

ASX Announcement 11 October 2016

High grade lithium up to 4.22% Li₂O on new "King Col" Pegmatite Trend

Highlights

New and highly prospective 7.5km long "King Col" Pegmatite Trend located at De Grey's 100% owned Turner River, within a world class lithium-tantalum province.

- Limited reconnaissance rock chip sampling completed to date. Detailed rock chip sampling to commence immediately.
- Nine samples (out of total of 38 only) with lithium oxide (Li₂O) assays ranging from 0.15% to 4.22% over ~1.5km strike length
- Prospective for Lithium-Caesium-Tantalum (LST) style pegmatite hosted mineralization
- Anomalous rock chip results include: Tantalum pentoxide (Ta2O5) to 221.6ppm Caesium (Cs) to 1605ppm Niobium (Nb) to 146ppm Rubidium (Rb) to 8420ppm (0.84%) Beryllium (Be) to 23800ppm (2.38%)
- Lepidolite (lithium bearing mineral) identified within anomalous lithium zone
- No modern pegmatite exploration known along this new pegmatite trend
- Reconnaissance sampling across the Turner River tenements is ongoing

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De Grey Mining Ltd (ASX: DEG, "De Grey", "Company") is pleased to advise that high grade lithium and additional highly anomalous results have been defined in recent surface reconnaissance rock chip samples within De Grey's 100% owned tenement E45/2533 at the Turner River Project. The Project is located only 40km from the world class Pilgangoora Lithium-Tantalum Project and 20km from the Tabba Tabba Tantalum Mine (Figure 1).



Figure 1 Turner River Project location plan

The rock chip sampling programme was undertaken along a newly discovered 7.5km long zone (Figure 2) of relatively sparsely outcropping pegmatites. The new pegmatite trend, named the **King Col Pegmatite Trend**, is considered to be highly prospective as the zone is:

- identified lithium bearing mineral lepidolite
- anomalous lithium occurs over 1.5km zone
- anomalous LCT indicator elements over 7.5km strike length
- occurs within the Tabba Tabba greenstone rocks





Figure 2 New "King Col Pegmatite Trend" located in E45/2533 (green zone)

The pegmatite outcrops are generally very low lying, small to patchy outcrops with intervening areas of aeolian sand, soil and large areas of quartz scree. Mapping of the individual pegmatites is quite difficult due to the lack of continuous outcrop and surficial scree and sands. However, in many instances the individual pegmatites are interpreted to have potential widths ranging from a few metres up to 50m. The patchy outcrops of pegmatite continue over a 7.5km strike length within greenstone rocks (mafic to ultramafic rocks) of the Tabba Tabba Greenstone Belt.

Sampling at the southern end of the King Col Pegmatite Trend has highlighted a 1.5km long zone of anomalous lithium and identification of the lithium bearing mineral lepidolite (Figure 3) from a historical (unmapped) small prospecting pit. Further sampling and mineral investigations are required to determine if any other lithium bearing minerals are present along this trend.

The rock chip sampling results are considered very encouraging, considering the limited nature of this initial first pass reconnaissance sampling programme. The results include a peak of **4.22% Li₂O** associated with a small outcrop of the lithium bearing mineral – lepidolite, and an additional 8 samples ranging from **2.5% to 0.15% Li₂O** along a zone of 1.5km.



Figure 3 Photo of rock specimen containing Lepidolite (lithium bearing mineral) from the historic prospecting pit at the southern end of the CB Pegmatite Trend.



The entire 7.5km pegmatite trend, is associated with anomalous LCT pegmatite elements include Tantalum pentoxide (Ta_2O_5) to 221.6ppm, Caesium (Cs) to 1605ppm, Niobium (Nb) to 8420ppm (0.84%), Rubidium (Rb) to 8420ppm (0.84%), Beryllium (Be) to 23800ppm (2.38%). Table 1 provides results of selected LCT associated elements.

As a comparison, the nearby world class Pilgangoora Lithium and Tantalum deposit, owned by Pilbara Minerals Limited, and occurs in pegmatites over a 9km long strike length with a resource stated as 128.6Mt @ 1.22% Li₂O and 138ppm Ta₂O₅ (*Pilbara Minerals Limited ASX release, dated 22 Aug 2016*). The Pilgangoora pegmatites also are hosted by similar greenstone rocks as seen at the King Col Pegmatite Trend.

