ASX Release

10 May, 2018

LITHIUM EXPLORATION UPDATE

SIGNIFICANT LITHIUM MINERALISATION DISCOVERED IN PEGMATITES OF THE MOUNT DORCHAP RANGE, VICTORIA

Highlights

- Ground follow-up of multiple targets defined by a first phase helicopter survey has discovered lithium-mineralised pegmatites;
- A second phase helicopter survey has recently been completed producing additional targets for follow-up;
- Boots-on-the-ground follow-up shows some pegmatite dykes contain abundant, coarse-grained petalite ($LiAlSi_4O_{10}$), a common lithium ore mineral;
- Significant rock chip assays of pegmatite dykes include:
  - Sample ESK013: **2.37 % Li_2O** (*Dorchap North*)
  - Sample ESK047: **1.04 % Li_2O** (*Dorchap South*)
  - Sample ESK011: **0.88 % Li_2O** (*Dorchap North*)
- Planned work includes:
  - Continued ground follow-up of the numerous targets defined by the helicopter surveys.
  - Upgrading tracks in the rugged, heavily vegetated terrain to provide better access to many targets for examination and possible drill testing;
  - Detailed geological mapping to define the size of the mineralised pegmatites, and extensive rock-chip sampling to define grade variations preparatory to drill testing.

Almost two years ago, Dart Mining N L (Dart) adopted a strategy to explore the regionally extensive Dorchap Dyke Swarm in eastern Victoria primarily for lithium, with tin and tantalum being secondary target commodities. The Dyke Swarm consists of thousands of dykes of variable composition and size and extends for approximately 60 kilometres from Glen Wills to north of Eskdale. Importantly, many of the dykes are pegmatites that potentially contain lithium-bearing minerals.

Dart, the first company to explore the Dorchap Dyke Swarm for lithium, has achieved a significant exploration breakthrough in recent times.

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Since Dart's last exploration update, (ASX:DTM 20 March 2018) field exploration has focused on pegmatite dyke targets in the Mount Dorchap target area. The strategy of focussing on large-scale pegmatite targets visually identified from the helicopter survey has provided excellent vectoring towards the pegmatite bodies. Subsequent boots-on-the-ground examinations, geochemical sampling and mineralogical testing of multiple pegmatites outcrops have led to the discovery of pegmatites containing coarse-grained petalite (Figure 1). Petalite ($LiAlSi_4O_{10}$) is commonly mined as a lithium ore. This development significantly upgrades the potential of the target area.

Lithium ore mineral identification

Mineralogical testing involved the analysis of selectively sampled single large crystals of the type shown in Figures 1a and 1b. X-ray diffraction (XRD) coupled with optical microscopy was used to positively identify mineral phases. Results demonstrate abundant phases of the lithium ore mineral petalite ($LiAlSi_4O_{10}$) to be present. Elsewhere in the world, petalite is contained in many lithium pegmatite ore bodies commonly associated with spodumene. Considerable further testing will be necessary before the mineralogical characteristics of the target pegmatites are adequately understood. Dart has previously announced (ASX:DTM 3 April 2017) that it had identified spodumene within multiple dykes by X-ray diffraction (XRD) and petrological examination.

