

Maiden Mineral Resource - Lynas Find: Potential for lithium mine

CORPORATE DIRECTORY

Non-Executive Chair John Fitzgerald

Managing Director - CEO David J Frances

Executive Technical Director Francis Wedin

Non-Executive Director Dudley J Kingsnorth

FAST FACTS

Issued Capital:	320.4m
Options Issued:	31.2m
Market Cap:	\$24.4m
Cash:	\$13.5m

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- For Immediate Release -

Highlights:

- Maiden Mineral Resource estimation completed at the 100% owned Lynas Find lithium project
- Total Indicated and Inferred Mineral Resource of 7.3Mt @ 1.25% Li₂O, 85ppm Ta₂O₅ and 0.99% Fe₂O₃ for all pegmatites estimated
- The Lynas Find Main pegmatite returned an Indicated and Inferred Mineral Resource of 6.0Mt @ 1.33% Li₂O, 85ppm Ta₂O₅ and 0.72% Fe₂O₃
- High grade resource from surface, with high recoveries, indicates potential for low cost, low strip-ratio lithium mine

Dakota Minerals Limited ("Dakota", "DKO", or "Company") is pleased to announce the completion of the maiden Mineral Resource estimate for the Lynas Find Lithium Project, in the Pilgangoora district, Western Australia which has been compiled using the guidelines provided by the 2012 JORC Code.

The Indicated and Inferred Mineral Resource for Lynas Find Central pegmatite has been calculated **at 6.0Mt @ 1.33% Li₂O, 85ppm Ta₂O₅ and 0.72% Fe₂O₃.**

Dakota's exploration work confirms that Lynas Find represents a high grade portion of the Pilgangoora lithium trend. Additionally, the company believes the high-grade resource from surface, with high recoveries, indicates potential for a low cost, low strip lithium mine.

Including surrounding pegmatites, the total resource has been calculated at **7.3Mt** @ **1.25%** Li₂O, **85ppm** Ta₂O₅ and 0.99% Fe₂O₃.

The substantial and high-grade resource complements metallurgical test work undertaken earlier in the month, displaying high recoveries of over 90% Li_2O using Heavy Liquid Separation (HLS)¹.



Having successfully proved up a resource of commercial potential, Dakota is well positioned to consider a number of options to exploit the value of the asset, including fast-tracking mining and production.

Dakota Minerals CEO David Frances commented: "We are very pleased to have advanced Lynas Find from an early-stage exploration target in Q1 2016 to a high-quality, high-grade, lithium deposit today – this is testament to the Dakota team's ability to consistently deliver on its promises." "We will now look at all options to maximise shareholder value at Lynas as a first step towards our evolution as a globally significant lithium company focussed on the rapidly growing global battery industry."

2012 JORC Resource Estimation

Optiro Pty. Ltd. was commissioned by Dakota to compile a maiden Mineral Resource estimate for the Lynas Find deposit, which forms part of the Lynas Find lithium project. Dakota has completed a two phase drilling program that has resulted in the deposit being covered by reverse circulation (RC) drillholes on a nominal 50 m by 40 m grid.

A total of six pegmatite units were modelled within the Lynas Find Project area; Main Pegmatite, Splay Pegmatite, North-east Pegmatite, Track Pegmatite, West Pegmatite, and the South-west Pegmatite. Three of the six pegmatite domains were estimated (Main Pegmatite, Splay Pegmatite, and Track Pegmatite). Lithological contacts and weathering surfaces were generated by Optiro in Leapfrog based on geological logging and surface mapping for the main lithological units at Lynas Find. Pegmatite boundaries typically coincide with anomalous Li₂O and Ta₂O₅ grades and mineralisation domains were confined to pegmatite boundaries (i.e. mineralisation envelopes within the pegmatite boundaries were not generated for grade estimation purposes). A low-grade zone was identified in the footwall of the Main Pegmatite, and for statistical analysis and grade estimation purposes this low grade zone was domained separately. The segregation of this low grade zone was largely based on lithological logging, which classified the pegmatite footwall zone as a feldspar dominant pegmatite with little to no spodumene.

The block volume model used to spatially represent the geological subdivisions within the deposit applied an estimation block size of 10 mE by 10 mN by 5 mRL with sub-blocks allowed to reduce to 5 mE by 5 mN by 2.5 mRL to resolve boundaries between adjacent domains and to represent current surface topography. Grades were estimated into blocks using ordinary kriging. The data search neighbourhood was fixed for the estimation of all variables within a single domain and only the data located within the domain was allowed to participate in the estimation of grade. A multiple search pass approach was applied that escalated the search distance if the number of informing samples did not satisfy required minimums. In most cases, the majority of blocks were estimated during the primary search pass.

Bulk density values were assigned on a lithology and oxidation basis using data averages calculated from available data obtained from the two diamond drillholes drilled in the deposit.

The Lynas Find Deposit has been classified as Indicated and Inferred in accordance with JORC 2012 guidelines based on a combination of drill spacing, geological confidence, grade continuity, and the quality control standards achieved. The total Lynas Find Mineral Resource comprises **an Indicated and**



Inferred Mineral Resource of 7.3 Mt at 1.25% Li₂O. The high grade portion of the **Main Pegmatite** contains **an Indicated and Inferred Mineral Resource of 6.0 Mt at 1.33% Li₂O**.

The total resource calculation has no lower cut-off grade as the estimation domains have been developed using geological boundaries and therefore incorporates all material within the pegmatite intrusions at Lynas Find. The Mineral Resources reported at a range of cut-offs is tabulated in Table 2 and Table 3. Table 1 includes total Inferred and Indicated Resources from the Main Pegmatite, Splay Pegmatite and Track Pegmatite combined.

Domain	Classification	Mt	Li₂O%	Fe ₂ O ₃ %	Ta₂O₅ ppm
	Indicated	4.9	1.32	0.67	85
Main Pegmatite – Hangingwall	Inferred	1.1	1.39	0.93	86
	Sub-total	<u>6.0</u>	<u>1.33</u>	<u>0.72</u>	<u>85</u>
	Indicated	0.1	0.80	0.92	104
Splay Pegmatite	Inferred	-	-	-	-
	Sub-total	0.1	0.80	0.92	104
	Indicated	0.5	0.90	2.27	87
Track Pegmatite	Inferred	0.7	0.82	2.56	82
	Sub-total	1.1	0.85	2.43	84
	Indicated	5.5	1.28	0.816	85
Total	Inferred	1.8	1.18	1.532	85
	Grand Total	<u>7.3</u>	<u>1.25</u>	<u>0.99</u>	<u>85</u>

Table 1: Mineral Resource report for Lynas Find deposit, September 2016



Cut-off Grade	Mt	Li₂O %	Fe ₂ O ₃ %	Ta₂O₅ ppm
0.1	7.2	1.25	0.99	85
0.2	7.2	1.26	0.99	85
0.3	7.0	1.28	0.96	85
0.4	6.8	1.31	0.94	86
0.5	6.6	1.34	0.91	86
0.6	6.3	1.38	0.89	86
0.7	5.9	1.43	0.87	86
0.8	5.5	1.48	0.85	86
0.9	5.0	1.54	0.83	86
1.0	4.4	1.62	0.78	87
1.1	3.8	1.70	0.72	87
1.2	3.3	1.79	0.67	87

Table 2: Lynas Find Indicated and Inferred Mineral Resources reported above various cut-off grades (Main Pegmatite, Splay Pegmatite and Track Pegmatite combined)

