ANNUAL REPORT EL 28045 Northern Territory SOUTHERN CROSS BORE PROJECT (SXB) 30/11/2017 to 29/11/2018

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ABSTRACT

EL 28045, Southern Cross Bore Project, located about 75kms northeast of Alice Springs is bisected by a north trending zone of intense tectonism called the Pinnacles Shear Zone hosting quartz – copper veins to the east and Johnnies Reward prospect to the west. Local geology is dominated by protolithic carbonate in the east which transitions abruptly to a pelite-psammite-acid volcanic sequence in the west assigned to the 1810 – 1800Ma Cadney metamorphics, Aileron Province, Strangways Metamorphic Complex, southeast Arunta Inlier.

Johnnies Reward is a mature prospect discovered in 1964. Since acquisition by Davenport, exploration undertaken on the project area includes an RC drilling program, a soil-sampling program, rock sampling, a second drilling program including both RC and diamond drilling and a heliborne VTEM and magnetics survey.

A VTEM survey in 2013 identified a number of anomalies, two of which were classified as high priority. At that time recommendations for future exploration at the Southern Cross Bore Project included a down hole EM survey and follow-up drilling. However, the break in field work due to the difficulty in raising funds for exploration meant that older drill holes where not open for DHEM.

During 2017 Davenport undertook a fauna and flora report and a weed management study as a requirement for the Mine Management Plan (MMP). Historic exploration data was accessed and reassessed with information included in compiling a new comprehensive GIS for the licence. As part of this data review process it was determined that there was sufficient drilling to complete an initial JORC Resource estimate on the Johnnies Reward prospect and the report was completed in early 2018.

The resource estimate, based on past drilling at Johnnies Reward and prepared by Conarco Consulting includes an Inferred Resource of 2.2 Mt @ 1.4 g/t gold equivalent for 101 koz gold equivalent. The Mineral Resource includes 52,000 ounces gold at 0.7 g/t gold and 9000 tonnes copper at 0.4% Cu. It is open down dip and additional plates modelled from the VTEM survey have not been drill tested.

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Southern Cross Bore Project (SXB) – EL28045 Northern Territory

1.0 INTRODUCTION

1.1 Location and Access

The Southern Cross Bore Project is located about 75kms north east of Alice Springs. Access to the project is via the Stuart Highway north of Alice Springs for 49kms, then east along the Arltunga Tourist Road for 48kms to the Pinnacle Road turnoff. The Pinnacle Road, also known as Bins Track, is followed north for 5.3kms where it crosses on to the southeast corner of the licence. A further 4.7 kms and the turnoff to Southern Cross Bore Track is reached. The Southern Cross Bore is located 0.7 kms from the turnoff and the Johnnies Reward Prospect lies a further 1.3 kms to the north of the bore. The Pinnacle Road continues a further 20kms north of the Southern Cross Bore Track where it joins the sealed Plenty Highway thus bisecting the licence (Figure 1).



Figure 1. Location Map EL 28045

1.2 Tenure

EL 28045, originally known as Gillen Creek, consists of 23 sub blocks (72.63kms²). The licence area includes Johnnies Reward an IOCG (Iron Oxide Copper Gold) prospect and the vein hosted copper deposits of the Pinnacles District. EL 28045 is located entirely within The Garden Pastoral Lease 662. It is not the subject of a land claim under the NT Land Rights Act (1976). The Sandover stock route passes through the area. The 1km wide stock route is Aboriginal Freehold land and is excluded.

EL28045 was granted to A. W. Mackie on 30 November 2010 for a period of 6 years. It was acquired by Sturt Resources Ltd on 5 July 2011 and renamed the Southern Cross Bore Project. The licence at that time was held by Davenport Resources

Pty Ltd (ACN 153 414 852) a wholly owned subsidiary of Sturt Resources Ltd. Subsequently in July of 2013 Arunta Resources Limited (ACN 73 089 224 402), a publicly listed company acquired Davenport.

In August 2015 Davenport converted to a public company (Davenport Resources Limited). In February 2016 Davenport became an independent unlisted public company after an in-specie distribution of its shares to Arunta shareholders. In December 2016 Davenport completed an Initial Public Offering raising exploration capital and listed on the ASX in January 2017. Davenport now has a corporate focus on exploration of the historic potash mining region of South Harz in Germany and consequently funding has not been available to advance exploration on EL28045. The company is seeking to divest the tenement.

