

# **Quarterly Report**

# **Highlights**

Sipa's work in delineating the Akelikongo chonolith by diamond drilling continues to add to the size and significance of this newly discovered Nickel and Copper sulphide mineral system in a new mineral province in the Kitgum Pader region of northern Uganda.

# Highlights of this work include:

- A number of strong late time conductors from the ground moving loop EM survey completed have been identified. The conductors are both inside and outside the known and modelled Akelikongo and Akelikongo West ultramafic chonoliths providing additional targets.
- Receipt of further assays from holes drilled in the September Quarter, AKD010 to AKD014 and other additional core samples collected for the data integration exercise confirm new exploration model.
- Completion of the drilling of a further two diamond holes, AKD015 and AKD016, into the mineralised Akelikongo chonolith, both of which extend the known mineralisation footprint.
  - ➤ Results for this program continue to show continuity of the mineralised system in dimension with selected samples containing stringer and massive sulphide assaying up to 0.73% Ni and 0.86% Cu. (Figures 2 and 3)
  - ➢ Best results include a disseminated sulphide mineralised zone of 18m @ 0.16% Ni from 324m in AKD015 and a 17m zone of disseminated sulphides averaging 0.2% Ni in AKD016 with an additional magma mixing 'footwall" zone of stringer to massive sulphides



Sipa Resources Limited (ASX: SRI) (the "Company" or "Sipa") is pleased to announce results for quarter ended 31 December, 2015. The further diamond drill program at Akelikongo continues to increase the known mineralised footprint. This extension comes off the back of the significant progress made during the September quarter, the further development of the geological model through both down hole and moving loop EM surveys completed during the quarter and the generation of several more targets.

During the Quarter, two holes were completed for 1007.86 m (Table 1) and results for some of the holes drilled in the September Quarter were received.

| Hole   | UTME   | UTMN   | RL  | Depth   | Dip | Azimuth |
|--------|--------|--------|-----|---------|-----|---------|
| AKD015 | 457026 | 397241 | 942 | 506.13m | -70 | 220     |
| AKD016 | 457120 | 397242 | 942 | 500.73m | -75 | 240     |

Table 1 Drillhole location and depth

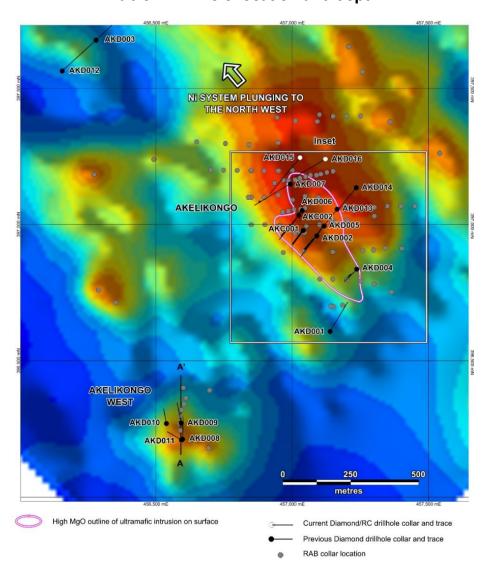


Figure 1 Drill hole locations on residual gravity image – Akelikongo area (Refer inset at Figure 2)



AKD015 and 16 were targeted to test the base of the intrusion.

AKD015 collared in gneiss and drilled a large amount of migmatitic gneiss interpreted to be a melting zone within the chonolith. At 323m the hole intersected ultramafic peridotite cumulate with disseminated nickel and copper sulphides for 18m which assayed 0.16% Ni and then into migmatite gneiss before ending at 506m. The hole confirms the base of the ultramafic intrusion dips at 25 degrees to the north west but has a more extensive internal migmatite zone than expected from the observed gravity.

