23 April 2019

ASX Announcement

ZINC OF IRELAND NL

EXCEPTIONAL PRELIMINARY METALLURGICAL RESULTS FROM KILDARE ZINC PROJECT

Highlights:

- **<u>Zinc Concentrate:</u>**
  - **96% recovery of Zn to concentrate.**
  - **56% Zn in concentrate.**
  - **Minimal Pb in Zn concentrate (<0.5%).**
- **<u>Lead Concentrate</u>:**
  - **86% recovery of Pb to concentrate.**
  - **62% Pb in concentrate.**
  - **Minimal Zn in Pb concentrate (<3%).**
- **Minimal levels of deleterious elements in either concentrate.**
- **Standard differential flotation process employed using a standard reagent scheme.**
- **Low expected energy costs (BWI 10.2kWh/t) to achieve target grind size (P_{80} 150µm).**
- **Additional process refinements will be aimed at optimising metallurgical performance.**
- **Results to be used as part of an ongoing assessment of project economics.**

Zinc of Ireland NL (ASX: ZMI) (**ZMI** or **Company**) is pleased to announce that the preliminary metallurgical test work at the Kildare Project has yielded very positive results, demonstrating the potential for the project to produce high quality, marketable, zinc and lead concentrates (summarised in the tables below).

Test Head Grade		Total Recovered to Concentrate				Combined Tails		
Zn	Pb	Mass (%)	Zn Rec (%)	Mass (%)	Pb Rec (%)	Mass (%)	Zn Rec (%)	Pb Rec (%)
10.83	1.87	18.50	96.39	2.60	86.44	78.90	3.61	13.56

Zinc Concentrate				Lead Concentrate			
Zn Rec (%)	Zn Grade (%)	Pb Rec (%)	Pb Grade (%)	Pb Rec (%)	Pb Grade (%)	Zn Rec (%)	Zn Grade (%)
96.39	56.43	4.59	0.46	86.44	62.35	0.66	2.75

This preliminary round of testing was designed to support the ongoing assessment of the economic potential of the Kildare Project in conjunction with the other parallel resource and development studies taking place in 2019.

The test work program has been completed by Grinding Solutions Ltd. (UK) under the supervision of ZMI's metallurgical consultant. The representative sample comprised a composite sample of approximately 50kg of quarter HQ diamond drill core taken from the main zone of base of reef massive sulfide at McGregor with a head grade of 10.1% Zn and 1.8% Pb.

Although these preliminary test results are indicative, it is expected that process refinements, including a basic process flow sheet, will lead to maximising the grade and recovery in future test work. Both the zinc and lead concentrates show only very low levels of potentially deleterious elements and therefore should be viewed as 'clean' and as such, should attract premium payment from potential buyers.

Additional metallurgical test work to support more detailed analysis and assessment will be initiated following the upcoming drilling campaign and as part of the ongoing assessment of the project economics.

Please see ZMI's ASX announcement dated 13 November 2018 for additional background, and the tables appended hereto for further details.

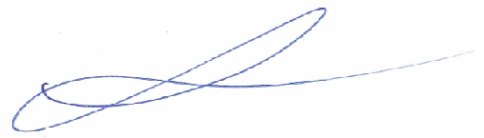
ZMI Executive Director, Patrick Corr, said:

"These preliminary test work results have exceeded our expectations, even given that Irish-type zinc projects, such as Kildare, are renowned for their outstanding metallurgical performance.

Simple grinding, excellent recoveries and high grades in clean concentrates is about as good as you can get from such a standard test work program. We believe minor improvements are still possible via straightforward optimization testwork and study.

This is a timely confidence building step for the Kildare Project as our focus shifts to our upcoming drilling campaign within the Allenwood Graben. The first phase of the program is designed to target areas with the potential to host significant zones of high-grade zinc mineralisation similar to that at McGregor."

Yours faithfully,



Patrick Corr
Executive Director
Zinc of Ireland NL

Investor Inquiries:
Patrick Corr
Tel: +61 459 209 093
Email: patrick@zincofireland.com

Competent Persons' Statements

The information in this report that relates to exploration results is based on information compiled by Mr. Sean Hasson, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr. Hasson is Zinc of Ireland NL's Exploration Manager. Mr. Hasson has sufficient experience, which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been 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. Hasson consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

The information in this report is based on the results of metallurgical test work undertaken by Grinding Solutions Ltd. (UK). The work has been monitored and interpreted on behalf of Zinc of Ireland NL by Dr Simon Meik, FAusIMM CP (No. 106146), who has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which has been 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). Dr Meik consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Disclaimer

