

Metallurgical Test Results Confirm Low Acid Consumption at Splinter Rock Project

OD6 Metals Limited (**OD6** or the **Company**) is delighted to report metallurgical tests conducted by Australian Nuclear Science Organisation (**ANSTO**) paving the way for attractive processing economics

Highlights:

- Metallurgical test results confirm **low hydrochloric acid (HCl) consumption**
- Average 16 kg HCl/t ore with **multiple zones at 6-10 kg HCl/t ore**
- Impressive leach and recovery responses observed at **reduced acid strengths**
- **Average 61% MagREO recovery** (range 43-87%) at 20g/l HCl
- **The positive acid consumptions and recoveries when combined with high grades, low stripping ratios, and substantial tonnages provide considerable confidence in the key economic drivers**
- Vendor discussions confirm **viability of potential site-based chlor-alkali (acid) facility**
- Indicative pricing for a chlor-alkali electrolyser is approximately £3M each (A\$5.7M)
- Chlor-alkali plant also provides a sodium hydroxide (NaOH) product which is utilised in impurity removal and precipitation of a final Mixed Rare Earth Product (MREC/H)
- A single chlor-alkali electrolyser has the potential to produce 62ktpa HCl and 69ktpa of NaOH which, at an average consumption of 16 kg HCl / tonne of ore, is sufficient to treat ~4Mtpa of REE bearing clay
- Further **metallurgical processing optimisation work underway**
- All head-assays contained in this ASX announcement are based on the 4-Acid soluble digestion method, which aligns with the reporting of geological drill assays and the Mineral Resource Estimate.

Brett Hazelden, Managing Director, commented:

"These low acid consumption numbers are very positive, validating our proposed processing route and providing confidence in future potential process economics. This represents a key value lever as we continue to tick all the major boxes that pave the way for project development success.

As part of future development planning, we have engaged vendors and experts on potentially owning and operating a site-based chlor-alkali facility. Initial discussions suggest this route can provide the lowest ongoing operating cost over time, which is important, as we envisage Splinter Rock growing to a multigenerational project, powered by low operating cost renewable energy sources.

We continue to focus on identifying the best-of-the-best Prospect areas, with our methodical and disciplined approach, in conjunction with research and development relationship with ANSTO, already yielding notable technical benefits"

Metallurgical sample selection and ANSTO testing

A total of 10 samples were selected from a wide variety of distinct clay and non-clay types at the Splinter Rock Project to test the various potential mineral recovery variations across the four main Prospects (Prop, Centre, Scrum and Flanker). Samples were selected based on differing geographic location, REE grade, colour, chemical composition, AEM conductivity, proximity to granite, basinal position (including paleo valley/channel positions) and inferred different geological genesis. **Results of the test work are presented in Tables 1, 2 and 3.**

The Splinter Rock clay hosted prospect areas are characterised by a combination of ionically adsorbed, acid soluble and refractory rare earth elements (**REEs**). Our assay methods (4-acid digestion) do not digest refractory components and are therefore not included in previously reported high-grade drill and resource estimate results. Future potential commercial production of REE is significantly improved through successful leaching of both ionic and acid soluble REEs.

ANSTO was selected to complete the second phase of Splinter Rock metallurgical testing given their extensive experience in rare earth process development. The objectives of the work program were to:

- Develop further understanding of the leachability of rare earths under different acid conditions over a variable time period
- Test the leach performance of upgraded concentrate fractions following screening at 75 µm (results still being finalised and will be reported separately)
- Check whether sulphuric acid is capable of meeting or exceeding the recoveries obtained with hydrochloric acid at similar acid consumptions
- Develop a standard test procedure for the screening of a large number of test samples for potential RE recovery
- Continue to compare assay methods such as acid digestion versus the lithium borate fusion method

The acid optimisation leach tests were conducted under three new acidic conditions on each sample (10, 15 and 20 g/L hydrochloric acid), at notionally ambient temperature and pressures, over a 24 hour period with interim 6, 9 and 12 hour liquor samples to determine leaching kinetics. Recoveries are calculated as noted at the bottom of each table. This data, combined with the phase 1 metallurgical leaching results of 25 and 100 g/L hydrochloric acid provide a picture of recoveries and acid consumptions for the OD6 clay hosted rare earths.

Test work results should be viewed in the context of geological setting and the vast areas of clay basins currently identified by OD6. Recoverability and acid consumptions, along with width and grade are key components of OD6's geometallurgical R&D program. The recoverability of rare earths are indicative only and do not currently account for additional losses that may occur during downstream processing.

Refer to Phase 1 test work program for previous results (refer ASX release, [3 April 2023](#))

Recovery at varying HCL strengths

Ten samples were leached at 10, 15 and 20 g/L HCl for 24 h at 30°C (4 wt% solids), and results were then compared to Phase 1 tests at 25 and 100 g/L HCl for 6 h at 30°C (2 wt% solids).