1.3 Regional Geology

The Southern Cross Bore Project which encompasses the Johnnies Reward Prospect is located within the high grade metamorphic rocks of the Central Block of the Arunta Province a Palaeo to Mesoproterozoic mobile belt (Figure 2). Within the project area the Arunta Province is represented by the Strangways Range Metamorphic Complex, originally a sequence of sedimentary and volcanic rocks of early Proterozoic age that was deformed and metamorphosed 1700 to 1800 million years ago by regional metamorphism associated with igneous intrusion.



Figure 2. Regional Geology of the Johnnies Reward Prospect

1.4 Project Geology

The licence area is generally flat with some higher terrain and ridges of ferruginous altered bedrock formations in the northwestern part of the tenement. Broad alluvial plains associated with the lower creeks are a feature of the eastern half of the licence area.

The Johnnies Reward gold-copper prospect occurs within lower Cadney metamorphics comprising metapelite quartzofeldspathic gneiss, felsic granulite and minor mafic granulite located stratigraphically just below the lower – upper Cadney metamorphic transitional contact. Johnnies Reward mineralisation is hosted within a north striking, overturned east-dipping (60 degrees) metasedimentary succession dominated by quartzose gneiss. The lode unit is a stratabound body of diopside-tremolite-magnetite rock, which at surface extends about 200m along strike and is up to 50m wide. Ground magnetic interpretation suggests the magnetite rich lode plunges to the northeast at 50 degrees and extends to at least 500m depth below surface.

Two types of mineralisation are present, a copper-lead-zinc-silver-gold assemblage restricted to the lode rock and a gold with minor copper assemblage extending from the base of the lode rock into the underlying quartz-garnet-biotite-gneiss.

1.5 Hydrogeology

Gillen Creek is the main watercourse through tenement EL28045. It enters the tenement from the southern boundary heading in a northerly direction for about the first 8 kilometres before meandering in a north-easterly direction before draining into the Anamarra River. The creek bed is sandy and about 50 - 100 metres wide with gums (Eucalyptus camaldulensis) along the banks.

2.0 PREVIOUS WORK

A thorough and detailed description of previous mining and exploration in the Southern Cross Bore Project Area was given by Mackie (2012) and summarised in previous Annual Reports for EL 28045. A brief summary of more recent work is included here with additional information referenced from previous years Annual Reports.

2.1 Mining History

Copper mineralisation was first discovered at the Pinnacles in 1889. However no significant work was undertaken until 1942 when two shafts were sunk resulting in an estimated 50 tonnes of ore averaging 20% Cu being produced from Ciccone's shaft. From 1952 to 1957 the Ophir South and North were re-opened followed by Central No. 2 with an estimated production of 20 tonnes averaging 20% Cu. From 1964 to 1968 the Pinnacles copper showings were reworked. Production from the largest of these Central No. 2 was 1500 tonnes of material mined from which was handpicked an ore parcel of 33.5 tonnes averaging 15.75% Cu and 2.9oz Ag.

Reported production from the other workings included:

- Ophir North: 50.95 tonnes @ 9.26% Cu
- Ophir South: 17.93 tonnes @ 5.27% Cu
- Urals: 7.25 tonnes @ 8.24% Cu
- Polly Boy: 22 tones @ 17.8% Cu

No further mining activity has occurred since 1968.

2.2 Exploration Completed Prior To 2010

In 1964 John Vitosky discovered a gossan at Johnnies Reward. That same year geological reconnaissance of the general area was undertaken. Since then the area has been under almost continuous exploration licence with a number of phases of work by different companies. The past exploration has been comprehensively recorded in Mackie 2012.

2.3 Exploration during Davenport tenure of EL28045

2.3.1 2011 Exploration Program

Following surrender by Maximus Resources of EL 23592 in February 2010, EL 28045 was granted over the same area to AW Mackie on 30 November 2010. Work undertaken included collation of all historical data from 1965 to 2008 and entry into

a digital database. The 2006 GPX airborne data was acquired, computer modelled and image processed. The Gillen Creek crossing at Southern Cross bore was re-established and existing tracks to Johnnies Reward upgraded (Mackie 2012).

