28 November 2024 ASX ANNOUNCEMENT

Excellent Metallurgical Results Highlight Earaheedy's Development Potential

Highlights

- **Excellent Metallurgical Results - recoveries of 79% Zn** were achieved into a high-grade, **61% Zn+Pb**, **marketable bulk concentrate** suitable for the Imperial Smelting Process (ISP), using a **coarse primary grind (P80 > 200µm),** which should lead to significant energy savings in the plant.
- **Innovative HydroFloat™ Technology** – coarse gangue rejection tests demonstrated the ability to **reject over 30% of barren material** early in processing, which should result in a reduced plant footprint and operating costs, improved tailings design, while maintaining excellent rougher recoveries of 86% zinc and lead.
- **Simplified and Cost-Efficient Flowsheet** - testwork confirmed Chinook ore is amenable to semi-autogenous milling, with coarse grinds delivering excellent metal recoveries. This should **support a simplified, low-capex/opex processing strategy** that adapts to variable feed grades while producing a high-value ISP concentrate.
- **Scoping Study** - an internal scoping study will commence shortly to assess the economic viability and marketing opportunities of the bulk high-grade ISP concentrate, with results expected in 2025.

Rumble's Managing Director and Chief Executive Officer, Peter Harold said:

"We are pleased to have completed the comprehensive metallurgical testwork program at Chinook which has generated positive results, including a high-grade bulk Zn-Pb concentrate with strong recoveries, and the information necessary to allow us to commence the internal scoping study.

The application of the HydroFloat technology has confirmed coarse particle rejection is achievable which should lead to capital and operating cost reductions in processing and could lower the cut-off grades, thereby significantly enhancing the project's economics.

The HydroFloat technology could also improve the environmental sustainability aspects of Earaheedy through the early separation of barren material and a coarser grind size, potentially allowing for significant reductions in power and water requirements, and better tailings management. We are now planning to include HydroFloat in the processing flowsheet for the internal scoping study to maximise the project's economic value.

We look forward to progressing Earaheedy through the internal scoping study and then into discussions with potential development partners."

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ASX RTR

Rumble Resources Limited (ASX:RTR) ("Rumble" or the "Company") is pleased to present the metallurgical testwork results from samples collected from eleven PQ holes drilled across the Chinook sulphide deposit at the Earaheedy Zn-Pb-Ag Project ("Earaheedy" or the "Project") located 110km northeast of Wiluna in Western Australia.

Metallurgical Testwork Background

Metallurgical testing has involved comminution, beneficiation studies, including Dense Media Separation (DMS) and Eriez HydroFloatTM and further conventional flotation work. In total this study saw 164 individual tests completed over a 10-month period. The testwork program was developed and supervised by Scott Dalley Francks Pty Ltd (SDF). The flotation testing has been performed at Auralia Metallurgy, Midvale, Western Australia, whilst the DMS test work was carried out by Nagrom, Kelmscott, Western Australia and the HydrofloatTM managed by Eriez at ALS Metallurgy, Balcatta, Western Australia.

Testwork was carried out on half and quarter core samples from eleven PQ drill holes located across and along strike of the Chinook deposit (see Figure 1 and Table A) at Earaheedy.

Table 1 provides the details of the diamond drill holes and intercepts used to prepare all metallurgical composites. All samples were diluted with hanging and footwall waste or internal dilution.

The 11 drill holes produced 216m and 1,709kg of sample in total. From the 11 holes 18 intercepts of differing lithology that make up the host Navajoh Unconformity Unit were prepared. The lithotype composites included:

- 8 Intercepts of Dolomicrite
- 5 Intercepts of Marl
- 5 intercepts of Dolomite

Each of the 18 intercepts were split out as individual metallurgical variability composites. The provenance details for these samples are found in Table 1 which also provides a summary of their expected geological head grades.

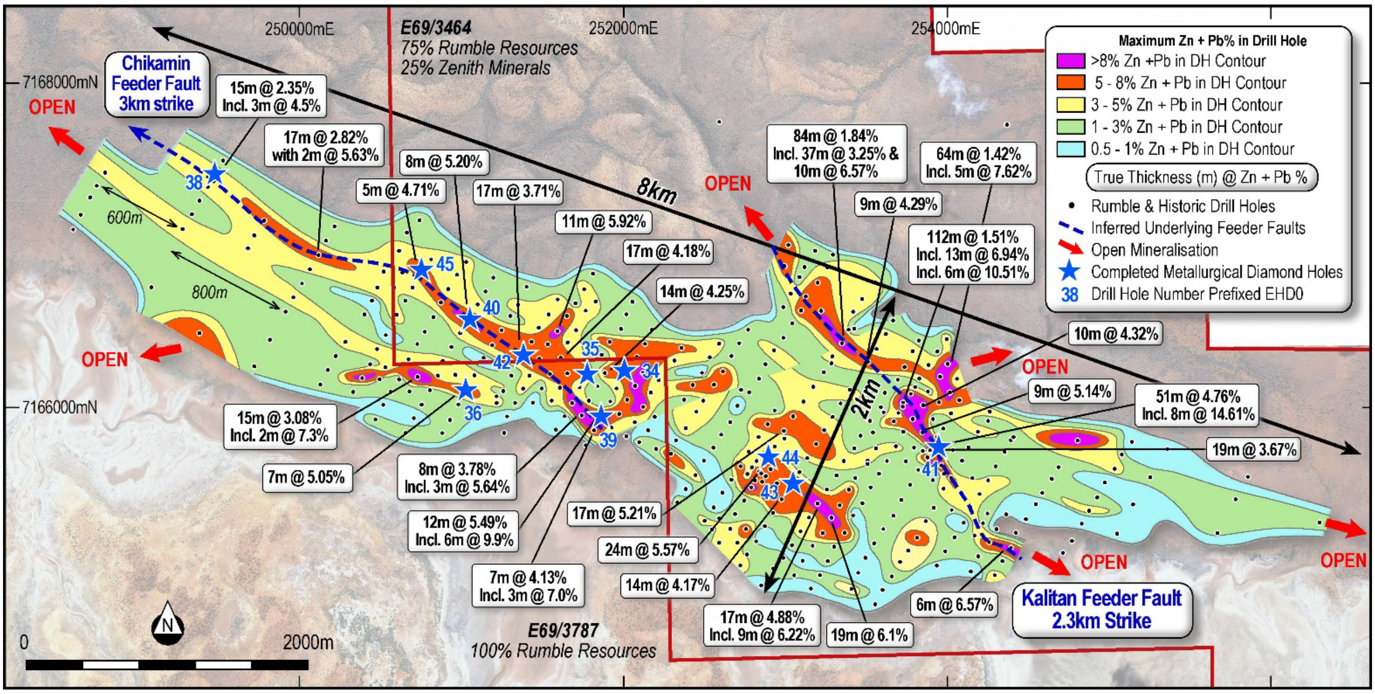


Figure 1. Chinook Drillhole Location Plan over previous Zn+Pb Downhole Contouring and Landsat

Master composites for each of the three mineralised lithotypes were prepared by splitting out a portion of the larger variability samples. Normally, sample splitting is performed based upon a weighted proportion of intercepts in the master composite, however, to achieve the required master composite mass for the DMS testwork (~120 - 200 kg required) some intercepts were over and under-represented in the master composite preparation. The relevant weights of the master composites are as follows:

- Dolomicrite Master Composite – 259 kg
- Marl Master Composite – 292 kg
- Dolomite Master Composite- 248 kg

Hole ID	Core	Lith	Type	Pb Grade %	Zn Grade %	From m	To m	Length m	Mass kg	Master Comp Split kg	Variability Comp Split kg
Dolomicrite			**8 Variability Samples**								
EHD035	1/2 & 1/4	Fresh	NUU SMIC	1.09	3.02	108.7	120	11.6	80.2	19.6	61
EHD038	1/2 & 1/4	Fresh	NUU SMIC	0.31	2.76	148.3	159	10.9	70.0	29.4	41
EHD039	1/2 & 1/4	Fresh	NUU SMIC	2.69	2.47	57.7	65.4	7.7	53.0	12.4	41
EHD040	1/2 & 1/4	Fresh	NUU SMIC	0.35	1.21	117.6	127	9.4	73.9	13.3	61
EHD041	1/2 & 1/4	Fresh	NUU SMIC	1.96	9.08	93	107	14	69.1	28.5	41
EHD042	1/2 & 1/4	Fresh	NUU SMIC	0.55	2.75	113	129	16.4	116.2	43.6	73
EHD044	1/2 & 1/4	Fresh	NUU SMIC	0.98	0.81	70.6	89	18.4	137.5	64.9	73
EHD045	1/2 & 1/4	Fresh	NUU SMIC	0.52	2.46	141.8	156	14.2	119.4	46.8	73
Sub-total:				**0.94**	**2.79**	**851**	**953**	**103**	**719**	**259**	**461**
Marl			**5 Variability Samples**								
EHD034	45383	Fresh	NUU-SML	0.65	2.55	117.7	127	9.5	7.0		7.0
EHD036	1/2 & 1/4	Fresh	NUU-SML	0.91	1.67	68.25	82.4	14.15	155.6	83.0	73
EHD040	1/2 & 1/4	Fresh	NUU-SML	0.20	1.72	127	144	17	193.3	120.7	73
EHD043	1/2 & 1/4	Fresh	NUU-SML	0.42	2.69	69.1	85	17	150.0	77.4	73
EHD045	1/2 & 1/4	Fresh	NUU-SML	0.36	0.79	156	161	4.7	51.1	10.5	41
Sub-total:				**0.49**	**1.93**	**538**	**599**	**62**	**550**	**292**	**265**
Dolomite			**5 Variability Samples**								
EHD035	1/2 & 1/4	Fresh	SWD	0.13	0.93	134	145	11	69.1	30.5	39
EHD038	1/2 & 1/4	Fresh	SWD	0.19	0.56	159.2	181	21.8	203.3	130.7	73
EHD041	1/2 & 1/4	Fresh	SWD	0.77	1.20	107	114	6.7	57.0	36.4	21
EHD041	1/2 & 1/4	Fresh	SWD	0.09	1.07	127	134	7	65.9	25.3	41
EHD043	1/2 & 1/4	Fresh	SWD	0.20	0.39	85	89	4	45.2	24.6	21
Sub-total:				**0.24**	**0.76**	**612**	**663**	**51**	**440**	**248**	**193**
Total Tests								**216**	**1709**	**798**	**919**