The results shown in Table 1 indicate that:

- REE extraction increases with acidity
- Extractions at 15 to 20 g/L HCl appear to be a balance point on recovery, acid strength and acid consumption.
- Each prospect and mineralisation type has slightly different optimal acid conditions
- There is a notable outlier in Sample SR149A which has both high recovery and high acid consumption.
- Neodymium (Nd), Praseodymium (Pr), Terbium (Tb) and Dysprosium (Dy) have very similar recoveries for each test which is reflected in overall Magnetic Rare Earth (MagRE) Percent Recovery

Summary of results by Prospect at 20g/L HCl:

- **Flanker** – Acid consumption is 6 kg/t with a 65% MagRE Recovery.
- **Centre** – Acid consumption ranging from 6 - 41 kg/t with a 43 - 56% MagRE Recovery.
- **Scrum** – Acid consumption is 19 kg/t with a 55% MagRE Recovery.
- **Prop** – Acid consumption ranging from 6 - 63 kg/t with a 49 - 87% MagRE Recovery.

Average overall acid consumption was 16 kg/t (excl.SR149A which had high acid use most likely due to high surficial carbonates) with a 61% MagRE Recovery at 20g/l HCl

Table 1: MagRE recovery and acid consumption at different HCl acid concentrations and over time

Prospect	Intercept ID	Free Acid Rate	Leach Duration	Recovery (Extraction) - wt%					Acid Cons.
			hrs	Nd	Pr	Tb	Dy	Mag RE	kg/t
Flanker	SR021A	10 g/L	24	Results not available					
	SR021A	15 g/L	24	55	56	63	54	55	6
	SR021A	20 g/L	24	66	64	67	61	65	6
	SR021A	25 g/L	6	62	62	63	59	62	8
	SR021A	100 g/L	6	76	77	71	68	76	14
Centre	SR033B	10 g/L	24	19	20	15	13	19	3
	SR033B	15 g/L	24	29	28	35	26	29	5
	SR033B	20 g/L	24	45	45	40	39	45	6
	SR033B	25 g/L	6	46	45	40	37	46	8
	SR033B	100 g/L	6	79	78	69	64	78	9
Centre	SR042A	10 g/L	24	24	20	30	25	23	23
	SR042A	15 g/L	24	34	29	43	38	33	22
	SR042A	20 g/L	24	45	38	52	47	43	24
	SR042A	25 g/L	6	48	40	57	53	47	24
	SR042A	100 g/L	6	56	48	64	58	55	29

Centre	SR043A	10 g/L	24	41	37	52	50	41	38
	SR043A	15 g/L	24	48	43	55	53	47	37
	SR043A	20 g/L	24	56	53	62	63	56	41
	SR043A	25 g/L	6	53	51	59	60	54	41
	SR043A	100 g/L	6	54	51	57	58	54	60
Scrum	SR056B	10 g/L	24	33	27	39	34	32	14
	SR056B	15 g/L	24	51	48	53	51	50	17
	SR056B	20 g/L	24	55	53	61	54	55	19
	SR056B	25 g/L	6	57	54	59	57	56	20
	SR056B	100 g/L	6	64	62	67	64	64	43
Prop	SR149A	10 g/L	24	75	75	67	61	74	59
	SR149A	15 g/L	24	85	84	80	72	84	61
	SR149A	20 g/L	24	88	87	82	74	87	63
	SR149A	25 g/L	6	92	91	86	79	91	105
	SR149A	100 g/L	6	97	96	91	86	96	113
Prop	SR150A	10 g/L	24	40	38	44	38	40	16
	SR150A	15 g/L	24	46	46	43	43	46	18
	SR150A	20 g/L	24	50	48	50	45	49	21
	SR150A	25 g/L	6	46	45	41	42	46	31
	SR150A	100 g/L	6	45	43	42	39	44	37
Prop	SR150B	10 g/L	24	48	45	47	39	47	5
	SR150B	15 g/L	24	50	46	46	44	48	8
	SR150B	20 g/L	24	58	53	53	49	56	9
	SR150B	25 g/L	6	53	50	52	47	52	14
	SR150B	100 g/L	6	53	49	37	34	51	16
Prop	SR150C	10 g/L	24	73	74	52	36	71	2
	SR150C	15 g/L	24	76	75	48	32	73	5
	SR150C	20 g/L	24	79	79	50	39	77	6
	SR150C	25 g/L	6	80	81	47	37	77	12
	SR150C	100 g/L	6	80	80	51	40	78	14
Prop	SR150D	10 g/L	24	51	51	47	37	51	5
	SR150D	15 g/L	24	63	64	50	46	62	8
	SR150D	20 g/L	24	77	78	62	60	76	10
	SR150D	25 g/L	6	77	77	64	55	76	18
	SR150D	100 g/L	6	87	87	67	56	85	28

Note: Recoveries are calculated based on the delta of the assayed solid head and solid residue after completion of a 6 or 24 hour leach period.

Recovery and HCl Acid Consumption over time

The same ten samples above had liquid samples taken at 6, 9, 12 and 24 hours during the leach testing to assess rare earth extraction over time at the different acid concentrations. The Results Shown in Table 2 indicate that:

- REE extraction increases progressively over time
- Extractions are the highest after 24 hours and in most cases have not plateaued
- Longer leach durations could increase rare earth recoveries
- Each prospect and mineralisation type has slightly different optimal acid conditions
- Extractions at 15 to 20 g/L HCl appear to be a balance point on recovery, acid strength and acid consumption.