A follow-up program of detailed rock chip and soil sampling programme is currently being planned and is expected to commence during October, with the direct aim of defining anomalous target zones for subsequent drill testing. Reconnaissance sampling across the Turner River Project tenements is ongoing.



Sample	Easting	Northing	Be ppm	Cs ppm	Nb ppm	Rb ppm	Li₂O %	Ta₂O₅ ppm
C 76968	682494	7699807	5.7	51.5	146.0	177.0	4.22	83.3
C 76969	682493	7699807	95.1	937.0	59.1	3780.0	0.72	84.9
C 76970	682492	7699808	142.5	167.5	20.8	890.0	1.90	9.2
C 76971	683500	7700162	1.9	4.6	15.1	99.8	0.02	5.9
C 76972	682546	7699837	198.5	668.0	66.3	2880.0	0.18	221.6
C 76973	682311	7699840	8.7	11.7	72.0	302.0	0.04	14.5
C 76974	682378	7699852	49.8	38.5	6.2	980.0	0.02	2.9
C 76975	682379	7699851	4.5	39.6	60.2	490.0	0.05	8.3
C 76976	682599	7699937	8.6	11.4	73.6	288.0	0.03	13.4
C 76977	683022	7699816	7.0	195.5	40.8	2350.0	0.02	17.2
C 76978	683388	7700018	5900.0	128.5	5.5	59.3	0.03	1.9
C 76979	683365	7700031	9770.0	209.0	5.7	16.8	0.31	6.7
C 76980	683501	7700162	16.6	3.7	22.3	81.4	0.01	13.4
C 76981	684260	7700465	15.1	1.5	3.7	11.1	0.00	0.3
BEY13801	684283	7700394	6.9	9.1	25.7	100.5	0.00	5.1
BEY13802	684212	7700263	81.1	14.0	4.2	25.3	0.01	5.1
BEY13803	684382	7700296	42.2	10.8	1.2	12.0	0.01	2.0
BEY13804	684715	7700523	1.7	2.4	11.8	26.6	0.00	5.9
BEY13805	684825	7700557	2.5	26.2	69.1	540.0	0.00	19.6
BEY13806	685002	7700909	15.1	7.6	64.5	109.0	0.02	17.8
BEY13807	685175	7700733	14.4	13.7	55.6	261.0	0.01	23.4
BEY13808	685134	7700943	227.0	15.2	4.9	215.0	0.03	6.1
BEY13809	682457	7699958	11.1	130.5	110.0	1020.0	0.04	61.2
BEY13810	682536	7699834	105.5	1605.0	45.9	8420.0	2.52	90.6
BEY13811	685320	7700941	3.6	5.2	19.2	48.3	0.01	9.1
BEY13812	686240	7701353	1.6	2.9	10.9	47.8	0.00	2.2
BEY13813	683453	7700148	6.9	817.0	91.1	3370.0	0.54	33.1
BEY13814	683452	7700150	7.5	808.0	116.5	3070.0	0.64	66.4
BEY13815	683364	7700030	23800.0	565.0	75.8	480.0	0.15	73.9
BEY13816	683227	7699893	116.5	15.7	40.4	183.0	0.01	23.8
BEY13817	683034	7699826	131.5	85.3	73.9	770.0	0.07	13.1
BEY13818	682393	7699890	5.6	34.7	44.3	428.0	0.05	6.4
BEY13819	682393	7699889	5.3	28.6	69.1	480.0	0.05	5.7
BEY13830	689399	7702065	2.7	17.3	9.2	371.0	0.01	1.7
BEY13831	689133	7702040	4.9	20.5	36.9	355.0	0.02	3.4
BEY13832	688830	7702039	5.3	50.8	23.6	540.0	0.02	5.0
BEY13833	688517	7701975	2.4	28.5	10.9	740.0	0.02	1.2
BEY13834	688109	7701867	2.3	7.4	25.2	198.0	0.01	6.2

Table 1 King Col Pegmatite Trend highlighting the LCT associated elements



For further information:

