



ASX Announcement

30th September 2024

Exploration Update

HIGHLIGHTS

Barlee Project – Gold, Base Metals, Lithium (100% DKM)

- Early-stage field work continuing including mapping and rock chip sampling.
- Rock chip sampling has returned a high Titanium value of 1.16% Ti in a sample collected on a gabbro outcrop on E77/2717.
 - Next steps include follow up sampling and detailed mapping of any available outcrops
- Four applications over adjoining ground expanding the Barlee Project footprint, now over 700km² within the Marda-Diemals Greenstone Belt.

Doris Project – Uranium, REE (100% DKM)

- Reconnaissance to access western tenements and assess ground for upcoming work including soil sampling.

Duketon Mining Limited (DKM) is pleased to provide an update on two of our regional projects, the Barlee and Doris Projects. Exploration work has been progressing on these projects including field reconnaissance, rock chip sampling and mapping, building on our understanding of these projects.

Barlee Project

Recent assays from rock chip sampling at our Barlee Project has returned an anomalous titanium assay of 1.16% Ti within an outcropping gabbro (Figure 3 and Table 1). Geological Survey of Western Australia (GSWA) mapping highlights the gabbro outcrop extending to the NNE for approximately 1200 metres in this area. The significance of this assay and the geological context are not currently fully understood. Further mapping and detailed sampling along strike will be undertaken. The effectiveness of soil sampling in areas of no outcrop will also be assessed and if considered favourable, soil sampling will be undertaken.



Rock chip sampling was also completed at other areas within the Barlee Project and was successful in locating further pegmatite outcrops, however, no significant assays were returned (Table 1).

The Barlee Project has been expanded now with one (1) granted tenement and five (5) applications covering a total of 700 sq km within the Marda-Diemals Greenstone Belt within the Southern Cross Domain.

Doris Project

The Doris Project comprises three granted tenements covering 168 sq km and is prospective for uranium and rare earth elements (REEs) (see ASX announcement 14th February 2024).

A recent field trip to Duketon's Doris Project was completed to field assess the area of REE anomalism that is coincident with a thorium anomaly identified from previously flown radiometric surveys (ASX: DKM 14th February 2024). Previous drilling areas and access routes to other prospects throughout the project were evaluated as part of the field program. A limited program of minus eighty mesh (177 micron) soil samples (n=9) were collected within the central portion of the anomaly to assess the area's suitability for further soil sampling programs to follow up on anomalous REEs intersected in historic drilling (Figure 5). Samples will be submitted to the laboratory within the week.