Table 1. Composite and Variability sample intervals and weights from Chinook PQ diamond drillholes

Most of the initial development work for the flotation flowsheet was performed on the master composites with subsequent confirmatory testwork using the established flowsheet from the master composite testing being confirmed by testing the flowsheet using the 18 variability composites.

In the final stages of the flotation testing a master composite blend of the three lithotypes (75% dolomicrite, 15% marl and 10% dolomite) was prepared that reflected the metal % metres by lithotype weighting within the original mineral resource based on the 2% zinc cut-off. This sample was compared alongside of a dolomicrite master to ascertain whether there was any variability in response during lock cycle testing (LCT) for the final bulk concentrate product.

The objectives of the 2024 metallurgical testwork campaign were to understand and establish the following:

- Ore mineralogy and geochemical relationships;
- Ore hardness and comminution characteristics;
- Amenability of the base metals to pre-concentration using DMS and Hydrofloat™ technologies;
- Amenability of the base metals to recovery by conventional froth flotation;
- Optimal grind size analysis; and
- Concentrate product analysis

The final aim being, the development of the most optimal means for processing the various Chinook lithotypes and therefore, the establishment of the most viable process flowsheet to best suit the deposit.

Geochemistry and Mineralogy

The zinc and lead assays in the metallurgical composites were in close agreement to the expected geological grades for all three lithotypes, with Zn:Pb ratios averaging approximately 3:1. The S:Zn ratio for the dolomicrite and dolomite was near 2:1, and 1.5:1 for the marl.

The chemical analysis from XRD for each lithotype is quite distinct and easily recognisable. The marl is siderite ($FeCO_3$) dominant (~70%) and lower in quartz/silicates, the dolomicrite is mostly quartz (~40%) with some siderite (20-25%), whilst the dolomite was nearly 90% dolomite.

The sulphide sulphur to sulphur ratio was approximately 0.85:1 for both the dolomicrite and the marl. Pyrite was the major sulphide gangue species in all the samples.

There were no notable penalty elements in the feed of the various lithotypes other than mercury which has an association with the sphalerite and is slightly enriched into the flotation concentrate.

Comminution Studies

All Chinook composites were medium to moderately soft while competent enough to form suitable media in an autogenous mill circuit. The combined weighted average resource Axb values in SMC testing was estimated at 60.2.

With respect to the Bond ball mill work indices, except for one dolomicrite sample measuring 17.2 kWh/t, showed that all lithotypes were typically only moderately hard, averaging 14.1 kWh/t. The composites appear to have low to moderate abrasivity, averaging 0.11 (Ai). The rod mill work indices for Chinook measured between 15 to 24.6kW/tonne which shows that the composites ranged from moderate to very hard.

The SMC specific gravity (SG) for dolomite was only 2.86kg/l but the dolomicrite and marl measure similarly at around 3.34kg/l.

Table 2 presents a summary of the data, with most of the samples tested to date being dolomicrite. The marl is slightly more competent, and the single dolomite sample tested had the highest competency.

Overall, the comminution results confirmed the material is suitable for semi-autogenous grinding (SAG).

Lithotype	Tested	% Resource	From	To	BRWi	P80	BBWi	Ai	SMC	DWi	Mia	Mih	Mic	Ta	SCSE	SMC SG	Pyc SG
	#	Weight	m	m	kWh/t	µm	kWh/t	(g)	Axb	kWh/m3	kWh/t	kWh/t	kWh/t		kWh/t	kg/L	kg/L
Dolomicrite	5	75	108	125	15.3	140	14.6	0.13	63.5	5.5	12.9	9.2	4.8	0.47	8.7	3.48	3.20
Marl	3	15	88	104	19.1	153	12.2	0.06	56.1	6.0	14.3	10.3	5.3	0.43	9.2	3.35	3.57
Dolomite	1	10	159	181	24.6	156	13.3	0.02	42.0	6.8	18.7	13.9	7.2	0.38	10.0	2.86	2.92
Resource Estimate		**100**	**110**	**127**	**16.8**	**144**	**14.1**	**0.11**	**60.2**	**5.7**	**13.7**	**9.8**	**5.1**	**0.46**	**8.9**	**3.40**	**3.23**

Table 2. Composite and Variability sample intervals and weights from Chinook PQ diamond drillholes.

NB. metal % metres by lithotype weighting based on Chinook resource 2%Zn cutoff– 75% Dolomicrite, 15% Marl and 10% Dolomite.

Dense Media Separation (DMS) Testwork

Heavy Liquid Separation (HLS) testwork by IMO Metallurgy (IMO) during the 2022 sighter program resulted in zinc upgrades of 2.9 times and concomitant recoveries of over 70% from a single sample that showed a high proportion of the mass and heavy mineral reporting to a 3.3 sink fraction. Thus, it was recommended by IMO that DMS be investigated as a beneficiation opportunity in any future work.

Auralia Metallurgy issued the three master lithotype composites in January 2024 to Nagrom to perform DMS testwork to understand the effectiveness of this means of beneficiation for each lithotype.

Accordingly, each master composite was crushed to a top size of 8mm and then screened over a 0.5mm sieve to remove the fines prior to treating the -8 +0.5mm fraction through a 100mm diameter hydrocyclone at four different media densities using ferrosilicon media (C40).

The results from the testwork and the zinc deportment produced at each media density (SG) target are summarised in Table 3.

Litho-Type	Media SG kg/L	Assay Head %Zn	Calc Head %Zn	<0.5mm			DMS Product				DMS Reject			Combined Discard		
				% Mass	%Zn Assay	% Metal	% Mass	%Zn Assay	Assay Upgrade	% Metal	% Mass	%Zn Assay	% Metal	% Mass	%Zn Assay	% Metal
Dolomicrite	2.80	2.80	2.98	**53.6**	1.44	26	33	**6.23**	**2.1**	**69**	13	1.07	5	67	1.37	31
	2.95	2.80	2.75	**53.6**	1.44	28	32	**5.73**	**2.1**	**66**	15	1.05	6	68	1.36	34
	3.10	2.80	2.71	**53.6**	1.44	29	29	**5.62**	**2.1**	**62**	17	1.54	9	70	1.46	38
	3.25	2.80	2.89	**53.6**	1.44	27	27	**6.20**	**2.1**	**58**	19	2.24	15	73	1.65	42
Screen only	N/A		2.83	**53.6**	1.44	27		**4.43**	**1.6**	**73**				54	1.44	27
AVERAGE		**2.80**	**2.83**													
Marl	2.80	2.14	2.09	16.4	2.41	19	80	**2.08**	**1.0**	**80**	3	0.84	1	20	2.14	20
	2.95	2.14	1.96	16.4	2.41	20	79	**1.92**	**1.0**	**77**	5	1.05	3	21	2.09	23
	3.10	2.14	2.07	16.4	2.41	19	75	**2.05**	**1.0**	**75**	8	1.58	6	29	2.13	25
	3.25	2.14	2.20	16.4	2.41	18	70	**2.23**	**1.0**	**71**	13	1.80	11	30	2.13	29
Screen only	N/A		2.08	16.4	2.41	19		**2.02**	**1.0**	**81**				16	2.41	19
AVERAGE		**2.14**	**2.08**												**2.12**	
Dolomite	2.80	0.70	0.71	13.2	1.40	26	29	**1.31**	**1.8**	**53**	58	0.26	21	71	0.47	47
	2.95	0.70	0.62	13.2	1.40	30	11	**2.29**	**3.7**	**40**	76	0.25	30	89	0.42	60
	3.10	0.70	0.84	13.2	1.40	22	4	**4.78**	**5.7**	**25**	82	0.54	53	96	0.66	75
	3.25	0.70	0.74	13.2	1.40	25	3	**5.16**	**6.9**	**17**	84	0.51	58	98	0.63	83
Screen only	N/A		0.73	13.2	1.40	26		**0.63**	**0.9**	**74**				13	1.40	26
AVERAGE		**0.70**	**0.73**													

Table 3: DMS Zinc Deportment for all 3 Lithotypes

The data from Table 3 confirms that:

