



## Successful maiden diamond drill program at Obelisk outlines large bedrock mineral system with strong similarities to other major Paterson deposits

*High-grade vein-hosted gold and copper and supergene copper intersected for the first time at Paterson North; regional potential expanded at Akelikongo*

### HIGHLIGHTS

#### Paterson North Copper-Gold Project – Western Australia

- 4-hole diamond drilling program comprising 1,604m completed over a ~500m strike length of the emerging Obelisk gold-copper discovery.
- Initial assay results from hole PND002 indicate the presence of narrow widths of vein-hosted gold and copper mineralisation assaying up to 22g/t Au, 2% copper and 16g/t silver.
- Results demonstrate the potential of the system to host both high-grade, high-value mineralisation and large-scale, lower grade bulk tonnage mineralisation. Further assays from the drilling expected within the next two weeks.
- The results confirm that Obelisk is similar to other gold and copper-rich deposits in the Paterson Province such as Telfer, Minyari, Calibre and Magnum. These systems are typically of a large areal extent and have components of high-grade vein mineralisation within a broader lower grade polymetallic alteration system.
- The wide-spaced drilling of four holes over 500m indicates a variety of host rocks, and complex zonation of mineralisation and alteration. The presence of supergene copper mineralisation in hole PND003 adds a further dimension to potentially economic mineralisation styles.
- Follow-up RC/AC drilling will now be undertaken early next year following a decision by the drilling company to postpone the program originally planned to commence in late October. This decision was made due to safety concerns arising from extreme weather and hazardous fire conditions currently being experienced in the Pilbara.
- Detailed gravity survey continuing at Sipa's 100%-owned tenement to the north of Obelisk, with the data collected to date defining a gravity high coincident with a Telfer "look-a-like" domal aeromagnetic feature. The survey is expected to be completed in the next two weeks with results anticipated before year-end.

#### Kitgum Pader Base Metal Project – Uganda

- Regional mapping and rock chip sampling identifies a broad area extending over an 80km x 30km north-northwest trending corridor with potential for further Akelikongo "like" intrusives.
- This highlights the potential for defining additional magmatic nickel and copper sulphide mineralisation within Sipa's tenements.

### Corporate

- Fully underwritten \$2M Share Purchase Plan completed subsequent to Quarter-end to underpin further exploration programs at both the Paterson North and Akelikongo projects. Cash at the end of the Quarter was \$1.4M.



## Paterson North Project, Western Australia (Sipa 51%, earning 80%)

Sipa's Paterson North Copper-Gold Project is located in the North West of Western Australia, in one of the most highly endowed yet under-explored mineral provinces in Australia. Included in the tenement package is the Great Sandy tenement (E45/3599), where Sipa can earn up to an 80% interest for expenditure of \$3 million over 4 years under a Farm-in and JV agreement with privately owned Ming Gold Limited (Ming).

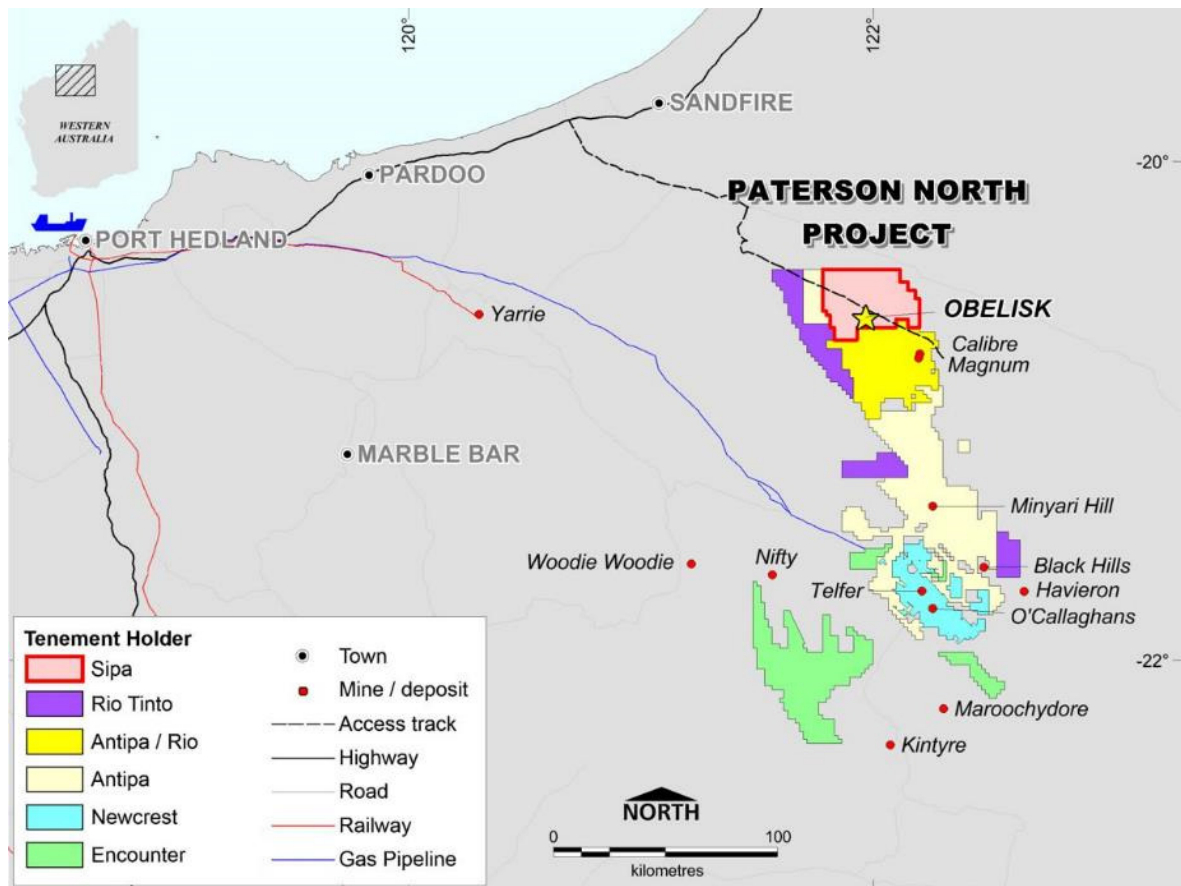


Figure 1: Location of Paterson North Tenements, Western Australia

### EL45/3599 (Sipa 51%, earning up to 80%)

During the quarter, Sipa completed a maiden 4-hole diamond drilling program comprising 1,604m over a ~500m strike length of the Obelisk gold-copper discovery. The program was designed to provide the first test for bedrock mineralisation beneath an extensive shallow copper and polymetallic anomaly defined during previous RAB/Aircore programs

Initial assay results were received subsequent to the end of the quarter for all four holes with further assay results from a second sampling program expected in the next two weeks.

Assay results indicate the presence of a large mineralised system at Obelisk with all holes intersecting zones of intense alteration and quartz, biotite and sulphide veining, including vein-hosted **gold of up to 22g/t and copper of up to 2%** over narrow widths and supergene mineralisation **of up to 4.6% copper and 7.48g/t silver**.