Table 2: MagRE recovery and acid consumption at different HCl acid concentrations and over time

MagRE % Extraction based on liquid assays															
Acidity g/L		10				15				20				25	100
Duration (hrs)		6	9	12	24	6	9	12	24	6	9	12	24	6	6
SR021A	MagRE	Results not available				31	36	39	49	32	37	42	49	49	69
SR033B	MagRE	8	9	10	13	14	15	17	22	19	22	24	31	32	67
SR042A	MagRE	9	11	13	17	19	22	24	29	23	29	29	34	37	49
SR043A	MagRE	22	26	26	31	34	35	37	40	32	36	35	40	44	48
SR056B	MagRE	15	17	19	23	27	30	32	39	28	31	35	39	46	51
SR149A	MagRE	66	69	71	74	76	78	82	84	83	88	88	92	87	88
SR150A	MagRE	25	28	29	30	35	36	38	40	34	35	36	38	38	41
SR150B	MagRE	40	41	43	46	52	55	56	58	49	50	51	52	50	58
SR150C	MagRE	50	59	65	70	72	78	81	83	70	72	73	73	70	75
SR150D	MagRE	29	32	36	46	43	49	54	64	46	49	56	66	62	78

Note: Recoveries are calculated based on the delta of the assayed solid head and progressively assayed liquid thief samples at the denoted leach duration.

Four Acid Digest vs Fusion Digest

The metallurgical test program at ANSTO has utilised duplicate head and tails assays utilising the ALS 4-acid soluble digestion method and the ALS Lithium Borate Fusion Digest method. This allows comprehensive comparison of both data sets.

All geological drill assays at Splinter Rock were performed utilising the ALS 4-acid soluble digestion method as opposed to the ALS Lithium Borate Fusion Digest method. Typically, the Fusion Digest method returns results for resistate (refractory) non-acid soluble REE minerals, thus inflating the overall TREO grade.

OD6 has reported its Mineral Resource Estimate (refer ASX release, [18 July 2023](#)) based on the ALS 4-acid soluble digestion method.

The results from this program and the previous work conducted by OD6 continue to show that utilising the fusion digest assay technique can increase head grade by up to 30% over a 4-acid leach assay. This extra grade however is highly unlikely to be recoverable in the proposed processing flowsheet.

All solid assay recovery results contained in this ASX announcement are based on the 4-Acid soluble digestion method which aligns with how OD6 reports geological drill assays and also the Mineral Resource Estimate

Indicative Processing Steps

OD6 metals is proposing the following simplified processing map to deliver rare earth products based on the test work completed to date.

Central to the flowsheet is the use of a site based chlor-alkali facility that utilises salt and water to produce two reagents, namely hydrochloric acid (HCl) and sodium hydroxide (NaOH). HCl is used to leach the rare earth elements, then NaOH is used to remove impurities, precipitate a mixed rare earth product (MREC/H) and neutralise the clays prior to pit disposal.

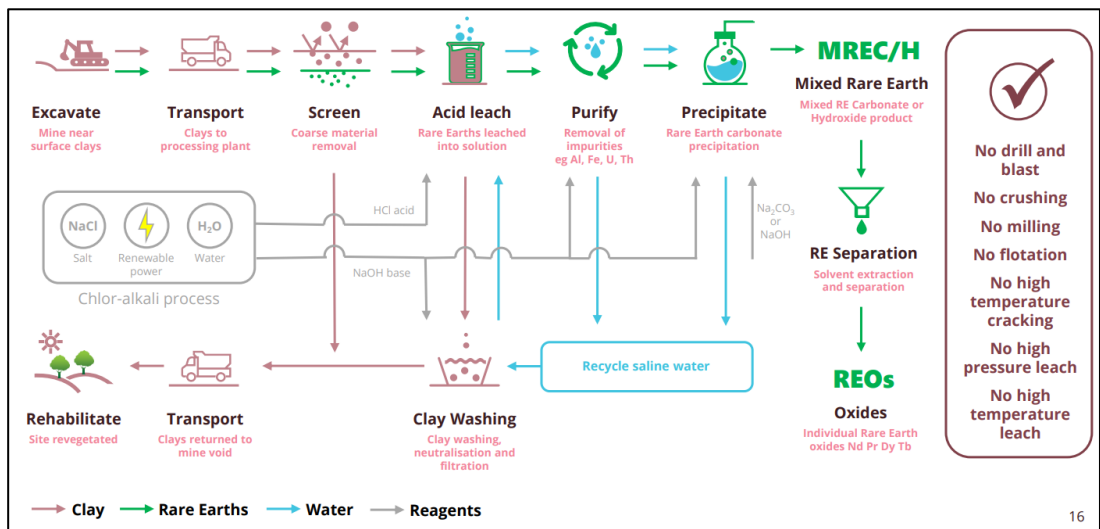
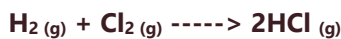


Figure 1: Indicative processing steps

Chlor-alkali Process and Vendor Information

The chlor-alkali process involves passing an electric current through high purity sodium chloride (NaCl or salt) brine to produce hydrogen, chlorine and caustic soda. The hydrogen and chlorine can then be combined into hydrochloric acid. The equations to create caustic soda (NaOH) and hydrogen chloride (HCl) are:



OD6 has obtained information from and held discussions with chlor-alkali electrolyser vendors and experts to determine if owning and operating a site based facility is a viable option. To date all indications are that this is likely to provide the lowest operating cost for a long term project that will form an integrated processing facility with storage tanks for HCl and NaOH to buffer any disruptions.