- The dolomicrite is naturally very fine and when crushed to a top size of 8mm the size distribution was greater than 50% passing 0.5mm. The marl and dolomite composites were both much coarser with only 15% passing 0.5mm.
- The ability to upgrade the zinc in the various lithotypes at a crush size of -8mm (P_{80} ~ 3.5 to 5.3mm) was limited. The best response was observed in the dolomicrite with the zinc grade doubling while achieving ~65% zinc recovery. Marl did not upgrade at all while dolomite doubled in zinc grade but at only 50% zinc recovery.
- Dolomite could be upgraded 6-fold at higher media densities (>3.1 kg/l) while at only 25% zinc recovery.
- Overall, the response was unfavourable across all lithotypes, with each responding differently to varying media densities. This feature makes an optimum media SG selection to treat all three lithotypes successfully difficult.
- A review of the size-by-size data and understanding that the crush size is already relatively fine, suggested that there would likely be limited opportunity to improve the DMS performance at a finer crush size.
- Conversely though, the data illustrated liberation and upgrade could be achieved at coarse grind sizes (i.e. up to 500µm). This coarse particle indication, along with earlier evidence from QEMScan mineralogy testwork (refer to RTR ASX release on 17 November 2022) revealed sphalerite and pyrite were coarse and well liberated. **This led to a recommendation by SDF for beneficiation testing using Eriez's patented and now widely adopted Hydrofloat™ technology.**

Hydrofloat™ Testwork Program

Sighter testwork to investigate upfront coarse particle rejection (CPR) and beneficiation of zinc and lead was carried out at Auralia Metallurgy and ALS Metallurgy laboratories in Perth and was supervised by Eriez Australia and SDF using Eriez HydroFloat™ pilot equipment.

Figure 2. Laboratory Scale Eriez Hydrofloat in operation at ALS Metallurgy

Two further litho-type composite samples of the principal rocks (dolomicrite and marl) that make up the dominant (90%) proportion of the mineralised unconformity host unit at Chinook deposit were prepared from the core drilled earlier in the year (see Table 4). Sample preparation was performed at Auralia Metallurgy consisted of combining intervals from several individual drill core samples of the same lithology and then crushed to 3.35mm, followed by rotary blending and splitting and then grinding individual samples to 212µm and a target value of over 300µm.

Hole ID	Core	Lith	Type	Pb Grade %	Zn Grade %	From	To	m	Mass kg
Dolomicrite			**6 Variability Samples**						
EHD035	1/2 & 1/4	Fresh	NUU SMIC	1.09	3.02	108.7	120.3	11.6	80.2
EHD038	1/2 & 1/4	Fresh	NUU SMIC	0.31	2.76	148.3	159.2	10.9	70.0
EHD039	1/2 & 1/4	Fresh	NUU SMIC	2.69	2.47	57.7	65.4	7.7	53.0
EHD040	1/2 & 1/4	Fresh	NUU SMIC	0.35	1.21	117.6	127	9.4	73.9
EHD042	1/2 & 1/4	Fresh	NUU SMIC	0.55	2.75	113	129.4	16.4	116.2
EHD045	1/2 & 1/4	Fresh	NUU SMIC	0.52	2.46	141.8	156	14.2	119.4
Sub-total:				**0.79**	**2.48**	**687**	**757**	**70**	**513**
Marl			**4 Variability Samples**						
EHD034	1/4	Fresh	NUU-SML	0.65	2.55	117.7	127.2	9.5	36.4
EHD036	1/2 & 1/4	Fresh	NUU-SML	0.91	1.67	68.25	82.4	14.15	155.6
EHD040	1/2 & 1/4	Fresh	NUU-SML	0.20	1.72	127	144	17	193.3
EHD045	1/2 & 1/4	Fresh	NUU-SML	0.36	0.79	156	160.7	4.7	51.1
Sub-total:				**0.51**	**1.66**	**469**	**514**	**45**	**436**

Table 4: Drill hole sample details incorporated in composite for HydroFloat™ testwork

Eriez supplied the CrossFlow classifier (XF), rotary drum and HydroFloat™ (HF) units used for laboratory testing at the ALS facility in Perth. The Eriez Laboratory CrossFlow is a hydraulic classifier that separates particles according to size, shape, and specific gravity. Samples were classified in the CrossFlow to remove the fines and slimes with a target split size of 40 to 50µm and the CrossFlow underflow was used as the feed for the coarse particle flotation into the HydroFloat™ unit. Prior to that, the HydroFloat™ feed was polished and conditioned with collector reagent in a rotating drum before being pumped into the HydroFloat™. The entire HydroFloat™ overflow and HydroFloat™ underflow streams were collected, split, and sub-sampled before assay analysis for primarily zinc, lead, iron and sulphur. The fine CrossFlow overflow and the coarse (200 to 270µm) HydroFloat™ overflow (concentrate) was reground to a P_{80} of 53µm was floated at Auralia Metallurgy to produce a rougher concentrate.

The coarse ore flotation evaluation included head-grade analysis and rougher flotation recovery testwork on the two litho-type composites prepared from the recently sampled drill core.

The Dolomicrite litho-type is naturally very fine and ~50% of the feed to the XF bypassed the HydroFloat™ (HF). The marl was ground finer but is naturally harder and less (~41%) of the XF feed bypassed the HF. The action of the XF upgraded the metal grades reporting to the HF although values in this stream were not low enough to be a 'throw-away' tail. This said, the coarse (314 to 445µm) HF underflow stream were low enough to discard directly to the tail.

The results from the testwork are shown in Table 5.

Stream	Parameter	Hydrofloat Dolomicrite	Hydrofloat Marl	Hydrofloat Weighted*
Feed Size	**P80 µm**	**310**	**250**	**300**
Calc Heads	% Zn	2.63	1.55	2.45
	% Pb	0.94	0.43	0.85
Crossflow Stream	% Zn	1.20	1.47	1.25
	% Pb	0.87	0.47	0.80
	P80 µm	39	47	40
	% Mass	**54**	**41**	**52**
Hydrofloat Underflow Stream	% Zn	9.40	4.25	8.52
	% Pb	2.2	1.4	2.06
	P80 µm	270	199	258
	% Mass	**19**	**16**	**19**
Hydrofloat Underflow Tail	% Zn	0.67	0.61	0.66
	% Pb	0.23	0.06	0.20
	P80 µm	442	314	420
	% Mass	**27**	**43**	**30**
Overall Flotation Concentrate	% Mass	26	15	24
	% Zn	9.0	6.9	8.6
	% Pb	3.1	2.4	3.0
Recovery	% Zn	90	67	**86**
	% Pb	87	83	**86**

Table 5. Hydrofloat Test Result (* Weighted averages based on proportions of contained metal within each unit within the >2% block model)

The overall results are compelling and demonstrate that at a coarse grind P_{80} of between 250µm to 310µm HydroFloat™ for rougher flotation of the Hydrofloat concentrate, produced similar recoveries (**86% Zn and 86% Pb**) to conventional flotation at finer grind sizes with improved Zn rougher concentrate grades.

These studies have confirmed that the use of Eriez HydroFloat™ as a coarse particle rejection system in the front end of the potential process route will discard a significant portion (~30%) of the coarse and largely barren ore which will likely offer numerous operating and capital cost benefits for Earaheedy, including.

- **reduced power and water intensity per tonne of ore processed;**
- **increased mill capacity and overall plant capacity for an increased production rate;**
- **reduction in consumables, such as grinding media and reagents; and**
- **significant improvement in tailings stability with the production of coarser tails, as well as water recycling at the back end of the plant.**

About Hydrofloat

The HydroFloat™ is an aerated fluidized-bed separator that combines the benefits of density separation with the selectivity of flotation.

In operation, feed slurry is introduced at the top of the HydroFloat™ and descends against a rising mixture of water and fine air bubbles to form a fluidized bed of solids. Air bubbles selectively attach to hydrophobic particle surfaces to reduce the effective density of bubble-particle agglomerates, which reduces settling velocity and facilitates hydraulic carryover to the overflow. Expansion of the fluidized bed is controlled to alter the effective bed density, thus preventing lower density agglomerates containing the target mineral species from penetrating the fluidised bed and reporting to the underflow.