**The results continue to demonstrate the potential of the system to host both high-grade, high value mineralisation and large-scale, lower grade bulk tonnage mineralisation.**



Gold and copper is hosted in quartz-biotite-chlorite-pyrite-pyrrhotite and chalcopyrite veins and fracture zones. Better zones include:

- PND001** 64.8m @ 0.1% Cu and 122ppm W; from 317.2m
- PND002** 31.5m @ 0.1% Cu from 334.8m (Figure 3)
- and 0.15m @ 22.5g/t Au and 2% Cu from 422.6m
- and 1.1m @ 0.26g/t Au 0.62% Cu from 334.8m
- PND003** 2.29m @ 0.68g/t Au and 0.19% Cu from 136.7m, including:  
0.53m @ 2.53g/t Au and 0.33% Cu
- PND004** 2.0m @ 0.83g/t Au and 0.1% Cu from 211m
- and 0.24m @ 0.93g/t Au 0.29% Cu from 213.12m
- and 0.3m @ 0.38g/t Au and 0.65% Cu from 228.7m
- and 0.32m @ 0.18g/t Au and 1.24% Cu from 239.68m

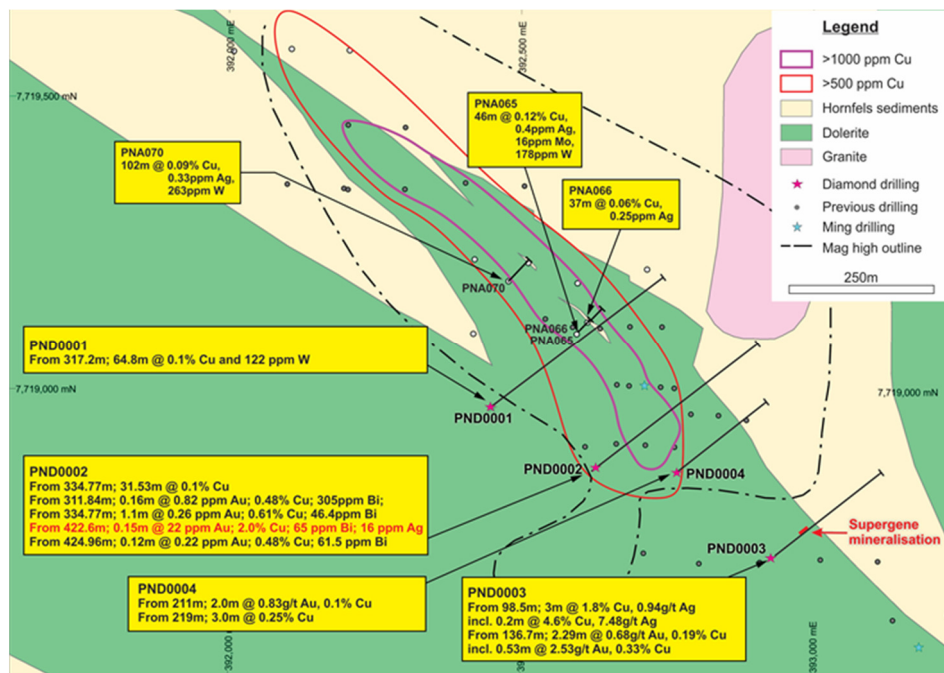


Figure 2: Drill-hole location plan and summary of results

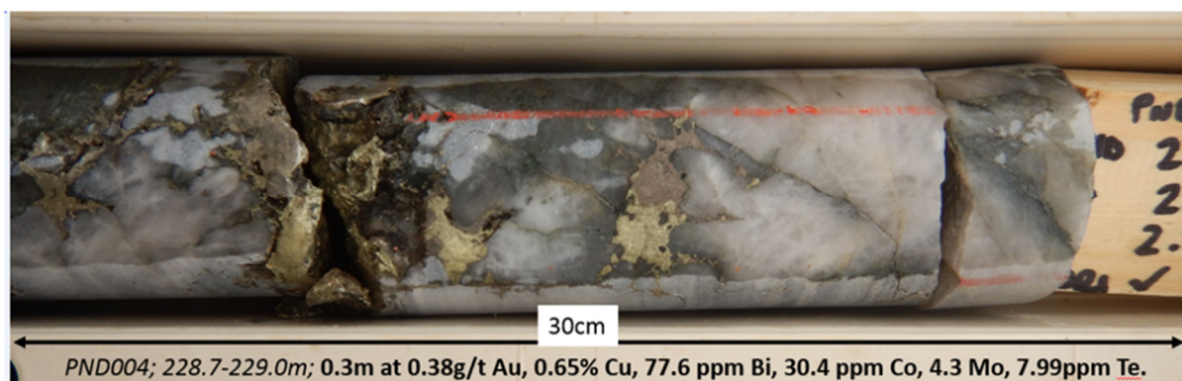


Figure 3: PND004; 228.7-229.0m; Quartz veining with pyrrhotite, pyrite and chalcopyrite

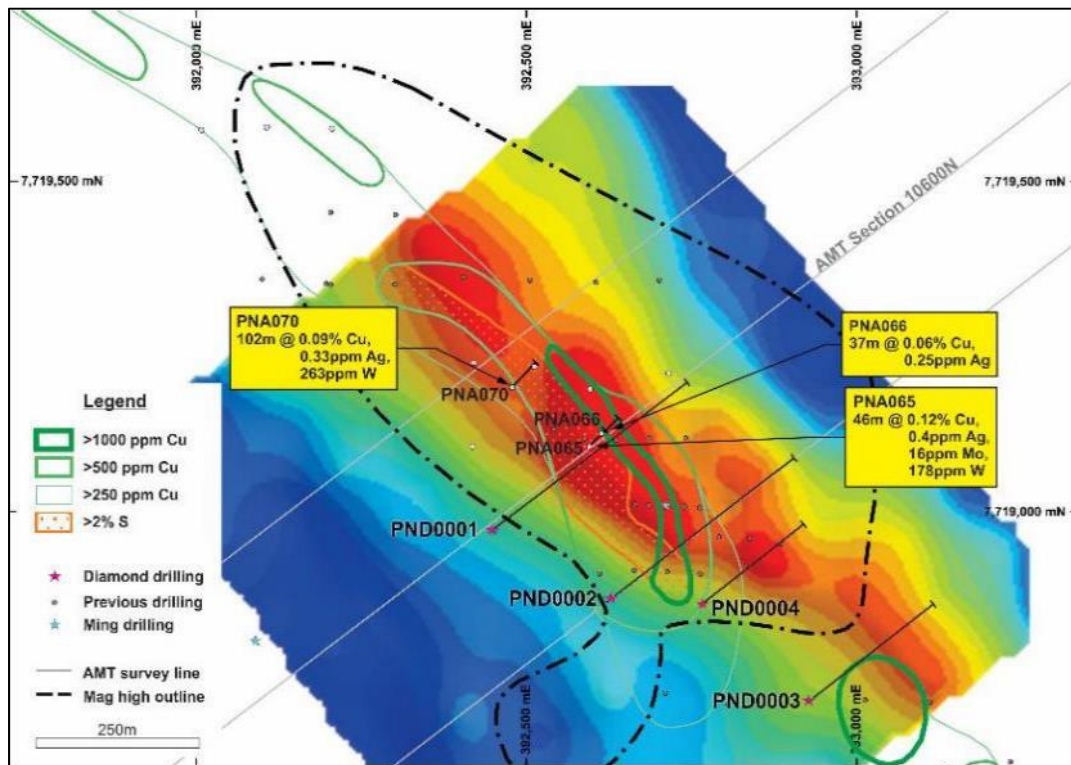


Figure 4: Obelisk drill plan, average copper in drill holes contoured, Magnetic high (dashed) with IP chargeability and AMT lines, showing strong correlation with anomalous copper intersected at surface. Location of diamond holes shown.

A complete description of hole results can be found in Appendix 1.

### Geophysical surveys

Ground geophysical surveys including AMT, gradient array IP and fixed-loop EM (FLEM) were completed in the previous quarter over the anomaly to test for the signatures related to silicification related to structurally controlled near-surface copper mineralization. Interpretation of these surveys was completed during the quarter. IP appears to have defined the disseminated sulphide footprint of the alteration system with the more focused veining coincident with elevated copper geochemistry at surface.

AMT appears to have defined structures and geological features to depths of 1,300m and also defines the depth of conductive cover.

Whilst the fixed-loop EM (FLEM) did not detect massive sulphides, the presence of sulphides in the drill holes suggests that the FLEM may not have penetrated the overlying Permian stratigraphy. A review of the sulphides intersected in core, particularly pyrrhotite and chalcopyrite, suggest that down-hole EM may be more effective. All holes have been lined with PVC casing to allow DHEM to be conducted as part of the 2018 field program.

### CSIRO collaboration

The Company's ongoing collaboration with the CSIRO has underpinned exploration activities at the Paterson North Project. This includes the development of a quantitative paragenetic understanding of the mineralizing system and refinement of geological models from the initial aircore programs using TIMA (Tescan Integrated Mineral Analyser) technology.