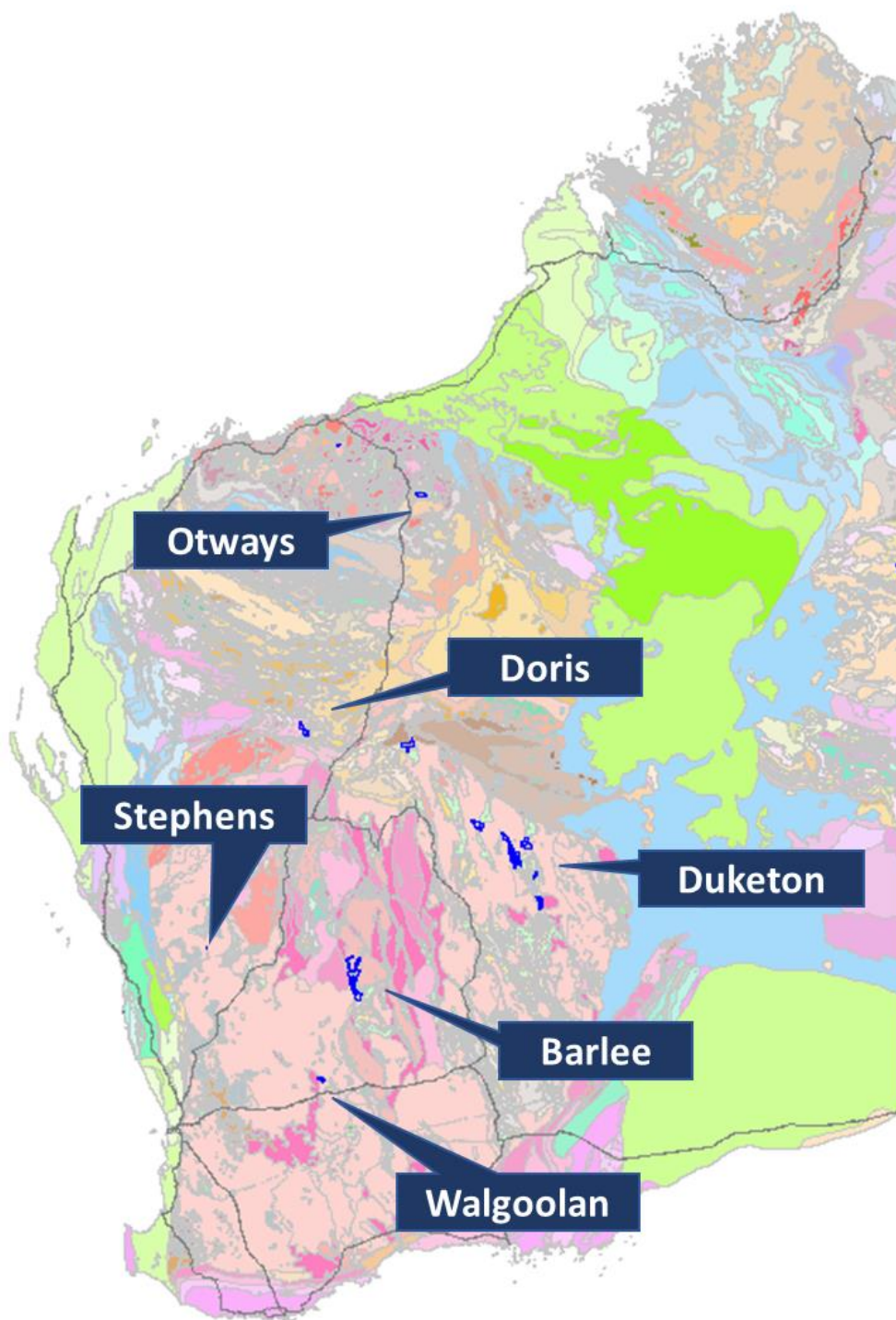


Figure 1: DKM Project Locations

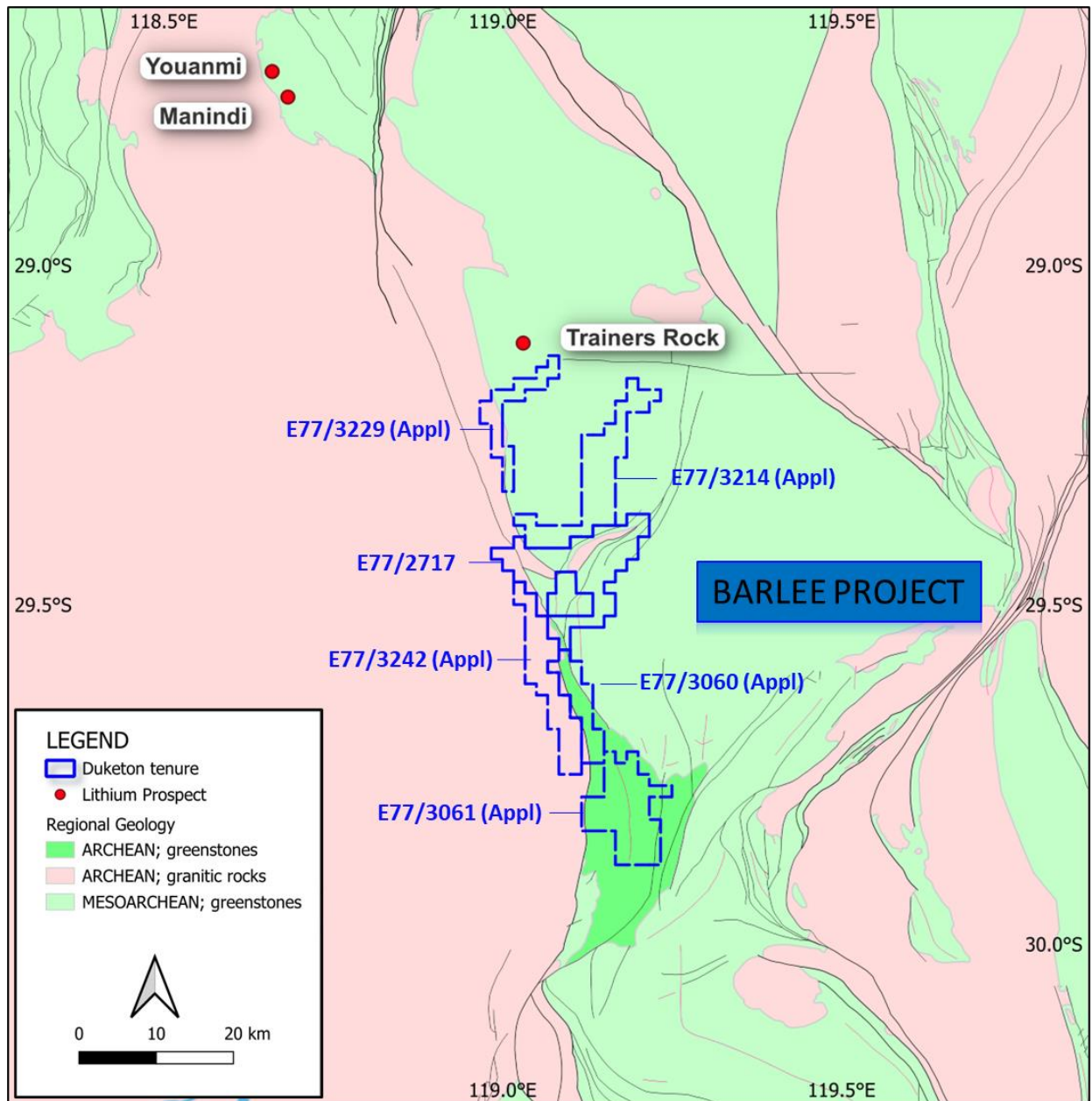


Figure 2: Barlee Project

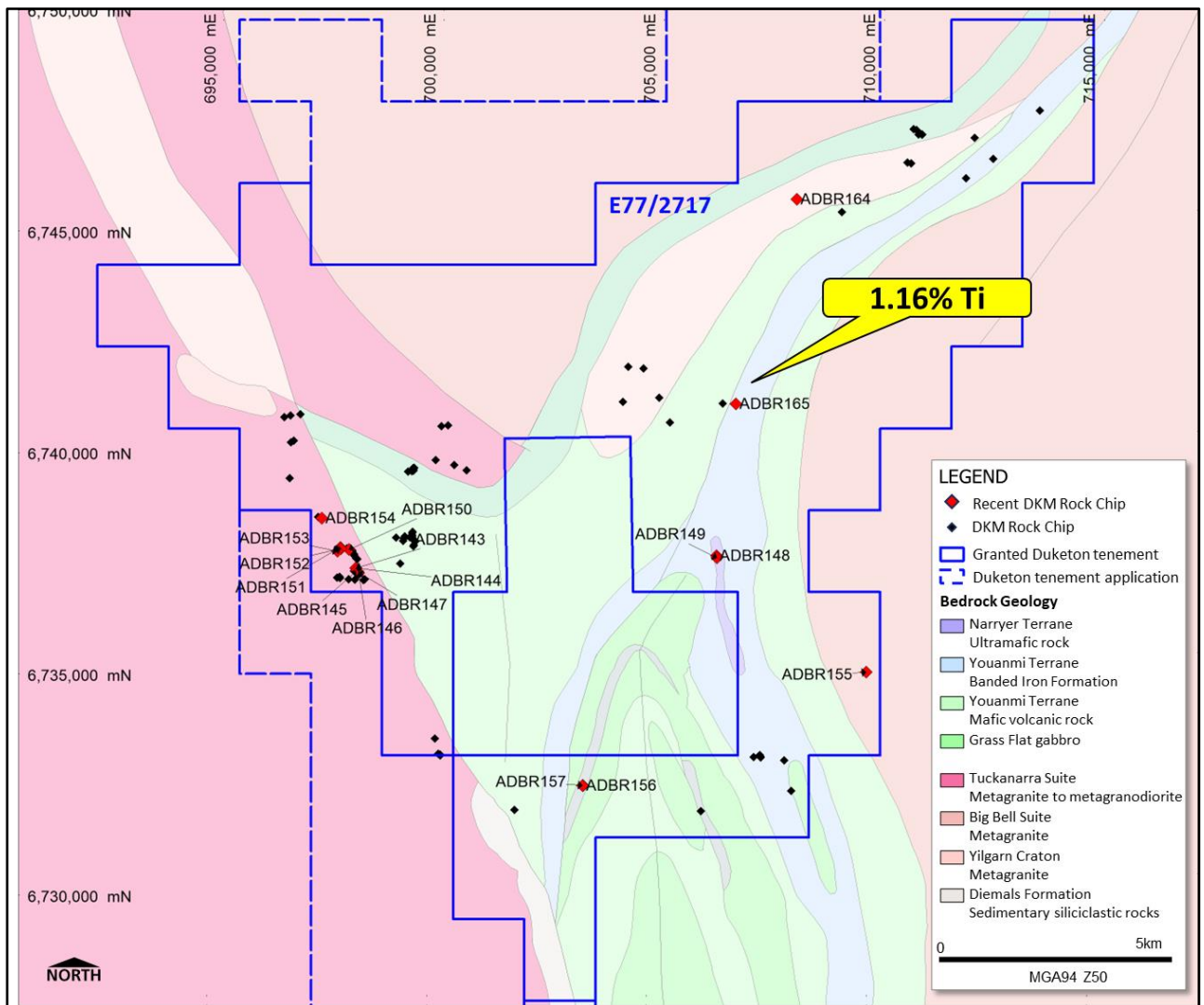


Figure 3: Rock Chip Sample Locations (over GSWA Geology)

Sample ID	NAT North MGA94_Z50	NAT East MGA94_Z50	Au ppb	Ag ppm	As ppm	Cr ppm	Cu ppm	Fe pct	K pct	Mg pct	Nb ppm
ADBR143	6737262	698174	-5	-0.05	3.9	10	4.4	3.84	3.294	0.1676	26
ADBR144	6737268	698160	8	0.07	0.9	8	5.4	0.79	5.612	0.0225	39.48