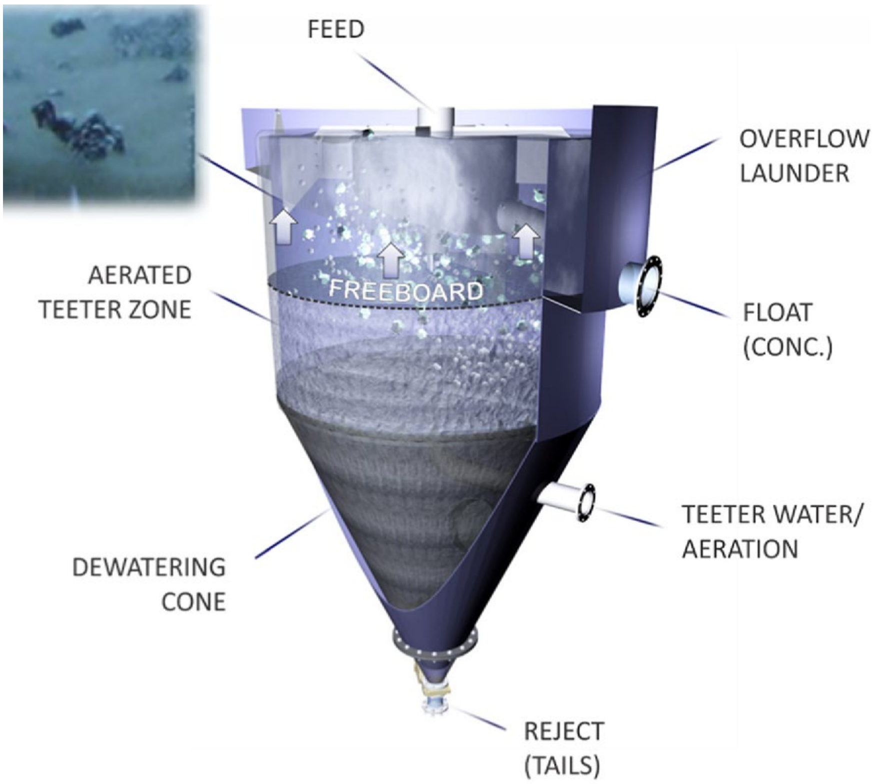


Figure 3. Cut-away of the Eriez Hydrofloat Fluidised Bed Separator

The Hydrofloat™ was developed and patented by Eriez Flotation in 2002. Most of the initial investigative work was conducted on phosphate and potash projects. It was later used commercially to recover vermiculite in the US, diamonds in Canada and spodumene in Australia, Canada and Brazil. Initially applying this technology to industrial minerals was reasonable given the relatively large particle sizes treated in flotation, coarse liberation characteristics, and generally lower specific gravities relative to polymetallic ore. Research efforts quickly focused on sulphide and base metal applications due to the recognised increase in capacity and associated energy savings (refer Awatey et al., 2015) reviewing the optimisation of coarse-grained sphalerite (ZnS).

The result of this breakthrough technology was an order of magnitude increase in selective recovery of coarse particles (e.g. up to 850µm) with as little as between 1% to 10% mineral surface expression, as well as a corresponding shift in the economic optimum grind size for concentrators.

In 2017, Rio Tinto published a press release stating that up to 70% of missed coarse copper-bearing particles and up to 90% of coarse molybdenum-bearing particles could be recovered from existing tailings using the HydroFloat™ technology. A full-scale demonstration module incorporating Eriez' CrossFlow and HydroFloat™ was installed and commissioned at the Copperton (second largest copper operation in the USA) in 2019.

In Australia, Newcrest identified the HydroFloat™ technology as having potential to effectively recover coarse gold and copper sulfide composite particles at their Cadia Valley copper-gold operation in New South Wales. This led to the first commercial installation of coarse particle flotation in a sulphide application. The success paved the way for an expansion that was added and commissioned in 2022 that treats the remaining two-thirds of the plant tailings.

Anglo American began studying other applications for the HydroFloat™ in 2017, including the "Coarse Gangue Rejection" (CGR) circuit, where the HydroFloat™ receives as its feed, mill circuit output prior to conventional flotation and produces a coarse, barren tailings. A demonstration module was engineered and built at the El Soldado Copper operation in Chile which was commissioned in 2021 (refer Arburo et al., 2022). This was the first HydroFloat™ application to run in the CGR application.

To date over 70 commercial HydroFloat™ units have been installed around the world.

Focusing on the CGR applications, where the HydroFloat™ is installed in the grinding circuit, benefits indicated by Eriez based on the past twenty years of development include:

Increases plant profitability by:

- Allowing an increase in plant throughput by 10% to 35% without the necessity of adding extra primary mills;
- Reducing total OPEX of greenfield projects by more than 10%; and
- Enabling processing hard and lower grade ores at coarser fractions.

Improves environmental sustainability by:

- Increasing water recovery by 85% in combination with advanced dewatering processes;
- Reducing energy consumption by 10 to 20%; and
- Producing greater than 2x coarser tailings, optimising tailings management, and facilitating safer tailings disposal (e.g. dry stacking, co-disposal).

Improves project economic KPIs by:

- Reducing total OPEX of greenfield projects by more than 10%;
- Improving overall NPV by 20% to 40% with only an additional 5% to 10% CAPEX investment in greenfield project implementations; and
- Reducing conventional flotation circuit by 40% in greenfield project implementations.

Increases Metallurgical Efficiency by:

- Improving global plant recoveries by 2% to 6%;
- Removing between 30% to 45% of the total gangue at early stages of the process, and in coarse fractions (+400µm), improving residence time in the conventional circuit by 40%; and
- Processing hard and lower grades ores at coarser fractions, improving plant production.

Rougher Flotation Testwork

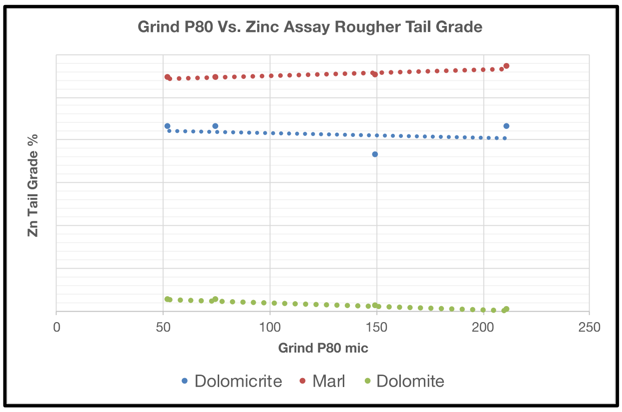
The initial flotation testwork used standard laboratory methods and was performed at Auralia Metallurgy, Perth, refer Figure 4. This work involved rougher flotation to establish the ideal conditions for metal recovery and selectivity via optimisation of defined parameters (grind sizes, flotation times and reagent types and addition rates) for all three lithotypes, with an initial focus on determining the optimum grind size.

The summarised flotation conditions for this were largely the same as previous work i.e.

- Ore dry jaw and roll crushed to 100% passing 3.35mm
- 1kg ground to 50% w/w solids in *site water* within a steel rod mill to 212µm sizing
- Reagents ($CuSO_4$, Sodium Metabisulphite [SMBS], Carboxymethyl cellulose (CMC), Aero Collector and frother) were added and conditioned for nominated times prior to the various stages of flotation, with pH, Eh and air addition recorded at each stage
- Rougher flotation was performed in a 2.0L laboratory cell at 34% w/w solids pulp density

All 3 master lithotype composites floated well under the same reagent scheme with results showing similar zinc and lead recoveries at fine (53 µm) and coarser primary grind sizes (212µm) – see Figure 5. Therefore, based on the work performed in this program, a coarse grind of P_{80} of 212µm is identified as the optimal grind for mineral release, however this is near the limit of testing in a conventional laboratory float cell. As a result and following prior QEMScan analysis and (refer to RTR ASX release 17 November 2022) mineralogy results on Chinook mineralisation, it was proposed to commence testing coarser grinds with the Eriez Hydrofloat^{TM}, to assess its potential as a CGR and beneficiation technique (refer to the prior "Hydrofloat Testwork" section).

Figure 4. Flotation testing of Dolomicrite master composite at Auralia Metallurgy



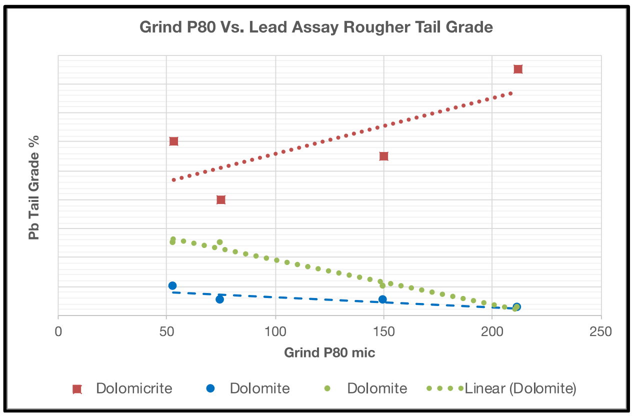


Figure 5. Zinc and Lead Rougher Tail Loss as a Function of Grind P_{80}

As a follow up to the initial testing each of the 18 variability samples were floated at a slightly more conservative P_{80} value of 150µm using the original flotation scheme to better understand the effect of head grade on base metal recovery.

Observations from this round of testing included:

- Six of the eight dolomicrite samples delivered excellent >94% zinc recoveries with average recoveries of 89% Zn and 93% Pb;
- Four of the five marl samples delivered moderate >65% zinc recoveries with average recoveries of 61% Zn and 95% Pb; and
- Four of the five dolomite samples delivered excellent >92% zinc recoveries with average recoveries of 96% Zn and 95% Pb.

Thus, based upon the prior weighted metal% averages of the three lithotypes (75% dolomicrite, 15% marl and 10% dolomite) within the original mineral resource based at a 2% zinc cut-off, the average rougher recoveries across the suite of 18 samples selected was **86% Zn** and **93% Pb.**

Cleaner and Locked Cycle (LCT) Flotation Testwork

The flotation testwork culminated in preparing a Chinook master composite blend (CRMC2024) which contained 75% dolomicrite, 15 % marl and 10% dolomite in proportion to metal% estimated by lithology within the 2% zinc cut-off of the current Chinook resource. This sample used the flowsheet conditions as defined by the testing of the individual lithotypes. Cleaner conditions were checked for the new blend prior to the capstone lock cycle tests.