2.3.2 2012 Exploration Program

Exploration undertaken between 30 November 2011 and 29 November 2012, the second year of tenure of EL 28045 included an RC drilling program, a soil-sampling program, metallurgical test work and mineralogical studies. The drilling program consisted of 8 RC drill holes that targeted the down dip / plunge gold-copper mineralisation at Johnnies Reward identified by Alcoa in 1984. The soil-sampling program consisted of 18.5kms of line in two grids and a single test line over the Johnnies Reward Prospect. One grid targeted a structural corridor running 1.4kms north of Johnnies Reward North the other tested a magnetic anomaly located about 2.3kms to the northwest of Johnnies Reward. A total of 393 soil samples were collected and analysed for gold, silver, arsenic, bismuth and copper. A mineralogical study and preliminary metallurgical test work was conducted to establish if the gold mineralisation intersected in the drilling program was amenable to traditional CIP processing. This program and the results received have been described previously by (Buskas 2013).

2.3.3 2013 Exploration Program

Exploration undertaken between 30 November 2012 and 29 November 2013, the third year of tenure of EL 28045 included an RC drill program, soil sampling with associated rock sampling, a second drill program including both RC and diamond drilling and an airborne geophysical survey. The first drilling program consisted of 9 RC drill holes that targeted the down dip / plunge gold-copper mineralisation at Johnnies Reward identified by Alcoa in 1984. The soil-sampling program had two aspects a regional component and a follow-up component with infill and extension of a sampling grid completed the previous year. The second drilling program included 25 RC drill holes/pre-collars and 4 diamond tails. At the Black Angus Prospect 17 RC holes were drilled together with one RC pre-collar with a diamond tail, 13BARCD038 drilled under the NT Collaborative drilling program (Buskas and Young 2014). At the Johnnies Reward Prospect 1 RC hole was completed, 2 RC pre-collars with diamond tails were drilled and a diamond tail extension was added to an RC drill hole drilled in the first program. At Brahman Prospect 4 RC holes were drilled. The airborne VTEM (Versatile Time Domain Electromagnetics) and magnetic was completed close to the end of the period. A total of 313.5 line kms were flown covering an area of 42.38 km2 (Buskas 2014).

2.3.4 2014 Exploration Program

Exploration undertaken between 30 November 2013 and 29 November 2014, the fourth year of tenure of EL 28045. (Buskas 2015). In January 2014, Arunta commissioned a study by SGC (Southern Geoscience Consultants) to interpret data from the airborne VTEM and magnetics survey. The data was of reasonably good quality and from it over 152 anomalies were identified. Of these two were classified as high priority, twenty seven as moderate priority and sixty eight as lower priority. The high and moderate priority anomalies fall within four priority areas.

- Zone 1 (Johnnies Reward) includes the 2 high priority anomalies which are coincident with a significant magnetic high and a number of moderate anomalies which closely follow a structural boundary extending up to Black Angus where geochemical sampling and shallow drilling have identified elevated Cu, Pb, Zn and Au concentrations. A VTEM survey conducted over the area in late 2013 identified three conductive anomalies. One is a highly localised anomaly centred over the Johnnies Reward Prospect.
- Zone 2 includes a series of moderate anomalies that closely follow an interpreted structure, the Woollanga Lineament, occurring on the shoulder of a much broader anomaly to the east.
- Zone 3 includes an assortment of moderate, weak and negative transient anomalies that follow a structural boundary. Modelling was difficult due to the large background response. No ground investigation has been undertaken in the area.
- Zone 4 comprises a single anomaly, Anomaly 42, located close to a structural boundary which may be caused by a small strong conductor proximal to elevated Cu in soil geochemistry.

Selected anomalies were modelled using thin plates to estimate discrete conductor orientations and strengths and drill holes were planned to intersect the modelled plates. (Sykes 2014) however drilling was never done due to funding restrictions



Figure 3 The priority VTEM zones modelled with conductor plates.

The background image is a magnetic RTP image, with an overlying lineament interpretation (black lines). Anomalies indicated by stars High = red, moderate = green, low = blue and negative transients = black.

2.3.5 2015 Exploration Program

No was exploration fieldwork undertaken between 30 November 2014 and 29 November 2015, the fifth year of tenure of EL 28045. The recommendation from the previous year of a follow up exploration program to include:

- Down-hole EM survey at Johnnies Reward
- Follow up drilling program of either RC or diamond drilling

was not acted on due to financial constraints.

Due to several changes in management of the parent company of EL28045, Davenport Resources Limited did not find the digital database referred to in reports from 2011 and much of this work has had to be repeated.

2.3.6 2016 Exploration Program

From 30 November 2015 and 29 November 2016, the sixth year of tenure of EL 28045, again no exploration fieldwork was undertaken. Follow up of the work recommended from 2014 was again deferred and from a field inspection it was noted that down hole EM had become impossible due to the passage of time the holes no longer being accessible.