ADBR145	6737200	698169	-5	-0.05	-0.5	6	2.4	0.75	3.776	0.011	31.99
ADBR146	6737154	698227	-5	-0.05	0.5	5	3.5	0.41	7.978	0.0094	23.51
ADBR147	6737165	698223	-5	-0.05	0.6	11	4.2	0.83	4.069	0.0634	31.44
ADBR148	6737400	706366	-5	-0.05	4.2	4009	13.9	9.06	0.055	16.672	0.88
ADBR149	6737352	706370	25	0.07	3.4	1358	42.3	3.07	0.139	1.4092	0.64
ADBR150	6737685	698026	-5	-0.05	0.5	42	2.2	0.56	5.319	0.0248	33.55
ADBR151	6737737	697827	-5	-0.05	1	36	16.5	1.17	3.844	0.1162	22.26
ADBR152	6737708	697835	-5	0.05	-0.5	20	16.2	0.38	5.265	0.0161	32.98
ADBR153	6737650	697759	-5	-0.05	0.7	17	5.5	0.57	6.676	0.0134	12.68
ADBR154	6738409	697419	-5	-0.05	0.7	16	1.6	0.61	4.569	0.0113	33.31
ADBR155	6734708	709716	-5	-0.05	0.7	19	4	1.61	0.969	0.3142	7.82
ADBR156	6732262	703234	-5	0.08	765.4	26	308.5	5.22	0.026	0.0311	0.26
ADBR157	6732255	703231	-5	0.06	4.2	27	6.4	0.69	0.021	0.0181	0.24
ADBR164	6745417	708343	-5	-0.05	0.7	19	3.2	0.39	0.13	0.0342	3.7
ADBR165	6740822	706873	8	-0.05	0.7	6	2.3	8.25	0.179	0.9279	18.14

