XRD Analysis Confirms Spodumene Dominant Pegmatite

- *Semi-Quantitative XRD Analysis now received for hole IDDD002*
- *Up to 63% Spodumene contained within pegmatite interval*
- *Four samples taken to characterise the pegmatite utilising Semi-Quantitative XRD*
- *Results in line with idealised LCT Pegmatite system*

Red Dirt Metals (ASX: RDT) ("Red Dirt" or the "Company") is pleased to report the results from a semi quantitative XRD analysis carried out by Microanalysis Australia on four (4) samples of ½ core from drillhole IDDD002 at the Mt Ida Project.

Results confirm that the predominant lithium mineral within the samples is in fact spodumene.

Two (2) samples were selected from the upper and lower contacts of the pegmatite zone (XRD001 and XRD004) and a further two samples (XRD002 and XRD003) were selected from material within the central portion of the pegmatite interval in diamond hole IDDD002.

Summary Tables 1-4 of the semi-quantitative XRD analysis are shown below, along with a schematic section of the sample locations overlain on an idealised pegmatitic model.

The entirety of the pegmatite section of IDDD002, consisting of 24 half and quarter core samples, has been submitted to NAGROM laboratories for analysis with results scheduled to be reported within the next 3 weeks.

CEO Matthew Boyes commented on the data review,

"The XRD characterisation analysis completed is a great start to helping us build up a better understanding of the mineralogical-petrological make up of this particular system. Having now confirmed what we originally identified visually as Spodumene being the dominant lithium bearing mineral from within the sampled interval in hole IDDD002 and that the mineral distribution fits an idealised pegmatitic model we are confident we are exploring a system with huge potential and look forward to starting drilling next week"

ACN 107 244 039

ASX RDT

DATE 14 October 2021

ISSUED CAPITAL

Ordinary Shares: **145.4M**

***not including $15M of loan funds to be converted to shares subject to shareholder approval**

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XRD analysis, Central area samples XRD002, XRD003

Crystalline mineral phase	**Concentration (%)**	ICDD match probability
Spodumene (LiAlSi2O6)	**63**	Good
Muscovite-2M1 (KFe0.12Al2.88Si3O10(OH)2)	**11**	Medium
Petalite (LiAlSi4O10)	**9**	Medium
Albite, ordered (NaAlSi3O8)	**8**	Medium
Quartz, syn (SiO2)	**6**	Good
Clinochlore-1MIIb, Fe+2-bearing ((Mg,Fe)6(Si,Al)4O10(OH)8)	**2**	Low
Microcline, intermediate (KAlSi3O8)	**1**	Low

Table 1; Semi-Quantitative XRD analysis from Microanalysis sample No XRD002 267.5m to 267.7m

Crystalline mineral phase	**Concentration (%)**	ICDD match probability
Spodumene (LiAlSi2O6)	**52**	Good
Quartz, syn (SiO2)	**29**	Good
Albite, ordered (NaAlSi3O8)	**13**	Medium
Muscovite-2M1 (KFe0.12Al2.88Si3O10(OH)2)	**5**	Low
Clinochlore-1MIIb, Fe+2-bearing ((Mg,Fe)6(Si,Al)4O10(OH)8)	**1**	Low

Table 2; Semi-Quantitative XRD analysis from Microanalysis sample No XRD003 261.8m to 262m

XRD analysis, Contact area samples XRD001, XRD004

Crystalline mineral phase	**Concentration (%)**	ICDD match probability
Albite, ordered (NaAlSi3O8)	**61**	Good
Petalite (LiAlSi4O10)	**14**	Good
Muscovite-2M1 (KFe0.12Al2.88Si3O10(OH)2)	**11**	Medium
Quartz, syn (SiO2)	**8**	Good
Clinochlore-1MIIb, Fe+2-bearing ((Mg,Fe)6(Si,Al)4O10(OH)8)	**5**	Low
Spodumene (LiAlSi2O6)	**2**	Low

Table 3; Semi-Quantitative XRD analysis from Microanalysis sample No XRD001 270.4m to 270.6m

Crystalline mineral phase	**Concentration (%)**	ICDD match probability
Albite, ordered (NaAlSi3O8)	**40**	Good
Quartz, syn (SiO2)	**23**	Good
Muscovite-2M1 (KFe0.12Al2.88Si3O10(OH)2)	**23**	Medium
Microcline, intermediate (KAlSi3O8)	**10**	Medium
Spodumene (LiAlSi2O6)	**3**	Low
Clinochlore-1MIIb, Fe+2-bearing ((Mg,Fe)6(Si,Al)4O10(OH)8)	**1**	Low

Table 4; Semi-Quantitative XRD analysis from Microanalysis sample No XRD004 250.7m to 250.9m

Idealised Pegmatite model

Samples submitted for XRD analysis were selected with the objective of characterising the mineral assemblage within the pegmatite intersected in IDDD002.