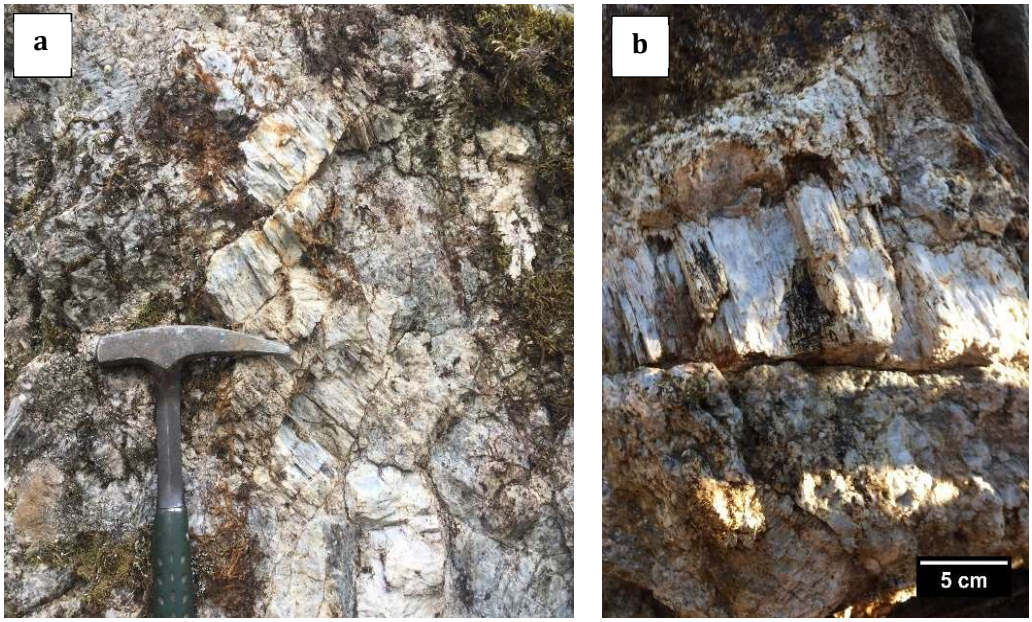

Figure 1a: Pegmatite dyke with large petalite crystals (approx. 14X7 cm). **Figure 1b:** Pegmatite dyke hosting a 30x10 cm petalite crystal.

Geochemical sampling

Many pegmatites dykes examined recently are 15-30+ m wide generally with strike lengths yet to be determined. Several dykes are known to be more than 500m long, but detailed mapping will be necessary to determine dyke lengths and widths in the heavily vegetated terrain. Due to the substantial widths of the dykes, composite sampling was conducted across the dykes. At present, exploration is focussed on the northern part of EL5315 (Figure 2) where the highest values of lithium have been observed. Although significant work has been undertaken to locate and sample numerous pegmatites in a preliminary fashion, there is still much work to be done before spatial and chemical trends can be defined. Highlights from the recent sampling program are included in Table 1 and full results and locations are listed in Table 2. The highest value was observed from sample ESK013 (2.37 % Li_2O) and is shown as the large red dot in Figure 2, within the Dorchap North zone; it is a priority area for further investigation. The second-highest value from the recent program is sample ESK047 (1.04 % Li_2O) from a pegmatite located 17.5 km south-east of the location of ESK013. This yields a new area of interest (Dorchap South) and will be investigated further in due course.

Table 1: Samples from Mount Dorchap demonstrating significant lithium mineralisation.