Cleaner tests were performed to upgrade the base metal content towards 60% Zn+Pb for marketing purposes. Silicates and pyrite were the main diluents in the rougher concentrate that needed to be rejected to upgrade the base metal content to an acceptable concentrate product. To remove these minerals the following was implemented in the cleaner flowsheet:

- A regrind of the coarser rougher concentrate to ensure good mineral liberation;
- A reduction of copper sulphate, removal of SIBX and reduction of A5100 to reduce pyrite activation and flotation, and improve base metal and pyrite selectivity;
- Addition of SMBS (Sodium Metabisulphite) in the roughers and cleaners to depress some of the pyrite reporting to the cleaners to reduce the potential for refloat in the cleaner stages Addition of CMC to depress the silicates and improve the rougher froth, noting that froth control due to fine gangue in the early stages of the rougher float was more difficult. Overdosing of CMC slowed the float kinetics; and
- two stages of cleaning and one stage of cleaner scavenging.
- All lithotypes responses converged on the same flowsheet, all requiring similar float times and reagent addition rates. The flowsheet developed was a simple two stage clean with a moderate regrind requirement.

The scheme developed for the individual lithotypes worked well for the resource blend. Both zinc and lead could be successfully recovered into a marketable bulk concentrate suitable for an Imperial Smelting Furnace

(ISP). This concentrate graded 47% Zn and 14% Pb and recovered of 74% Zn and 55% Pb from a 2.13% Zn and 0.87% Pb feed grade.

A dolomicrite master composite sample (MC2) was also tested via the identical flotation scheme and successfully recovered a similar ISP marketable bulk concentrate grade product. This concentrate graded 48% Zn and 12% Pb and recovered ~79% Zn and 57% Pb from a 2.58% Zn and 0.90% Pb feed grade. The results for both LCT's are found in Tables 6 and 7.

Stream	Mass %	Zinc Grade %	Lead Grade %	Sulphur Grade %	Zinc Rec %	Lead Rec %	Sulphur Rec %
Final Concentrate	3.4	46.8	14.3	30.5	74.1	55.4	18.5
Cleaner Concentrate	3.7	38.9	13.0	26.5	78.4	65.8	26.5
Rougher Concentrate	11.4	16.0	5.81	15.2	85.3	77.9	30.2
Cleaner Tail	8.00	2.54	2.25	8.13	9.5	20.7	11.4
Rougher Tail	88.6	0.35	0.21	4.37	14.7	22.1	69.8
Feed	**100.0**	**2.13**	**0.87**	**5.71**	**100.0**	**100.0**	**100.0**

Table 6: Locked Cycle Test Results – CRMC2024 Chinook Master Composite (AM230-61)

Stream	Mass %	Zinc Grade %	Lead Grade %	Sulphur Grade %	Zinc Rec %	Lead Rec %	Sulphur Rec %
Final Concentrate	4.2	47.9	12.2	30.5	78.7	57.2	21.4
Cleaner Concentrate	6.9	35.2	10.7	25.8	82.6	67.3	25.8
Rougher Concentrate	16.7	13.2	4.30	11.9	85.7	79.8	32.8
Cleaner Tail	12.5	1.44	1.63	5.55	7.0	22.6	11.4
Rougher Tail	83.3	0.44	0.22	4.88	14.3	20.2	67.2
Feed	**100.0**	**2.58**	**0.90**	**6.05**	**100.0**	**100.0**	**100.0**

Table 7: Locked Cycle Test Results – Dolomicrite Master MC2 Composite (AM230-56)

The Zn+Pb grade verses Zn recovery plots for the two locked cycle tests are found in Figure 6 and show a very similar response despite the addition of the more difficult to treat marl lithotype into the CRMC2024 Chinook master composite.

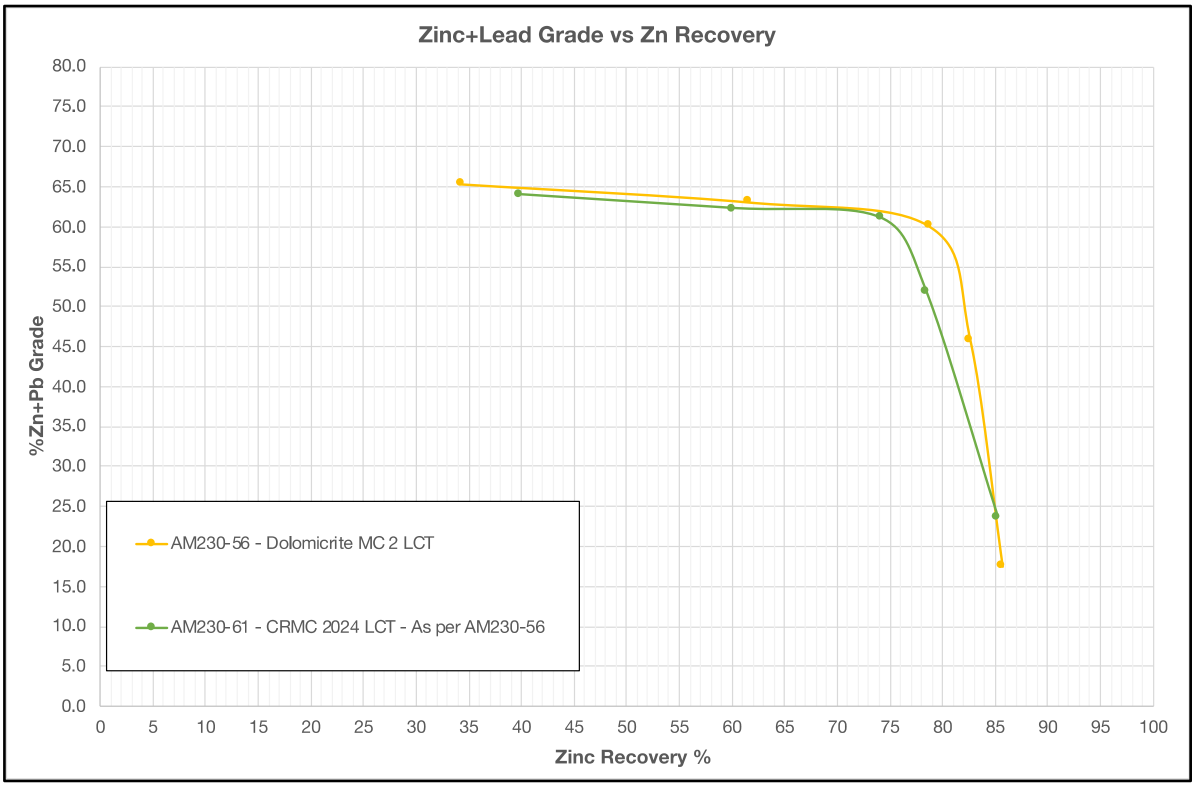


Figure 6: Locked Cycle Vs. Batch Test Zinc + Lead Grade- Zinc Recovery Curve

Overall, the locked cycle testwork established that:

- A bulk concentrate of good quality with >60% zinc plus lead;
- Selectivity against the pyrite was excellent with >98.5% iron rejection and showed that the effects of any reagent build-up in the flowsheet were minimal;
- The cleaner tailing contained 7-10% of the feed zinc and ~20% of the feed lead, highlighting the potential to improve the lead recovery;
- The recirculating load was 3 -7% of the feed mass, with 30-40% of the zinc and ~40-60% of the lead;
- The resultant grade of the concentrate was only 5.3% Fe, SiO_2 1.8% and MgO 0.14% and on specification; and
- Silver grade was 98 g/t, providing a possible future silver credit.

Circuit stability in both tests were very good considering the coarse feed size distribution with a reasonable mass conservation observed.

Figure 7 compares the head grade vs zinc recovery from the LCT's (red dots) results to a referenced zinc-lead mine database, highlighting the **excellent results from the lower grade feed (<2.6% Zn)**.

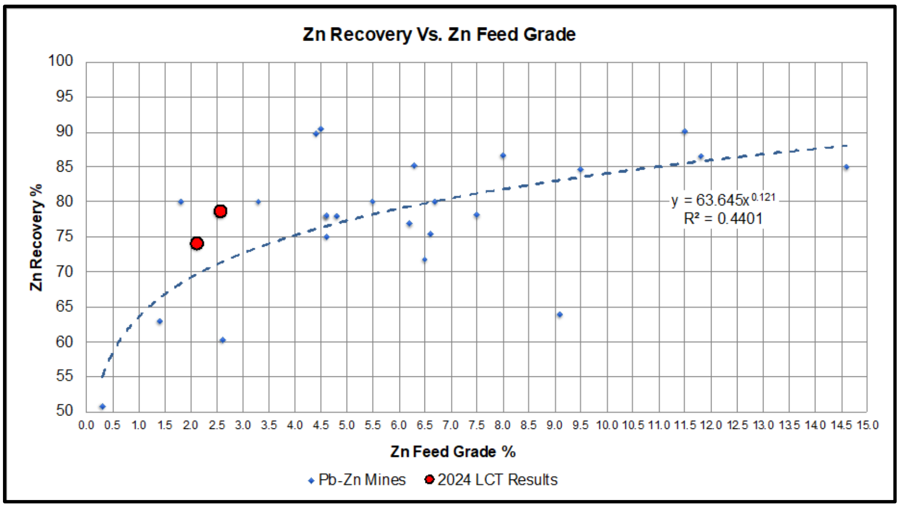


Figure 7: Chinook Zinc Recovery Vs. Head Grade Comparison to Pb-Zn Mine Database
(Database taken from 'Handbook of Flotation Reagents: Chemistry,Theory and Practice' Srdjan Bulatovic – 19 February 2007)

Conceptual Flowsheet(s)

Following the more comprehensive metallurgical testing at Chinook in 2024, including scoping level comminution studies, two simple and robust flowsheet options remain, both pursuing the idea of treatment of a high volume of lower grade feed with simpler technical requirements, refer Figure 8.