The TIMA analyses of rock chip samples and interpretation demonstrates strong and complex alteration and zoning related to mineralisation. In addition, a new regional geological interpretation map has been developed providing regional structural and geological context.

### Obelisk summary

The program has now confirmed that the Obelisk system extends well into the bedrock below a very large ~1000ppm copper “footprint”, with assay results from all drill holes demonstrating narrow intervals of higher grade mineralization focused in veins.

The supergene mineralisation in hole PND003 also highlights the potential for this style of mineralisation in the region.

The results to date continue to provide confidence that the system is capable of containing both high-grade, high-value mineralisation and bulk, lower grade high tonnage deposits with analogies to the Telfer gold and copper mine, the Minyari skarn-hosted gold and copper deposit and the Magnum and Calibre deposits, located 20km to the south.

The evolution of brecciation and brecciated quartz sulphide veining (as seen in Figure 3) is texturally similar to the well-developed Calibre deposits.

As shown in Figure 5 below, the association of multi-elements in intrusion-related gold deposits and their zonation over distances of up to 10km away from intrusions is a very important tool in determining the type, level of formation in the earth’s crust, and style of mineralisation. Obelisk is situated in the zone relatively close to the granite, as shown by the presence of pegmatites and the association with Bismuth and tellurium. Arsenic and antimony, which are indicators of shallower systems, are notably absent.

Identification of the type of mineral system and its level of formation in the crust assists in predicting the location of better grade mineralisation. 3D orientation of contacts, veins and structure mapped in the core will allow this picture to evolve.

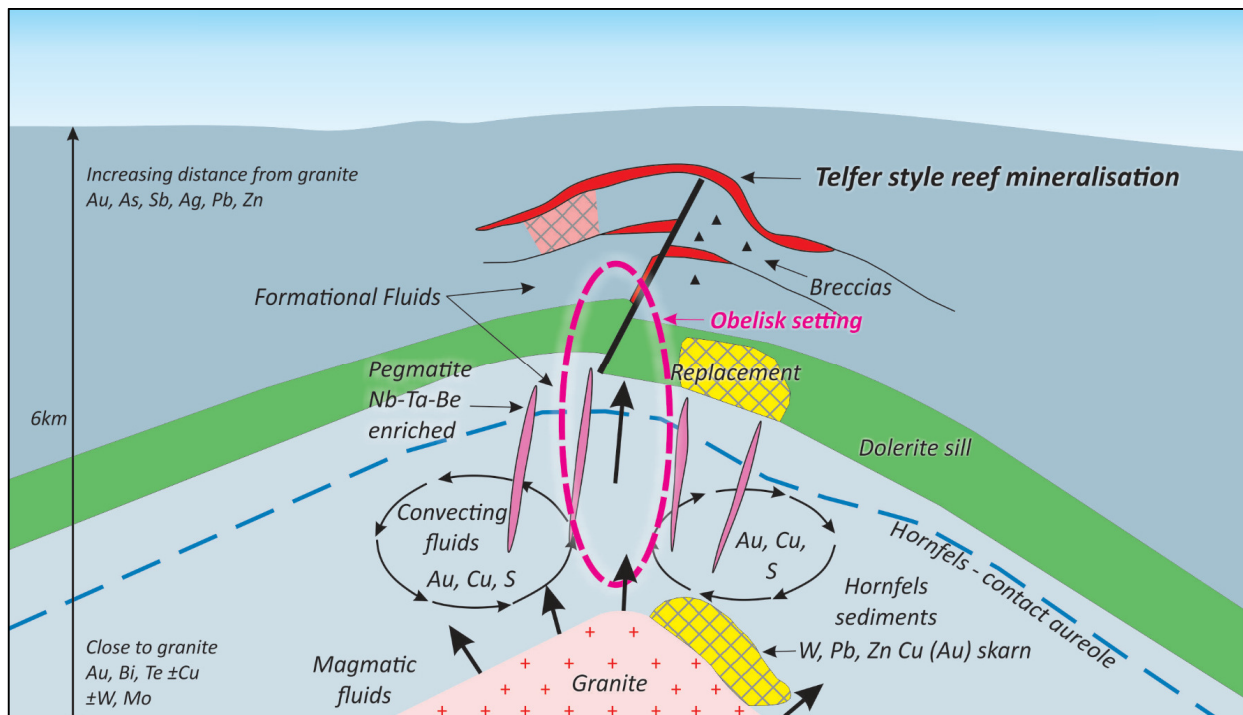


Figure 5: Setting of Obelisk gold-copper mineralisation Paterson North Province (modified from Rowins, et al, 1998).



## Anketell (EL 45/4697) – Sipa 100%

A detailed gravity survey continues at Sipa's 100%-owned tenement to the north of Obelisk (Figure 1). The close-spaced gravity data collected to date define a gravity high coincident with a Telfer "look-a-like" domal feature interpreted from regional aeromagnetic data (Figure 6). The survey is expected to be completed in the next two weeks.

In addition, soil sampling for ionic leach analysis is being undertaken at each gravity station to provide a multi-element geochemical data set which may assist direct targeting of covered mineralisation.

Both programs will assist with targeting of reconnaissance drilling planned for the tenement in the second quarter of 2018. The program will be subsidised by a WA State Government Exploration Incentive Scheme (EIS) grant. The EIS co-funded drilling grant provides a 50% subsidy (up to \$150,000) from the WA Government for the drilling component of the work and is funded by the Royalties for Regions program.

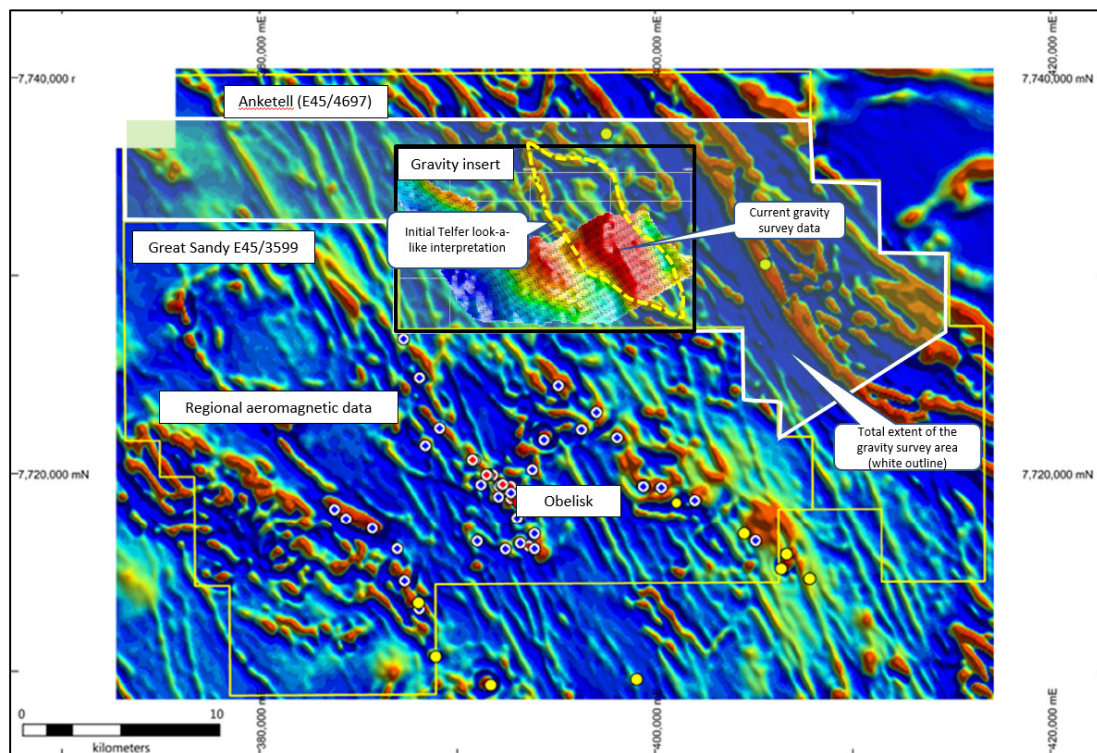


Figure 6: Current gravity survey overlaying the regional aeromagnetic data set with Telfer domal look-a-like feature.

