 m	



AZIMUTH = 100°



**Blackthorn Resources**  
**Mumbwa Project**  
**Phase 6 drilling**



### HOLES PLOTTED

TOTAL 1

KITDD\_003

### TOPOGRAPHY

DEM.GRD

PROFILES	L/R	COL
Au_AAS_ppm	L	Yellow
Cu_Combined_Perc	R	Green

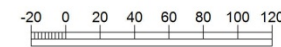
ROCK CODES	PAT	LABEL	DESCRIPTION
LITH	BREC	BREC	breccia
	FPSY	FPSY	Feldspar Porphyry Syenite
	IORE	IORE	Iron oxide replacement
	QFPG	QFPG	quartz feldspar porphyry granite
	SAPR	SAPR	saprolite
	SYEN	SYEN	syenite

### SECTION SPECS:

REF. PT. E, N	479348 m	8373740 m
EXTENTS	665.6 m	650 m
SECTION TOP, BOT	1525 m	875 m
TOLERANCE +/-	14.25 m	

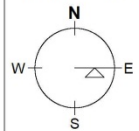
SCALE 1 : 4000

(m)



WGS 84 / UTM zone 35S

AZIMUTH = 90°



**Blackthorn Resources**  
**Mumbwa Project**  
**Phase 6 drilling**