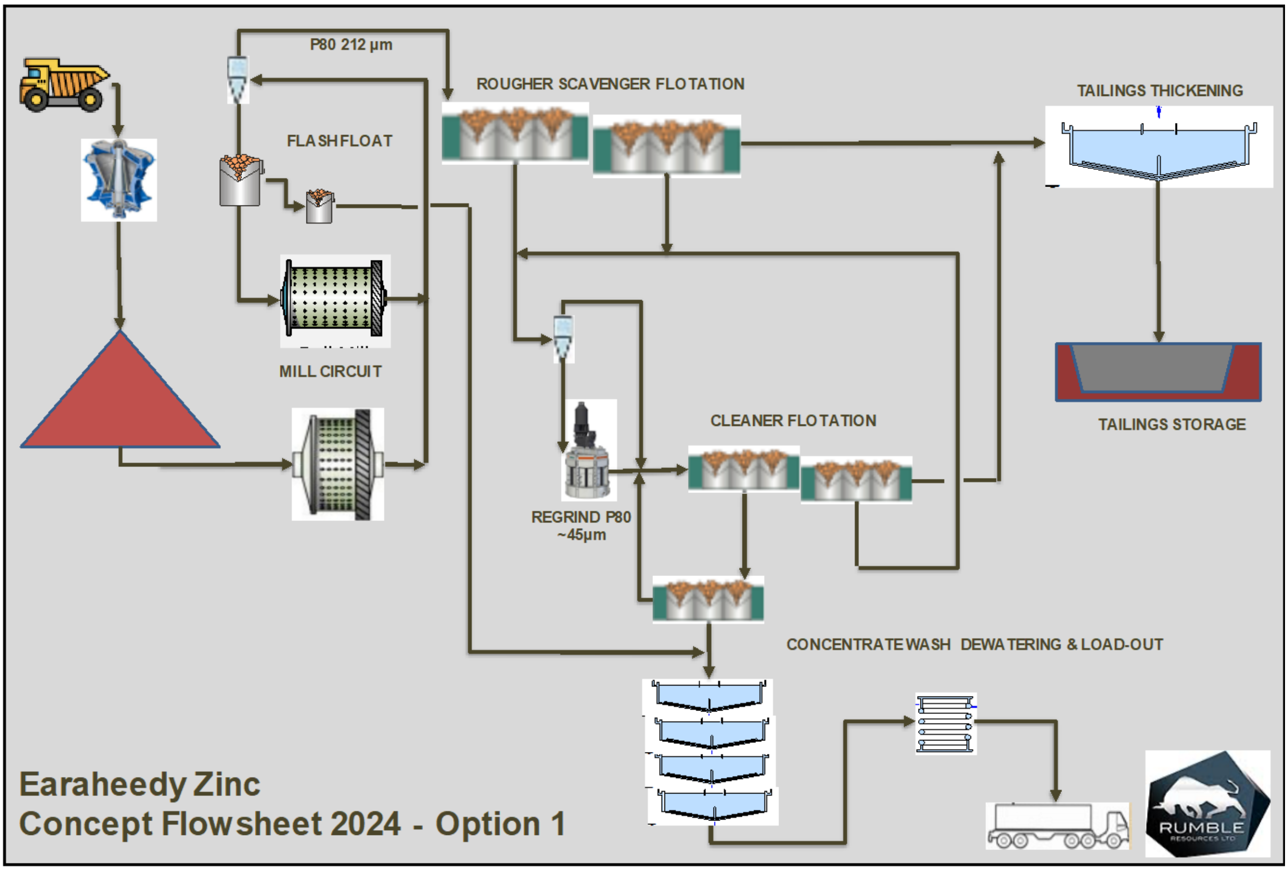
- **Option 1** – A conventional flotation flowsheet producing a bulk Zn-Pb concentrate
- **Option 2** – A Hydrofloat™ flotation flowsheet producing a bulk Zn-Pb concentrate

Option 1 was previously proposed following the November 2022 sighter studies and consists of a single stage crusher feeding a SAG (+/- Ball) mill grinding circuit in parallel prior to flotation.

In Option 2 the Hydrofloat™ would be installed within the grind section of the plant. Here, the coarser size fraction in the secondary classification process is fed to the Hydrofloat™. The tailings produced from the Hydrofloat™ are final tailings, allowing the removal of roughly 35% w/w of the total coarse gangue material at coarse fractions (>400µm) in the early stages of the process.

In both options the remaining flotation circuit will consist of a conventional scheme that includes rougher, scavenger flotation with the rougher concentrate being reground prior to two stages of cleaner flotation.

The final metal concentrate is ultimately washed prior to filtration.



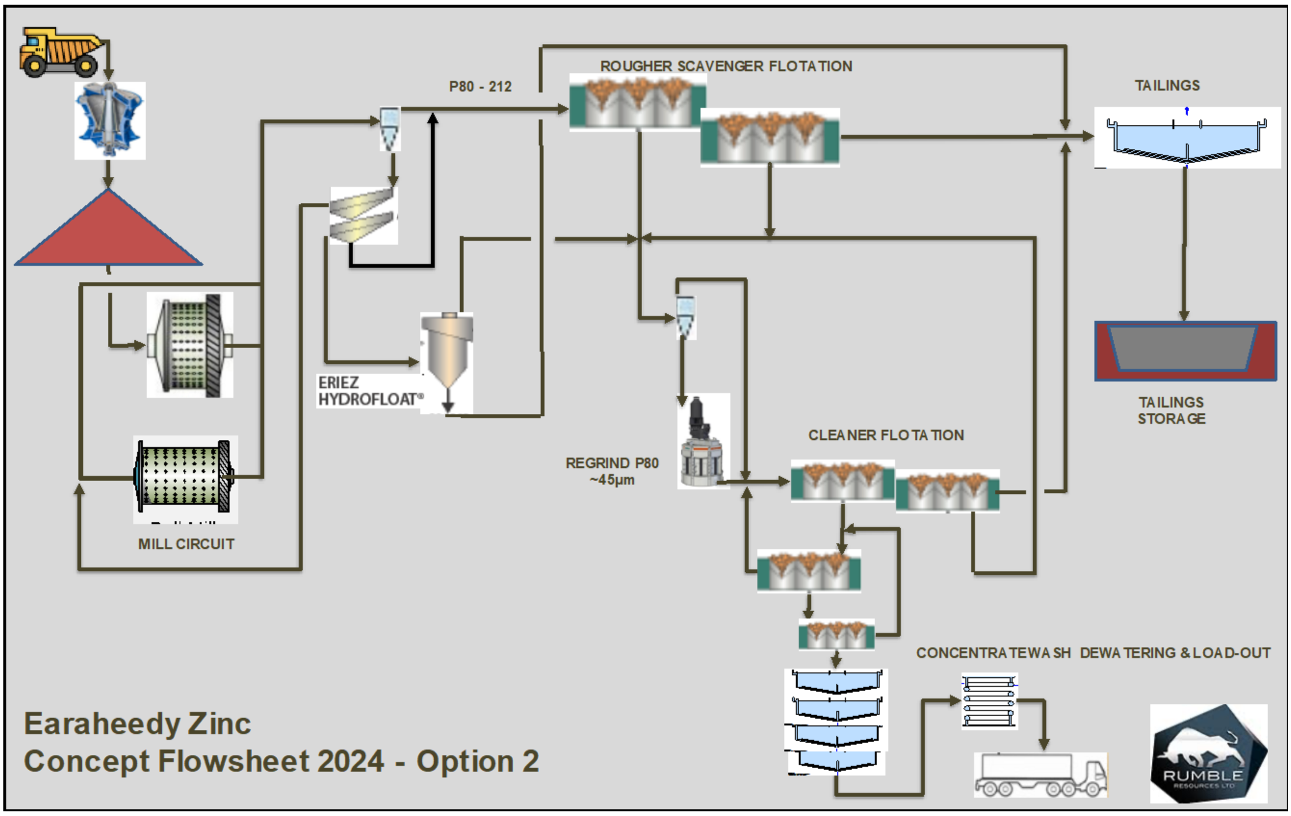


Figure 8 Proposed Flowsheet Options – Chinook

Next Steps at Earaheedy

- An internal scoping study to provide an order of magnitude estimation of the potential project economics of the Earaheedy mineral resource and will include the examination a range of options and studies that will assist in delivering an optimised open pit, plant flowsheet and other infrastructure inputs for engineering design;
- Complete further geometallurgical studies to improve ore characterisation of the resources and when combined with spatial modelling, the resulting block model and mine schedule will provide the optimal ore feed schedule to the process plant;
- Further optimise metal recovery and concentrate grade to improve the project economics, particularly the lead and silver in the concentrates using alternate collectors and or conditions;
- Identify alternate techno-economic opportunities to lower any penalty elements in the bulk concentrate;
- Carry out a marketing study to review the opportunities for the bulk concentrate offtake;
- Perform flotation tailings concentrate and thickening and filtration testwork;
- Perform geotechnical testwork on the flotation tailings samples when the optimal flowsheet is finally determined.