Sample ID	Li_2O %*
ESK013	2.37
ESK047	1.04
ESK011	0.88
ESK044	0.20

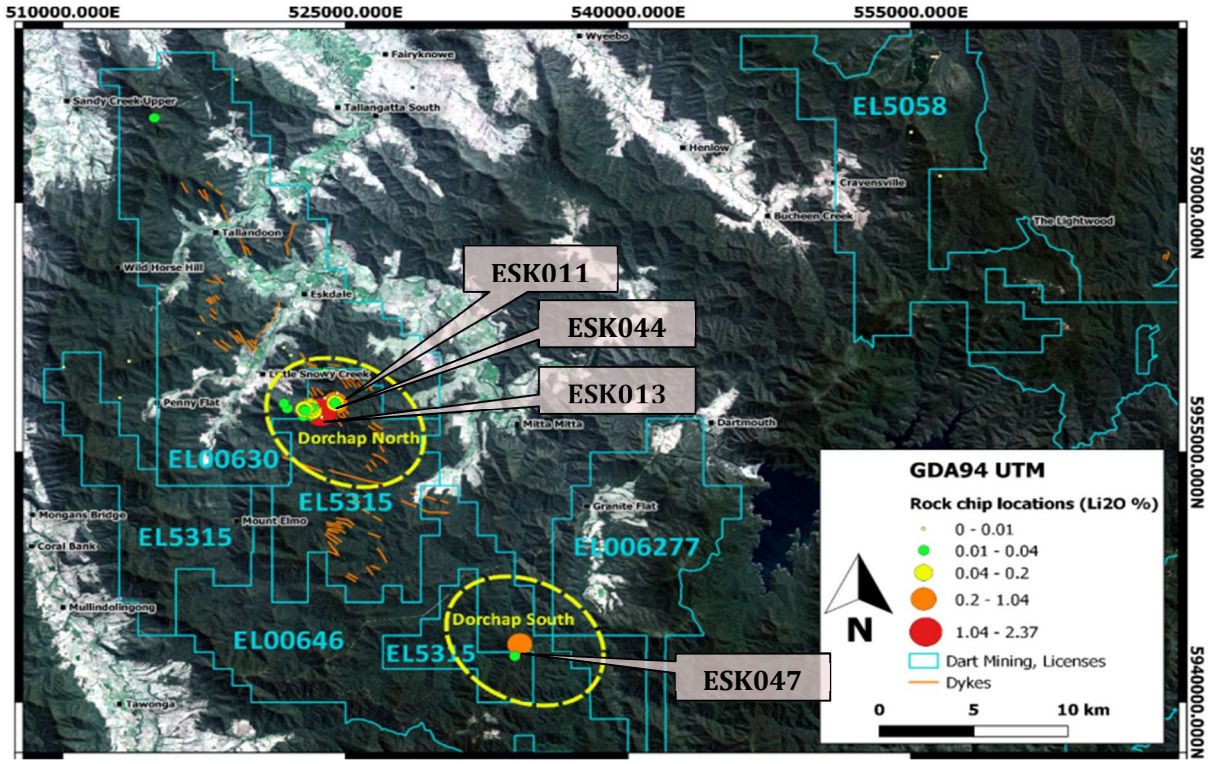

Figure 2: Satellite imagery showing the location and magnitude of recent rock chip samples with respect to concentrations of Li_2O %. Note the distribution of lithium in pegmatite dykes within the Mount Dorchap Range area respective to Dart Mining's exploration licenses. The dyke data was obtained by government geological survey datasets and should not be considered comprehensive for the area. Note defined trend of known dykes that occur within Dart Mining's License areas.

Second phase helicopter survey

Given the success of the initial helicopter survey, a second survey was recently undertaken. Again, this has provided the ground exploration team with additional targets for follow-up (Figure 3). It is anticipated that continued ground follow-up and sampling of these targets will generate better vectors to significant lithium mineralisation. In particular, it may provide information on how the compositions of the pegmatites vary with depth.

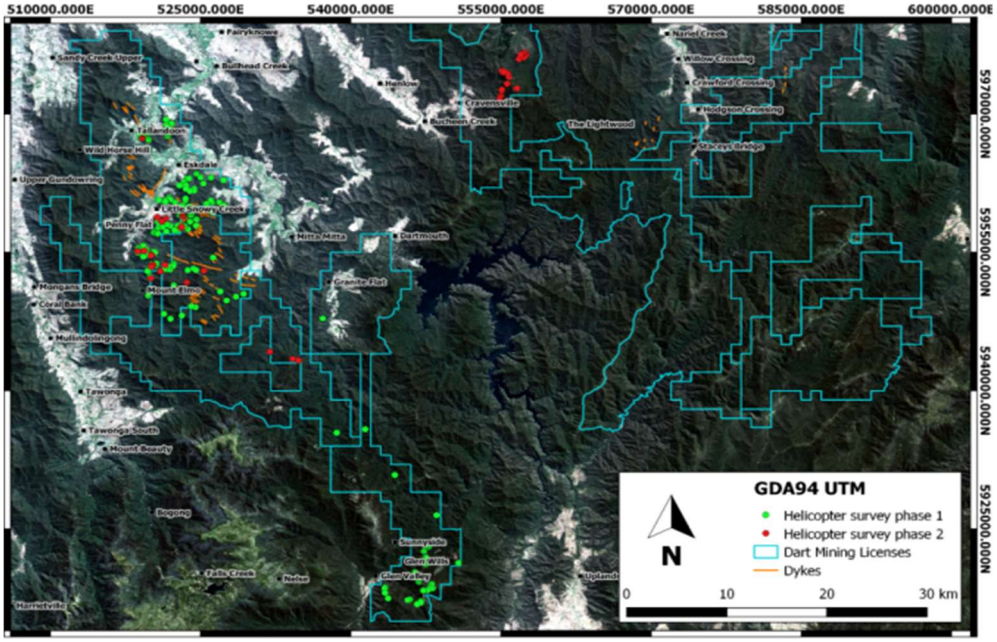

Figure 3: Satellite imagery showing data points for ground follow-up and geochemical sampling. Phase one targets (green) phase two targets (red).