Samples XRD001 and XRD004 were selected proximal to the upper and lower pegmatite contacts and show high concentrations of Albite (XRD001 61% Albite, XRD004 40% Albite), quartz and mica.
Samples selected from the centre of the core section XRD003 (52% Spodumene) and XRD002 (63% Spodumene), were visually interpreted to represent the intermediate and core zones within the pegmatite and have reported high Spodumene contents, analogous to the idealized model shown in the Figure 1 below.

Figure 1 shows a stylised depiction of an idealized pegmatite cross-section showing zonation patterns, with the representation of IDD002 drilled through the pegmatite unit. The Company considers these XRD results consistent with this conceptual model and illustrative of the zonation generally seen in LCT deposits of this nature.

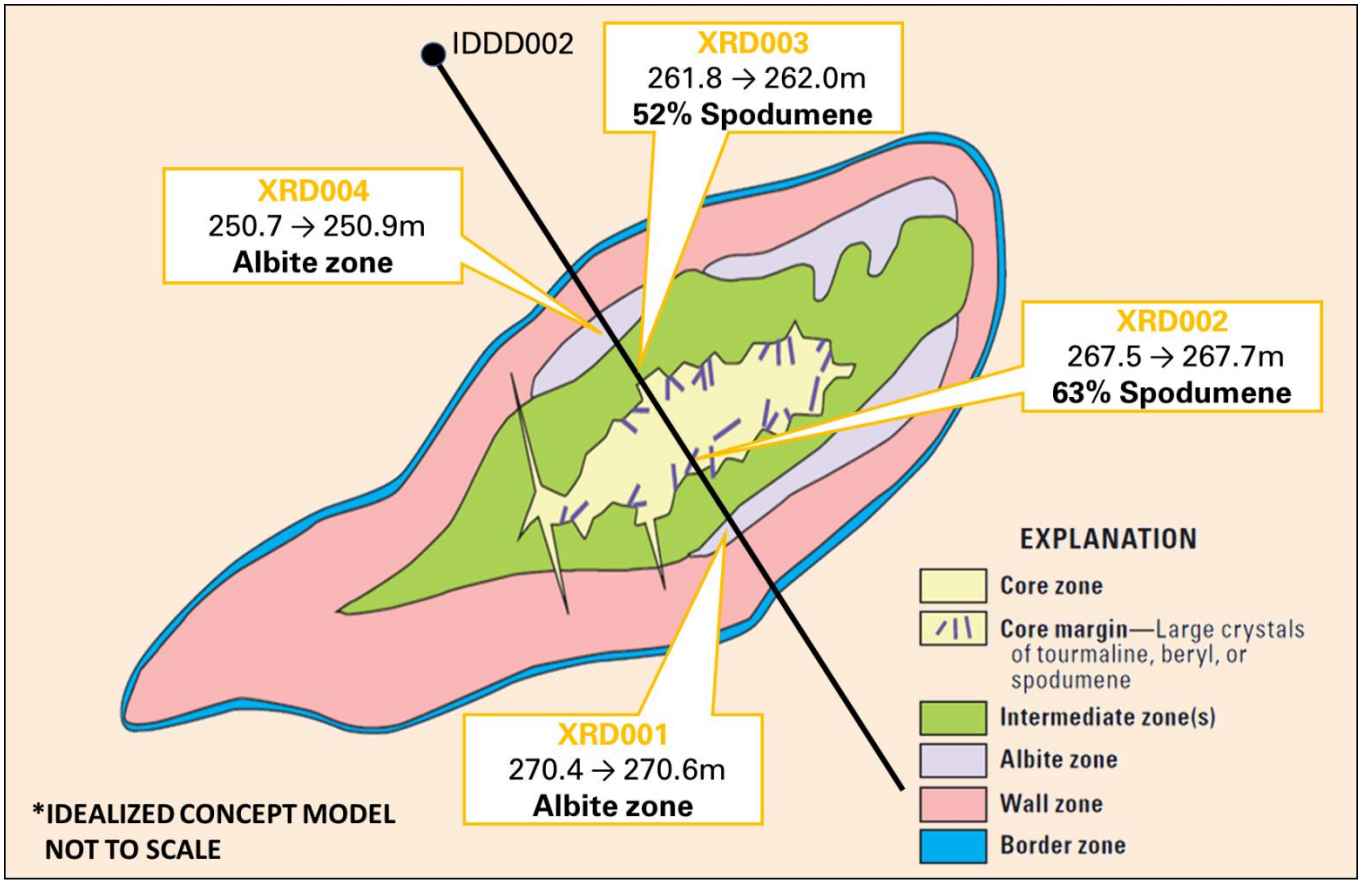

Figure 1; Schematic figure showing IDDD002 overlain on idealized pegmatite cross section, # Modified from Fetherston (2004) after Cerny (1991a). USGS Mineral Deposit Model for Lithium-Cesium-Tantalum Pegmatites, Scientific Investigations Report 2010-5070-0 pg33.

These results are an excellent beginning to our understanding of the Mt Ida Lithium Project as we work to determine the scale and scope of this system.

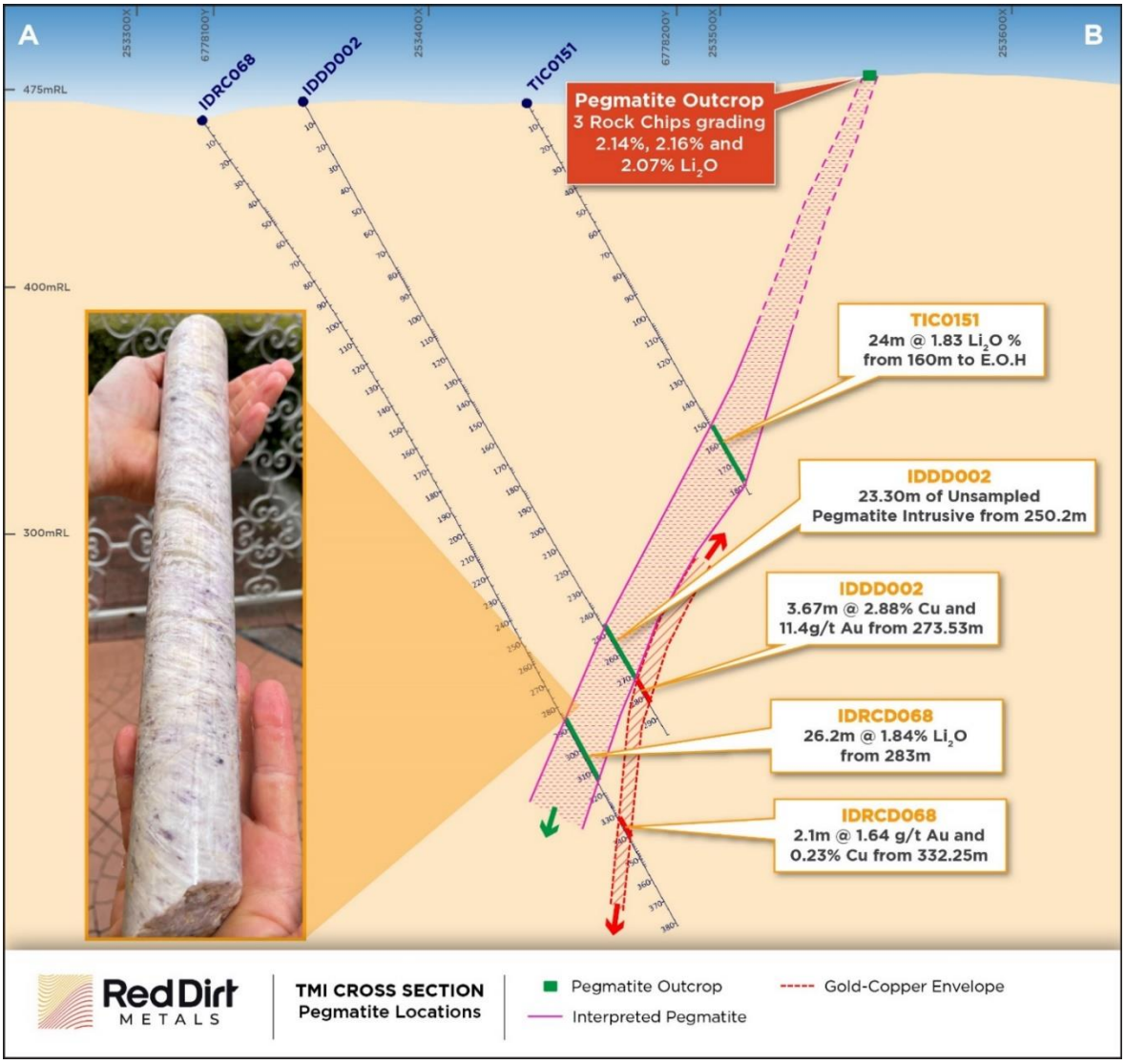

Figure 2; Cross section showing IDDD002 from ASX release "Mt Ida- A New Lithium Province 28/09/2021"