## Kitgum Pader Base Metal Project, Uganda – Sipa 100%

The Kitgum-Pader Base Metals Project was secured by Sipa following the acquisition in 2011 of relatively new airborne magnetic and radiometric datasets over East Africa, and the subsequent geological and metallogenic interpretation of these datasets.

Sipa's flagship project in Uganda is the Akelikongo nickel-copper discovery, located on the north-eastern margin of the Congo super-craton. Akelikongo comprises a sizeable body of nickel-copper sulphide mineralisation **with strong similarities to other globally significant, intrusive-related magmatic nickel copper sulphide systems** such as Nova-Bollinger (14Mt @ 2.3% Ni and 0.9% Cu), Voisey's Bay (141Mt @ 1.6% Ni and 0.8% Cu) and Raglan (30Mt @ 3.4% Ni and 0.9% Cu).





While the majority of the recent exploration has been focused-at the Akelikongo prospect, the regional prospectivity is also encouraging for nickel sulphides with Goma, Katunguru and Waligo representing other anomalies (see Figure 7).

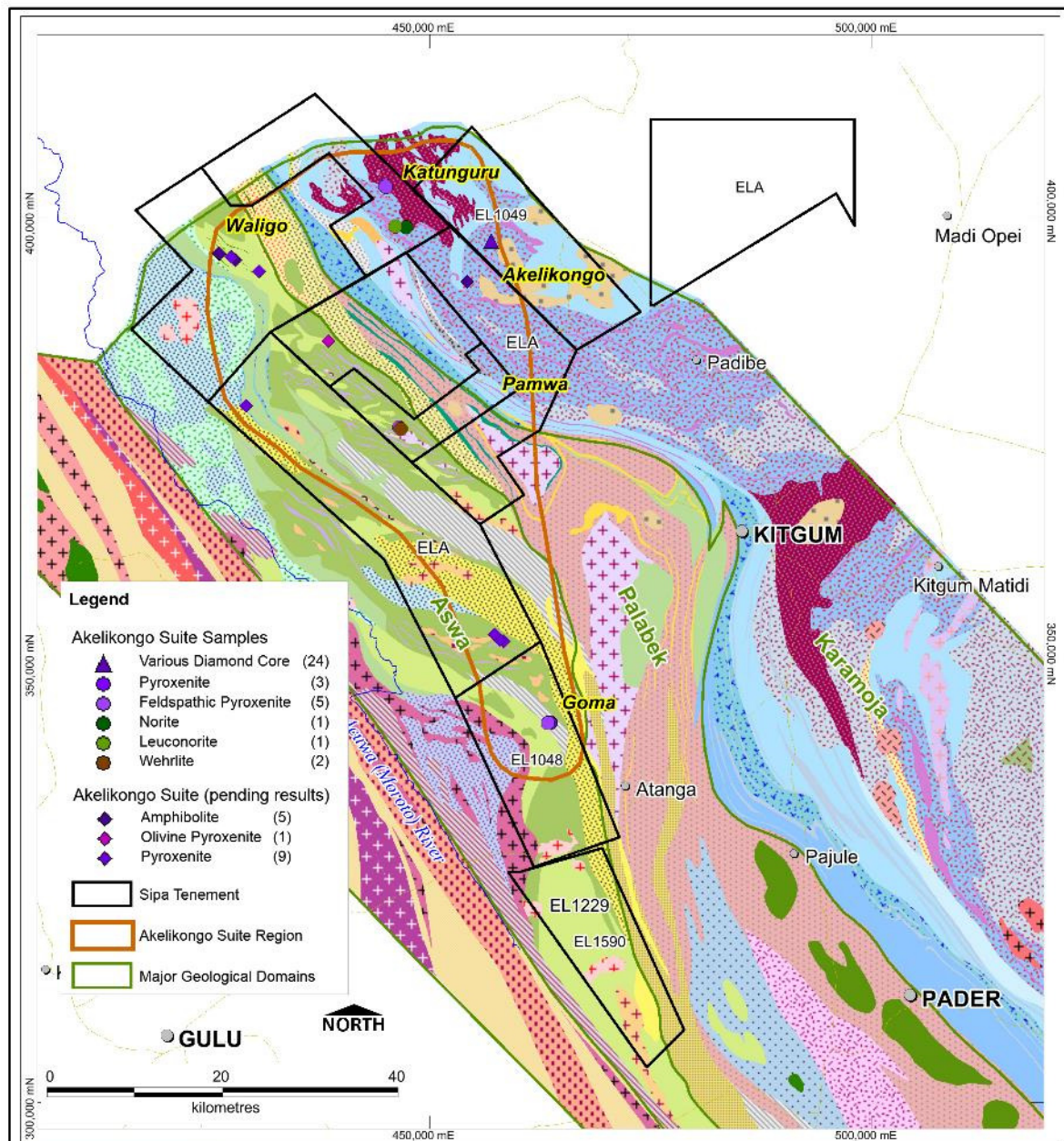


Figure 7: Kitgum Pader Project, Uganda showing location of the Akelikongo nickel-copper discovery and regional prospects with new “Akelikongo Suite” intrusions highlighted.

During the quarter, tenement-scale mapping and rock sampling collecting representative samples of known outcropping mafic-ultramafic bodies was undertaken. The program of mapping and geological documentation complements the previous regional soil sampling completed in 2013-2016. The program was conducted by consultant geologist, Richard Hornsey, a highly regarded nickel geologist, with globally recognised expertise in nickel sulphide and PGE exploration.



The program was undertaken to quantify litho-geochemistry, geochronology and olivine mineral chemistry, and compare these features to selected mineralised and unmineralised core at Akelikongo. The purpose of the investigation was to determine whether the area prospective for significant intrusive related nickel-copper mineralisation can be expanded beyond the Akelikongo area. Initial field mapping and geochemical sampling has been completed, with samples dispatched to the laboratory.

The recognition and demonstration that Akelikongo is located in a belt of fertile nickel-copper sulphide mineralised intrusions, rather than an isolated occurrence, is important to the potential size, scale and likelihood of further discoveries within the project. The earlier recognition that Akelikongo is very late in the tectonic history of the area indicates that additional fertile intrusions may be present throughout the tenement package in all mapped tectonostratigraphy, and not just in the immediate vicinity of Akelikongo.

The current field mapping exercise has identified an Akelikongo “like” suite of intrusives over an 80km x 30km north-northwest trending corridor extending from Goma in the south-east through Akelikongo and trending further to the north-west through the Sipa tenements. These initial observations indicate the potential for additional nickel and copper sulphide mineralised intrusions similar to Akelikongo within the Sipa tenements.