Sample ID	Ni ppm	Pb ppm	S pct	Sn ppm	Ta ppm	Ti pct	Zn ppm	Li ppm	Rb ppm	Lithology
ADBR143	3.3	111.3	-0.05	7	7.69	0.0536	43	21.6	490.16	Granite
ADBR144	1.8	274.9	-0.05	3.5	9.3	0.0265	8	8.5	549.78	Pegmatite
ADBR145	1.1	77.5	-0.05	3.4	3.83	0.0171	13	6.8	357.5	Granite
ADBR146	0.9	86.2	-0.05	4.5	2.78	0.0072	5	5.9	899.86	Granite
ADBR147	2.8	52.5	-0.05	5.9	9.53	0.0481	21	19.1	386.26	Granite
ADBR148	2202.5	4.1	-0.05	0.2	0.11	0.1289	109	3.9	6.23	Ultramafic
ADBR149	893.7	4.1	-0.05	0.2	0.08	0.0461	34	1.8	6.79	Ultramafic
ADBR150	2.8	50.6	-0.05	4.5	15.51	0.0176	6	5.2	515.94	Pegmatite
ADBR151	7.4	33.1	-0.05	23	4.92	0.0668	15	81.4	499.32	Pegmatite
ADBR152	1.9	43.3	-0.05	2.7	7.77	0.0101	5	4.3	564.35	Pegmatite
ADBR153	1.8	65.5	-0.05	2.9	1.83	0.0218	7	7.5	631.83	Pegmatite
ADBR154	1.4	67.1	-0.05	1.5	2.58	0.0152	5	4.6	446.33	Pegmatite
ADBR155	8.5	21	-0.05	1.5	0.74	0.1682	46	19.6	66.11	Granite
ADBR156	22.7	5.8	-0.05	0.2	0.02	0.0091	44	0.9	1.95	Ferruginous Quartz
ADBR157	1.8	2.9	-0.05	0.2	0.03	0.0042	1	0.5	1.63	Quartz
ADBR164	3.2	5.6	0.07	1	0.41	0.1722	4	4.9	10.67	Granite
ADBR165	4.6	3.3	-0.05	0.6	1.12	1.1603	56	1.1	6.33	Gabbro