Based on the publicly available information associated with a **BICHLOR™ Electrolyser**, plus informal discussion, the following key details are noted for a single chlor-alkali electrolyser:

- Power consumption is the major cost at 1,990 kWhr/te NaOH @ 6 kA/m²
- Normally allow for 350 days operation and 7kA/m²
- Normally operate at 385mbarg, 90°C and 32wt% NaOH

- Can produce up to 62ktpa HCl and 69ktpa of NaOH
- Indicative pricing for a chlor-alkali electrolyser is approximately £3M each (A\$5.7M)
- Multiple smaller electrolyzers can be utilised to provide operation flexibility

A chlor-alkali facility would also consist of the key production steps outlined in Figure 2 along with the associated equipment. Figure 3 also provides an example of scale of two operational electrolyzers.

At an average consumption of 16 kg HCl / tonne of ore a single electrolyser based on the above information could provide sufficient reagents to treat ~4Mtpa of clay ore. The average acid consumption may potentially be lower based on the potential removal of coarse grained (>75um) material which is yet to be reported.

Given power being the main cost driver OD6 envisages that low-cost power supply would be sourced from an owned and operated hybrid power system consisting of solar, wind turbines, energy storage and gas or diesel powered generators. OD6 understands that a similar facility that is currently powering the Esperance township and surrounding areas is currently achieving a 70% renewable power penetration rate which is significant achievement that OD6 should aim to replicate.

On an owned and operated basis, utilising low cost power supply, OD6 has an aspiration target to achieve an operational reagent consumption cost that would be equivalent to about \$5-6/t of processed clay ore, assuming sunk capital costs.

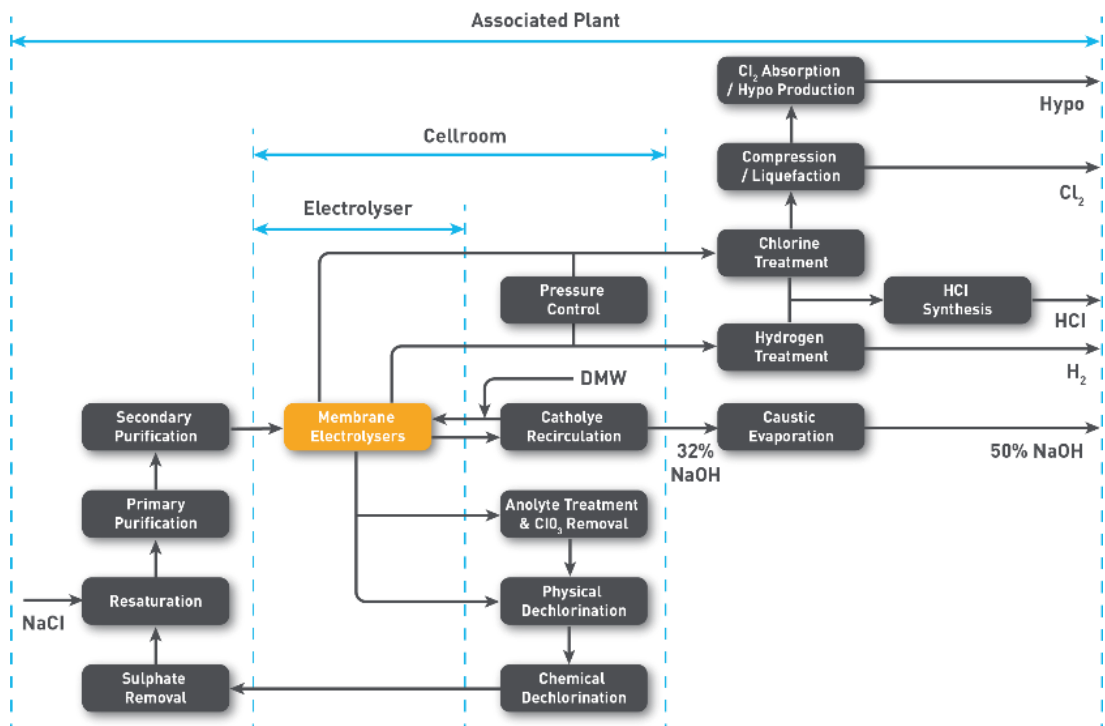


Figure 2: Chlor-alkali key processing steps (note not all will be required eg Hypo, Cl₂ and caustic evaporation)



Figure 3: Two electrolyzers in an operational environment (Source: Ineos)

Bottle Roll Tests Initial bottle roll tests on four split samples from the original program were performed under varying conditions of time, temperature, pH etc. in order to determine an inexpensive and fast method for ascertaining leachability of the clay samples. The final extraction results were compared with the results obtained in the Phase 1 program and operating parameters refined until similar leaching performance was obtained.

- The bottle roll methodology will be used for initial geo-metallurgical assessment of new prospective drill hole locations to provide an indication of whether samples should undergo further metallurgical testing.

Sulphuric Acid Leaches For completeness OD6 undertook sulfuric acid leach tests on four samples from the Phase 1 program utilising 25 and 50 g/L H_2SO_4 with a residence time of 24 h at 30 °C (4 wt% solids).