About the Earaheedy Project

The potentially world class Earaheedy Zn-Pb-Ag Project is located 110km northeast of Wiluna in Western Australia, with access to major highways, power (gas pipeline), rail, ports, airports and experienced mining workforce (refer to Figure 9). The Project includes tenement (E69/3464), which forms the Rumble Resources Ltd 75% / Zenith Minerals Ltd (ASX: ZNC) 25% Joint Venture (JV), and tenements E69/3787, E69/3862 and newly added tenements E69/4124 and E69/4149, which are all 100% controlled by Rumble.

In addition to the above tenements, Rumble is acquiring 100% ownership in four granted exploration licences that lie north and northwest of the existing tenure (refer to ASX release 24 October 2023). These tenements include E69/3815, E69/3842, E69/3889 and E52/3879. The addition of the latest tenure will increase the Earaheedy Project landholding to over 1206km² in area.

Rumble announced a major discovery on 19 April 2021 and two years later on 19 April 2023, announced a globally significant, pit constrained, maiden inferred Mineral Resource Estimate (MRE) of **94Mt @ 3.1% Zn+Pb and 4.1g/t Ag at a 2% Zn+Pb cutoff** (refer to ASX release dated 19 April 2023). This maiden MRE confirmed the Earaheedy Project as one of the largest global zinc sulphide discoveries in the last decade. The strength of the MRE is supported by a 41Mt of higher-grade resources that could be part of a possible early development scenario, and a much larger 462Mt resource (at a 0.5% cut-off) that could potentially be upgraded via beneficiation, providing the project with significant future flexibility.

The Earaheedy Zn-Pb-Ag Project has exceptional near-term growth potential with the deposits open in all directions. The recent tenement additions has significantly **increased the strike potential to over 70km, with less than 25% of the host unconformity effectively tested**. Drilling by Rumble has focused on the Navajoh Unconformity Unit (host to the current resources) with the aim to find additional large shallow flat lying sulphide deposits (i.e. Chinook and Tonka-Navajoh) amenable to large scale open cut mining, whilst none of the thick underlying geologically fertile formations which could potentially host high-grade Mississippi Valley Type (MVT) deposits have yet to be tested.

The sheer scale, optionality, location and extraordinary growth potential of Earaheedy could see the project stamp itself as a world class, multi-decade production asset and play a key role in the future global renewable energy transition.

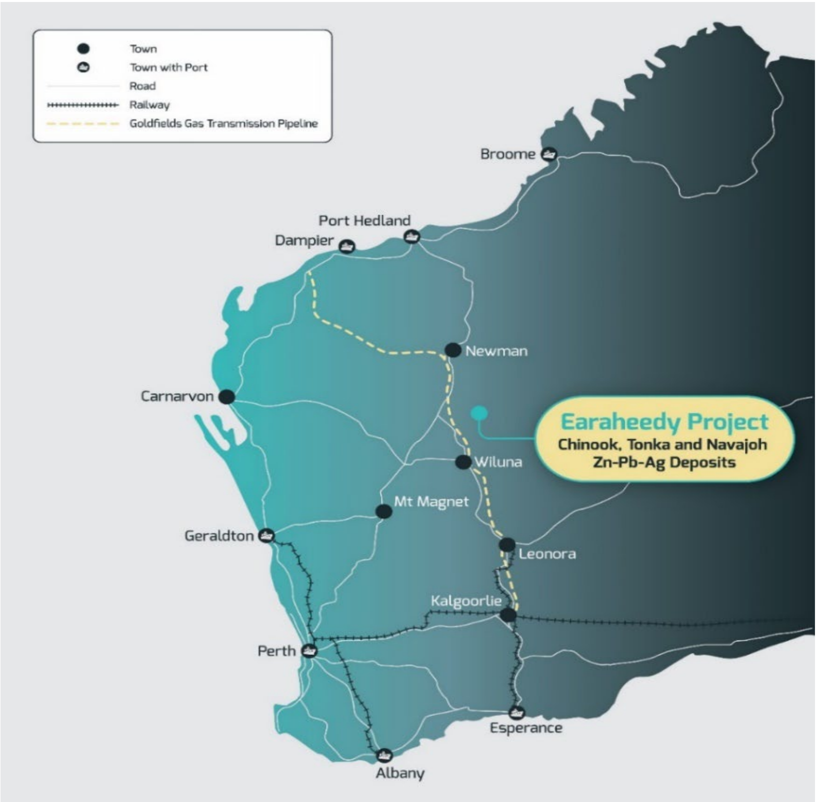


Figure 9 - The Earaheedy Zn-Pb-Ag-Cu Project location and existing infrastructure within Western Australia.

Authorisation

This announcement is authorised for release by Peter Harold, Managing Director and CEO of the Company.

-Ends-

For further information visit ***rumbleresources.com.au*** or contact ***info@rumbleresources.com.au***.

Peter Harold Managing Director & CEO Rumble Resources Limited info@rumbleresources.com.au	Peter Venn Technical Director Rumble Resources Limited	Trevor Hart Chief Financial Officer Rumble Resources Limited

About Rumble

Rumble Resources Ltd is an Australian based exploration company, listed on the ASX in July 2011. Rumble was established with the aim of adding significant value to its selected mineral exploration assets and to search for suitable mineral acquisition opportunities in Western Australia.

Rumble has a unique suite of resources projects including the Western Queen Gold Project which has the potential to deliver near term cash flow from the existing open pit resources and resource growth through future exploration success. In addition, the discovery of the Earaheedy Zn-Pb-Ag Project has demonstrated the capabilities of the exploration team to find world class orebodies.

Previous Announcements

Previous results reported to ASX include:

- ASX Release 19/4/2021 – Major Zinc-Lead Discovery at Earaheedy Project, Western Australia
- ASX Release 2/6/2021 – Large Scale Zinc-Lead-Silver SEDEX Style System Emerging at Earaheedy
- ASX Release 8/7/2021 – Broad Spaced Scout Drilling Has Significantly Increased the Zn-Pb-Ag-Mn footprint at Earaheedy
- ASX Release 23/8/2021 – Earaheedy Zn-Pb-Ag-Mn Project – Exploration Update
- ASX Release 13/12/2021 - New Zinc-Lead-Silver Discovery at Earaheedy Project
- ASX Release 21/12/2021 – Major Zinc-Lead-Silver-Copper Feeder Fault Intersected
- ASX Release 20/1/2022 – Two Key Tenements Granted at Earaheedy Zn-Pb-Ag-Cu Project
- ASX Release 31/1/2022 – Shallow High-Grade Zn-Pb Sulphides Intersected at Earaheedy
- ASX Release 21/2/2022 – Further High-Grade Zn-Pb Results and Strong Grade Continuity
- ASX Release 9/3/2022 – Major Expansion of Zn - Pb Mineralised Footprint at Earaheedy
- ASX Release 26/5/2022 - Multiple New High-Grade Zn-Pb Zones defined at Earaheedy
- ASX Release 18/7/2022 – Heritage Clearance Confirmed- Sweetwater drilling commenced
- ASX Release 23/08/2022 – Significant Zones of Zn-Pb Sulphides Intersected
- ASX Release 30/08/2022 – High grade Zn-Pb drill intercepts at Tonka
- ASX Release 29/09/2022 – New 2.2km High Grade Chikamin Feeder Zone extends Chinook
- ASX Release 3/11/2022 – High Grade System Discovery Chinook inc. 3.37% Cu 4450g/t Ag
- ASX Release 17/11/2022 – Exceptional Metallurgical Results at Earaheedy Project
- ASX Release 16/02/2023 – Multiple New High-Grade Feeder Targets Defined
- ASX Release 14/03/2023 – Chinook Zn-Pb Prospect expands to 8km strike
- ASX Release 19/04/2023 – Maiden Resource Confirms Earaheedy's World Class Potential
- ASX Release 03/05/2023 – Heritage Clearance Received for Navajoh Southeast Trend
- ASX Release 01/06/2023 – High impact drilling commences at the Earaheedy Project
- ASX Release 17/07/2023 – Zinc Lead Mineralisation Discovered in Drilling
- ASX Release 5/10/2023 – High Grade Zinc-Lead intersected at the Mato Prospect
- ASX Release 31/10/2023 – Mato Discovery Confirmed with Further High-Grade Zn-Pb Mineralisation
- ASX Release 21/02/2024 - Mato Discovery Continues to Grow with new high-grade Zn-Pb sulphide mineralisation intersected
- ASX Release 13/03/2024 – Earaheedy Project Tenement Acquisition Completed

Competent Persons Statement

The information in this announcement that relates to exploration results is based on information reviewed by Mr Peter Venn, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Venn is Technical Director to Rumble Resources Ltd. Mr Venn has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Venn consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to metallurgy and metallurgical test work is based on and fairly represents information has been reviewed by Mr Ivan Hunter of Scott Dalley Francks. Mr Hunter is a metallurgist who is providing services as a consultant to Rumble. Mr Hunter is a member of the AusIMM (MAusIMM). Mr Hunter has sufficient experience that is relevant to the styles of mineralisation and types of deposit under consideration, and to the activity being undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). Mr Hunter consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

Previously Reported Information

The information in this report that references previously reported exploration results is extracted from the Company's ASX market announcements released on the date noted in the body of the text where that reference appears. The previous market announcements are available to view on the Company's website or on the ASX website (www. asx.com.au). The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

Disclaimer

This report contains certain forward-looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Rumble Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Rumble Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors. Nothing in this report should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities. This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference in this document have been, and will be, prepared in accordance with the JORC classification system of the Australasian Institute of Mining, and Metallurgy and Australian Institute of Geoscientists.