Table 3: Lynas Find Indicated and Inferred Mineral Resources reported above various cut-off grades (Main Pegmatite)

Cut-off Grade	Mt	Li₂O%	Fe ₂ O ₃ %	Ta₂O₅ ppm
0.1	6.02	1.34	0.72	85
0.2	5.99	1.34	0.72	85
0.3	5.93	1.35	0.72	85
0.4	5.83	1.37	0.72	85
0.5	5.68	1.39	0.70	85
0.6	5.45	1.43	0.68	85
0.7	5.13	1.48	0.67	85
0.8	4.77	1.53	0.65	86
0.9	4.37	1.60	0.64	86
1	3.94	1.67	0.62	86
1.1	3.52	1.74	0.60	86
1.2	3.15	1.81	0.59	87





Figure 1: Lynas Find grade tonnage curve – Indicated & Inferred Resources of Main Pegmatite, Splay Pegmatite and Track Pegmatite combined



Figure 2: Lynas Find grade tonnage curve – Indicated & Inferred Resources of Main Pegmatite





Figure 3: Lynas Find deposit south -north cross section 699,800.mE coloured by lithology



Figure 4: Lynas Find deposit oblique view of pegmatite estimation domains. Note that only Main, Splay and Track pegmatites were estimated.





Figure 5: Map showing drill collar locations used in resource, and main pegmatites modelled



Geology

Regional Geology

The Lynas Find (Pilgangoora) lithium deposit is located within the Pilbara pegmatite province in the Archaean North Pilbara Craton of Western Australia. The North Pilbara Craton, which consists of large, domal, multiphase granitoid-gneiss complexes bordered by sinuous synformal to monoclinal greenstone belts, has been subdivided into three tectonostratigraphic domains with boundaries defined by NNE-SSW to NE-SW trending structural lineaments that regionally have a sinistral shear sense; the East Pilbara granite-greenstone terrane, the Central Pilbara tectonic zone, and the. West Pilbara granite-greenstone terrane.

The Pilbara pegmatite province contains at least 120 pegmatite deposits in over 27 pegmatite groups and fields, including the giant Mount Cassiterite tantalum orebody in the Wodgina pegmatite district. The rare metal pegmatites in the province are hosted by mafic-ultramafic volcanic-dominated supracrustal sequences of predominantly greenschist facies, adjacent to, and rarely within, domal multiphase granitoid-gneiss complexes. The most fractionated pegmatites are hosted by inliers of greenstone belts protruding into or within larger granitoid complexes, of which the majority are within two of the six tectonostratigraphic domains of the East Pilbara granite-greenstone terrane. The pegmatites tend to be clustered along and within 5 km (at surface) of major faults and craton-scale lineaments that coincide with or are parallel to domain boundaries. All of the major tantalum deposits in the region (Wodgina, Mount Cassiterite, Tabba Tabba, Strelley, Pilgangoora) are located along a north-northeast-trending corridor that is within one tectonostratigraphic domain.

The Pilgangoora pegmatites are hosted within the East Strelley greenstone belt, which is comprised of a series of steeply dipping, tholeiitic metabasalts and amphibolites with thin interflow metasedimentary units. In the Pilgangoora area, the greenstones have been intruded by a swarm of north-trending, east-dipping, zoned pegmatites emplaced into a regional north-south trending fault system, extending over a strike length of approx. 10 km, and width of ~1 km, mostly cross cutting regional foliation. Pegmatites range in size from 100 to 1,250 m in length and 1 to 300 m in width and have irregular dyke-like forms, often with splayed, forked or poddy terminations. Pegmatites are hosted entirely within amphibole (actinolite) bearing mafic/ultramafic metavolcanics².

Local Geology

The Lynas Find lithium deposit is located within the Pilgangoora pegmatite field, which consists of a number of lithium bearing pegmatites that outcrop for approximately 10 km along strike.

The Lynas Find pegmatite strikes east-west for approximately 500 m, being narrow in the west and thick in the east, with a horizontal to 40-degree south dip, with minor east-west trending roll-over zones. The pegmatite splits into two down-dip and is up to 40 m thick (true thickness). The eastern contact is truncated by a 50 to 80 degrees west-dipping north-south trending fault/shear zone which has been intruded by a thin Proterozoic dolerite dyke. The fault zone consists of a mixture of sheared and altered

² Characteristics of Sn-Ta-Be-Li-Industrial Mineral Deposits of the Archaean Pilbara Craton, Western Australia (Sweetapple, 2000), and Porter Geoconsultancy Database (Porter, 2016)



rocks including brown biotite silica schist, ultramafic talc schist, a thin Proterozoic dolerite dyke, quartz veining, and a zone of siliceous lithium-bearing pegmatite. The fault acts as a major domain boundary between north-south trending stratigraphy at Lynas Find, and northeast trending stratigraphy to the east. The fault is interpreted to in-part, post-date the pegmatite intrusion, with a strong likelihood that the pegmatite at Lynas Find was formed in a dilatational zone caused by the fault.

The Lynas Find pegmatite is cross-cut by several generations of dykes and veins including sheeted southeast-trending grey quartz veins, and dark green tourmaline-rich east-west and north-south trending pegmatite dykes.



Figure 6: Plan view of local geology at the Lynas Find Project area, based on a combination of mapping and geophysical interpretation



Mineralogy

The bulk of the pegmatite is spodumene-rich, with individual crystals up to 30 cm in length and 10 cm wide.

Results from drilling indicate that the main pegmatite at Lynas Find is comprised of:

- blue to grey quartz and clear quartz;
- feldspar, as fine to medium, to extremely coarse orthoclase crystals, commonly with welldeveloped twinning, varying from white to grey;
- feldspar, as granular masses of plagioclase laths in the footwall and hangingwall albitite;
- spodumene, in medium to very coarse crystals and as clear, grey and pale green varieties;
- black tourmaline, generally present in conjunction with clear to grey quartz;
- muscovite, often with a greenish hue, in very coarse books to fine clusters;
- unidentified green mineral, previously thought to be amblygonite, which may be altered spodumene;
- minor blue beryl, as match head-sized spots.

Fe₂O₃ in Resource

Two potential iron contamination issues were highlighted during drilling, sampling and assaying resulting in elevated Fe_2O_3 assay results. The first issue identified is the highly abrasive nature of the pegmatite rock on the RC drilling bits and rods, which resulted in iron contamination of the drill samples. The second issue identified was with the pulverisation of drill samples in steel bowls, which due to the abrasive nature of the samples, resulted in further iron contamination of the drill samples.

In order to determine the extent of iron contamination, the diamond core samples were crushed in tungsten carbide bowls instead of steel bowls and compared with their twin RC drillholes (Table 4). The comparison, which accounts for both of the iron contamination issues, indicates that the iron content of the RC samples is potentially elevated by 0.52% Fe₂O₃. Based on these results, an iron factor of - 0.52% Fe₂O₃ was applied to the RC samples only.