The higher acid strength (50 g/L H_2SO_4) resulted in increased RE extractions in 3 of the 4 samples. The 50 g/L H_2SO_4 test showed MagRE recoveries comparable to that obtained in 25 g/L HCl in only 6 hours. However the H_2SO_4 leach results had increased gangue concentrations, and higher calculated acid consumptions..

Hydrochloric acid remains the preferred lixiviant, given that an increased sulphuric acid strength and longer leach duration is required to achieve an equivalent extraction. Use of sulphuric acid should not however be discounted at this stage of the metallurgical testing program.

Table 3: MagRE recovery and acid consumption at different H_2SO_4 acid concentrations vs HCl

Test ID	Conditions				24 hour -Final Extraction (%)					Acid Consumption kg/t
	Reagent	Acidity (g/L)	Temp. (°C)	Time (h)	Pr %	Nd %	Tb %	Dy %	Magnets %	
		H ₂ SO ₄								
SR150B	25 g/L H ₂ SO ₄	25	30	24	44	49	56	49	48	20
SR033B	25 g/L H ₂ SO ₄	25	30	24	42	46	36	45	45	10
SR056B	25 g/L H ₂ SO ₄	25	30	24	26	31	24	34	30	33
SR021A	25 g/L H ₂ SO ₄	25	30	24	37	40	26	46	39	12
SR150B	50 g/L H ₂ SO ₄	50	30	24	47	51	53	47	50	23
SR033B	50 g/L H ₂ SO ₄	50	30	24	34	40	28	36	38	11
SR056B	50 g/L H ₂ SO ₄	50	30	24	47	51	48	54	50	29
SR021A	50 g/L H ₂ SO ₄	50	30	24	59	60	46	61	59	14
		HCl								
					6 h - Final Extraction (%)					
Test ID	Reagent	Acidity (g/L)	Temp. (°C)	Time (h)	Pr %	Nd %	Tb %	Dy %	Magnets %	Acid Consumption kg/t
SR150B	25 g/L HCl	25	30	6	49	53	55	47	52	14
SR033B	25 g/L HCl	25	30	6	41	47	30	36	46	8
SR056B	25 g/L HCl	25	30	6	53	57	46	55	56	20
SR021A	25 g/L HCl	25	30	6	60	60	44	58	62	8

Note: Recoveries are calculated based on the delta of the assayed solid head and solid residue after completion of a 6 or 24 hour leach period.

Program timeline

- The centre prospect drill assays are expected to be announced in November 2023
- Metallurgical leach performance of upgraded concentrate fractions following screening at 75 µm are expected to be announced in November 2023
- A New CSIRO interpretation of the AEM data is being undertaken to more clearly define surficial cover thickness, clay thickness and clay basin areas, to help improve identification of preferred exploration target areas
- Metallurgical recovery and acid consumption results for the Phase 2 drill program is expected during Q4 2023. Further results are expected for the Phase 3 drill program in Q1 2024
- Metallurgical testing and mineralogy assessments at ANSTO expected to be available during Q4 2023
- A review and potential upgrade of the Mineral Resource Estimate is expected during Q1 2024.

Competent Persons Statement

Information in this report relating to Exploration Results is based on information reviewed by Jeremy Peters, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Chartered Professional Geologist and Mining Engineer of that organisation. Mr Peters is an independent consultant of Burnt Shirt Pty Ltd and has sufficient experience which 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 by the 2012 Edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Peters consents to the inclusion of the data in the form and context in which it appears.

No new information

Except where explicitly stated, this announcement contains references to prior exploration results, all of which have been cross-referenced to previous market announcements made by the Company. The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant market announcements.

Forward Looking Statements

Certain information in this document refers to the intentions of OD6 Metals, however these are not intended to be forecasts, forward looking statements, or statements about the future matters for the purposes of the Corporations Act or any other applicable law. Statements regarding plans with respect to OD6 Metals projects are forward looking statements and can generally be identified by the use of words such as 'project', 'foresee', 'plan', 'expect', 'aim', 'intend', 'anticipate', 'believe', 'estimate', 'may', 'should', 'will' or similar expressions. There can be no assurance that the OD6 Metals plans for its projects will proceed as expected and there can be no assurance of future events which are subject to risk, uncertainties and other actions that may cause OD6 Metals actual results, performance, or achievements to differ from those referred to in this document. While the information contained in this document has been prepared in good faith, there can be given no assurance or guarantee that the occurrence of these events referred to in the document will occur as contemplated. Accordingly, to the maximum extent permitted by law, OD6 Metals and any of its affiliates and their directors, officers, employees, agents and advisors disclaim any liability whether direct or indirect, express or limited, contractual, tortious, statutory or otherwise, in respect of, the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and do not make any representation or warranty, express or implied, as to the accuracy, reliability or completeness of the information in this document, or likelihood of fulfilment of any forward-looking statement or any event or results expressed or implied in any forward-looking statement; and disclaim all responsibility and liability for these forward-looking statements (including, without limitation, liability for negligence).