AKD016 was targeted to the east of AKD015 in order to further define the shape of the chonolith and test the centre of the most intense modelled gravity within the gravity complex which defines the Akelikongo Ultramafic Complex. The hole collared in migmatitic gneiss and then drilled into a mafic intrusion similar to that observed in hole AKD014 (ASX Release 13 November 2015) before intersecting disseminated nickel and copper sulphides in ultramafic peridotite cumulate at 254m to 274m. The hole then intersected from 274m to 284m stringer and semi-massive sulphide associated with a "footwall mixing zone" of ultramafic and felsic xenomelt occuring below the disseminated zone. The hole continues in variably migmatised gneiss to the end of the hole at 500.73m.

#### Results include

5.2m @ 0.18% Ni from 254.8 to 260m - disseminated sulphides in ultramafic cumulate;

11.7m @ 0.19% Ni from 262.3m to 274m - disseminated sulphides in ultramafic cumulate; and

3m @ 0.48% Ni and 0.26% Cu from 274m including -

**0.4m** @ **0.64%** Ni and **0.15%** Cu from 275m

0.35m @ 0.65% Ni and 0.86% Cu from 276.1m and

**0.4m** @ **0.73%** Ni and **0.18%** Cu from 283.6m as stringer and massive sulphides.

These results continue to be encouraging as they show strong continuity of the mineralisation style with disseminated mineralisation marginal to a footwall mixing zone with felsic xenoliths and stringer to massive sulphide. In addition the higher copper values seen in the sulphide zone at 276.1m in AKD016 show that sulphide fractionation processes are occurring which indicate the potential for higher combined \$ metal values in the mineral system.

Also during the quarter, results were received for a number of diamond holes drilled into the Akelikongo and Akelikongo West mineral systems during the previous quarter (ASX release Nov 13 2015). Of note, AKD014 intersected a very broad zone, greater than 140m wide, of magma mixing within the interior of the chonolith increasing in nickel and copper towards the base of the intrusion with results of 15m @0.3% Ni from 238m including 5m @0.4% Ni and 0.2% Cu from 247m.



In addition, additional assay results collected as part of the data integration exercise show much broader low grade disseminated nickel and copper sulphide intercepts from AKD007 (the most north western hole) than was previously reported with

- 53m at 0.25% Ni and 0.06% Cu from 258m including 12m at 0.42% Ni and 0.12% Cu from 275m.
- 10m at 0.22% Ni and 0.06% Cu from 112m
- 17m at 0.19% Ni and 0.05% Cu from 181m

Section C-C' shows a cross section through the chonolith with holes AKD007 15 and 16 (Refer Figure 3).

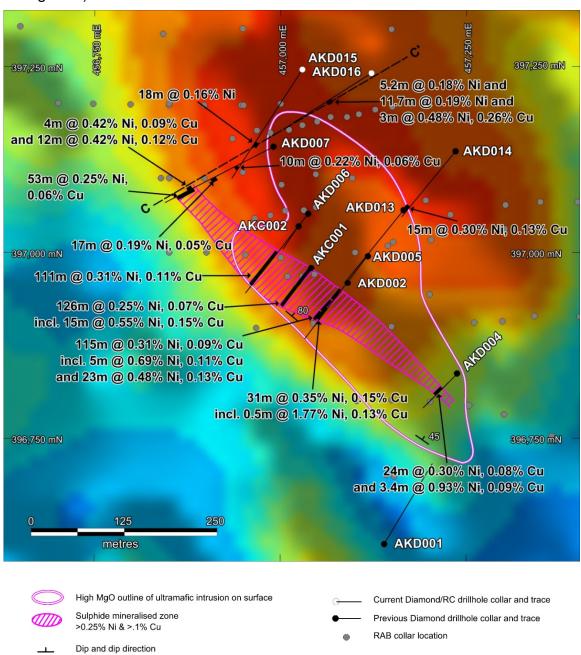


Figure 2: Drill hole results at Akelikongo on residual gravity image.