BHID	Drilling Method	Assay Preparation Method	Li ₂ 0%	Ta₂O₅%	Fe ₂ O ₃ %
16DD01	DD	Tungsten Carbide	2.47	56	0.44
16LC012	RC	Steel	2.08	131	0.99
Difference			0.39	-75	-0.55
16DD02	DD	Tungsten Carbide	2.16	64	0.48
16LC007	RC	Steel	1.96	71	0.97
Difference			0.20	-7	-0.49
Combined DD samples	DD	Tungsten Carbide	2.31	60	0.46
Combined RC samples	RC	Steel	2.02	101	0.98
Difference			0.29	-41	-0.52

Table 4: Steel and RC drilling vs. tungsten carbide and diamond drilling difference for Li₂O%, Ta₂O₅% and Fe₂O₃%

It should be noted that this analysis is based on limited data (two diamond drillholes) and this comparison has been used to understand the potential Fe_2O_3 contamination and attempt to remove the Fe_2O_3 contamination. The factoring of the RC Fe_2O_3 grades should not be considered as definitive.

About Dakota Minerals

Portugal: Lusidakota

Portugal, as the leading lithium producer in Europe³, was identified by the Company to be a high priority jurisdiction for lithium. Europe accounts for 24% of world lithium demand, but only produces 2% of global supply, all of which comes from Portugal. Many countries in Europe are leading the world in uptake of electric vehicles (EVs) using lithium-ion batteries, with EVs already totalling 22% of all new vehicle sales in Norway. Lithium-ion batteries are already being produced in Europe to meet this increasing demand, and production capacity in car-producing countries such as Germany is growing dramatically to keep up with Daimler recently announcing a new 500 million Euro battery factory⁴, and Volkswagen to follow suit with an 8 billion Euro "gigafactory"⁵. Battery producers will need more lithium supply from safe, nearby jurisdictions. Sourcing lithium from Europe would also reduce the carbon footprint of the car production supply chain. Portugal has public policies deemed to be highly supportive of mining: it ranked in the global Top 10 of all countries in the Fraser Institute 2015 Survey of Mining Companies for Policy Perception Index, an assessment of the attractiveness of mining policies⁶. For

³ USGS Mineral Commodity Summaries, 2016

⁴ http://media.daimler.com/deeplink?cci=2734603

⁵http://www.telegraph.co.uk/business/2016/05/27/vw-to-invest-8bn-in-battery-factory-as-it-tries-to-reinvent-itse/

⁶ Fraser Institute Survey of Mining Companies 2015



these reasons, the Company has been pursuing projects in areas most prospective for lithium-bearing minerals Petalite and Spodumene in Portugal.

Dakota's Lusidakota lithium projects in Northern Portugal, to which Dakota has 100% rights through its binding agreement with Lusorecursos LDA, are located over three broad districts of pegmatitic dyke swarms, which contain spodumene and petalite-bearing pegmatites. The three main districts are the Serra de Arga, Barroso-Alvão and Barca de Alva pegmatite fields, all three of which are highly prospective for lithium mineralisation. The Lusidakota tenement package consists of eight exploration licences (one granted and seven under application). After encountering encouraging surface sampling results of up to 2.8% Li₂O, exploration at the Sepeda Lithium Project within the Barroso-Alvão district has accelerated, with first pass drilling already under way.

Western Australia: Lynas Find

Dakota is developing a quality lithium project at Lynas Find, in the Pilbara region of Western Australia, about 100km south of the regional centre of Port Hedland. The Company holds 100% rights to Lynas Find, which is located on and in the vicinity of the extensive Pilgangoora lithium-tantalum bearing pegmatitic dyke swarm. Dakota has completed two phases of exploration reverse circulation drilling at Lynas Find for a total of 5,276 metres drilled, which has been successful in defining high grade mineralisation from surface that remains open at depth. Dakota has now completed resource modelling and estimation to develop a maiden Mineral Resource at Lynas Find, of 7.3Mt @ 1.25% Li₂O, 85ppm Ta₂O₅ and 0.99% Fe₂O₃. Initial metallurgical testwork results indicate excellent recoveries of >90% Li₂O from Heavy Liquid Separation (HLS). The Company is now evaluating the numerous development options available to progress Lynas Find, and maximise shareholder value.

Competent Person Statement

The information in this report that relates to Exploration Results is based on information compiled by Dr Francis Wedin, who is a member of the Australasian Institute of Mining and Metallurgy. Dr Wedin is a full-time employee of Dakota and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a competent person as defined in the 2012 Edition of the "Australasian Code for reporting of Exploration Results, Exploration Targets, Mineral Resources and Ore Reserves" (JORC Code). Dr Wedin consents to the inclusion in this report of the matters based upon the information in the form and context in which it appears. All material assumptions and technical parameters underpinning the JORC 2012 reporting tables in the relevant market announcements referenced in this text continue to apply and have not materially changed.

The information in this report that relates to Mineral Resources is based on and fairly represents information reviewed by Mr Paul Blackney (consultant with Optiro Pty Ltd). Mr Blackney is a members of the Australian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Blackney consents to the inclusion in this report of the matters based on the information in the form and the context in which they appear.



-ENDS-

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Summary of Resource Estimate and Reporting Criteria

As per ASX Listing Rule 5.8 and the JORC 2012 reporting guidelines, a summary of the material information used to estimate the Mineral Resource is detailed below (for more detail please refer to Table 1, Sections 1 to 3 in Appendix 2).

Geology and geological interpretation

The Lynas Find Project sits within a broad area of pegmatite hosted lithium-tantalum mineralisation. The pegmatites are interpreted to have been intruded into N-S trending faults within the metamorphic greenstone rocks of the Archaean-aged Warrawoona group, close to the contact of a granite of the Carlindi Batholith. The pegmatites are a LCT spodumene type.

Drilling techniques and hole spacing

Drilling was predominantly reverse circulation drilling with two diamond drillholes. Holes range in dip from approximately 60° to vertical. Average depth of drilling is 85 m and ranging from 16 to 206 m. RC drilling was undertaken by two drilling companies;

- Mount Magnet Drilling using a track-mounted rig (Schramm T450) and compressor (rated 1,350 cfm/800 psi) and 6WD support truck. The drill rig utilised a reverse circulation face sampling hammer, with 138mm bit. The sampling was conducted using a rig-mounted cyclone with cone splitter and dust suppression system.
- Strike Drilling, using a truck-mounted KWL700 RC rig, which used a rig-mounted cyclone and cone splitter, and dust suppression system.

In addition, DKO completed two vertical PQ diamond holes for 99.7 metres in 2016. The diamond drillholes were drilled predominantly for metallurgical purposes and are twins of RC holes. Core was not orientated. Downhole surveying was conducted using a Reflex multi-shot survey system. Diamond holes are twins of RC holes, which are generally spaced between 40 and 60 m on section, and generally 50 m between sections, depending on site accessibility.

Sampling and sub-sampling techniques

The deposit was sampled using 62 Reverse Circulation (RC) holes for 5,276m and two diamond drill (DD) holes over a two phase drilling campaigns from April 2016 to June 2016. Drilling was completed by Mt Magnet Drilling and Strike Drilling contractors.

RC holes were sampled every metre, with a rig-mounted cyclone splitter, including a dust suppression system, used to split samples off the rig. Approximately 85% of the RC chips were split to 600x900mm green plastic mining bags, for potential re-sampling, whilst 15% was captured at the sample port in draw-string calico sample bags.

Drill PQ core was geologically, structurally and geotechnically logged, photographed, and marked up for cutting. The core was shipped to SGS laboratories in Perth, where it was cut and sampled according to the geologist's instructions. Half the core was taken for metallurgical test-work purposes, the remaining half core was cut again, and a quarter core sample was taken for assay from each sample interval.