Dart's Managing Director, James Chirnside, commented: *"We are very encouraged by the discovery of coarse petalite, an important lithium ore mineral, in pegmatites of the Dorchap Dyke Swarm, as it indicates that Dart now has a major and exciting exploration program on its hands. I believe that pegmatites hosting coarse petalite of the type we have found have never been seen in Victoria previously. We fortunately have a huge land position, but importantly our recent discoveries have provided the necessary focus within this large area for detailed exploration. An expanded and accelerated exploration program is definitely warranted and we expect to drill test multiple targets in coming months."*

ATTRIBUTION: ***Competent Person's Statement***

The information in this report that relates to Exploration Results is based on information reviewed by Chris Bain B App Sc (Geol), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Bain is an independent consultant. Mr Bain 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". Mr Bain consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

James Chirnside,

Managing Director

FORWARD-LOOKING STATEMENTS

This document may contain certain forward-looking statements which have not been based solely on historical facts but rather on Dart's expectations about future events and on a number of assumptions which are subject to significant risks, uncertainties and contingencies many of which are outside the control of Dart and its directors, officers and advisers. Forward-looking statements include, but are not necessarily limited to, statements concerning Dart's planned exploration program, strategies and objectives of management, anticipated dates and expected costs or outputs. When used in this document, words such as "could", "plan", "estimate" "expect", "intend", "may", "potential", "should" and similar expressions are forward-looking statements. Due care and attention has been taken in the preparation of this document and although Dart believes that its expectations reflected in any forward-looking statements made in this document are reasonable, no assurance can be given that actual results will be consistent with these forward-looking statements. This document should not be relied upon as providing any recommendation or forecast by Dart or its directors, officers or advisers. To the fullest extent permitted by law, no liability, however arising, will be accepted by Dart or its directors, officers or advisers, as a result of any reliance upon any forward-looking statement contained in this document

Table 2: Assay results and locations for rock chip samples from the Mount Dorchap project area.