Table A

Chinook Diamond Drillhole Collar information –

Hole ID	E (GDA94 Z51)	N (GDA94 Z51)	Depth (m)	Dip	Azi	Area
EHD034	252003.71	7166205.64	760	-80	180	Chinook
EHD035	251776.82	7166209.59	180	-80	210	Chinook
EHD036	251027.16	7166114.74	104.6	-80	210	Chinook
EHD038	249489.63	7167450.26	213.5	-83	210	Chinook
EHD039	251858.43	7165947.10	101	-80	210	Chinook
EHD040	251046.89	7166556.05	149.4	-80	240	Chinook
EHD041	253921	7165767	138.3	-85	223	Chinook
EHD042	251390.17	7166315.48	167.1	-80	310	Chinook
EHD043	253058.81	7165558.62	125	-80	210	Chinook
EHD044	252912.88	7165702.09	113.7	-80	315	Chinook
EHD045	250766.94	7166855.78	170.1	-84	195	Chinook

Appendix 1 – Drill Hole Details and JORC Tables

Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.*	• Diamond core tail involved PQ3 coring using 3m barrel. Subject to core recovery, the PQ core is cut in half (along long axis) and then one half core is further cut into quarter core. Half core was used for metallurgical test work, quarter core was used for wet assay and the final quarter was initially retained although later also used for test work. • pXRF analysis (Vanta Olympus XRF Analyser) taken every 25cm (ore zone) or 50cm on the core. • Sampling for assays chosen based on logging and pXRF data. Sample breaks typically on the metre except where a change in lithology or oxidation state occurs. • Samples sent to ALS, Malaga, Perth, WA and were assayed using a four acid digest and read by ICP-AES analytical instrument. At total of 33 elements are reported including Ag, Al, As, Ba, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn. • For Metallurgy test work, half and quarter PQ3 core (and later quarter core) were bagged up in intervals the same as those sent for lab assay. Samples were then weighed and bagged in green plastic bags secured with zip ties. These were stored in a cool room on site. • Metallurgical samples collected were dispatched to Auralia Metallurgy in Perth for analysis and testing.
Drilling techniques	• *Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.)..*	• Diamond core drilling from surface. In some holes rock rolling was used in softer ground above the min zone. Core is PQ3 triple tube. Core is orientated if ground conditions are competent enough to allow. Reflex Act III downhole orientation tool was used.
Drill sample recovery	• *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*	• Diamond core measured and recoveries noted per drilling run. • Sample recovery was maximized during drilling by the use of products down hole including Potassium Chloride, Vis Gel, and Ezee Pac.

Criteria	JORC Code explanation	Commentary
	fine/coarse material.	• Where sample was not recovered in diamond core a break in sampling was made. Lost sample is assumed to be finer grained on average but it is not known how to may affect grade.
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.*	• The PQ3 core is marked up for recovery, orientated (where possible) and geologically logged. Petrographic and mineragraphic samples have been taken subject to logging. pXRF analysis is also completed for later interpretation and reference. • Logging by all contractors and employees was at an appropriate detailed quantitative standard to support future geological, resource and technical and economic studies. • Logging is qualitative (e.g. lithology) or quantitative (e.g. mineralisation %) where appropriate. • All recovered core was logged. • Photographs were taken (wet, dry, and close ups when required) for all core after mark up and logging. Photographs were taken with a Canon EOS 1500D on an angled frame to avoid reflections or shadows.
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.*	• Diamond Core drilling sub-sampling techniques are subject to core recovery. Core cut by automatic diamond saw where hard or divided by paint scraper where soft and sent as quarter core to laboratory for wet analysis. • Core was divided just off the orientation line so as to retain the line. The same quarter was used for assay throughout the hole to avoid any bias in sample selection. • Duplicate samples show acceptable repeatability considering the variability of the mineralisation. • PQ3 sample size is appropriate for the fine to medium grained material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory*	• The assigned assaying methodology (4 acid) is total digest. • A Vanta pXRF analyser was used to threshold the collection of samples for wet analysis along with logging observations. pXRF results are not reported. • Duplicates taken 5/100 samples. The primary sample is quarter core,

Criteria	JORC Code explanation	Commentary
	checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	and the duplicate is also quarter core. • Standards were inserted 4/100 samples and a coarse blank was inserted 2/100 samples. 4 standards (OREAS CRMs) of typical Zn, Pb and Ag levels found in the deposit and one blank were used. • In addition to Rumble's QA/QC methods (duplicates, standards and blanks), the laboratory has additional internal QA/QC procedures. • QA/QC results showed acceptable levels of accuracy and precision. • All metallurgical assays performed on the hole composites were in good agreement
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.*	• Significant intersections reported by company personnel only. • Diamond drill holes in this program were designed to twin RC drill holes. Holes were targeted with 80 degree dips (as opposed to vertical RC holes) so that oriented core could be produced. Holes were designed such that the mineralised zone would be as close to that of the RC twin as possible. However holes were kept 5m away from the RC twin so as to avoid the "damaged zone" from the high pressure air during RC drilling. • Diamond twins in this program show on average lower grades than their twins. This is attributable to a regression to the mean effect considering that the chosen RC holes to twin are located in well mineralised zones and the mineralisation can be moderately variable on the 5-10m scale. • Sampling and logging data is entered into and verified in OCRIS software, which is backed up online using dropbox, then exported to the database. Assay results are sent directly from the lab to the database and no adjustments are made. • Metallurgical testwork assays performed at ALS Metallurgy and Nagrom Laboratories
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*	• All drillhole collars were initially surveyed using handheld GPS – Datum is MGA94 Zone 51 at the

Criteria	JORC Code explanation	Commentary
	Resource estimation. • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	immediate conclusion of drilling. • Drillhole collars were subsequently picked up by use of a RTKGPS by a contractor surveyor at a later date. • Holes were surveyed downhole every 30m and end of hole during drilling by the drill contractor using a Reflex Gyro Sprint-IQ in multishot mode.
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.*	• No resource work completed. The diamond drilling is reconnaissance (scoping) by nature and designed to provide sample for metallurgy test work
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.*	• Previous (and historical) drilling has defined a consistent very shallowly dipping (<10 degrees) sedimentary package. Drilling is approximately normal (90°) to the mineralised intersections. True width reported. No bias. • Diamond and sonic core drilling was near vertical (80 degrees dip). Drill hole length reported.
Sample security	• *The measures taken to ensure sample security.*	• All sampling packaging and security completed by Rumble personnel, from collection of sample to delivery at laboratory.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits completed.

Section 2 Reporting of Exploration Results

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.*	• The drilling was completed on granted exploration license E69/3464 (75% Rumble and 25% Zenith Minerals) and granted exploration license E69/3787 (100% Rumble). • E69/3464 and E69/3787 are in a state of good standing and have no known impediments to operate in the area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration solely completed by Rumble Resources
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Earaheedy Project deposit type is a flat lying carbonate hosted MVT variant (Irish Style in part) of Palaeoproterozoic age. The Sweetwater's Well Dolomite unit within the Earaheedy Basin hosts the primary mineralisation. "Unconformity" hosted mineralisation immediately overlies and is derived from the carbonate mineralisation via supergene processes.
Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* ○ *easting and northing of the drill hole collar* ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* ○ *dip and azimuth of the hole* ○ *down hole length and interception depth* ○ *hole length.* • *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Table A - Location and Survey information for all diamond holes used in the Metallurgical testwork are provided in this document
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• Not Applicable as no exploration results being reported.
Relationship between mineralisation widths and	• *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*	• Drilling is near vertical. Mineralisation is near flat. Width of mineralisation is approximately true width.

Criteria	JORC Code explanation	Commentary
intercept lengths	*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').*	
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.*	• Appropriate diagrams, including geological plans are included in the main body of this release.
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 known exploration and metallurgical results have been reported. • Reports on other exploration activities at the project can be found in ASX Releases that are available on our website www.rumbleresources.com.au
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.*	• All material and meaningful data collected 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 work will aim to provide a strong metallurgical and mineralogical model and further refine the process flowsheet. • An internal Scoping Study to commence in the near term