Sampling analysis method

All RC samples were 1 m split samples sent to NAGROM laboratory in Perth, and analysed using XRF and ICP techniques for a suite of five elements including Li₂O, Ta, Cs, Fe, and Be.

All diamond holes were PQ. Holes were geologically logged, measured and marked up on site, before being sent to SGS in Perth for cutting. Quarter-core samples were submitted to SGS laboratory in Perth for analysis using XRF and ICP techniques for a suite of elements including Li₂O, Ta₂O₅, Al₂O₃, As, CaO, Fe, Fe₂O₃, K₂O, MgO, Mn₃O₄, Na₂O, Nb₂O₅, Sb, SiO₂, Sn, SO₃, Ta, ThO₂, TiO₂, U₃O₈.

Cut-off grades

The total resource calculation has no lower cut-off grade as the estimation domains have been developed using geological boundaries and therefore incorporates all material within the pegmatite intrusions at Lynas Find.

Estimation methodology

Lithium, tantalum, and iron grade estimation used Ordinary Kriging (OK) in Datamine Studio 3 software.

Classification criteria

Lynas Find Deposit has been classified as Indicated and Inferred in accordance with JORC 2012 guidelines based on a combination of drill spacing, geological confidence, grade continuity, and the quality control standards achieved.

Mining and metallurgical methods and parameters

Based on their orientations, thicknesses and depths to which the pegmatite bodes have been modelled, as well as their estimated grades, the potential mining method is considered to be open pit mining. Metallurgical testwork⁷ carried out by SGS on behalf of Dakota has shown that the ore is amenable to DMS techniques, with very high recoveries from Heavy Liquid Separation (HLS) testwork of over 90%. This produced a mineral concentrate of marketable qualities.

^{7 15/09/2016} DKO ASX announcement



Appendix 1: Exploration Results: Downhole Intercepts (to be read in conjunction with JORC Table 1) NSI: No Significant Intercept

HOLE_ID	НОГЕ_ТҮРЕ	TOT_DEPTH_M	E_GDA94_50S	N_GDA94_50S	RL_M	AZI_GDA94_50S	DIP	INTER VAL	FROM M	LIIZO
16LC001	RC	75	699846	7675243	208	360	-90	11	0	1.77
16LC001	RC	75	699846	7675243	208	360	-90	5	14	0.83
16LC002	RC	72	699803	7675268	216	360	-90	35	0	2.14
16LC003	RC	66	699745	7675281	222	360	-90	33	8	1.87
16LC004	RC	72	699747	7675244	227	360	-90	40	16	1.52
16LC005	RC	82	699736	7675203	228	360	-90	35	30	1.75
16LC006	RC	96	699730	7675168	234	360	-90	30	56	1.61
16LC007	RC	50	699695	7675260	218	360	-90	26	17	1.96
16LC008	RC	39	699705	7675287	215	360	-90	21	7	2.64
16LC009	RC	60	699808	7675231	223	360	-90	30	11	1.77
16LC010	RC	78	699804	7675191	225	360	-90	16	27	1.51
16LC010	RC	78	699804	7675191	225	360	-90	10	52	1.11
16LC011	RC	40	699849	7675280	205	360	-90	5	0	1.62
16LC011	RC	40	699849	7675280	205	360	-90	3	20	1.2
16LC012	RC	54	699794	7675312	213	360	-90	26	2	2.08
16LC012	RC	54	699794	7675312	213	360	-90	6	34	1.04
16LC013	RC	98	699649	7675195	238	360	-90	8	77	1.09
16LC014	RC	164	699705	7675095	234	360	-90	3	118	0.86
16LC014	RC	164	699705	7675095	234	360	-90	23	133	1.05
16LC015	RC	110	699796	7675152	225	360	-90	3	44	1.87
16LC015	RC	110	699796	7675152	225	360	-90	10	67	1.11
16LC015	RC	110	699796	7675152	225	360	-90	5	92	1.09
16LC016	RC	24	6997840	7675315	208	360	-90	16	0	1.56
16LC017	RC	44	699750	7675322	208	360	-90	20	5	2.61
16LC018	RC	26	699705	7675329	207	360	-90	17	0	1.72
16LC019	RC	88	699695	7675197	231	360	-90	21	49	0.99
16LC020	RC	19	699794	7675345	202	360	-90	12	0	1.9
16LC021	RC	28	699836	7675344	211	360	-90	4	16	1.64
16LC022	RC	40	700064	7675565	206	360	-90	2	19	1.22
16LC023a	RC	32	700079	7675535	208	360	-90	NSI	NSI	NSI
16LC023	RC	88	700079	7675535	208	360	-90	NSI	NSI	NSI
16LC024	RC	28	699431	7675144	200	250	-59	NSI	NSI	NSI
16LC025	RC	68	699393	7674624	210	360	-90	NSI	NSI	NSI
16LC026	RC	16	699371	7674644	218	360	-90	1	8	0.83

HOLE_ID	НОГЕ_ТҮРЕ	TOT_DEPTH_M	E_GDA94_50S	N_GDA94_50S	RL_M	AZI_GDA94_50S	DIP	INTER VAL	FROM M	LIIZO
16LC027	RC	148	699697	7675147	231.66	360	-89.5	18	86	1.41
16LC028	RC	200	699693	7675052	224.1	360	-89.5	9	132	1.18
16LC028	RC	200	699693	7675052	224.1	360	-89.5	8	168	0.88
16LC029	RC	150	699642	7675157	233.66	291.4	-90	7	101	1.25
16LC030	RC	160	699787	7675075	216.4	311.4	-89	34	112	0.86
16LC031	RC	124	699795	7675112	216.57	360	-90	3	66	0.98
16LC031	RC	124	699795	7675112	216.57	360	-90	27	83	1.58
16LC031	RC	124	699795	7675112	216.57	360	-90	2	116	0.55
16LC032	RC	94	699876	7675295	202.52	360	-90	NSI	NSI	NSI
16LC033	RC	58	699835	7675280	203.92	360	-90	5	1	1.38
16LC033	RC	58	699835	7675280	203.92	360	-90	2	12	1.48
16LC033	RC	58	699835	7675280	203.92	360	-90	3	21	1.77
16LC034	RC	50	699794	7675357	197.63	360	-90	NSI	NSI	NSI
16LC035	RC	70	699603	7675290	216.3	360	-90	5	45	0.84
16LC036	RC	28	699654	7675320	208.2	172.6	-90	1	15	0.5
16LC037	RC	46	699657	7675281	211.37	300	-88	17	21	1.36
16LC038	RC	94	699602	7675218	217.16	360	-90	2	74	0.68
16LC039	RC	68	699604	7675250	216.07	314	-90	2	61	0.58
16LC040	RC	60	699548	7675288	207.16	360	-90	2	53	1.01
16LC041	RC	146	699747	7675076	235.4	25	-67	2	102	1.62
16LC041	RC	146	699747	7675076	235.4	25	-67	22	116	1.15
16LC042	RC	180	699743	7675051	235.43	40	-81	1	112	1.22
16LC042	RC	180	699743	7675051	235.43	40	-81	1	117	0.58
16LC042	RC	180	699743	7675051	235.43	40	-81	2	137	1.65
16LC042	RC	180	699743	7675051	235.43	40	-81	1	146	0.98
16LC042	RC	180	699743	7675051	235.43	40	-81	3	155	0.6
16LC042	RC	180	699743	7675051	235.43	40	-81	5	162	0.94
16LC043	RC	66	699653	7675245	219.83	300	-89	2	18	0.62
16LC043	RC	66	699653	7675245	219.83	300	-89	10	50	1.69
16LC044	RC	67	699843	7675200	212.34	360	-90	32	19	1.9
16LC045	RC	74	699844	7675169	211.05	230	-87.5	25	36	2
16LC046	RC	24	699722	7675362	200.23	223	-90	NSI	NSI	NSI
16LC047	RC	196	699627	7675070	232	360	-90	4	115	1.27
16LC047	RC	196	699627	7675070	232	360	-90	5	174	1.45
16LC048	RC	88	699686	7674914	212.05	360	-90	NSI	NSI	NSI
16LC049	RC	58	699758	7674902	216.7	350	-58	NSI	NSI	NSI
16LC050	RC	120	699843	7675063	226	355	-58	NSI	NSI	NSI