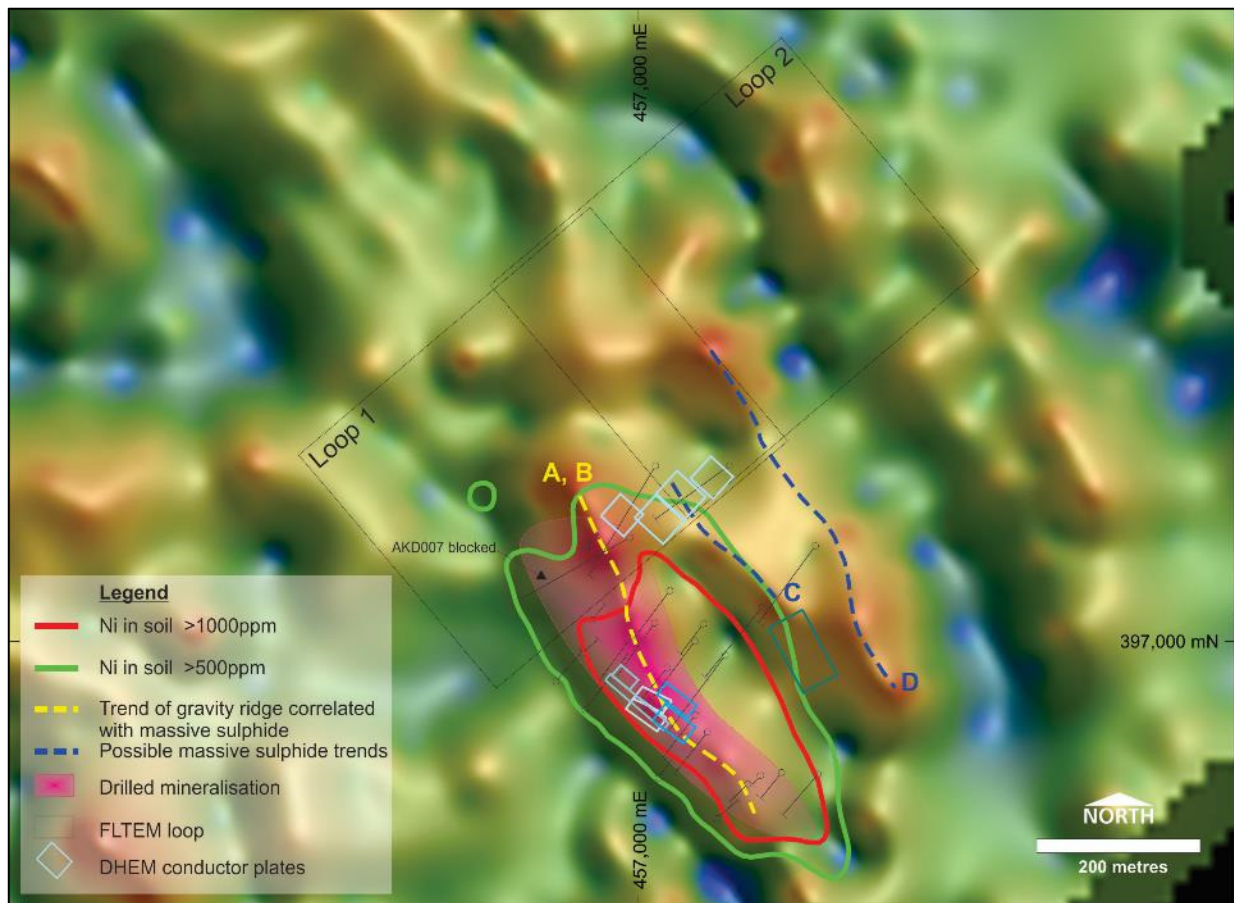
An important field observation is that Goma, located to the south-east of Akelikongo is a similar intrusion style to Akelikongo. The Goma prospect has previously been explored by Sipa with weathered rock chip samples assaying up to 2.6% nickel and soils up to 1.9% nickel. This anomaly is yet to be drill tested. Although these are laterite-enriched results, the potential for sulphide mineralisation is now confirmed.

### **Akelikongo Nickel-Copper**

During the quarter, a fixed-loop transient electromagnetic survey (FLTEM) was completed at Akelikongo. The survey was designed to explore for highly conductive massive sulphide mineralisation near the base of the ultramafic chonolith, down-plunge from intersections of semi-massive sulphide in holes AKD017 and AKCD006, which returned intercepts of up to 7m at 1.04% Ni and 0.35% Cu.

A review of down-hole TEM geophysical results conducted earlier in the year supported the geological interpretation that the system is strengthening down-plunge and identified a linear trend containing strong conductors using drilling and gravity inversions (Figure 8).





*Figure 8: 1VD residual gravity with known massive sulphide trends from DHTeM and drilling, showing FLTEM loops 1 and 2. Trend AB has been drilled and is open down plunge. Trend C and D are inferred from DHTeM conductors and the gravity.*

FLTEM surveys conducted in December 2014 were designed on a pre-drilling understanding of the chonolith geometry and distribution of sulphide mineralisation. Consequently, placement of transmitter loops in these surveys did not provide optimal electromagnetic coupling with this target.

The recent FLTEM survey utilised a high-powered transient electromagnetic (TEM) transmitter, capable of about 120 ampere peak current output into a three-strand 400m x 500m wire loop (compared to about 17ampere in previous surveys). The increased power was designed to increase the ability of the survey to detect low-amplitude responses from deeply-buried strong conductors by increasing the signal-to-noise ratio of the data. The current survey base frequency was also lowered from the previously used 1.25Hz to 0.125Hz, in order to increase the anomaly amplitude in the event of a strong conductor being identified.

The fixed-loop TEM readings were strongly affected by induced polarization (IP) responses, which create a distorted and noisy signal both inside and outside the transmitter loops. This impacted the ability to detect the target at the predicted position.

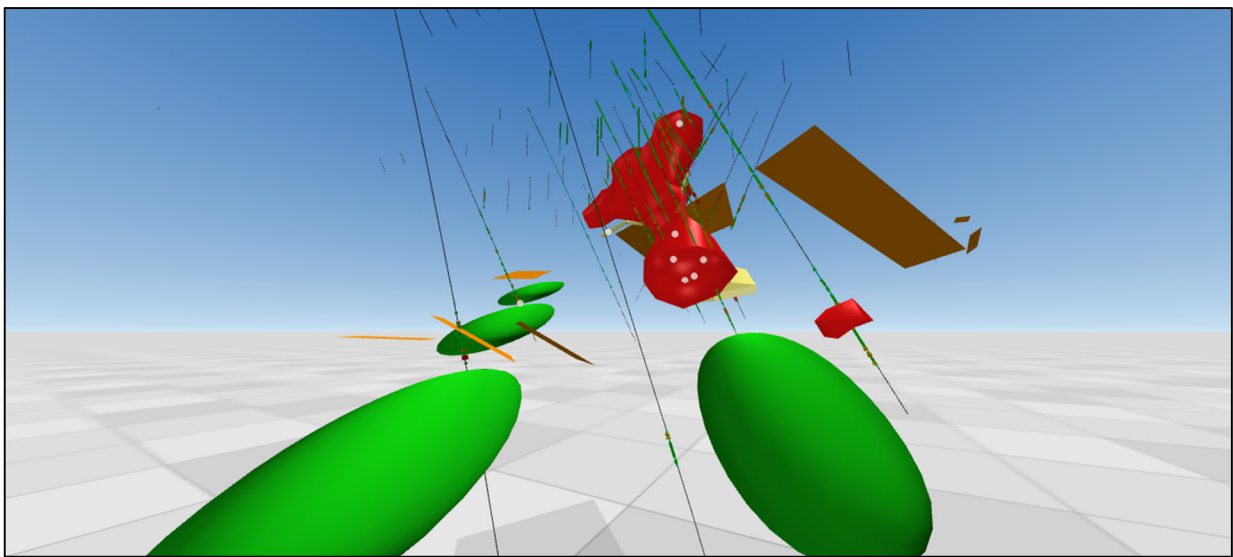
A number of FLTEM responses were noted, however the survey did not identify a conductor of the size and orientation targeted in the expected down-plunge position of the chonolith.

Given the strong IP effects on surface EM, the most direct and reliable exploration technique moving forward is a combination of drilling and down-hole EM (DHEM) as the system plunges to the north-west.



A down-hole transient electromagnetic (DHTeM) survey will be conducted from hole AKD007 using a large transmitter loop and high-powered transmitter to detect the source of the conductor responsible for the FLTEM response. Previous attempts to survey this hole were abandoned as the hole had become blocked. However follow-up drilling of the strong conductors detected in the AKD016 DHTeM survey is likely to provide an explanation for the single-station FLTEM response defined on Line 1 of the Loop 1 survey.

3D modelling conducted last quarter depicts the orientation and plunge of the mineralised body. This is a very effective tool for demonstrating that the system is open down-plunge and shows a second possible massive sulphide position within the pipe. The model can be found at the Company's website, [www.sipa.com.au](http://www.sipa.com.au).