This announcement has been authorised for release by the Board of OD6 Metals Limited

About OD6 Metals

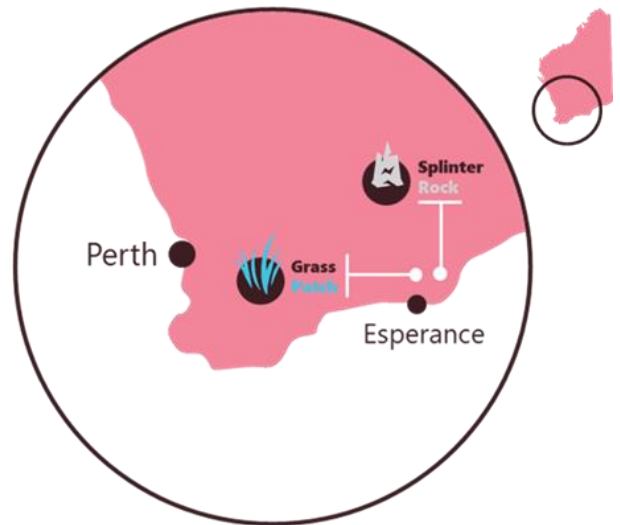
OD6 Metals is an Australian public company pursuing exploration and development opportunities within the critical mineral sector. The Company has successfully identified clay hosted rare earths at its 100% owned Splinter Rock and Grass Patch Projects, which are located in the Esperance-Goldfields region of Western Australia - about 30 to 150km northeast of the major port and town of Esperance.

Drilling and geological analysis at its flagship Splinter Rock has shown widespread, thick, high-grade clay hosted REE deposits that extend over hundreds of square kilometres. Metallurgical testing using hydrochloric acid to leach the rare earths have resulted in positive REE recoveries with optimisation ongoing.

The Company aims to delineate and define economic resources and reserves of Rare Earth Elements (REE), in particular Neodymium (Nd), Praseodymium (Pr), Dysprosium (Dy) and Terbium (Tb), which can be developed into a future revenue generating mine. Clay REE deposits are currently economically extracted in China, which is the dominant world producer of REEs.

REE are becoming increasingly important in the global economy, with uses including advanced electronics and permanent magnets in electric motors. As an example, a neodymium magnet used in a wind turbine or electric vehicle motor is 18 times stronger than a standard ferrite magnet significantly increasing energy use efficiency.

As part of the exploration process the Company has entered into heritage agreements with Esperance Tjaltrjraak Native Title Aboriginal Corporation and the Ngadju Native Title Aboriginal Corporation that serves to both enable exploration and protect important cultural sites on Country.



Corporate Directory

Managing Director	Mr Brett Hazelden
Non-Executive Chairman	Dr Darren Holden
Non-Executive Director	Mr Piers Lewis
Non-Executive Director	Dr Mitch Loan
Financial Controller/ Joint Company Secretary	Mr Troy Cavanagh
Joint Company Secretary	Mr Joel Ives
Exploration Manager	Tim Jones

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Metallurgical Drill Hole Location Details

Hole ID	Type	Easting	Northing	RL (m)	Dip (degrees)	End of Hole (m)
SRAC0021	Aircore	508100	6329561	178.8	-90	40
SRAC0033	Aircore	502230	6335591	206.2	-90	46
SRAC0042	Aircore	500036	6337842	207.3	-90	40
SRAC0043	Aircore	499486	6338407	204.3	-90	31
SRAC0056	Aircore	496417	6341560	229.5	-90	39
SRAC0149	Aircore	517485	6325298	161.8	-90	77
SRAC0150	Aircore	517999	6325835	151.7	-90	95

JORC 2012 – Table1: Splinter Rock

Section 1 Sampling Techniques and Data

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Geochemical sampling was undertaken by sampling of metre interval samples returned from the cyclone of a conventional air core drilling rig. Certified reference samples, duplicates and blank samples were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis Two composite samples were collected over three metre intervals – the first (the A sample) being submitted for laboratory analysis and the second (the B sample) being retained as a reference. A sample from each metre was collected and stored in a chip tray for logging and x-ray diffraction analysis
Drilling techniques	<ul style="list-style-type: none"> 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). 	<ul style="list-style-type: none"> Air core drilling was completed by hammer and blade industry standard drilling techniques Aircore is considered to be an appropriate drilling technique for saprolite clay Drilling used blade bits of 87mmØ with 3m length drill rods to blade refusal.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Air core recoveries were not recorded but are not considered to be materially biased, given the nature of the geology and samples. The assay data will be analysed against control samples and historical assays for any indications of bias The Competent Person considers that due to the nature of the drilling and geology, sample bias is unlikely to result from poor recovery.
Logging	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> All chips were logged qualitatively and quantitatively. A sample from each metre was collected and stored in a chip tray for logging