Sample ID	Tenement	East	North	Field term	Li (ppm)	Nb (ppm)	Sn (ppm)	Ta (ppm)	Li_2O (%)	Method
ESK001	EL5315	524244	5959606	pegmatite	22	68	100	26.5	0.00	ICP003
ESK002	EL006300	522095	5960822	pegmatite	63	29	46	10.5	0.01	ICP003
ESK003	EL006300	521731	5961289	pegmatite	55	11	30	3.5	0.01	ICP003
ESK004	EL5315	523840	5959722	pegmatite	72	59	98	31	0.02	ICP003
ESK005	EL5315	524244	5959784	pegmatite	43	50	84.5	16.5	0.01	ICP003
ESK006	EL006300	520883	5967717	pegmatite	61	78	427	59	0.01	ICP003
ESK007	EL006300	518809	5965729	pegmatite	54	9	26.5	3.5	0.01	ICP003
ESK008	EL006300	517204	5962141	pegmatite	17	36	47	14.5	0.00	ICP003
ESK010	EL5315	510041	5960112	pegmatite	32	25	41	11	0.01	ICP003
ESK011	EL5315	524473	5957937	pegmatite	**4066**	29	105	23	**0.88**	ICP003
ESK012	EL5315	524467	5957303	pegmatite	42	36	102.5	23	0.01	ICP003
ESK013	EL5315	523704	5957416	pegmatite	**11020**	93	62.5	43	**2.37**	ICP003
ESK014	EL5315	523748	5957106	pegmatite	61	48	81	13.5	0.01	ICP003
ESK015	EL006300	514858	5975079	pegmatite	90	10	13	<1	0.02	ICP004
ESK016		519223	5977373	pegmatite	20	25	63	20	0.00	ICP004
ESK019	EL006300	522823	5957401	pegmatite	160	60	89	25	0.03	ICP004
ESK020	EL006300	522816	5957381	pegmatite	140	55	90	24	0.03	ICP004
ESK021	EL006300	522823	5957371	pegmatite	160	30	90	9	0.03	ICP004
ESK022	EL006300	522800	5957334	pegmatite	90	80	113	28	0.02	ICP004
ESK023	EL5315	523268	5957146	pegmatite	20	55	70	19	0.00	ICP004
ESK024	EL5315	523181	5957174	pegmatite	120	45	2839	24	0.03	ICP004
ESK025	EL006300	522863	5957199	pegmatite	60	60	108	26	0.01	ICP004
ESK026	EL006300	522812	5957173	pegmatite	30	70	175	30	0.01	ICP004
ESK027	EL006300	522768	5957159	pegmatite	80	50	144	33	0.02	ICP004
ESK028	EL006300	521913	5957634	pegmatite	80	60	59	46	0.02	ICP004
ESK029	EL006300	521736	5957928	pegmatite	90	25	48	9	0.02	ICP004
ESK030	EL5315	523932	5958232	pegmatite	40	75	119	56	0.01	ICP004
ESK031	EL5315	523259	5957423	pegmatite	110	60	72	18	0.02	ICP004
ESK032	EL5315	523276	5957476	pegmatite	270	70	68	17	0.06	ICP004
ESK033	EL5315	523151	5957731	pegmatite	150	30	143	18	0.03	ICP004
ESK034	EL5315	523131	5957735	pegmatite	210	50	87	19	0.05	ICP004
ESK035	EL5315	523117	5957647	pegmatite	**420**	65	83	12	**0.09**	ICP004
ESK036	EL5315	523271	5957868	pegmatite	50	45	99	12	0.01	ICP004
ESK037	EL5315	523402	5957819	pegmatite	60	165	7492	209	0.01	ICP004
ESK038	EL5315	523432	5957757	pegmatite	10	90	75	28	0.00	ICP004
ESK039	EL5315	523212	5957654	pegmatite	100	50	98	23	0.02	ICP004
ESK040	EL5315	523126	5957483	pegmatite	30	35	64	20	0.01	ICP004
ESK041	EL006300	522812	5957594	pegmatite	240	30	163	15	0.05	ICP004
ESK042	EL006300	522804	5957555	pegmatite	130	60	1071	109	0.03	ICP004
ESK043	EL006300	522870	5957504	pegmatite	70	45	147	37	0.02	ICP004
ESK044	EL5315	524473	5957937	pegmatite	**910**	55	202	51	**0.20**	ICP004
ESK045	EL5315	524473	5957938	pegmatite	170	55	422	48	0.04	ICP004
ESK046	EL5315	524473	5957939	pegmatite	190	50	69	46	0.04	ICP004
ESK047	EL006486	534256	5943478	pegmatite	**4850**	110	757	111	**1.04**	ICP004
ESK048	EL5315	533991	5942772	pegmatite	70	75	112	32	0.02	ICP004
ESK049	EL5315	533991	5942773	pegmatite	80	65	147	24	0.02	ICP004
ESK051	EL5058	555023	5974215	pegmatite	20	10	21	5	0.00	ICP004
				***ICP003 LLD**	1	1	0.5	0.5	N/A	
				***ICP004 LLD**	10	5	1	1	N/A	

*Denotes lower limit of detection (LLD) for each laboratory method, respective to elements listed in Table 2.

Table 1 - Section 1 Sampling Techniques and Data for the Mount Dorchap Lithium Project

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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 sampling.*	• 47 rock chip samples (Table 2) described in this report were submitted for whole rock assay between the periods of April and March, 2018.
	• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*	• Samples were obtained from pegmatite dyke outcrops and were georeferenced utilising a handheld GPS. Coordinates are in GDA94 UTM format.
	• *Aspects of the determination of mineralisation that are Material to the Public Report.*	• Digital photographs were taken of outcrop locations. Notes were recorded in the field highlighting specifics, such as; weathering, alteration, and mineral composition.
	• *In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	• Samples were submitted to Nagrom in Perth, where they were latter dried, crushed, pulverised and analysed for a suite of elements via four acid digest or peroxide fusion for ICP-MS or ICP-OES. In the case of pegmatite dykes samples were taken as a composite across the width of the tabular body as to obtain a more representative sample from each location.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• Not applicable – no drilling conducted
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	• Not applicable – no drilling conducted.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	• Not applicable – no drilling conducted.
	• *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.*	• Not applicable – no drilling conducted.
Logging	• *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*	• Rock chip samples were examined at the outcrop and fresh hand sample macro scale, lithology and associated mineralogy were noted.

