

# ASX Release Report for the Quarter Ended 30 September 2014

27 October 2014

#### **Highlights**

- Unicorn Reborn.
- Manager Unicorn PFS appointed.
- Saleable concentrates Mo, Cu can be produced.
- Orion decision due.
- DRAFT Bid received.
- Fairley's prospect expands geochemically anomalous zone.
- Soils grid completed at Copper Quarry

ASX Code: DTM

Investment Data: Shares on issue: 243,257,892M Unlisted options: 13,473,048

Substantial Shareholders: Top 20 Holdings: 49%

Key Projects: Unicorn Porphyry Mo-Cu-Ag Morgan Porphyry Mo-Ag-Au Copper Quarry Porphyry

#### Board & Management:

Chairman: Bruce Paterson Acting CEO: John Cornelius Non-Executive Director: Rob Hogarth Non-Executive Director: Dr. John Cottle Company Secretary: John Nethersole

Dart Mining NL ACN 119 904 880

Contact Details: Lower Ground Floor, 395 Collins Street Melbourne VIC 3000 Australia

John Cornelius Phone: +61 (0)418 338 909 Email: jcornelius@dartmining.com.au Visit our webpage: www.dartmining.com.au

## The September Quarter in Brief

- Unicorn Project Reborn
- \$1.1M raising in placement and additional substantial shareholder (~12%)
- Unicorn Turnaround
- Appointment of (Metallurgical) Unicorn PFS Manager
- Orion Resource Partners funding decision due 31 October 2014
- Cash at 30 September 2014 was \$4.2M

# Since the end of the September Quarter

Draft Bid Received

Dart continues to discuss the indicative incomplete proposal received from a third party (See ASX Release "Draft Bid Received" - 6 October 2014), and is making further technical information available at the request of that party.

Dart also continues to actively engage with other strategic parties with a view to exploring opportunities that are value accretive for shareholders.

Shareholders will be kept informed of further developments.

Annual Production Schedule Updated

An annual production schedule update, based on the new metallurgical processing parameters, was completed for internal valuation purposes during the Quarter.

• Orion Resource Partners Tranche 2 Funding.

Funding decision, subject to conditions precedent and Orion discretion due 31 October 2014.

### **Unicorn Project Reborn in Game Changing Turnaround**

Detailed metallurgical test work, analysis, and efficient application of conventional, standard industry practice and design has demonstrated the technical achievability of saleable Molybdenum (Mo) and Copper (Cu) products from the Unicorn deposit(see ASX Release "Unicorn Project Reborn" - 31 July 2014). This means a turnaround for the Unicorn project and greatly enhances its development to production prospects (see ASX Release "Unicorn in Game Changing Turnaround" -11 September 2014). Of particular note is that:

- Saleable Metal (both Mo, and Cu) is able to be recovered from the Oxide portion of the resource;
- Saleable concentrates are able to be produced from across the entire Unicorn deposit resource;
- Previous Zinc separation issues have been resolved and overcome;
- Proven (conventional, standard industry practice) processes have been applied, so reducing technological and commercial risk; and
- A whole-of-deposit, draft process flowsheet has been developed which will be further detailed and refined as feasibility studies and analyses progress.

Highly experienced metallurgist, Dr. Colin Seaborne, who designed, analysed, and directed all the foregoing test work and studies, using two independent laboratories, and who achieved the Unicorn turnaround, has been appointed Dart's PFS Manager.

During the Quarter, Dart produced a new annual production schedule (for internal valuation purposes) of current Unicorn resources based on the newly defined metallurgical parameters that now allow:

- Incorporation (and recovery) of significant metal content from the Oxide resource material (previously designated as 'waste') into the Mill/Process Plant Feed stream; and
- Recovery, with industry standard ease, of Molybdenum, Copper, Silver (and Zinc) from across the range of fresh resource material within the deposit.

#### **Regional Exploration**

Regional exploration at Fairley's, Onslow Reefs and Onslow South prospects continues to expand the geochemically anomalous zones. Greenfields soil traverses tested a series of targets (Figure 1). An exploration review by Dart's Strategic Advisor - Exploration, Dave Royle, has highlighted the potential of the porphyry and gold prospects and refined the exploration strategy. Efforts in the forthcoming Quarter will be focused on the drilling underway at Unicorn. Drilling at Copper Quarry, Gentle Annie, Fairley's and Onslow Reefs is planned at the end of the Unicorn drill programme. Soil geochemistry is planned for Fairley's, Onslow, Mountain View South, Scorodite Ridge and Donovan's.