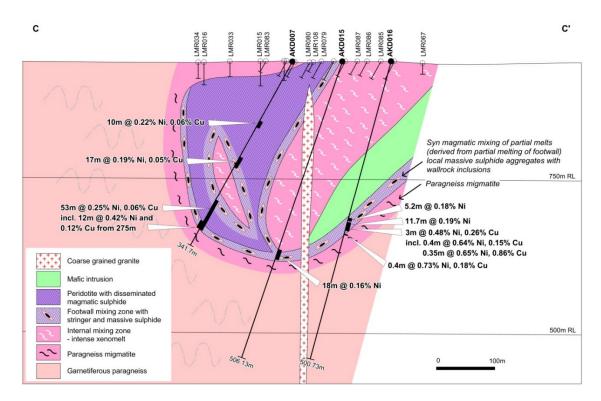


Figure 3: Section C-C' showing drill section across Akelikongo Intrusive Complex with new holes AKD015 and AKD016.

## **Akelikongo North**

During the current quarter, results were received from AKD012 drilled in September 2015 one kilometre to the northwest of Akelikongo under AKD003 (ASX Release 25 March 2015) as shown in Figure 1.

The results from AKD012 and further new assay intervals collected and returned from AKD003, now confirm nickel copper and PGE anomalism in migmatitic gneisses. These rocks appear similar to those drilled in the footwall of the Akelikongo Ultramafic disseminated mineralisation. In AKD012, from 151m to 173m, assays average 174ppm Ni and 95ppm Cu. The AKD012 core assay dataset has a 92% correlation between Ni and Cu and an 83% correlation between Cu, Ni and Pd. The most anomalous >100ppm Cu and >200ppm Ni assays correlate with 3PGE (Au+Pt+Pd) assays of between 20ppb and 48ppb. The strong correlation of nickel copper and PGEs is typical of nickel sulphide systems. Importantly, information collected from an additional new logging procedure which takes pXRF spot analyses of core as it is drilled, shows strongly anomalous levels of nickel and copper anomalism in the sulphides of the migmatitic gneisses.

It was the nickel copper and PGE anomalism from selected samples of variably migmatised paragneiss assayed in AKD003, plus some untested late time EM anomalies which led Sipa to drill hole AKD012 in this area in September 2015.

The geochemistry results now point to the strong possibility that these holes have intersected migmatitic gneisses which are proximal to the Akelikongo chonolith conduit. These holes AKD003 and 012 are over 500 meters northwest of AKD007 (the most northern mineralised drill hole).



### **EM** surveys

Moving loop time domain EM surveys were conducted over Akelikongo and Akelikongo West during October and early November. The surveys, have highlighted a number of conductors detectable from mid to late time and detected conductors within the known modelled ultramafic chonolith both at Akelikongo and Akelikongo West and also outside.

Down hole EM detected a number of off hole conductors in addition to the known mineralisation in holes AKD008, 009, 006 and 14. AKD005 and 007 were blocked and therefore not surveyed.

Integrated modelling of these data with known geology assays and petro physical measurements of the core such as specific gravity, magnetic susceptibility and conductivity is continuing. The targeting of drill holes AKD015 and 16 was guided by the moving loop and down hole EM surveys in conjunction with the ground gravity and down hole gravity modelling as shown in Figure 4.