*Figure 9: Target zones shown in green down-plunge of Akelikongo mineralisation (shown in red) which remains open down plunge*

## Forward Plan

### Paterson North

A program of follow-up RC/AC drilling is planned at Obelisk to further vector towards the centre of this large and prospective system. This program was originally planned to commence in late October, however the Company's drilling contractor has decided to defer it due to the extreme weather conditions and hazardous fire conditions currently being experienced in the Pilbara.

The program will be coordinated to commence as early as possible in 2018, subject to weather conditions and access. This program will be undertaken in conjunction with planned follow-up down-hole electromagnetic (DHTeM) surveys on all of the recently completed diamond drill holes.

Beyond Obelisk, the current multi-disciplinary approach is aiming to generate the next generation of targets on the entire tenement package.

The key aspects to this approach include:

- The application of geochemical and geophysical information generated during exploration at Obelisk to the broader regional exploration, particularly the identification of alteration systems on the margins of intrusives;



- Utilising the regional geology map generated by the CSIRO in conjunction with Sipa to develop a structural framework to identify potential mineralising traps;
- Utilising the gravity survey data with the magnetic datasets to refine the position of interpreted domes; and
- Generate regional geochemistry datasets from ionic leach analysis from samples collected at gravity stations. These data, combined with the multi-element datasets generated at Obelisk, will further refine the alteration and mineralisation footprints.

In summary, the integration of geochemistry (TIMA and ionic leach and drill hole analysis), geophysics (gravity and magnetics), and geology (CSIRO bedrock interpretation and drill core/chips) is expected to advance and help prioritise regional targeting as the exploration effort on Obelisk continues to pursue economic mineralisation. Understanding the controls of the high grade gold and copper veining will be a priority.

The final data collection for these activities will be completed in the current quarter and is expected to provide a clear pipeline of targets moving into the next field season.

## **Uganda**

Audit Magneto Tellurics (AMT) is an effective detector of mineralised ultramafic chonoliths in a similar geological settings elsewhere, with the ability to detect features well over 1000m below surface. This technique has been used successfully at the Jacomynspan nickel deposit in South Africa.

The mineralised pipe at Akelikongo is interpreted to be close to holes AKD003 and AKD012, around 700m to the north of the known mineralization, due to the presence of anomalous nickel and PGE's in the sulphides with the gneiss. This may be due to element leakage from the mineralised pipe below or along a fault. Planning has commenced for an AMT survey that may detect the pipe in this area and further down-plunge.

In addition, the recent recognition and demonstration that Akelikongo is most likely located in a belt of fertile, potentially nickel-copper sulphide mineralised intrusions rather than an isolated occurrence is important to the potential size, scale and likelihood of further discoveries within the project.

This has resulted in additional tenement applications being submitted in areas where similar intrusives have now been identified.

In summary, the activities for the current quarter will include:

- Planning for AMT surveys at the Akelikongo Project to further define the geometry and extent of the chonolith in order to target further drilling;
- DHEM surveying of holes previously untested by this technique due to blockage. This will be dependent on being able to successfully remove the source of the blockage in the holes.
- Finalising the interpretation of litho-geochemistry, geochronology, and olivine mineral chemistry, as results become available and comparing these features to both mineralised and barren core at Akelikongo; and
- Investigating geochemical processing options (i.e. various ratios such as Ni/Cu and domaining of elements) to develop more constrained targets and compare these to the targets generated by recent mapping.





The planned exploration activities will provide information to move the Akelikongo Project forward while at the same time generating new targets and revisiting other targets within the current Sipa tenements.

## Corporate

### SPP

As announced on 18 September 2017, the Company conducted a Share Purchase Plan ("SPP") to raise up to \$2 million to underpin further exploration programs at its Paterson North copper-gold project in WA and at its Akelikongo nickel sulphide discovery in Uganda.

Since that announcement, the Company and JM Financial Group Limited (ACN 007 364 132) (Underwriter) entered into an underwriting agreement in respect of the SPP (Underwriting Agreement) which will ensure that the Plan will raise a minimum of \$2,000,000 (Underwritten Amount).

The Underwriting Agreement contains customary warranties, undertakings and termination events, as set out in the Plan offer booklet. The SPP closed at 5pm AEST on Thursday, 26 October. The proceeds of the SPP, together with the Company's cash at the end of the Quarter of \$1.4 million, is sufficient to underpin ongoing exploration activities.

### Board changes

The Board has received notice that Paul Kiley will not be seeking re-election at the AGM due to other professional commitments and will finish his tenure from the date of the AGM, being 16 November 2017.

Mr Kiley has served as a Director since September 2014 and the Board thanks him for his contribution to the Company.

### Appointment of Exploration Manager

Highly experienced geologist and mining executive **Ian Stockton** was appointed as Exploration Manager in August, strengthening the Company's existing technical team, led by Managing Director Lynda Burnett.

Mr Stockton has held numerous senior technical and managerial positions in a 25-year career, including 10 years' management experience in exploration, project assessment, feasibility studies, mine development and business development across a broad range of commodities including gold, silver, copper, molybdenum, and antimony. He has previously been employed by MIM, Glencore, Dundee Precious Metals, Straits Resources and, most recently, IAMGOLD Corp, and has extensive working experience in porphyry, epithermal and orogenic mineral systems in Australia, Asia and Eastern Europe. He has been directly involved in the discovery of several significant ore deposits in Australia, Indonesia and Suriname, which are currently either operating or at the development stage.

Sipa secured the expertise of consultant geologist, Richard Hornsey, a highly regarded nickel geologist, with globally recognised expertise in nickel sulphide and PGE exploration for the Regional mapping and rock chip sampling program in Uganda.



## About Sipa

Sipa Resources Limited (ASX: SRI) is an Australian-based exploration company which is targeting the discovery of significant new gold-copper and base metal deposits in established and emerging mineral provinces with world-class potential.

In Australia, Sipa has a Farm-in and Joint Venture Agreement with Ming Gold at the Paterson North Copper Gold Project in the Paterson Province of North West Western Australia, where extensive primary copper gold silver molybdenum and tungsten mineralisation was intersected at the Obelisk prospect in primary bedrock. The project is in an intrusion related geological setting similar to other deposits in the Paterson and those in the Tintina and Tombstone Provinces of Alaska and the Yukon.

The Company's maiden drill program in August 2016 successfully delineated a major copper plus gold, silver, molybdenum and tungsten mineral system over a 4km strike length at the Obelisk prospect, within the Great Sandy Tenement. The drilling confirmed that the anomaly is continuously developed over the entire strike length, including an 800 by 200m long zone where highly anomalous copper (greater than 500ppm Cu) and gold results up to 1.26g/t Au were returned. This represents an outstanding target for follow-up exploration.

The Paterson Province is a globally recognized, strongly endowed and highly prospective mineral belt for gold and copper including the plus 25Moz world-class Telfer gold and copper deposits, the Magnum and Calibre gold and copper deposits, the Nifty copper and Kintyre uranium deposits and the O'Callaghans skarn hosted tungsten deposit.

In Northern Uganda, the 100%-owned Kitgum-Pader Base Metals Project contains two new mineral discoveries, Akelikongo nickel-copper and Pamwa lead-zinc-silver, both made by Sipa during 2014 and 2015.

The intrusive-hosted nickel-copper sulphide mineralisation at Akelikongo is one of the most significant recent nickel sulphide discoveries globally, exhibiting strong similarities to major intrusive hosted nickel orebodies such as Nova, Raglan and Voisey's Bay.

At Akelikongo, Sipa has delineated intrusive-hosted chonolith style nickel-copper sulphide mineralisation which is outcropping and plunges shallowly to the north-west for a distance of at least 500m and open to the northwest. In December 2016 strong zones of up to 7m of semi-massive sulphide interpreted to dip shallowly to the northwest were intersected with strong off-hole conductors associated with them. These intercepts occur beneath large thicknesses over 100m of disseminated nickel and copper sulphide.

*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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## Competent Persons Statement

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.