Figure 1. Key Prospect Locations Plan

# **Fairley's Prospect**

**RESULTS FOR THE QUARTER:** Geochemical sampling has extended arsenic anomalism associated with the main Fairley's line and defined two new trends to the north and the west (Figure 2). The Fairley's line remains open to the south but has been closed to the north. The new line to the north is offset from the Fairley's line and remains open to the north and south. Four adits have been found on this northern line. The new line to the west has not previously been worked. The line has been closed at the northern end but remains open to the south. The soil samples were collected from the top of the clay layer (B Horizon) using an auger and analysed by pXRF in the field enabling sampling to follow the elevated arsenic readings.



Figure 2. Colour coded arsenic (As) in soil (pXRF) at the Fairley's prospect over colour digital elevation model. Earlier 2007 Dart Mining laboratory soil results for arsenic are included. New lines of anomalism have been identified to the west and north of the main Fairley's line.

**TARGETS & PLANS:** Dart Mining now understands Fairley's to be a series of sub-parallel faults with internal gold shoots. Ongoing geochemical sampling will continue to locate and delineate the distribution of the shoots at surface. Drilling is planned at Fairley's during the forthcoming field season.

**ABOUT FAIRLEY'S PROSPECT:** Dart Mining was the first to recognise a disseminated style of gold mineralisation within the historic Buckland Goldfield. Dart Mining conducted soil geochemistry over the main Fairley's workings in 2007 (Figure 2) and drilled the first scout holes into the prospect of 11 RC and 2 diamond holes in 2008. The best drill intercept was 21 m @ 1.41 g/t gold and chip sampling of historic workings returned 12.5m @ 6.62 g/t and 10m @ 2.99 g/t gold

### **Onslow Reefs and Onslow South Prospects**

**RESULTS FOR THE QUARTER**: An expanded soil grid was established to test for previously unidentified mineralisation surrounding the Onslow Reefs and Onslow South prospects (Figure 3). Infill of new anomalous zones has begun and the Onslow South trend has been extended further northwards. This trend is over 400 m long and open north and south. A shallow shaft and an adit were found adjacent to the arsenic anomalism at Onslow 'A'. No workings have been found at the other anomalies identified. The soil samples were collected from the top of the clay layer (B Horizon) using an auger and analysed by pXRF in the field enabling sampling (and assaying) to follow the elevated arsenic readings.

**TARGETS & PLANS:** Dart Mining now understands that multiple reefs occur in the Onslow vicinity. Drilling is planned at Onslow Reefs and Onslow South during the forthcoming field season.

**ABOUT ONSLOW REEFS AND ONLSOW SOUTH PROSPECTS:** The historic Onslow Reef workings occur as a small isolated cluster 8km south of Unicorn and show narrow quartz-sulphide lodes with true widths between 0.7 and 1.5m where mapped in the main adit level. Historic records describe further workings at Onslow South and to the north of Onslow Reefs, although the latter has yet to be located.



Figure 3. Colour coded arsenic (As) in soil (pXRF) for the Onslow Reefs area over colour digital elevation model. New anomalies have been identified on the expanded grid, ('A' to 'E'), that are gaining infill sampling.

### Other soil surveys conducted during the September Quarter

Follow up soil geochemistry at Empress South failed to expand the copper anomalism previously reported [see DTM: ASX Release 30 June 2014] or find new areas of mineralisation. Soil traverses at Bullocky Creek were conducted to try to find the source of the gold at the top of a series of alluvial workings where there are historic reports of nuggets up to 8 oz. However, the geochemical results failed to delineate a source. A soil traverse at Sylvester's, a structural target, encountered weak arsenic mineralisation (up to 34 ppm) but will not be followed up.

### **Copper Quarry Prospect**

**RESULTS FOR THE QUARTER:** New exposure at Copper Quarry has revealed sheeted veins sets (Figure 4) and extensive disseminated pyrite (+ chalcopyrite + chalcocite) mineralisation consistent with phyllic alteration above a mineralised porphyry.



Figure 4. The face at Copper Quarry showing sets of sheeted veins (upright and dipping downwards towards the right of the photo) and iron staining, in part from weathering of disseminated sulphides.