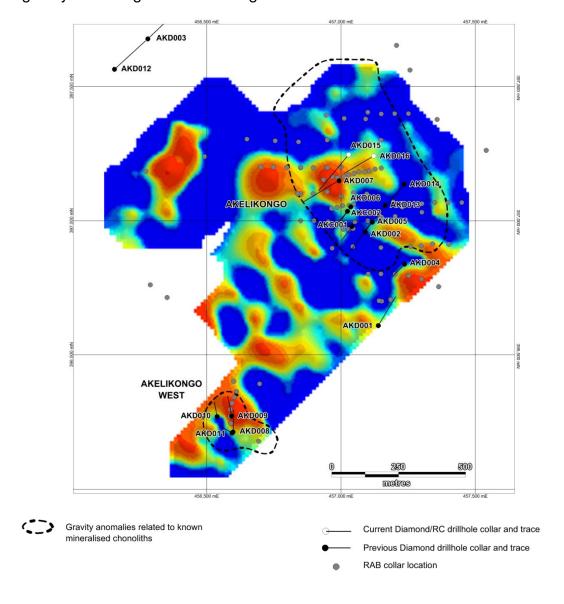


Figure 4: Drillhole locations on late channel EM Image – Akelikongo area



#### Goma

The Environmental Impact Study report was received and submitted to the regional government for approval and recommendation. An approval recommendation was received from the DGSM on the 18<sup>th</sup> of November which allows road clearance and drill access. A comprehensive review of the multielement geochemistry of this anomaly has now been undertaken following extensive infill soil sampling completed during the quarter. A decision to not drill the anomaly at this stage has been taken, as the geochemistry suggests it appears to be entirely related to nickel enrichment in ultramafic rock due to lateritic weathering rather than a nickel sulphide mineral system which is our preferred target.

#### **Pamwa**

Infill soil sampling completed during the September Quarter has shown significant untested Zinc-Lead soil anomalies with a strong lithostructural control as shown in Figures 5 and 6. Further shallow drilling of these anomalies is required as only three out of the nine anomalies have any drilling in them at all. The geological interpretation of a shallowly doubly plunging anticline indicates further strike potential of the target mineralised horizon under cover (Figure 7).

The pXRF soil data also shows a mafic association of Fe-Cu-Zn-Ca-Cr-Ti within the anomalies and a felsic granitic association characterised by Rb-K-Zr-Y immediately outside the anomaly area (**Figure 5**).

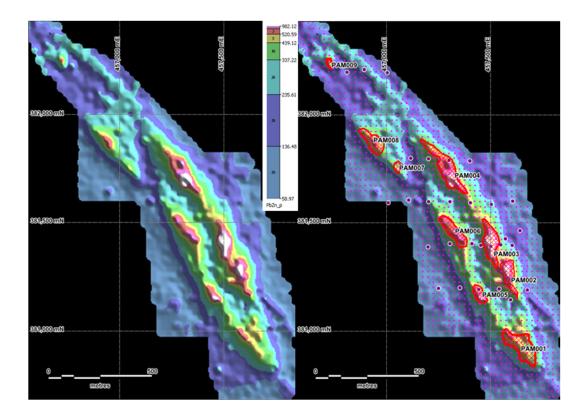


Figure 5: Pb plus Zn in soils (left), Anomalies labelled with drill holes (right)

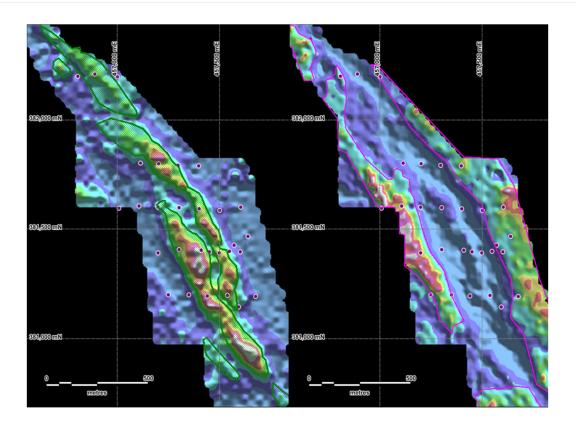


Figure 6: Mafic association of Fe-Cu-Zn-Ca-Cr-Ti (left) and a felsic association characterised by Rb-K-Zr-Y immediately outside the anomaly area (right)

The parallel zinc and lead anomalism within the centre of Pamwa and the closure of the anomalism to the north and south, points to the interpretation of a doubly plunging antiform with the host lithology plunging to the north and south under cover.

The implications are that if economic zinc and lead mineralisation is intersected at Pamwa it could plunge shallowly to the north and south.