Next Steps

Orlando Drilling have now confirmed they will arrive onsite at Mt Ida next week with the first of two rigs to be mobilised to site and commence drilling. An initial 25,000m programme with a mix of RC and diamond drilling is being planned.

Aircore and geochemical drilling will also be commenced along strike from the Mt Ida central area with the objective of targeting the pegmatite outcrops located in the mafic sequence sitting to the west of the Mt Ida granitic complex.

Further petrological work and assay results from IDDD002 are still pending and will be released as soon as available.

Authorised for ASX lodgement by the Board.

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APPENDIX 1: HISTORIC DRILL HOLE COLLAR COORDINATES FOR LITHIUM-PEGMATITE BEARING DRILL HOLES MT IDA

HoleID	MGA_North	MGA_East	MGA_RL	MGA_Azi	Dip	Depth
IDDD001	6778221.429	253229.338	475.523	61.1	-61.66	400.08
IDDD002	6778164.374	253328.455	475.675	59.4	-61.75	298.03
IDDD004	6778030.456	253329.06	477.631	53.85	-60.85	392.98
IDRCD068	6778140	253295	468	56	-55	381.5
MIB428	6778800	257865	470	270	-60	49
MIB443	6778500	257890	470	270	-60	50
MIB446	6778500	257965	470	270	-60	36
TIB0145	6778186.995	253711.072	476.091	55	-60	60
TIB0146	6778168.601	253686.241	476.728	55	-60	42
TIB0147	6778164.547	253681.816	476.787	55	-60	60
TIB0148	6778145.601	253656.063	476.482	55	-60	60
TIB0149	6778129.05	253630.188	475.76	55	-60	60
TIB0150	6778114.386	253608.271	475.505	55	-60	60
TIC0058	6778625	253292	472	55	-60	124
TIC0121	6778635	253236	471	55	-60	196
TIC0151	6778126	253441	475	55	-60	184
TIC0154	6778073.201	253543.336	475.497	55	-60	223
TIC0156	6778590	253162	471	55	-60	324
TIC0158	6778594	253168	472	55	-56	120
TIC0159	6778592	253163	472	55	-60	318
TIC0163	6778609	253024	472	51	-60	294
TIC0164	6778717	253018	472	55	-60	148
TIC0165	6778644	252965	472	55	-60	298
TIC0166	6778624	253220	471	55	-60	214
TIC0168	6778621	253162	471	55	-60	292
TIC0179	6778596	253251	474	55	-60	188
TIC0180	6778644	253216	470	55	-60	212
TIC0181	6778614	253170	471	58	-60	295
TIC0183	6778597	253216	473	55	-60	240
TIC0190	6778535	253159	472	55	-58	340
TIC0195	6778108.565	253599.955	475.387	55	-60	156
TIC0210	6778161	253606	476	55	-60	126
TIC0211	6778066.195	253606.171	475.458	55	-60	170
TIC0224	6778609.36	253063.974	472.606	56	-60	258
TIC0247	6778754.86	252949.548	472.061	55	-59	258
TIC0257	6778555.704	253266.628	477.108	52	-60	204
TIC0259	6778655.098	252980.429	473.213	55	-60	294
TIC0260	6778720.045	252985.865	472.488	55	-60	234
TIC0264	6778708	252967	470	54	-58	246
TIC0267	6778659	252934	470	54	-58	258
TID009	6778588	253203	472	56	-59	287.96
TID013	6778611	253202	471	55	-60	240.4