An independent report on the geology of the region was prepared by Consultants Conarco. This report provided directors with an independent assessment of the geology and prospectivity of the tenement. In addition a full report was completed for inclusion in the Davenport Initial Public Offering Prospectus. This report is included in Appendix 1.

Davenport met its obligation to complete rehabilitation of the drill pads and associated tracks from the 2013 drilling program. Following unseasonal rain in late 2016 Davenport undertook a field inspection of the Johnnies Reward area in January 2017 and observed good native vegetation regrowth across all of the rehabilitated area.

2.3.7 2017 Exploration Program

Davenport commissioned Low Ecological Services Pty Ltd to undertake a Flora and Fauna survey and Weed Management Plan. The study was primarily a desktop review of data supplemented with a one-day field visit. Reports were completed in March 2017 and incorporated into the 2018 Annnual Report

Following a review of past geophysics by Southern Geoscience Consultants (SGC) it was decided to fly an aeromag survey over surrounding EL30090, for continuity the survey also covered all of EL28035 including the area covered by the previous 2013 survey. SGC interpretation of Aeromag survey results

The detailed magnetic and radiometric survey delivered good quality data and enhanced the understanding of the area. A new structural and lithological interpretation across both licences (EL30090 & EL28045) was completed and delivered a range of exploration leads. However, apart from Johnnies Reward itself there were no new discreet targets of interest recommended for field investigation on EL28045. In September 2017 a field follow up of high priority and accessible targets was undertaken however, apart from the features noted below in Traverses 1 & 2 no additional areas of interest were noted



Figure 4 SGC interpretation plan

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Traverse 1 – Johnnies Reward then west over the hill to JC's Target 1. Samples (DAV0001 – DAV0005) were taken within the calc-silicate unit which was followed to the south then back around a possible fold hinge to Jonnies Reward. DAV0001, ~200 m southwest of Johnnies Reward recorded anomalous copper (81 ppm Cu) and within the 90th percentile of all samples. No anomalous gold was evident from the assays



Traverse 2 – West of Black Angus. Evidence of tourmaline-rich rocks in creeks with areas of scattered boulders (est.+75% tourmaline) (Figure 1). Sample DAV0006 was taken in garnet-rich calc-silicates with minor anomalous copper assay. These rocks usually do not host mineralisation, but can be considered a vector to mineralisation within other known IOCG deposits. In addition to this, the wide spaced 200m x 200m sampling already conducted has not closed off the mineralisation. (Buskas 2013) This sampling also follows a known fault zone that is thought to control (possibly truncate) the Black Angus mineralisation.

Figure 5 Tourmaline-rich boulder.



Traverse 3 – The Pinnacles area although not highlighted as a discreet target has a history of small scale copper mining but has had little recent follow-up. Located the Pinnacles Central No.2 (JC Target 4) north of the creek where the extent of the diggings appears to be chasing copper on the margins of a cross-cutting quartz vein (Figure 11). More workings were evident south of the creek (Ophir North). Whilst locally cross cutting stratigraphy the structure hosting the mineralisation appears broadly sub-parallel to the regional stratigraphy. Further investigation of the structure is recommended.

Figure 6 Pinnacles Central No. 2

3.0 RESOURCE ESTIMATE

A Mineral Resource for the Johnnies Reward prospect, prepared by Conarco Consulting was underway at the time of the last Annual report and as it was completed prior to that report being submitted it was included for completeness. However as the work was done in the 2017/2018 year it is again included in this report.

The resource estimate is an Inferred Resource of **2.2 Mt @ 1.4 g/t gold equivalent for 101 koz gold equivalent**. The Mineral Resource includes 52,000 ounces gold at 0.7 g/t gold and 9000 tonnes copper at 0.4% Cu.