Table 1: Barlee Rock Chip Assays

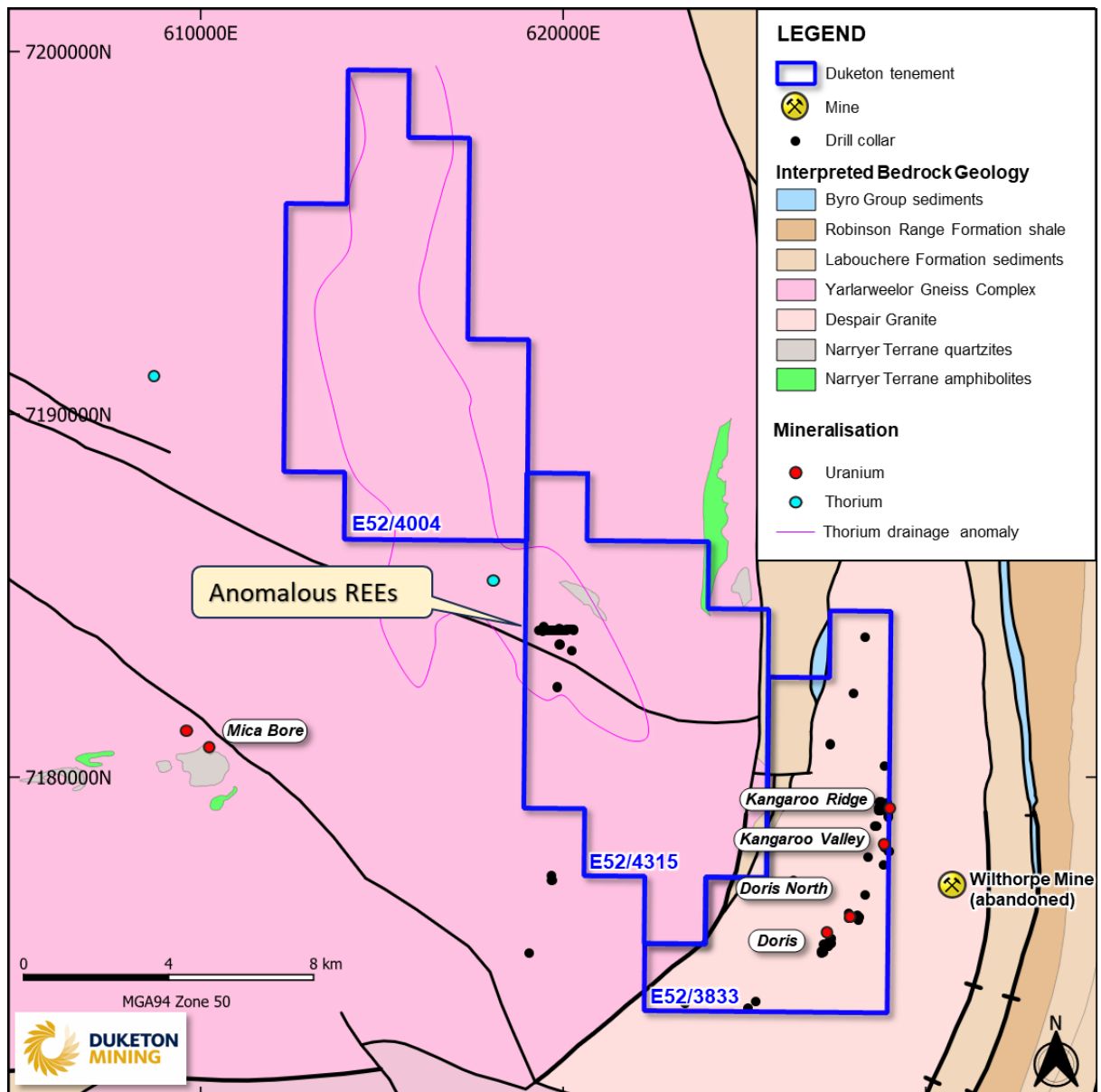


Figure 4: Doris Tenements over GSWA Geology

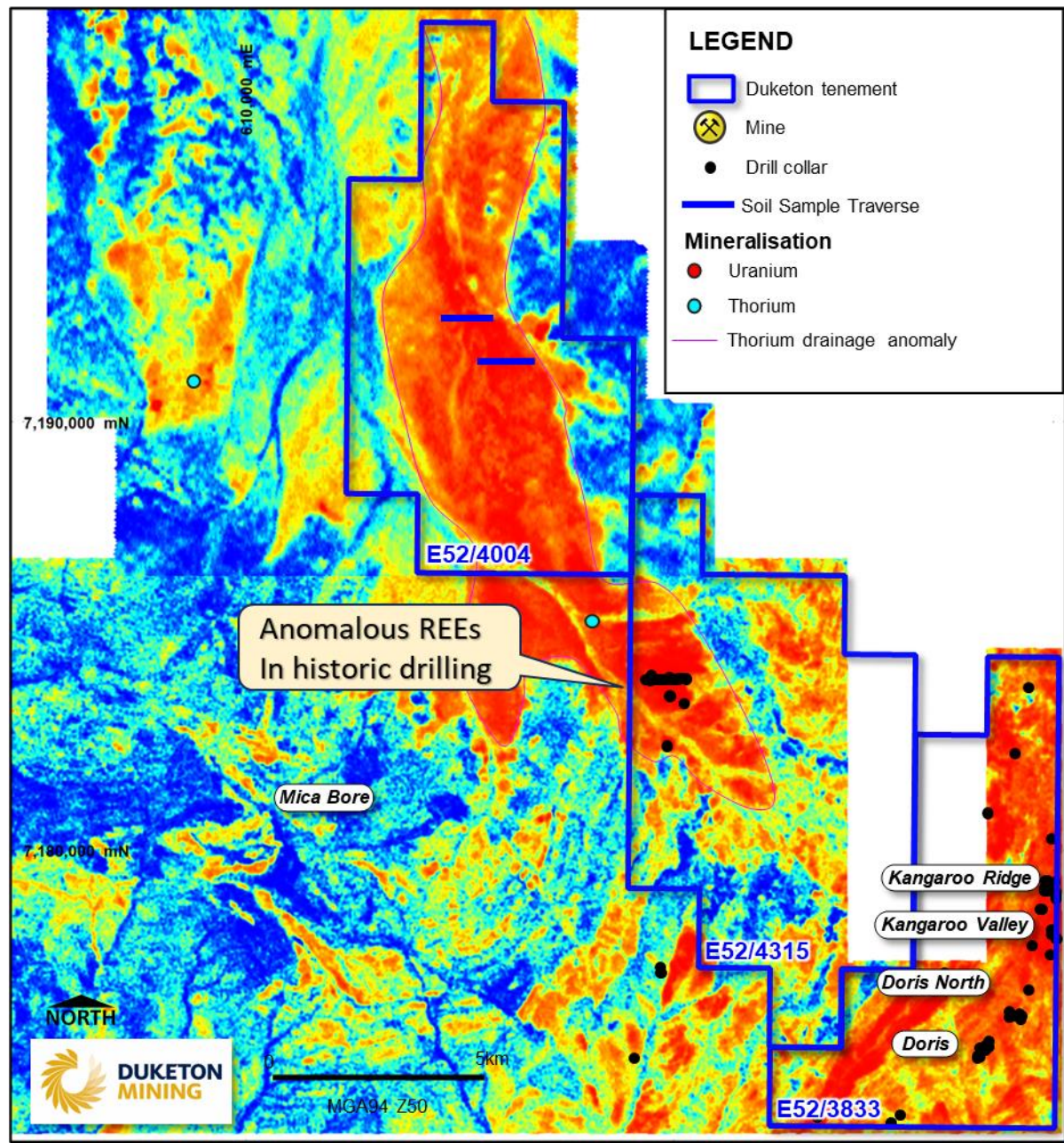


Figure 5: Location of Trial Soil Sample Traverses (blue lines) over Radiometric Image (Thorium Channel)



Figure 6: Soil Sampling over Thorium Anomaly, E52/4004

Authorised for release by:

Stuart Fogarty

Duketon Mining Limited - Managing Director

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Competent Person Statement:

The information in this release that relates to exploration results is based on information compiled by Ms Kirsty Culver, Member of the Australian Institute of Geoscientists (AIG) and an employee of Duketon Mining Limited. Ms Culver has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that is being undertaken to qualify as a competent person as defined in the JORC Code 2012. Ms Culver consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.

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JORC Table 1

JORC Code, 2012 Edition – Table 1 report – Barlee Project

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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. - 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 (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	Rock samples were analysed at Intertek Minerals by four acid digestion with ICP-MS finish.
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	Not applicable, no drilling completed
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Not applicable, no drilling completed

Criteria	JORC Code explanation	Commentary
	- 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.	
Logging	- Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. - Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. - The total length and percentage of the relevant intersections logged.	Not applicable, no drilling completed
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.	Not applicable, no drilling completed
Quality of assay data and	- 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	QAQC procedures include the use of standards, blanks and duplicate samples along with laboratory standards and repeats.

Criteria	JORC Code explanation	Commentary
laboratory tests	<i>derivation, etc.</i> Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	
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.	- All data is checked internally by senior DKM geologists and corporate staff. - All data is uploaded into the Datashed database
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.	Sample points were located using a handheld GPS in 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.	Data has been collected at various spacing.
Orientation of data in relation to geological structure	- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. - If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	Barlee - The rock chip samples are collected as available Doris - Limited program of soil samples were collected to assess areas suitability for soil sampling