**TARGETS & PLANS:** Dart Mining believes Copper Quarry is the surface expression of a mineralised porphyry and has an exploration model to guide testing this system at depth (Figure 5). Two drill holes are planned to test for alteration changes with depth and to allow for downhole geophysics or deeper drilling if successful.

**ABOUT COPPER QUARRY PROSPECT:** The Copper Quarry prospect shows highly anomalous copper over 400m from soil sampling. Variable composition of cross-cutting igneous rocks at the surface suggest a complex intrusive history. Dart Mining has completed a 50m x 50m soil grid and infill sampling and geological mapping during the initial exploration phases.



Figure 5. Schematic cross section of the Copper Quarry prospect (not to scale).

# **Tenement Status Report as at 30 September 2014**

		Area		
<b>Tenement Number</b>	Name	(Grats)	Interest	Location
EL4724 Note 2	Buckland	82	100%	NE Victoria
EL4726 Note1&2	Dart	680	100%	NE Victoria
EL5058	Cudgewa	413	100%	NE Victoria
EL5194	Mt. Alfred	95	100%	NE Victoria
EL8190	Koonenberry	99	100%	NSW Relinquished
EL5467	McCormacks	92	100%	NE Victoria
EL5468	Upper Murray	198	100%	NE Victoria

All tenements remain in good standing at 30 September 2014.

Notes:

- 1. Unicorn Project area is subject to a contingent 2% NSR Royalty agreement with BCKP Limited (Orion Mine Finance) dated 29 April 2013
- 2. Areas subject to a 1.5% Founders NSR Royalty Agreement

### Corporate

#### Placement

Dart raised \$1.1M during the Quarter by placement of 36 million shares to sophisticated investors, one of whom is now a substantial shareholder (~12%) (See ASX Release "Placement" 3 September)

#### **Financial**

Dart released its 2014 Financial Report on the 23 September 2014. (See ASX Release "2014 Financial Report)

Cash at 30 September 2014 was \$4.2M.

#### Since the end of the September Quarter

#### **DRAFT Bid**

The Company is in receipt of a written, but as yet incomplete bid for all the Company's shares (see ASX RELEASE "Draft Bid Received" - 6 October 2014). Talks have been held with the proponents. The Board has made it clear to the proponents that it will not recommend any bid that is not in the interests of all shareholders, and even then not until it is in receipt of a formal bid in compliance with the Corporations Act and ASX requirements.

Dart is making further technical information available at the request of that party. Dart also continues to actively engage with other strategic parties with a view to exploring opportunities that are value accretive for shareholders

#### 2014 Annual Report

The 2014 Annual Report was released on 17 October 2014 (see ASX Release "2014 Annual Report" - 17 October)

### JORC CODE, 2012 EDITION – TABLE 1 -Regional Exploration Results

#### SECTION 1 SAMPLING TECHNIQUES AND DATA

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of</li> </ul>	<ul> <li>All soil samples are taken from the top of the clay layer (B Horizon) to maintain consistency and sieved to minus 1.5mm prior to all analysis.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>For commercial assay analysis, all soil samples are pulverized at the laboratory and various aliquot sizes removed dependent upon assay technique.</li> <li>Hand held XRF analysis is performed on the sieved sample without pulverization.</li> <li>XRF calibration is examined using duplicate samples submitted for commercial assay analysis and the equivalent XRF sample data compared.</li> </ul>
Drilling techniques	<ul> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul> <li>No drilling operation carried out</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>No drilling operation carried out</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged</li> </ul>	<ul> <li>No drilling operation carried out</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	No drilling operation carried out
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> </ul>	<ul> <li>Au-AA22 is a low detection limit (0.001ppm) technique commonly used in geochemical investigations. ME-MS61r is a four acid digestion technique with near total digestion for common base metals but partial for</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	some REE (not quoted within this report). Laboratory blanks, standards are reviewed per batch to monitor accuracy and precision and cross correlated via XRF duplicates of data where available.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Sample records are located via GPS and attributes recorded within a record template that is entered manually into a spreadsheet. Attribute and location data is imported into an offsite Maxwell's Geoscience database for storage and retrieval.</li> <li>Electronic only assay data is imported into the offsite database from the laboratory by the database storage provider.</li> <li>Below detection limit data is assigned a –ve character in all exports rather than a "&lt;" symbol.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	No drilling operation carried     out
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>No drilling operation carried out</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	Where a mineralized geological structure is recognized soil sample spacing is reduced across the strike of the structure and increased between lines perpendicular to the structure to help capture across strike variability in response.
Sample security	The measures taken to ensure sample security.	<ul> <li>All samples submitted for commercial assay analysis are placed in sealed poly-weave bags and delivered to a commercial transport company for delivery to the laboratory. Any evidence of sample damage or tampering is immediately reported by the laboratory to the company and a decision made as to the</li> </ul>