Mineral Resource Estimate for the Johnnies Reward Deposit - February 2018									
Domain	Cut-off	Tonnes (kt)	Au (g/t)	Au (Oz)	Cu (%)	Cu (t)	AuEq (g/t)	AuEq (oz)	
B Transition	0.0	75	0.5	1,000	0.5	500	1.3	3,000	
Α	0.0	145	1.1	5,000	0.3	500	1.6	7,000	
В	0.0	1,970	0.7	47,000	0.4	8,000	1.4	91,000	
Total	0.0	2,190	0.7	52,000	0.4	9,000	1.4	101,000	

Table 3 – List of Mineral Resources at a 0 g/t gold equivalent cut-off

The Mineral Resource for the Johnnies Reward prospect project incorporates assays from 41 holes including 9 diamond, 15 percussion and 17 RC holes for a total of 4699 m. This maiden Mineral Resource extends from an outcropping gossan through a transitional weathered zone that is approximately 20 m thick below which is fresh rock. The mineralisation dips steeply to the east with a moderate northerly plunge. The mineralisation is interpreted to be an IOCG deposit hosted within a magnetite-pyroxenite. The mineralisation is open down-dip as well as along strike to the north.



Figure 7 Oblique view(south-west) of Johnnies Reward showing three areas of exploration potential.

The estimate was prepared using a block model constrained with 3D wireframes of two main domains. Values for gold, copper and gold equivalent were interpolated using an Ordinary Kriging (OK) interpolation method on $10 \times 10 \times 10$ m

blocks. The block size and number of samples used for the estimate were determined by a Kriging Neighbourhood Analysis to optimise the kriging efficiencies and slope of regression.

In addition to this, using existing VTEM data from a survey completed in 2013, SGC reprocessed the data and revised the plate modelling of the late time VTEM anomaly showed a conductor was about 85 m below the surface and dipping towards the east. The anomaly coincides with the interpretation of the Inferred Mineral Resource and can therefore be used as an effective exploration tool. The modelling also shows two adjacent anomalies to the immediate north and south of the Johnnies Reward mineralisation. Although slightly deeper, ~150 m below surface, they clearly suggest a target required for further exploration. The full Resource Estimation report is Appendix 8.

4.0 CONCLUSION AND RECOMMENDATIONS

Johnnies Reward is a mature prospect, discovered in 1964. Other prospects in EL28045 include Black Angus, Wagyu, and Brahman (previously Johnnies Reward North) discovered by soil sampling in 2012 and defined by extension of the magnetic anomaly north from Johnnies Reward. Nearby to the east is the Pinnacles copper mineralisation that has been known of for over 120 years but has had only minimal attention in recent years.

The re-interpretation of the 2013 VTEM survey incorporating interpreted geology from past drilling has defined two plates that represent an untested drill target at Johnnies Reward. Immediate drilling was deferred pending results from the Aero Magnetic survey over the combined EL28045 and EL30090. Whilst there were some additional targets defined from that survey field follow up did not discover any new high priority targets. However, extensive tourmaline and magnetite rocks to the north-west of JR although not showing anomalous geochemistry in grab rock chip samples are indicative of distal hydrothermal activity and are noted as similar to distal hydrothermal rocks related to mineralisation at the Jervois project further east in the Arunta region. Follow up detailed sampling by infilling and extending the existing soil sample grid extending west from the Black Angus prospect is recommended. A drill program to test the deeper plates at Johnnies Reward is also recommended with follow up DHEM essential.

In addition the Pinnacles area to the east of Johnnies Reward has been largely overlooked with no records of modern exploration known. Davenport considers the area is worthy of follow up.

5.0 REFERENCES

BAIN, CJ 2018 Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2016 - 29/11/2017, Davenport Resources Limited. (Unpublished)

BAIN, CJ 2017 Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2015 - 29/11/2016, Davenport Resources Limited. (Unpublished)

BUSKAS, A.J. 2013, Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2011 - 29/11/2012, Sturt Resources Limited. (Unpublished)

BUSKAS, A.J. 2014, Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2012 - 29/11/2013, Arunta Resources Limited. (Unpublished).

BUSKAS, A. and Young, J. 2014, Diamond Drilling to confirm geology of the Black Angus Prospect, potentially a new style of mineralisation in the Eastern Arunta Province, NT. EL28045 *Southern Cross Bore Project Collaboration Program Report CR2014-0201*

BUSKAS, A.J. 2015, Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2013 - 29/11/2014, Arunta Resources Limited. (Unpublished).

MACKIE, A.W. 2012, EL 28045 Gillen Creek Annual Technical Report. (Unpublished)

SYKES, M. 2014, Southern Cross Bore VTEM Interpretation'. Southern Geoscience Consultants Pty Ltd, in *Annual Report EL 28045 Southern Cross Bore Project (NT) 30/11/2013 - 29/11/2014,* BUSKAS, A.J. 2015 Appendix I

APPENDICES

Appendix 1 Collier, J., 2018, Johnnies Reward, Au-Cu, Mineral Resource Estimation.