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The information in this report that relates to exploration results is based on, and fairly represents information and supporting documentation prepared by Mr. Andrew Beckwith, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr. Beckwith is a consultant to De Grey Mining Limited. Mr. Beckwith has sufficient experience that is relevant to the style of mineralisation and type of deposit 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 Resource and Ore Reserves". Mr. Beckwith consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	 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 sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	 Results in this report relate to reconnaissance rock chip sampling undertaken over the pegmatite trend by De Grey Mining. The sampling comprised of 2-3kg samples of outcropping pegmatite. The sample is a composite of various rock fragments in an approximate 5m radius The sampling was undertaken on a broad basis as a first pass reconnaissance assessment Assays were undertaken at an industry standard independent laboratory
Drilling techniques	 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.). 	No drilling undertaken
Drill sample recovery Logging	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. Whether core and chip samples have 	No drilling undertaken The rock chip samples were geologically
	 been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. 	logged at the time of sampling

Criteria	JORC Code explanation	Commentary
	The total length and percentage of the relevant intersections logged.	
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 in situ 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. 	 The sampling comprised of composite rock samples of 2-3kg Samples were bagged and sent to the independent laboratory for assay where they were crushed, pulverised and assayed. The samples are considered appropriate for first pass reconnaissance assessment of the area for this style of mineralisation. 7 laboratory standards and 4 blanks were inserted Further detailed sampling is planned
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	 The samples were analysed by an independent industry laboratory and are considered appropriate for this style of mineralisation 7 laboratory standards and 4 blanks were inserted
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, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 The initial samples were taken by a prospector employed by De Grey and the sampling was checked by the CP in the field. The analytical data has been reviewed by De Grey staff (CP) Further detailed sampling is planned
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. 	 All sample locations are derived from handheld GPS and are accurate +/- 5m. GDA94 Zone 50

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. 	 Sample density is varied depending on outcrops found Total of 38 samples have been taken along the 7.5km trend Sampling is of insufficient density to determine a resource estimate. Additional detailed follow-up sampling is recommended to qualify and quantity the anomalous areas in greater detail prior to drill testing if warranted.
	 Whether the orientation of sampling achieves unbiased sampling of 	• Orikilowii at this stage.
data in relation	nossible structures and the extent to	
to geological	which this is known, considering the	
structure	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	
	it material.	
Sample security	Ihe measures taken to ensure	 I he initial samples were taken by a prospector employed by Do Croy and the
	sample security.	prospector employed by De Grey and the sampling was checked by the CP in the field
		 Samples were then sent via transport
		contractor direct to the laboratory
Audits or	• The results of any audits or reviews of	No audits have been completed
reviews	sampling techniques and data.	The CP has reviewed the data and considers
		the data is appropriate for this style of
		mineralisation and sampling type.

Section 2 Reporting of Exploration Results (Criteria listed in the preceding section also apply to this section.)

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. 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. 	 Tenements are owned by De Grey mining and include: E45/2533 (De Grey owns 100% all minerals rights including the pegmatite rights)
Exploration done by other parties	 Acknowledgment and appraisal of exploration by other parties. 	 Pegmatite related results reported in this report are based on work completed by De Grey. De Grey has also undertaken a considerable amount of sampling and drilling on other portions of this tenement including the definition of two base metal resources and numerous other gold and base metal targets requiring additional follow-up Historic stream sediment sampling has been undertaken on the tenement however this sampling did not cover this portion of the tenement

Geology	 Deposit type, geological setting and style of mineralisation. 	 The mineralisation targeted is rare metal pegmatite hosted mineralisation including Tantalum and Lithium similar to the Tabba Tabba Tantalum Mine located immediately to the north of E45/2364 and the Lithium rich Pilgangoora deposit located approximately 40km to the south.
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. 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. 	No drilling undertaken on pegmatite targets
Data aggregation methods	 In reporting Exploration Results, weighting 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. 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. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	 Samples relate to a point source composite rock chip samples with rock specimens comprising hand sized samples within approximately 5m of the nominated point
Relationship between mineralisa- tion 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 (e.g. 'down hole length, true width not known'). 	Unknown at this stage
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. 	 Plans of sample locations and table are provided in report.

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 	 The report includes defined levels of anomalous results however further sampling is required to validate the tenor of result.
Other substantive exploration data	 reporting of Exploration Results. 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. 	• De Grey has acquired an extensive gold and base metal dataset including geochemical, geophysical and drilling data over the tenement areas however this data has not specifically targeted pegmatite style mineralisation. Further work is required to test of this style of mineralisation although it is noted the region host a number of pegmatite hosted deposits.
Further work	 The nature and scale of planned further work (e.g. 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. 	 De Grey is planning further detailed field reconnaissance investigations to validate the pegmatite related mineralisation potential.