Criteria	JORC Code explanation	Commentary
		integrity of the sample and the remaining samples within the damaged / tampered bag/s.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>A comparison between handheld XRF data for As and duplicate samples submitted for commercial assay analysis is very favourable, indicating the XRF unit consistently slightly under reports As content of samples.</li> </ul>

#### SECTION 2 REPORTING OF EXPLORATION RESULTS

Criteria	JORC Code explanation	Commentary			
Mineral tenement and	• Type, reference name/number, location and	Tenement         Area           Number         Name         (Grats)         Interest         Location			
	ownership including agreements or material	EL4724 Buckland 82 100% NE Victoria			
land tenure	ventures, partnerships, overriding royalties.	EL4726* Dart* 680 100% NE Victoria			
status	native title interests, historical sites,	EL5058 Cudgewa 413 100% NE Victoria			
	wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known	EL5194 Mt. Alfred 95 100% NE Victoria			
		EL8190 Koonenberry 99 100% South Wales			
		EL5467 Mcormacks 92 100% NE Victoria			
	impediments to obtaining a licence to	EL5468 Upper Murray 198 100% NE Victoria			
	operate in the area.	All tenements remain in good standing at 30 September 2014. * Unicorn Project area subject to a 2% NSR Royalty agreement with BCKP Limited (Orion Mine Finance) dated 29 April 2013.			
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>No reference to previous exploration results</li> </ul>			
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Geological setting and style of mineralisation are discussed on a prospect by prospect basis within the report.</li> </ul>			
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole</li> <li>ealevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	No drilling operation carried out			

Data	In reporting Exploration Results weighting	No drilling operation carried out
aggregation methods	<ul> <li>averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
Relationship hetween	These relationships are particularly     important in the reporting of Exploration	No drilling operation carried out
mineralisatio	Results.	
n widths and intercept	respect to the drill hole angle is known, its	
lengths	<ul> <li>If it is not known and only the down hole</li> </ul>	
	lengths are reported, there should be a clear statement to this effect (e.g. 'down hole	
Digarams	<ul> <li>length, true width not known').</li> <li>Appropriate maps and sections (with scales)</li> </ul>	No drilling operation carried out
	and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	
Balanced	Where comprehensive reporting of all     Exploration Results is not practicable.	<ul> <li>All significant / relevant precious or pathfinder elements are reported with</li> </ul>
reporting	representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	either assay value in full or presented to display the full range of assay data returned.
Other	Other exploration data, if meaningful and material, should be reported including (but	<ul> <li>Where material or instructive, geological mapping, feature surveys or past results</li> </ul>
exploration	not limited to): geological observations;	of exploration work are presented on
data	survey results; bulk samples – size and method of treatment; metallurgical test	results.
	results; bulk density, groundwater,	
	geotecnnical and rock characteristics; potential deleterious or contaminating substances.	
Further work	• The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out	<ul> <li>Where planned exploration is provided within the report, reference is made to likely areas for follow up or geological</li> </ul>
	<ul><li>drilling).</li><li>Diagrams clearly highlighting the areas of</li></ul>	interpretation provided to aid in the interpretation of current results
	possible extensions, including the main	
	areas, provided this information is not	
	CONTINETCIALLY SELISILIVE.	

#### **COMPETENT PERSON'S STATEMENT**

The information in this report that relates to Exploration Results for tenement prospects is based on information compiled by Rodney Boucher B. App. Sc. (Geol.) Hons. PhD. M. AIG R.P. Geo., M. AusIMM, a Competent Person who is a Member of the Australian Institute of Geoscientists and The Australian Institute of Mining and Metallurgy. Dr. Boucher is a consultant to Dart Mining and full time employee of Linex Pty Ltd. Dr. Boucher has sufficient experience that is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken 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". Dr. Boucher consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.