Various information in this report which relates to Exploration Results reported within is extracted from the following previously released reports:

- 20 October 2017 Further High-Grade Vein Hosted Gold-Copper at Obelisk
- 12 October 2017 Initial Assays Confirm Large Bedrock Mineral System
- 22 September 2017 Progress Report – Update on 2<sup>nd</sup> Diamond Hole
- 18 September 2017 Paterson North Drilling Update
- 19 June 2017 Paterson North Assays Confirm Large Copper System
- 24 May 2017 Initial Results Expand Potential of Paterson North
- 22 February 2017 Progress Report – Akelikongo Geophysics Results
- 1 December 2016 Akelikongo Final Assays Discovery Continues to Grow
- 17 November 2016 Strong Nickel and Copper hits up to 2.4% Nickel and 2% Copper
- 22 April 2015 Progress Report - Akelikongo

All of the above reports are available to view of [www.sipa.com.au](http://www.sipa.com.au) and [www.asx.com.au](http://www.asx.com.au). The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements.





## Appendix 1 – Paterson North drill hole descriptions

The drill-hole locations are as follows:

Hole	Easting (GDA94/zone 51)	Northing (GDA94/zone 51)	RL (m)	Dip (deg.)	Azimuth (deg.)	Length (m)
PND001	392,449.00	7,718,972.00	222	-60	55	511.3
PND002	392,630.00	7,718,868.00	229	-60	55	517.4
PND003	392,929.00	7,718,715.00	279	-55	55	279.2
PND004	392,767.00	7,718,860.00	225	-60	55	296.1

**PND001** was designed to test the gradient array IP chargeability and coincident copper anomaly, which is interpreted to represent a strike extensive zone of disseminated sulphides, open along strike in both directions. As reported in ASX releases dated 18 and 22 September 2017, PND001 demonstrably intersected the geophysical features associated with disseminated and structurally controlled sulphide mineralisation, as well as the coincident copper anomaly. In particular, the broad chargeable zones appear to reflect the disseminated pyrite as well as the fracture coated pyrite and the quartz-pyrite veins. PND001 results reported in ASX 12 October 2017 include:

- PND001:** 1m @ 0.19g/t Au and 0.07% Cu from 300m
- PND001:** 0.24m @ 0.14g/t Au and 0.17% Cu from 319.2m
- PND001:** 0.48m @ 0.26g/t Au and 0.16% Cu from 322.4m
- PND001:** 64.8m @ 0.1% Cu and 122ppm W; from 317.2m

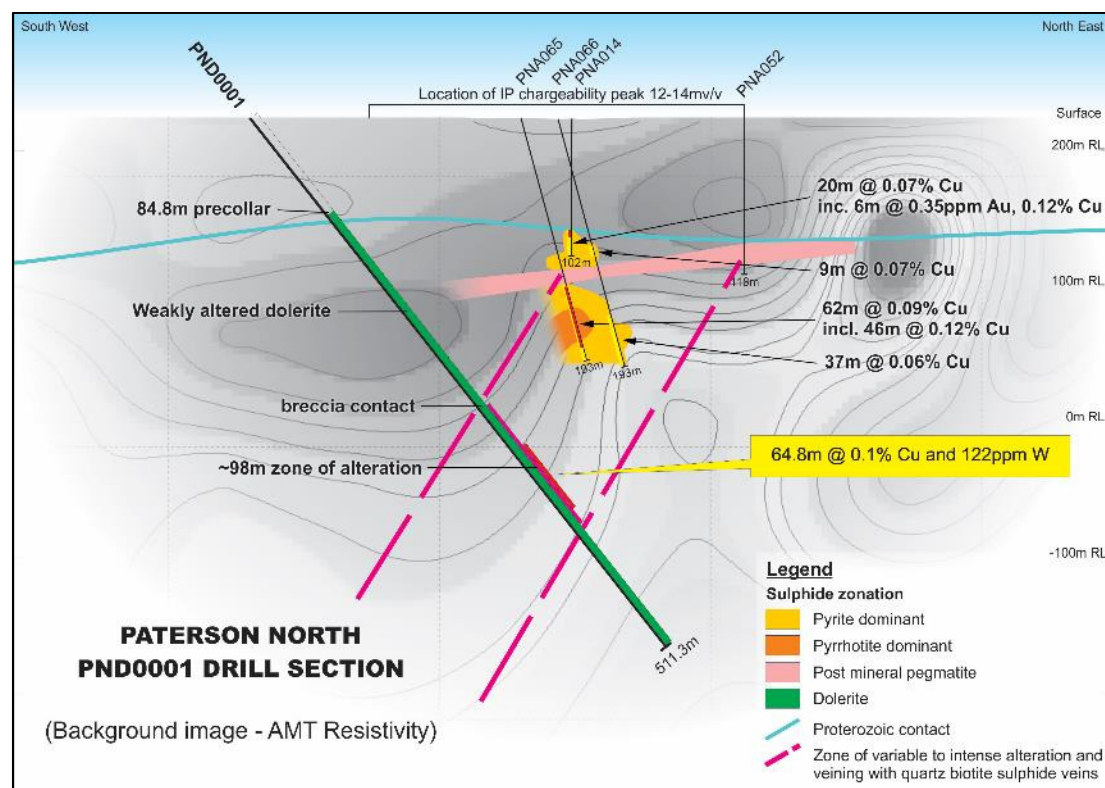


Figure 10: Cross-section with results from PND001



**PND002** 200m to the south of PND001, intersected a wider but more variable zone of silicification alteration and veining, varying in width from 5cm to 4m. The veins are quartz-dominated with pyrrhotite chalcopyrite and minor pyrite. Within the mineralised zone, the dolerite is strongly altered to quartz, biotite, titanite and pyrrhotite. PND002 results reported in ASX 12 October 2017 include:

<b>PND002:</b>	<b>13.5m @ 0.15% Cu</b> from 252.5m
<b>PND002</b>	<b>10m @ 0.1% Cu</b> from 272m
<b>PND002</b>	<b>31.5m @ 0.1% Cu</b> from 334.8m
<b>PND002</b>	<b>0.15m @ 22.5g/t Au and 2% Cu</b> from 422.6m
<b>PND002</b>	<b>0.16m @ 0.82g/t Au 0.49% Cu</b> from 311.8m
<b>PND002</b>	<b>1.1m @ 0.26g/t Au 0.62% Cu</b> from 334.8m