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	<p>metallurgical studies.</p> <ul style="list-style-type: none"> Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Geological logs recorded lithology, colour and weathering. The Competent Person considers that the logging protocols are sufficient to support estimation of a Mineral Resource. 																																																
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> A composite sample of ~ 3kg for analysis was taken using a scoop from each metre pile to subsample 1 to 1.5kg sample. This was then dispatched to the laboratory. A second composite sample was similarly taken and stored on site as a reference Air core samples were a mix of wet and dry Certified reference samples, duplicates and blank samples were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis The Competent Person considers to be appropriate the measures taken to demonstrate that sample protocols were appropriate and unbiased. 																																																
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> "A Samples" were submitted for chemical analysis using industry standard sample preparation and analytical techniques including: <ul style="list-style-type: none"> Riffle split all "A samples" to 50:50 bagging one half as a coarse reject for storage Pulverise the balance of the material via LM-5 Generate a standard 300g master pulp packet Bag the balance as a bulk pulp master for storage Multi-Element Ultra Trace method ME-MS61r for exploration in soils or sediments. 4-Acid digest on 0.25g sample analysed via ICP-MS and ICP-AES. REEs included. 																																																
Verification of sampling and assaying	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Certified reference samples, duplicates and blank samples were inserted into the sample stream such as to represent approximately 5% of the samples submitted to the laboratory for analysis No holes were twinned (duplicated). Data stored in a database, with auto-validation of logging data, Multielement results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. 																																																
		<table border="1"> <thead> <tr> <th>Element ppm</th> <th>Conversion Factor</th> <th>Oxide Form</th> </tr> </thead> <tbody> <tr><td>Ce</td><td>1.1713</td><td>CeO₂</td></tr> <tr><td>Dy</td><td>1.1477</td><td>Dy₂O₃</td></tr> <tr><td>Er</td><td>1.1435</td><td>Er₂O₃</td></tr> <tr><td>Eu</td><td>1.1579</td><td>Eu₂O₃</td></tr> <tr><td>Gd</td><td>1.1526</td><td>Gd₂O₃</td></tr> <tr><td>Ho</td><td>1.1455</td><td>Ho₂O₃</td></tr> <tr><td>La</td><td>1.1728</td><td>La₂O₃</td></tr> <tr><td>Lu</td><td>1.1371</td><td>Lu₂O₃</td></tr> <tr><td>Nd</td><td>1.1664</td><td>Nd₂O₃</td></tr> <tr><td>Pr</td><td>1.1703</td><td>Pr₆O₁₁</td></tr> <tr><td>Sm</td><td>1.1596</td><td>Sm₂O₃</td></tr> <tr><td>Tb</td><td>1.1510</td><td>Tb₄O₇</td></tr> <tr><td>Tm</td><td>1.1421</td><td>Tm₂O₃</td></tr> <tr><td>Y</td><td>1.2699</td><td>Y₂O₃</td></tr> <tr><td>Yb</td><td>1.1387</td><td>Yb₂O₃</td></tr> </tbody> </table>	Element ppm	Conversion Factor	Oxide Form	Ce	1.1713	CeO ₂	Dy	1.1477	Dy ₂ O ₃	Er	1.1435	Er ₂ O ₃	Eu	1.1579	Eu ₂ O ₃	Gd	1.1526	Gd ₂ O ₃	Ho	1.1455	Ho ₂ O ₃	La	1.1728	La ₂ O ₃	Lu	1.1371	Lu ₂ O ₃	Nd	1.1664	Nd ₂ O ₃	Pr	1.1703	Pr ₆ O ₁₁	Sm	1.1596	Sm ₂ O ₃	Tb	1.1510	Tb ₄ O ₇	Tm	1.1421	Tm ₂ O ₃	Y	1.2699	Y ₂ O ₃	Yb	1.1387	Yb ₂ O ₃
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		<ul style="list-style-type: none"> Rare earth oxide is the industry accepted form for reporting rare earths. The following calculations are used for compiling REO into their reporting and 																																																

Criteria	JORC Code explanation	Commentary
		<p>evaluation groups:</p> <ul style="list-style-type: none"> TREO (Total Rare Earth Oxide) $= \text{La}_2\text{O}_3 + \text{CeO}_2 + \text{Pr}_6\text{O}_{11} + \text{Nd}_2\text{O}_3 + \text{Sm}_2\text{O}_3 + \text{Eu}_2\text{O}_3 + \text{Gd}_2\text{O}_3 + \text{Tb}_4\text{O}_7 + \text{Dy}_2\text{O}_3 + \text{Ho}_2\text{O}_3 + \text{Er}_2\text{O}_3 + \text{Tm}_2\text{O}_3 + \text{Yb}_2\text{O}_3 + \text{Lu}_2\text{O}_3 + \text{Y}_2\text{O}_3$. Note that Y_2O_3 is included in the TREO calculation.
Location of data points	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drill hole collars were located using a handheld GPS to +/-5m accuracy Grid system was MGA 94 Zone 51 Downhole survey was not undertaken, the holes being vertical No topography control was used, given the relatively flat topography
Data spacing and distribution	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drilling intervals were closed to approximately 200m centres where historic drilling returned elevated REE assays Downhole samples were taken on 1m intervals This drilling indicated excellent continuity, particularly when supported by the results of the Tempest Airborne Aeromagnetic Survey, which was used to define basin limits. Tempest Airborne Electromagnetic Survey (AEM), undertaken by Xcalibur Multiphysics Data collected using the TEMPEST EM system (50Hz) using fixed wing aircraft. Nominal flight height of 120 m above ground level. GPS cycle rate of 1 second, accuracy 0.5m Altimeter accuracy of 0.05m Flight line spacing 400 to 800m. Conductivity measurements and sampling interval at approximately 11 to 12 metres along line. This data when combined with further drilling will be utilised to guide future mineral resource estimation
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> Drillholes were vertical and approximately perpendicular to mineralisation hosted in flat lying clay-beds This orientation is not considered by the Competent Person to have introduced material sampling bias. For AEM data: Flight lines are North West- South East: drainage and regolith patterns show a regional slope down from NW to SE, whereas geological structure is dominantly NE-SW. The thickness of regolith presented in the cross-sections is based on geophysical inversion modelling conducted by the CSIRO. This inversion modelling used Monte Carlo simulation known as RJMCMC regression based on Bodin and Sambridge (2009) https://doi.org/10.1111/j.1365-246X.2009.04226.x & Minsley (2011) https://doi.org/10.1111/j.1365-246X.2011.05165.x with modifying parameters by CSIRO. refer ASX Announcement 5 October 2022 The RJMCMC method uses a comparison method to estimate the conductivity.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples were taken and dispatched by road freight direct to the analytical laboratory
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> The Independent Competent Person reviewed the sampling techniques and data collection. The Independent Competent Person has previously completed a site visit during drilling to verify sampling techniques and data collection.