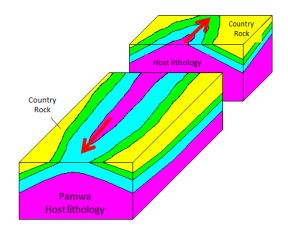


Figure 7 shows a 3d cartoon of interpreted geology at Pamwa, with red arrows, showing plunge direction of mineralised horizon



#### Plan Forward

**Akelikongo** – further 3d modelling of newly collected datasets is underway and will assist with further drill targeting. Due to the success of the pXRF soil sampling geochemical technique, an ultra-detailed soil survey is also planned at the main Akelikongo soil anomaly to determine possible structural or lithological controls to higher grade massive sulphide bodies.

**Akelikongo Regional** – further RAB/aircore is planned for later in the quarter for areas around the main Akelikongo area where previous shallow drilled failed to penetrate deep enough.

**Pamwa** – At the same time, a carefully targeted program is also planned to test the remaining 6 out of the 9 main soil anomalies identified at Pamwa including those in the interpreted fold hinge positions.

#### Outlook

The current investment and commodity price environment is presenting a challenging environment for mining companies and also junior exploration companies to work through.

However, Sipa currently has a strong cash position which allows us to take advantage of other opportunities that have become available in this market. Meanwhile, Sipa will continue to optimise its exploration expenditure in Uganda and conservatively manage its cash.

The information in this report that relates to Exploration Results is based on, and fairly represents, information and supporting documentation compiled by Ms Lynda Burnett, who is a Member of The Australasian Institute of Mining and Metallurgy. Ms Burnett is a full-time employee of Sipa Resources Limited. Ms Burnett has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Ms Burnett consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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## **Glossary**

## Chalcopyrite

Chalcopyrite is a copper iron sulphide mineral

#### Cumulate

Cumulate rocks are the typical product of precipitation of solid crystals from a fractionating magma chamber. These accumulations typically occur on the floor of the magma chamber. Cumulates are typically found in ultramafic intrusions, in the base of large ultramafic lava tubes in komatiite and magnesium rich basalt flows and also in some granitic intrusions.

#### **Gneiss**

Gneiss is a high grade metamorphic rock, meaning that it has been subjected to higher temperatures and pressures than schist. It is formed by the metamorphosis of granite, or sedimentary rock. **Gneiss** displays distinct foliation, representing alternating layers composed of different minerals

### MgO content

Method of mafic and ultramafic rock classification, with high MgO ultramafic rocks generally comprising greater than 25% MgO. The higher the MgO content the more Ni the rock can contain in silicate form with modifying factors up to 3000ppm.

## Migmatite

Migmatite is a rock that is a mixture of metamorphic rock and igneous rock. It is created when a metamorphic rock such as gneiss partially melts, and then that melt recrystallizes into an igneous rock, creating a mixture of the unmelted metamorphic part with the recrystallized igneous part.

### Nickel tenor

How much nickel in percentage terms within the sulphides as a percentage of the sulphide. If you have nickel tenor of 6% and you have 50% sulphide then the grade is 3% nickel

#### **Oikocrysts**

Part of the definition of poikilitic texture. Poikilitic texture is a texture in which small, randomly orientated, crystals are enclosed within larger crystals of another mineral. The term is most commonly applied to igneous rock textures. The smaller enclosed crystals are known as chadacrysts, whilst the larger crystals are known as oikocrysts.

### **Paragneiss**

A metamorphic rock formed in the earth's crust from sedimentary rocks (sandstones and argillaceous schists) that recrystallized in the deep zones of the earth's crust

#### **Pentlandite**

Pentlandite is an iron-nickel sulphide mineral with the formula, (Fe,Ni)<sub>9</sub>S<sub>8</sub>.

#### **Peridotite**

Peridotite is a dense, coarse-grained igneous rock, consisting mostly of the minerals olivine and pyroxene. Peridotite is ultramafic, as the rock contains less than 45% silica.