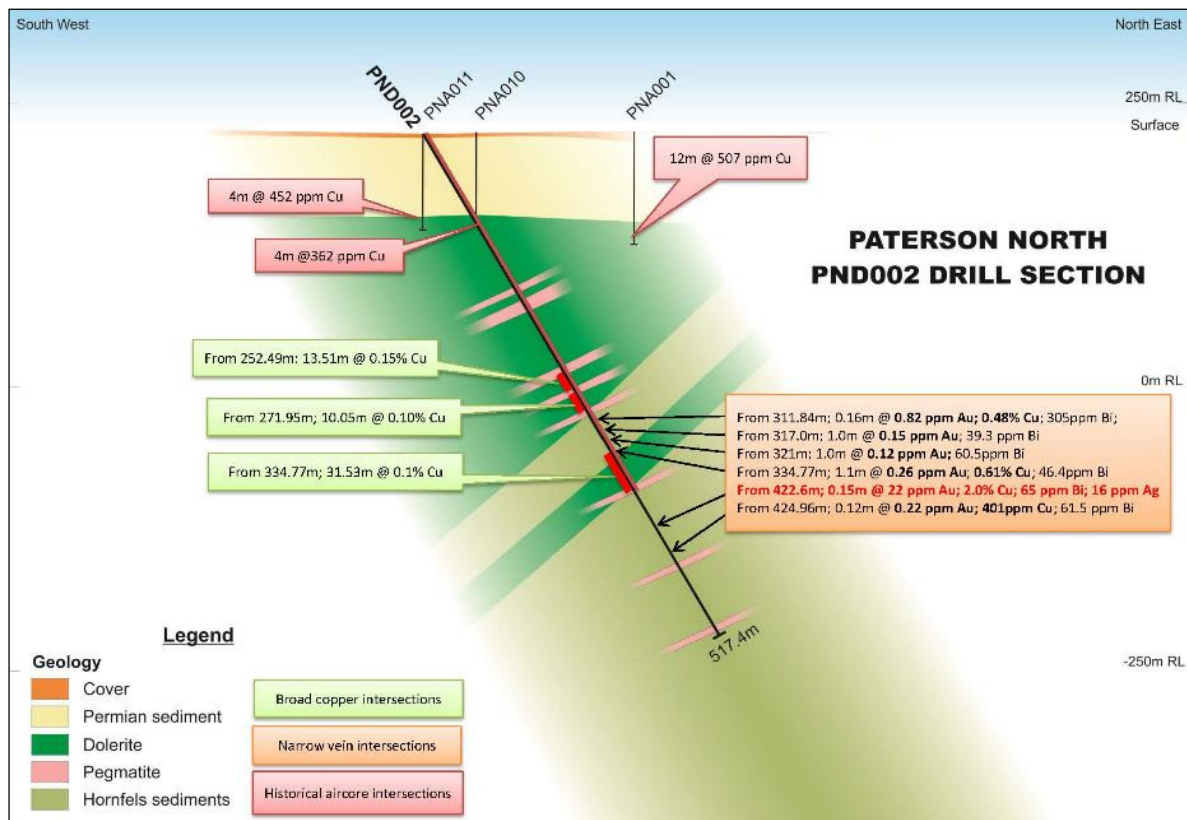


Figure 11: PN002 Drill Section



**PND003**, the southernmost hole, located almost 500m south of PND001, intersected a supergene copper-enriched zone from 93.4m to 97.7m and then altered dolerite to 148.8m. The hole then intersected variably veined and altered fine grained hornfelsed sediment (potentially indicating a proximal intrusive heat source) until its completion at 279m.

The best assays was from the supergene zone, primarily consisting of chrysocolla as was:

**PND003**      **3m @ 1.8% Cu and 0.94g/t Ag from 95.8m, including:**  
**0.2m @ 4.6% Cu and 7.48g/t Ag**



Figure 12: Drill core from PND003 showing the supergene zone, chrysocolla occurrence and zones where additional assaying is currently in progress

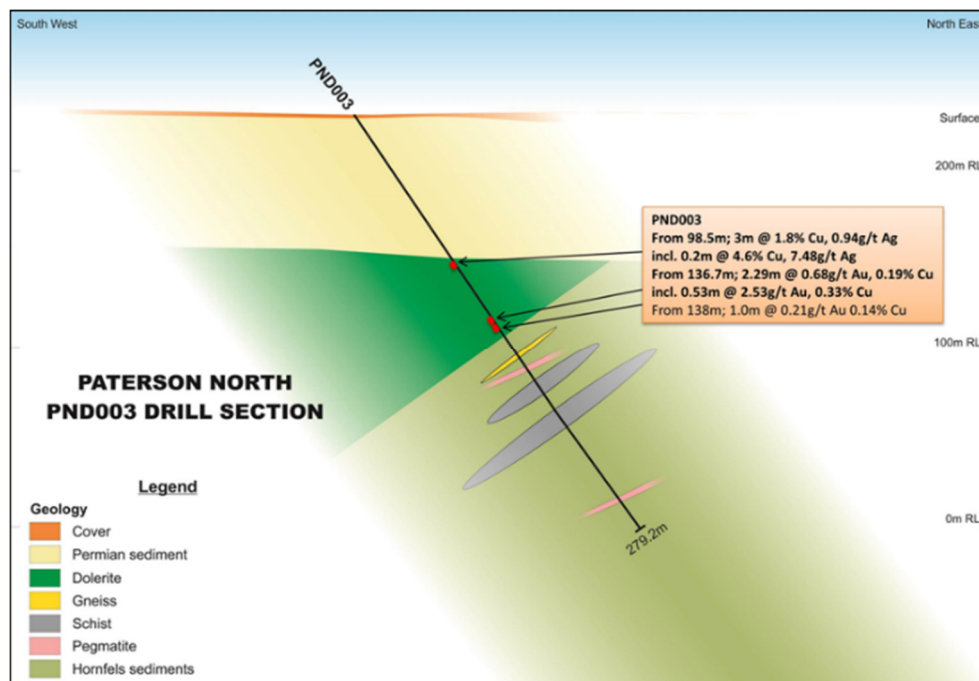


Figure 13: PND003 Drill Section





**PND004** was drilled 100m to the south-east of PND002 and intersected strong veining and alteration within a hornfelsed sediment with a similar style of mineralisation to PND002, with a total depth of 296.1m.

<b>PND004</b>	<b>0.16m @ 0.14g/t Au 0.57% Cu</b> from 205.29m
<b>PND004</b>	<b>2.0m @ 0.83g/t Au and 0.1% Cu</b> from 211m
<b>PND004</b>	<b>0.24m @ 0.93g/t Au 0.29% Cu</b> from 213.12m
<b>PND004</b>	<b>3.0m @ 0.25% Cu</b> from 219m
<b>PND004</b>	<b>0.3m @ 0.38g/t Au and 0.65% Cu</b> from 228.7m
<b>PND004</b>	<b>0.32m @ 0.18g/t Au and 1.24% Cu</b> from 239.68m

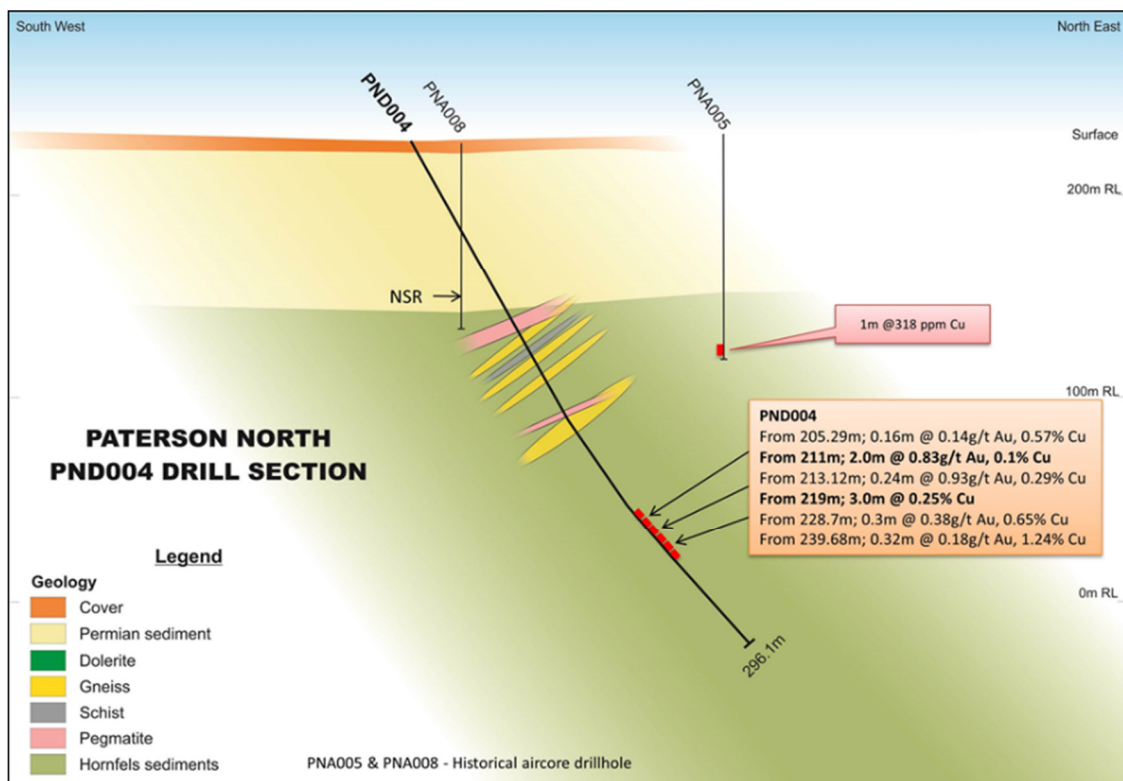


Figure 14: PN004 Drill Section