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	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> The Splinter Rock Project is held by Odette Six Pty Ltd which is a 100% owned subsidiary of OD6 Metals Ltd. Granted exploration Licences include E63/2115, E69/3904, E69/3905, E69/3907, E69/3893, E69/3894. The ELs predominantly overly vacant crown land with a small portion of freehold agricultural land used for crop and livestock farming to the south. The Company has Native Title Land Access agreements with Ngadju Native Title Aboriginal Corporate and Esperance Tjaltjraak Native Title Aboriginal Corporation. The tenements are in good standing with no known impediments outside the usual course of exploration licenses.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> An Independent Geological Report was completed by of Sahara Natural Resources and included in the Company's Prospectus dated 10 May 2022. Historic exploration for REE's was conducted by Salazar Gold Pty Ltd The historical data has been assessed and is considered of good quality
Geology	<ul style="list-style-type: none"> Deposit type, geological setting and style of mineralisation. 	<ul style="list-style-type: none"> The rare earth mineralisation at the Splinter Rock project occurs in the weathered profile (in-situ regolith clays) adjacent to and above Booanya Granite of the East Nornalup Zone of the Albany-Fraser Orogen. The Booanya granites are enriched in REEs. Factors such as groundwater dispersion and paleo-weathering environments may mobilise REEs away from the granite sources.
Drill hole Information	<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> All drill results are reported to the ASX in line with ASIC requirements. A summary of material drill hole information ins included in the Drill Hole Data table included below. No material has been excluded. Some results occur outside the mineralised area of interest and have been excluded as not being of material interest. Internal waste results have been included in the mineralised intercepts. Mineralised intersections have been publicly reported by OD6 in accordance with the JORC Code and ASX Listing Rules and are not repeated here. The Competent Person observes consistent broad intersections of REEs and is satisfied that the drilling information supports this interpretation.
Data aggregation methods	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No cutting of grades has been engaged in Data has been aggregated according to downhole intercept length above the cut-off grade and internal sub-grade material has been included. A lower cut-off grade of 300ppm TREO has been applied. OD6 considers this to be an appropriate cut-off grade for exploration data in a clay-hosted REE project A 1,000ppm cut off grade has been applied to the Mineral Resource Multielement results (REE) are converted to stoichiometric oxide (REO) using element-to-stoichiometric conversion factors. These stoichiometric conversion factors are stated in the 'verification of sampling and assaying' table above and can be referenced in appropriate

Criteria	JORC Code explanation	Commentary
		publicly available technical data.
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> • <i>These relationships are particularly important in the reporting of Exploration Results.</i> • <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> • <i>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').</i> 	<ul style="list-style-type: none"> • Drillholes drilled vertical and orthogonal to generally flat to shallow dipping clay mineralisation. • Drilled width is approximately true width.
<i>Diagrams</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • Diagrams are included at relevant sections in this Report • Drilling is presented in long-section and cross section as appropriate.
<i>Balanced reporting</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • Electromagnetic data processing presented in this release is across all tenure at Splinter Rock. Further work on the remainder of the project is underway • Mineralisation has been reported at a variety of cut-off grades
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> • <i>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.</i> 	<ul style="list-style-type: none"> • All material data available is reported. • There have been various photogrammetric and geophysical surveys at Splinter Rock at various times that have contributed to understanding of the geology of the deposit. The Competent Person considers these to have been undertaken in an appropriate manner. • All material data available is reported for test work conducted on acid leaching of rare earths. ANSTO conducted hydrochloric acid optimisation tests on a 4 wt% slurry of Splinter Rock clay composites at 10, 15 and 20 g/L free acidity from hydrochloric acid. With REE recoveries calculated from assay results of liquor and residue samples taken at the 6, 9, 12 and 24 hour marks. Sulphuric Acid diagnostic leach tests were also conducted on 4 wt% slurries of Splinter Rock clay composites at 25 and 50 g/l free acidity. Samples were taken at the same intervals as those conducted during the hydrochloric acid optimisation tests. • As mentioned in the report, the recoverability of rare earths are indicative only and do not currently account for additional losses that may occur during downstream processing. • The metallurgical samples that have been provided to the laboratory for leaching assessment are detailed within this report.
<i>Further work</i>	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Mineralisation is open perpendicular to the drill traverses. The Competent Person recommends that OD6 drill traverses in this direction. • Further work will include additional air core drilling, core drilling (e.g sonic or push-tube drilling, mineralogy, metallurgical test work and study work. Further work will include additional air core drilling, core drilling (e.g sonic or push-tube drilling, mineralogy, metallurgical testwork and study work.