HOLE_ID	НОГЕ_ТҮРЕ	TOT_DEPTH_M	E_GDA94_50S	N_GDA94_50S	RL_M	AZI_GDA94_50S	DIP	INTER VAL	FROM M	LIIZO
16LC051	RC	196	699790	7675016	218.89	30	-87	7	133	2.1
16LC051	RC	196	699790	7675016	218.89	30	-87	28	148	1.8
16LC051	RC	196	699790	7675016	218.89	30	-87	3	180	0.64
16LC052	RC	50	699422	7675247	197.6	310	-61	NSI	NSI	NSI
16LC053	RC	32	699395	7675099	195	200	-89	3	20	0.84
16LC054	RC	46	699318	7675150	192.63	316	-58	1	34	0.78
16LC055	RC	70	699455	7675305	198.7	315	-59	1	23	1.07
16LC056	RC	52	699471	7674836	206.55	5	-69	1	35	1.34
16LC057	RC	88	700120	7675635	205	285	-62	NSI	NSI	NSI
16LC058	RC	154	699590	7675111	222	360	-90	6	138	1.56
16LC059	RC	88	699471	7674829	207	180	-69	3	74	1.52
16LC060	RC	206	699777	7674986	217.5	320	-88	6	139	0.94
16LC060	RC	206	699777	7674986	217.5	320	-88	16	164	1.82
16LC061	RC	200	699691	7675002	218	360	-90	6	146	1.38
16LC062	RC	58	699450	7675102	197	300	-87	1	45	0.99

HOLE_ID	НОГЕ ТҮРЕ	Total Depth	East	North	RL	AZI	DIP	FROM	INTERVAL_M	Weighted Grade Li20 %
16DD001	DD	54.3	699793.36	7675310.5	206.731	360	-90	8.4	16.6	2.47
16DD001	DD	54.3	699793.36	7675310.5	206.731	360	-90	31	1	1
16DD001	DD	54.3	699793.36	7675310.5	206.731	360	-90	35	1	0.85
16DD001	DD	54.3	699793.36	7675310.5	206.731	360	-90	38	1	1.16
16DD002	DD	45.4	699703.89	7675251.9	210.377	360	-90	17.09	24.91	2.16





Appendix 2: Pilgangoora - JORC Table 1

Section 1: Sampling Techniques and Data

	Criteria	JORC Code explanation	Commentary
s t	ampling echniques		The deposit was sampled using 62 Reverse Circulation (RC) holes for 5,276m and two diamond drill (DD) holes over a two phase drilling campaigns from April 2016 to June 2016. Drilling was completed by Mt Magnet Drilling and Strike Drilling contractors.
		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	RC holes were sampled every metre, with a rig- mounted cyclone splitter, including a dust suppression system, used to split samples off the rig. Approximately 85% of the RC chips were split to 600x900mm green plastic mining bags, for potential re-sampling, whilst 15% was captured at the sample port in draw-string calico sample bags.
		should not be taken as limiting the broad meaning of sampling.	Drill PQ core was geologically, structurally and geotechnically logged, photographed, and marked up for cutting. The core was shipped to SGS laboratories in Perth, where it was cut and sampled according to the geologist's instructions. Half the core was taken for metallurgical test-work purposes, the remaining half core was cut again, and a quarter core sample was taken for assay from each sample interval.



Criteria	JORC Code explanation	Commentary
		DKO submitted 64 field RC duplicate to Nagrom Laboratories for Li_2O , Ta, Cs, Fe, and Be analysis by method ICP004. Results from these samples correlated well given the uneven split sizes. The coefficient of coefficient) was 0.95 indicating excellent repeatability of lithium grades.
		Eight pulp duplicates from the diamond core samples were submitted to SGS Laboratories for analysis. The pulp duplicates ranged in grade from 0.02 to $3.80 \text{ Li}_2\text{O}\%$. Scatter plots show a strong correlation coefficient (0.99), indicating excellent repeatability of grades between paired samples.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used	A total of 54 coarse diamond drill hole duplicate samples were sent to an umpire laboratory (Nagrom) to test the accuracy of the primary laboratory (SGS). Scatter plots for Li ₂ O show a strong correlation coefficient (0.99), a moderate correlation for tantalum (0.50), and a moderately strong correlation for iron (0.89).
		Samples submitted by DKO in 2016 had standards inserted into the sample stream at a rate of approximately one in 20. Standards were certified for lithium and tantalum, but are not certified for iron. All standards were within three standard deviations. However, Optiro notes that standard AMS0339 shows a clear high bias in its lithium grades, whilst AMS0340 shows a clear low bias in its lithium grades. The materiality of these potential biases is unknown and further work is required.
	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	All RC samples were 1 m split samples sent to NAGROM laboratory in Perth, and analysed using XRF and ICP techniques for a suite of five elements including Li ₂ O, Ta, Cs, Fe, and Be.
	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	All diamond holes were PQ. Holes were geologically logged, measured and marked up on site, before being sent to SGS in Perth for cutting. Quarter-core samples were submitted to SGS laboratory in Perth for analysis using XRF and ICP techniques for a suite of elements including Li ₂ O, Ta ₂ O ₅ , Al ₂ O ₃ , As, CaO, Fe, Fe ₂ O ₃ , K2O, MgO, Mn ₃ O ₄ , Na ₂ O, Nb ₂ O ₅ , Sb, SiO ₂ , Sn, SO ₃ , Ta, ThO ₂ , TiO ₂ , U ₃ O ₈ , and LOI.



Criteria	JORC Code explanation	Commentary			
Drilling techniques		Drilling was predominantly reverse circulation drilling with 2 diamond drillholes. Holes range in dip from approximately 60° to vertical. Average depth of drilling is 85 m and ranging from 16 to 206 m. RC drilling was undertaken by two drilling companies;			
	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.).	 Mount Magnet Drilling using a track-mounted rig (Schramm T450) and compressor (rated 1,350 cfm/800 psi) and 6WD support truck. The drill rig utilised a reverse circulation face sampling hammer, with 138mm bit. The sampling was conducted using a rig-mounted cyclone with cone splitter and dust suppression system. Strike Drilling, using a truck-mounted KWL700 RC rig, which used a rig-mounted cyclone and cone splitter, and dust suppression system. In addition, DKO completed 2 vertical PQ diamond holes for 99.7 metres in 2016. The diamond drillholes were drilled predominantly for metallurgical purposes and are twins of RC holes. Core was not orientated. Downhole surveying was conducted using a Reflex multi-shot survey sustem 			
		conducted using a Kenex matt-shot survey system.			
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed	Sample recovery was recorded by the geologist as "good" for all RC holes. Sample recovery was recorded by the geologist as "good" for both PQ holes.			
	Measures taken to maximise sample	Rods were flushed with air after each six metre interval to prevent contamination.			
	recovery and ensure representative nature of the samples	Samples were dry, and recoveries all recorded as "good".			
	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.	No material bias has been identified.			