Sample security	The measures taken to ensure sample security.	Chain of custody is managed by company representatives and is considered appropriate.

Criteria	JORC Code explanation	Commentary
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits or reviews have been conducted apart from internal company reviews.

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.	Barlee - The tenements E77/2717, E52/3833, E52/4004 and E 52/4315 are 100% owned by Duketon Mining Limited and are in good standing and there are no known impediments to obtaining a licence to operate in the area. - The historic data presented, however, has not been collected by Duketon Mining Limited and was not collected originally on tenements owned by Duketon Mining Limited.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Barlee - Previous work by various companies including Beacon Minerals Limited, Fortescue Metals Group Ltd, Helix Resources, Savage Australian Exploration Pty Ltd and Battle Mountain (Australia) INC. Doris - The data presented was collected by various companies including Agip Minerals and FYI Resources
Geology	Deposit type, geological setting and style of mineralisation.	Barlee The anomalies and intersections presented in the historic data are sourced from typical Archaean Greenstone rocks of the Yilgarn Craton.

Criteria	JORC Code explanation	Commentary
		Doris The Uranium mineralisation is associated with potassic altered biotite shears within the Despair Granite.
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.	N/A (drillholes not considered material as all aspects of the drillhole cannot be confirmed as they are historic)
Data aggregation methods	- In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. - 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.	- Results have been presented. - No metal equivalents or aggregates are reported.
Relationship between mineralisation widths and intercept lengths	- If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. - If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg ‘down hole length, true width not known’).	Mineralisation orientations have not been determined.

Criteria	JORC Code explanation	Commentary
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 figures in document.
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.	Data provided in Table in document
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.	Refer to document.
Further work	- The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). - Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Further work will include detailed interrogation of historic data and possible follow-up and extension of this work and/or application of trends identified to other sections of the geological regime being investigated.