Criteria	JORC Code explanation	Commentary
	metallurgical studies. • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Logging is qualitative only. • Not applicable – no drilling conducted.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• No subsampling or sieving was conducted in the field. The sample in its entirety was submitted to the laboratory and all sample preparation was conducted in-house (at the laboratory). • All samples were collected dry, by hand. • All sample preparation was performed at the laboratory and is considered appropriate and to industry standard, to the best of our knowledge. • Laboratory standards and repetition/duplicate splits. • No field duplicates were taken. • Samples are considered of adequate size for the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• The assaying is industry standard in quality and appropriate for the objectives of the sample set. Laboratory QA/QC involved the used of internal standards including certified reference material, splits and duplicates. • XRD for mineral ID was conducted using a PanAlytical X'Pert Pro diffractometer at Federation University from the samples supplied after fine milling, equipped with an incident beam BBHD Co Kα monochromator and an X'Celerator linear detector, operated at 40kV and 25 mA over 5-80° from 2θ with a step size of 0.017° at a rate of 0.08 per second. Phase identification was achieved via computer assisted search-match of the ICDD PDF4 Minerals sub-file and quantitation carried out using SiroQuant software and validated with HighScore Plus. • No control procedures or external checks carried out. Laboratory QA/QC involves the use of internal lab standards using certified reference material, splits and duplicates.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification,*	• Not applicable – no drilling conducted. • Not applicable – no drilling conducted. • Not applicable – no drilling conducted.

Criteria	JORC Code explanation	Commentary
	data storage (physical and electronic) protocols. • *Discuss any adjustment to assay data.*	• Not applicable – no drilling conducted.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Samples were geolocated using a handheld GPS. • GDA94. • No topographic control used.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• Samples are irregularly spaces but are based on ground follow-up derived from a helicopter survey which visually identified large scale outcrops from the air. • Not applicable – no resource or reserve is contained in this report, nor drilling conducted. • Composites were taken at outcrop scale across the width of pegmatite dykes. This was conducted to avoid spikes in any potential zonation within tabular bodies known to occur in styles of mineralisation of this nature.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• Sampling is at a very early stage in exploration however given nature of pegmatite dykes in relation to zonation sampling was conducted in a composite nature across the width of dyke outcrops. The practice is noted in this report. • Not applicable – no drilling conducted.
Sample security	• *The measures taken to ensure sample security.*	• All samples were collected and, bagged and transported to the freight company by Dart Mining staff. Samples were then forwarded for delivery to the laboratory in Perth. Detailed records are kept of all samples that are dispatched, including details of chain of custody.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Data is validated when updated and loaded into the database. No formal external audit has been conducted.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.*	• Samples (Table 2) are taken from ELs 006300, 0064846, and 5058 are 100 % holdings of Dart Mining NL (Dart Mining). EL, 5315 is held by Mt. Unicorn Holdings Pty Ltd whose parent company is Dart Mining 100 %.
	• *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Tenure is current and approved.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Limited exploration activity has been conducted over the area defined by rock chips in this report. Regional mapping and interpretation has been conducted by the geological survey to produce dyke pegmatite spatial data acknowledged and presented in this report.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The sampling targets are lithium minerals hosted in pegmatite dykes.
Drill hole Information	• *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:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.*	• Not applicable – no drilling details contained in this report.
	• *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.*	• Not applicable – no drilling conducted.
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	• No averaging or aggregation techniques were used. No cut-offs or metal equivalent values have been used in this report.
	• *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*	• Not applicable – no drilling conducted.

Criteria	JORC Code explanation	Commentary
	should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not applicable – no metal equivalent values have been used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Not applicable – no drilling conducted. • Not applicable – no drilling conducted. • Not applicable – no drilling conducted.
Diagrams	• *Appropriate maps and sections (with scales) 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.*	• Locations of samples (Fig. 2) are shown in plan view maps with appropriate scales. Addition positional data is provided in table two.
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Assays (Table 2) are presented in this report of all samples located within the reporting entity's exploration leases.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• Ground observations and historical data do not show evidence of and previous drilling or reported results.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Forward intentions include additional geological mapping and sampling. • Not applicable – No drilling conducted. Areas sampling interest are defined in figures two and three.