Criteria	JORC Code explanation	Commentary
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource	One metre samples were laid out in lines of 20, with RC chips collected and geologically logged for each metre interval on a plastic logging sheet, then stored in RC chip trays marked with hole IDs and depth intervals. Geological logging information was recorded directly onto hard-copy sheets, and later transferred to an Excel spread sheet. The rock-chip trays will be stored at the DKO office for future reference.
	estimation, mining studies and metallurgical studies.	PQ core was logged and cut according to geological boundaries, but generally at 1m intervals. Geological logging information was recorded directly onto hard-copy sheets, and later transferred to an Excel spread sheet. The PQ core will be stored at the DKO office for future reference.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging has been primarily quantitative, using RC chips. Detailed logging was carried out on the diamond core by a consultant from Insight Geology Pty Ltd.
	The total length and percentage of the relevant intersections logged	The logging database contains lithological data for all intervals in all holes in the database.
Sub-sampling techniques and sample preparation	If core, whether cut or sawn and whether quarter, half or all core taken.	PQ core was sawn and a sample equivalent to a ¼ core size was taken.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	RC samples were all dry and split at the rig using a cyclone splitter, which is considered appropriate and industry standard.
	For all cample types, the pature, quality	RC rockchip samples were submitted to Nagrom Laboratories, and the diamond core samples were submitted to SGS Laboratories with umpire samples (from the diamond core) sent to Nagrom Laboratories.
	and appropriateness of the sample preparation technique.	Samples submitted to SGS were crushed to -2mm and then milled to 90% passing 75 microns in a tungsten-carbide bowl.
		Samples submitted to Nagrom were crushed to - 2mm and then milled to 80% passing 75 microns in a steel bowl.



Criteria	JORC Code explanation	Commentary
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Three different grades of certified reference material (CRM) for lithium and tantalum were inserted at a rate of approximately 1 in 20. The CRM's submitted represented a weakly mineralised pegmatite (AMS0338), a moderate to high grade lithium mineralised pegmatite (AMS0340), and a high grade lithium mineralised pegmatite (AMS0339). A total of 86 CRM samples were analysed for lithium and 80 for tantalum. These CRM's are not certified for iron grades. Results were within were within three standard deviations.
		Duplicates submitted by DKO included field RC duplicates, pulp duplicates from diamond core, and coarse crushed diamond core duplicates. Results from these samples correlated well.
		Results of field RC duplicates show a strong correlation of 0.95 for lithium, 0.85 for tantalum and 0.82 for iron. The pulp duplicates ranged in grade from 0.02 to 3.80 Li2O% had a strong correlation coefficient of 0.99.
	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.	The coarse duplicate results showed a strong correlation for lithium (0.99), moderate correlation for tantalum (0.50), and a moderate to strong correlation for iron (0.89). The duplicate samples analysed by Nagrom were prepped using steel bowls, whilst the original samples were prepped by SGS using tungsten carbide bowls. In order to assess the impact of steel versus tungsten carbide, DKO submitted 31 samples to Nagrom for analysis by both sample preparation methods. The results confirm that the use of different mill bowls accounts for the differences in iron grades between the duplicate samples and the poor precision and repeatability of iron grades. However, it is not known what has attributed to the difference in tantalum grades. Optiro recommends that further umpire testwork is undertaken.
	Whether sample sizes are appropriate to	Drilling sample sizes are considered to be appropriate to correctly represent the lithium- bearing pegmatite-style mineralisation at Lynas Find.
	the grain size of the material being sampled.	As noted above duplicates samples correlated well, therefore sample sizes are considered to be acceptable to accurately represent lithium mineralisation.



Criteria	JORC Code explanation	Commentary		
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.	RC samples were assayed at NAGROM's laboratory in Perth, for a five element suite using XRF with a sodium peroxide fusion, and total acid digestion with an ICP-MS finish. Diamond drill samples were assayed at SGS's laboratory in Perth, for a 19 element suite using XRF with a sodium peroxide fusion, and total acid digestion with an ICP-MS finish.		
	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.	No downhole geophysical surveys were conducted and no geophysical tools were used to determine any elemental concentrations.		
		Quality control measures employed included the use of certified reference materials (CRM), field blanks, field RC duplicates, coarse DDH umpire duplicates, and pulp duplicates to demonstrate the accuracy and precision achieved by the recent sampling.		
	Nature of quality control procedures adopted (e.g. standards, blanks,	Field RC duplicates, pulp duplicates and coarse diamond field duplicates generally indicate good repeatability of samples.		
	duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Field QAQC procedures for the 2016 sampling included the insertion of commercial standards at the rate of approximately one in 20 samples. Assay results have been generally satisfactory demonstrating acceptable levels of accuracy and precision. However, whilst All standards were within 3 standard deviations, it was noted that standard AMS0339 shows a clear high bias in its lithium grades, whilst AMS0340 shows a clear low bias in its lithium grades. The materiality of these potential biases is unknown.		
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Independent verification was carried out by a consultant to the Company, lain Groves.		
	The use of twinned holes.	Twinning of two RC holes with diamond drilling also showed good consistency of mineralisation.		
	Documentation of primary data, data	Field logs are entered into and validated on an electronic Excel database, both of which are stored at the DKO Perth office.		
	entry procedures, data verification, data entry procedures, data verification, data storage (physical and electronic) protocols.	Diamond core drilled was photographed on site and then sent to the SGS Laboratories, Perth. Geological logging took place on-site and sampling took place at the laboratory. Data capture was straight into Excel files.		



Criteria	JORC Code explanation	Commentary
		Values below the assay detection limit have been entered as half of the detection limit.
	Discuss any adjustment to assay data.	Li_2O was used for the purposes of reporting, as reported by NAGROM and SGS. Ta was adjusted to Ta_2O_5 by multiplying by 1.2211. Fe was adjusted to Fe_2O_3 by multiplying by 1.4297. Fe_2O_3 values were adjusted by subtracting 0.52% Fe_2O_3 from all RC samples, which is the total correction factor for contamination caused by steel RC drill bits, and pulverising the samples in steel bowls.
Location of data points	Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	All drill-hole locations were located using a Navcom 3040 Real time GPS, with an accuracy of +/- 10 cm vertical and +/-5 cm horizontal. Down hole surveying of drill holes was conducted roughly every 30m using a Reflex multi-shot camera to determine the true dip and azimuth of each hole. Subsequently, more detailed down hole surveying was conducted to verify this data, using a High Speed True North Seeking Keeper Gyroscope.
	Specification of the grid system used.	The grid system used is GDA 1994 MGA Zone 50.
	Quality and adequacy of topoaraphic	RL data to date has been collected using a Navcom 3040 Real time GPS, which has an accuracy of +/-10 cm vertical and +/-5 cm horizontal.
	control.	Topographic control is also assured using data provided by an airborne geophysical survey conducted by DKO in March 2016.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Diamond holes are twins of RC holes, which are generally spaced between 40 and 60 m on section, and generally 50 m between sections, depending on site accessibility.
	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.	The continuity of the mineralisation can confidently be interpreted from the geology of the pegmatite dykes, which have also been mapped on surface as extending over several hundred metres length.
	Whether sample compositing has been applied.	Diamond drill samples were composited to 1 m. RC samples were all 1 m in length.



Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure		The orientation of drilling was designed to intersect pegmatites perpendicular to the dominant geometry.
	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The pegmatite varies between horizontal and 50- degree dip towards the south and south-east. Most of the drilling was conducted with vertical holes, meaning that samples collected were generally almost perpendicular to mineralisation, which is deemed appropriate as per industry standard.
	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.	No orientation-based sampling bias has been identified.
Sample security	The measures taken to ensure sample security.	DKO contract geologists and field assistant conducted all sampling and subsequent storage in field. Samples were then delivered via road freight to NAGROM and SGS laboratories in Perth.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The collar and assay data were reviewed by compiling the database on Excel, and importing into various three-dimensional modelling packages. Some minor numbering discrepancies were thus identified and amended.



Criteria	JORC Code explanation	Commentary		
Mineral tenement and		The Lynas Find Project tenements and interests, to which DKO has 100% rights, comprise:		
land tenure status		(a) exploration licence E45/3648;		
		(b) prospecting licence P45/2783;		
	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.	(c) a contractual right to acquire a 100% legal and beneficial interest in E45/4523, subject to Ministerial consent to the transfer under the Mining Act if the transfer is to occur before the first anniversary of grant; and		
		(d) all of the shares in Slipstream Resources Investments Pty Ltd (which holds a contractual right) upon the grant of exploration licence applications E45/4624, E45/4633 and E45/4640, to acquire a 100% legal and beneficial interest in E45/4624, E45/4633 and E45/4640, subject to Ministerial consent to the transfers under the Mining Act in respect of any transfer that is to occur before the first anniversary of grant.		
	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.	The tenements are in good standing.		
Exploration done by other parties	Acknowledgment and appraisal of	Lithex Resources Ltd. took some rock-chip samples from the Lynas Find pegmatite in 2012, which graded up to 5% Li ₂ O.		
	exploration by other parties.	No additional drilling is known to have been conducted by any party within the drilling area.		
Geology	Deposit type, geological setting and style of mineralisation.	The Lynas Find Project sits within a broad area of pegmatite hosted lithium-tantalum mineralisation. The pegmatites are interpreted to have been intruded into N-S trending faults within the metamorphic greenstone rocks of the Archaean- aged Warrawoona group, close to the contact of a granite of the Carlindi Batholith. The pegmatites are LCT spodumene type.		

Section 2: Reporting of Exploration Results



Criteria	JORC Code explanation	Commentary
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. 	Collar data drilling conducted April 2016 are tabulated in Appendix 1 of this report.
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.	Length weighted averages used for exploration results are reported in Appendix 1 of this announcement. Cutting of high grades was not applied in the reporting of intercepts.
	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.	No metal equivalent values were used.
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 (e.g. 'down hole length, true width not known').	Most holes are vertical. True widths are not known. However, due to the 0-50-degree dip of the pegmatite, and the vertical dip of the majority of the drill holes, the thicknesses shown are generally close to approximate true widths.
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.	Refer to diagrams in the body of text.
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.	All exploration results have been reported.



Criteria	JORC Code explanation	Commentary
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.	Preliminary metallurgical test work has shown that within the ore zone the pegmatite is fairly abrasive and Heavy Liquid Separation (HLS) test-work has been completed which demonstrated high recoveries of the lithium-bearing material in excess of 90% with a 2.9 SG float. Further flotation test-work is currently on-going. All meaningful and material exploration data has been reported.
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	Further drilling is being planned to test extensions to the currently known mineralised pegmatites, and to infill some areas of the known ore body to convert Mineral Resources to high confidence classification (Inferred to Indicated and Indicated to Measured).



Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.	Geological logging and sampling took place on-site with data capture straight into Excel files.
		The collar and assay data were reviewed by compiling the database on Excel, and importing into various three-dimensional modelling packages. Some minor numbering discrepancies were identified and amended.
		Optiro conducted data validation checks as part of the drillhole desurveying process such as
	Data validation procedures used.	 missing assays and collars below detection limit values overlapping and duplicated sample intervals comparison of assay and geology depths against collar end of hole depths assay column swaps
		All issues found were resolved prior to commencing statistical analysis.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.	A site visit was not carried out by Optiro.
	If no site visits have been undertaken indicate why this is the case.	All on-site geological works were undertaken or supervised by an independent consultant to DKO, lain Groves of Insight Geology Pty Ltd. Mr Groves has visited the sites numerous times and was onsite during field activities.
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The confidence in the geological interpretation is considered high. Lithium and tantalum mineralisation is hosted within pegmatite dykes intruded into basalts and sediments. The pegmatites range in dip from 0 to 40° (Main Pegmatite) and close to vertical.

Section 3: Estimation and Reporting of Mineral Resources



Criteria	JORC Code explanation	Commentary
		The lithology and oxidation domains are based on geological logging codes, observations from core photographs and surface geological mapping of outcropping pegmatites.
	Nature of the data used and of any assumptions made.	Mineralisation domains are based on pegmatite interpretations. Pegmatite boundaries typically coincide with anomalous Li ₂ O and Ta ₂ O ₅ grades and mineralisation domains were confined to pegmatite boundaries and mineralisation envelopes within the pegmatite boundaries were not generated for grade estimation purposes.
		Un-sampled drillhole intervals are assumed to be barren and waste and were assigned lithium and tantalum values of half the absolute value of the detection limit of the assaying method. Iron grades were left absent.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternative interpretations have been considered.
	The use of geology in guiding and controlling Mineral Resource estimation.	There is a clear relationship between tantalum and lithium mineralisation and pegmatite intrusions. Pegmatite boundaries have been used to control the mineral resource estimation.
	The factors affecting continuity both of grade and geology.	The key factor affecting the continuity of grade and geology is the presence of pegmatite.
Dimensions		The Lynas Find Mineral Resource consists of six pegmatite units (Main Pegmatite, Splay Pegmatite, North-east Pegmatite, Track Pegmatite, West Pegmatite, and the South-west Pegmatite), which range in size up to 500 m along strike and 3 m to 40 m in thickness.
	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource	The Main Pegmatite (the main mineralisation domain) strikes approximately 500 m, being narrow in the west and thick in the east, with a horizontal to 40-degree south dip, with minor east- west trending roll-over zones. The pegmatite splits into two down dip and is up to 40 m thick (true thickness). The eastern contact is truncated by a 50 to 80 degrees west dipping north-south trending fault/shear zone which has been intruded by a thin Proterozoic dolerite dyke.
		The northern, western, and eastern extents of the Main Pegmatite have been defined, whilst the down dip extension is open with depth.



Criteria	JORC Code explanation	Commentary			
Estimation and modelling techniques		Lit Or sof the sar ge wit	hium, tanta dinary Krig ftware. Dri e deposit is mple data v nerated fro reframes a	grade estimation used tamine Studio 3 in the central part of 50 m by 50 m. Drillhol ing domain codes insional lithology urfaces.	
			Domain	Domain 2	Description
	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining,		100	101	Main Pegmatite – Hangingwall zone
		100	100	102	Main Pegmatite – Footwalll zone
			200	200	North-east Pegmatite
			300	300	Splay Pegmatite
			400	400	Track Pegmatite
		,	500	500	West Pegmatite
		2	600	600	Southwest Pegmatite
	distance of extrapolation from data points. If a computer assisted estimatio	n	999	999	Background – not estimated

Sample data was composited to a one metre downhole length using a best fit-method. Top-cuts were applied prior to block grade estimation.