## **Pyroxenite**

Pyroxenite is an ultramafic igneous rock consisting essentially of minerals of the pyroxene group, such as augite and diopside, hypersthene, bronzite or enstatite. They are classified into clinopyroxenites, orthopyroxenites, and websterites which contain both clino and orthopyroxene.

## **Pyrrhotite**

Pyrrhotite is an iron sulphide mineral with the formula Fe(1-x)S (x = 0 to 0.2).

### Xenomelt

Melt of a foreign rock typically the country rock, through which the hot ultramafic magma intrudes, interacts and partially melts and absorbs.



#### **Background**

The Kitgum-Pader Base and Precious Metals Project covers 7,296 square kilometres in central northern Uganda, East Africa. The Project was generated following the acquisition in 2011 of relatively new airborne magnetic/radiometric data sets over East Africa, and the subsequent geological/metallogenic interpretation of the data sets.

During field reconnaissance in December 2011, rocks were recognised as being strikingly similar to the host 'Mine Series' sequence at the giant Broken Hill Lead-Zinc-Silver Deposit in NSW, Australia, to the northwest of Kitgum, Uganda. Since that time, the company has collected over 60,000 soil samples, along with geological mapping by the late Nick Archibald, Brett Davies and Russell Mason. The results of the field work and subsequent drilling of soil targets has led to the discovery of 2 potentially economic mineral systems.

- the Intrusive hosted Nickel-Copper sulphide mineralisation at Akelikongo; and.
- The Broken Hill-style Lead-Zinc-Silver, at Pamwa.

**Akelikongo** is one of the standout Ni-Cu-PGE soil anomalies identified to date. The element association and shape of the anomaly led Dr Jon Hronsky in early 2014 to interpret this as a possible "chonolith" being a fertile host for nickel sulphides within a mafic-ultramafic intrusive complex.

At **Akelikongo** a high MgO intrusion hosts a zone of disseminated nickel and copper sulphide mineralisation above a zone of brecciated more massive nickel and copper sulphides. The mineralisation extends into the country rock felsic gneiss which shows strong migmatisation characteristic of such intrusive pipes or chonoliths which melt country rock and form the conduits for many nickel sulphide deposits of economic importance.

At **Mt Goma** in the western Archean greenstone belt a linear zone of strongly oxidised ultramafic has returned nickel in soil pXRF values ranging from 0.5% to 1.9% Nickel. A strong copper in soil anomaly is located adjacent to the nickel anomaly. Rocks from this zone up to 2.64% Nickel have also been returned showing disseminated garnierite in a saprolitic weathered ultramafic. It is now thought that this strong nickel anomaly which is hosted in the Aswa Archean greenstone sequence is related to nickel laterite enrichment rather than nickel sulphides.

The **Lawiye Adul** nickel anomaly south of Mt Goma which was drilled in August 2014 was determined to be due to lateritic enrichment.

The **Pamwa** Zn, Pb, Ag and Cd soil anomaly was first pass drilled using RAB during July and resulted in the discovery of a Broken Hill Type Zn Pb, Cd, Ag mineralised system. Diamond drilling confirmed thin zones of base metal sulphides (sphalerite and galena) in all three holes. The mineralisation is broadly foliation parallel and can be correlated to the detailed soil data.

These intercepts are located within a wider Zn, Pb, Ag, Cd anomalous zone defined by a 1000ppm Zn contour and an even larger 1000ppm Manganese (Mn) anomalous zone defined as the "geological host sequence". The soil data shows only three out of nine of the soil peaks within the broader anomaly have been tested.

This strong geochemical association is characteristic of a high metamorphic grade sedimentary style of mineralisation, similar to Broken Hill in Australia.

Major mining houses have scoured the world for decades in an attempt to discover the next Broken Hill Type Deposit. Sipa has demonstrated that such world class deposits could be discovered at **Pamwa** and within the extensive Zn rich **Ayuu Alali** soil horizons to the north east of **Pamwa** as defined by soil sampling during 2013 to 2015.