Competent Persons Statement

Exploration information in this Announcement is based upon work undertaken by Mr Matthew Boyes who is a Fellow of the Australasian Institute of Mining and Metallurgy (AUSIMM). Mr Boyes has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a 'Competent Person' as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr Boyes is an employee of Red Dirt Metals Pty Ltd and consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• Petrological and XRD samples were selected from half NQ with core samples by Red Dirt Metals
Drilling techniques	• Drilling has been completed by various companies utilising purpose-built RC and DD rigs as well as combination rigs. • DD drilling was NQ sized core • It is assumed industry standard drilling methods and equipment were utilised for all drilling
Drill sample recovery	• No sample recovery or condition information has been found or supplied
Logging	• Qualitive logging of samples supplied includes lithology, mineralogy, alteration, veining and weathering • It is unknown if core was oriented, some geotechnical logging has been supplied • No core photography has been supplied • Logging is suitable to support Mineral resource estimates and subsequent mining studies
Sub-sampling techniques and sample preparation	• Samples were collected from XRD analysis via selection from ½ NQ diameter drill core • The sample was supplied by the client to Microanalysis Australia on 06/10/2021 for the Semi-quantitative XRD analyses. • A representative sub-sample was removed and lightly ground such that 90% was passing 20 µm. Grinding to this size helps eliminate preferred orientation • No standards were used in the quantification process. The concentrations were calculated using the normalized reference intensity ratio method where the intensity of the 100% peak divided by the published I/Ic value for each mineral phase is summed and the relative percentages of each phase calculated based on the relative contribution to the sum. This method allows for slight attention to be paid to preferred orientation but is limited in considering other factors including but not limited to; variable crystallinity, alteration, fluorescence, substitution and lattice strain
Quality of assay data and laboratory tests	• All samples are assumed to have been prepared and assayed by industry standard techniques and methods • A standard mica phases was used for this analysis. It is possible that a lithium bearing mica such as lepidolite is present. A subsequent analysis technique would be required for confirmation • No standards were used in the quantification process. The

Criteria	Commentary
	concentrations were calculated using the normalized reference intensity ratio method where the intensity of the 100% peak divided by the published I/Ic value for each mineral phase is summed and the relative percentages of each phase calculated based on the relative contribution to the sum. This method allows for slight attention to be paid to preferred orientation but is limited in considering other factors including but not limited to; variable crystallinity, alteration, fluorescence, substitution and lattice strain
Verification of sampling and assaying	• Significant intercept verification • No adjustments to assay data
Location of data points	• MGA94 zone 51 grid coordinate system is used • Collars are recorded as being picked up by DGPS • Downhole surveys were completed by Eastman single shot and multi shot downhole camera
Data spacing and distribution	• Drill hole spacing is variable throughout the programme • Spacing is considered appropriate for this style of exploration and development drilling
Orientation of data in relation to geological structure	• Drill holes are orientated perpendicular to the regional trend of the mineralisation previously drilled at the project, drill hole orientation does is not considered to have introduced any bias to sampling techniques utilised
Sample security	• Samples were selected and transported by Red Dirt Metals staff directly to Microanalysis Laboratories
Audits or reviews	• None carried out

Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• Drilling has been carried on M29/2 • The tenement is in good standing
Exploration done by other parties	• The area has a long history of gold and base metals exploration and mining, with gold being discovered in the district in the 1890s. Numerous generations of exploration have been completed including activities such as drilling, geophysics and geochemical sampling • Targeted Li assaying was first carried out in the early 2000s by La Mancha Resources and more recently in 2020 Lithium assays were completed
Geology	• The Mt Ida project is located within the Eastern Goldfields region of Western Australia within the Mt Ida/Ularring greenstone belt • Locally the Kurrajong Antiform dominates the regional structure at Mount Ida, a south-southeast trending, tight isoclinal fold that plunges at a low angle to the south. The Antiform is comprised of a layered greenstone sequence of mafic and ultramafic rocks. • Late stage granitoids and pegmatites intrude the sequence.
Drill hole Information	• A list of the drill hole coordinates, orientations and metrics are provided as an appended table

Criteria	Commentary
Data aggregation methods	• No metal equivalents are used
Relationship between mineralisation widths and intercept lengths	• The geometry of the mineralisation is currently unknown although preliminary interpretation suggests the Pegmatite intrusive sills and bodies are orientated sub-parallel to the Mt Ida Granitic intrusion and the North west trending Amphibolite mafic units which bound the western and eastern limbs of the intrusive
Diagrams	• Figures have been included in the announcement
Balanced reporting	• It is not practical to report all historical exploration results from the Mount Ida Project. Relevant collars are details are contained within the body of the announcement
Other substantive exploration data	• None completed at this time
Further work	• Further exploration and development drilling will be designed once a geophysical appraisal and interpretation in conjunction with petrological and geochemical surface work programmes • Images included identify areas of potential future targets, further work is discussed in the announcement • Drilling is programmed to commence in October at Mt Ida with the preliminary focus being the already existing geophysical gold copper targets at the Baldock main location and the delineation of the Lithium bearing Pegmatites along strike and down dip from IDDD002