Variography analysis of the composite data within the Main Pegmatite was undertaken for Lithium, tantalum, and iron. Due to the geometry of the Main Pegmatite, no one dip orientation was adequately representative and as such the variography analysis of the composite grade data was undertaken in "flattened" space. All other domains lacked sufficient data to support variography. As such, variogram model parameters were borrowed from Domain 100 for estimation of these domains at Lynas Find.

Pegmatite domain boundaries were treated as hard boundaries.

Other estimation parameters, such as block size, minimum and maximum sample numbers were derived from KNA.

This is the Maiden Mineral Resource Estimate for Lynas Find.

No previous mining activity has taken place in this area

method was chosen include a description of computer software and parameters used.

The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.



Criteria	JORC Code explanation	Commentary
-	The assumptions made regarding recovery of by-products.	No assumptions have been made regarding recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	Iron is considered as a potential deleterious element that may impact product marketability. Iron grades were estimated as a factored Fe ₂ O ₃ grade
		An iron factor of -0.52% was applied to the raw Fe_2O_3 assays to account for additional iron introduced by wear on drill bits and rods in the drilling process and to account for additional iron introduced during the pulverisation of samples using steel bowls during the sample preparation stage.
		The Lynas Find block model was created with parent block dimensions of 10 mE by 10 mN by 5 mRL. Block sub-celling was allowed down to a minimum block size of 5 mE by 5 mN by 2.5 mRL to represent domain boundaries.
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Grade estimation used a three pass search. The primary search radii were based on approximately half the variogram range from variogram modelling of the Main Pegmatite domain (120 m by 60 m by 10 m). The same search pass was used for all domains. Minimum (10) and maximum (20) informing sample numbers remained constant between the primary, secondary and tertiary searches. The primary search radii were doubled for the secondary search and tripled for the tertiary search. The maximum number of samples that could be utilised from a single drillhole was limited to 4. Any blocks that did not receive a grade estimate during this process were not assigned default grade values.
	Any assumptions behind modelling of selective mining units.	No selective mining units were assumed in this estimate.
	Any assumptions about correlation between variables.	No assumptions about correlation have been made.
	Description of how the geological interpretation was used to control the resource estimates.	Drillhole sample data was flagged using domain codes generated from lithological and oxidation interpretations.
		Estimation domains were treated as hard boundaries in the estimation. Lithology and oxidation were used to control density assignment



Criteria	JORC Code explanation	Commentary
	Discussion of basis for using or not using grade cutting or capping.	Top-cut analysis of lithium, tantalum, and iron was undertaken by viewing log probability plots and by identifying values at which the population distributions started to become discontinuous. Top-cuts were employed to reduce the influence of high-grade outliers that could affect the quality of a resource estimate.
		Based on the disintegration analysis, lithium, tantalum and iron top-cuts were assigned to Domain 100 and Domain 400.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	Estimated block grades were compared to the input drill data on a domain basis using visual appraisal, domain average grade comparisons and grade swath plots in the three grid axis directions. Reasonable outcomes were obtained.
		Visual validation of grade trends and distributions was carried out.
		No mining has taken place; therefore, no reconciliation data is available.
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	The tonnages are estimated on a dry basis.
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied	No cut-off grades or quality parameters have been applied.
		Pegmatite boundaries coincide with anomalous Li_2O and Ta_2O_5 grades and grade estimation was confined to pegmatite boundaries.
Mining factors or assumptions	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	Based on the orebody geometry and depth, potential mining of the Lynas Find deposit will be by surface mining methods involving standard truck and haul mining techniques. The geometry of the deposit will make it amenable to mining methods currently employed in many surface operations in similar deposits around the world. The current block grade estimate includes some internal dilution and assumes bulk mining on five- metre-high benches.



Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	 No assumptions have been made regarding metallurgical factors. Preliminary test-work that has been undertaken by SGS includes: Comminution test-work completed on the ore zone, which produced results broadly in line with expectations (i.e. the pegmatite is fairly abrasive). Heavy Liquid Separation (HLS) test-work has been completed which demonstrated high recoveries of the lithium-bearing material in excess of 90% with a 2.9 SG float. Iron is considered to be a deleterious element in the technical grade spodumene market. At this stage, DKO have yet to establish whether the iron contained within the Lynas Find ore is interstitial or contained within the spodumene crystals. Upon completion of current floatation test-work, magnetic separation will be undertaken on the final product to determine the nature of the iron oxide. Further flotation test-work is currently on-going and results are not available at the date of this report, and at this stage there is no information to suggest that spodumene ore from the Lynas Find Deposit cannot be considered to potentially be marketable as a concentrate to the chemical lithium markets.
invironmental actors or issumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made	No assumptions have been made and these will form part of future works.



Criteria	JORC Code explanation	Commentary
Bulk density		A total of 23 density measurements are present within the database. These were averaged within the lithological and oxidation domains and applied to the block model for tonnage estimation as follows.
		Dry density's assigned to the model are:
		Rock Type Density
	Whether assumed or determined. If	Pegmatite (oxidised) 2.69
	assumed, the basis for the assumptions.	Pegmatite (fresh) 2.72
	If determined, the method used, whether	Basalt 2.96
	wet or dry, the frequency of the	Amphibolite 2.96
	measurements, the nature, size and representativeness of the samples.	Dolerite 2.96
		Ultramafic 3.15
		No density measurements for dolerite or ultramafic were collected during this phase of drilling. A density value of 3.15 g/cm ³ for ultramafic was assumed, and dolerite and amphibolite were assigned the same density value as basalt (2.96 g/cm ³).
	The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit,	Measurements were taken using the "Archimedes Principle" water displacement technique on diamond drillcore from the Lynas Find Project. Measurements were taken from PQ whole core, which was wax-coated prior to being submersed in the water.
	Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	Average density values were assigned relative to lithological and oxidation conditions.
Classification		The Mineral Resource classification at Lynas Find is based on confidence in the geological and grade continuity, along with the 50 m by 50 m drillhole grid informing the core of the deposit, and surface outcrop mapping.
	The basis for the classification of the Mineral Resources into varying confidence categories	These grid conditions, combined with geological confidence and grade continuity achieved from variography modelling has divided Domains 100, 300 and 400 into Indicated and Inferred regions.
		Domains 200, 500 and 600 had too few samples for grade estimation.
		No blocks have been assigned grades.
		No Measured Mineral Resources have been defined.



Criteria	JORC Code explanation	Commentary
	Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The resource classification process addresses all known contributing issues
	Whether the result appropriately reflects the Competent Person's view of the deposit.	The Mineral Resource estimate appropriately reflects the view of the Competent Persons
Audits or	The results of any audits or reviews of Mineral Resource estimates.	This is a maiden Mineral Resource estimate.
reviews		No audits have been undertaken on the 2016 Mineral Resource Estimate at this stage.
	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate	The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the JORC Code (2012 Edition). No attempt has been made to quantify relative accuracy and confidence at this stage of analysis.
	The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used	The statement relates to global estimates of tonnes and grade.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available	No production data is available.