Certain statements contained in this announcement, including information as to the future financial or operating performance of ZMI and its projects, are forward-looking statements that:

- *may include, among other things, statements regarding targets, estimates and assumptions in respect of mineral reserves and mineral resources and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions;*
- *are necessarily based upon a number of estimates and assumptions that, while considered reasonable by ZMI, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; and,*
- *involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.*

Table 1. Test FT2 – Rougher Flotation @ P_{80} of 150µm

Product	Mass			Assay		Cumulative Recovery		Cumulative Grade	
	g	Sum g	Sum %	% Pb	% Zn	% Pb	% Zn	% Pb	% Zn
FT2 Carbon Pre-float	35.1	35.1	3.6	1.16	3.49	1.96	1.17	1.16	3.49
FT2 Pb Ro 1	27.0	27.0	2.7	62.08	4.45	80.81	1.15	62.08	4.45
Pb Ro 2	9.8	36.8	3.7	17.16	7.01	88.93	1.81	50.12	5.13
Pb Ro 3	4.5	41.3	4.2	5.78	7.47	90.17	2.12	45.32	5.38
Pb Ro 4	3.0	44.3	4.5	3.51	5.49	90.68	2.28	42.49	5.39
Pb Ro 5	2.3	46.6	4.7	2.69	4.81	90.98	2.39	40.51	5.36
Zn Ro 1	154.2	154.2	15.6	0.19	56.62	1.41	83.41	0.19	56.62
Zn Ro 2	39.8	194.0	19.6	0.33	32.09	2.04	95.60	0.22	51.59
Zn Ro 3	15.4	209.4	21.2	0.42	3.02	2.36	96.05	0.23	48.02
Ro Tails	697.4	697.4	70.6	0.14	0.06	4.70	0.39	0.14	0.06
Totals	988.6	988.6	100.0	2.10	10.59	100.00	100.00		

Table 2. Test FT3 – Cleaner Flotation of Test F2 concentrates

Product	Sum Mass %	Assay %		Sum Recovery %		Sum Grade %	
		Pb	Zn	Pb	Zn	Pb	Zn
Carbon pre float	3.56	1.19	4.15	2.26	1.36	1.19	4.15
Pb Cl Kin 1	0.89	66.10	0.88	31.33	0.07	66.10	0.88
Pb Cl Kin 2	1.74	67.19	2.23	61.69	0.25	66.63	1.54
Pb Cl Kin 3	2.35	64.81	5.05	82.98	0.53	66.15	2.46
Pb Cl Kin 4	2.43	39.85	4.42	84.70	0.57	65.28	2.52
Pb Cl Kin 5	2.54	25.26	6.22	86.21	0.63	63.52	2.69
Pb Cl Kin 6	**2.60**	7.85	5.91	**86.44**	**0.66**	**62.35**	**2.75**
Pb Cl Tail	3.28	2.07	4.71	87.19	0.96	49.78	3.16
Zn Cl Kin 1	3.69	0.33	58.99	0.65	20.12	0.33	58.99
Zn Cl Kin 2	5.23	0.53	53.41	1.09	27.72	0.39	57.35
Zn Cl Kin 3	6.22	0.71	49.71	1.46	32.24	0.44	56.14
Zn Cl Kin 4	7.09	0.87	44.33	1.86	35.80	0.49	54.69
Zn Cl Kin 5	16.78	0.41	61.28	3.98	90.61	0.44	58.50
Zn Cl Kin 6	**18.50**	0.66	36.30	**4.59**	**96.39**	**0.46**	**56.43**
Zn Cl Tail	22.76	0.31	0.14	5.29	96.44	0.44	45.90
Ro Tails	70.40	0.14	0.19	5.26	1.24	0.14	0.10
Totals	100.00	1.87	10.83	100.00	100.00		

* The Pb Cl Kin 6 and Zn Cl Kin 6 represent the deliverable concentrate grades and recoveries.

Table 3. Detailed Product Analysis (ICP Scan)

Sample	Pb Cl 1 Concentrate	Zn Cl 1 Concentrate	Pb Cl 1 Tailings	Zn Cl 1 Tailings	Rougher Tailings	
Al	185	239	937	640	325	ppm
As	219	161	246	261	274	ppm
B	2	1	2	1	<1	ppm
Ba	<1	1	4	4	2	ppm
Be	<1	<1	<1	<1	<1	ppm
Bi	1	3	2	2	4	ppm
Ca	>10000	>10000	>10000	>10000	>10000	ppm
Cd	158	1736	125	15	5	ppm
Co	2	1	5	4	2	ppm
Cr	6	23	76	131	52	ppm
Cu	74	399	59	448	109	ppm
Fe	7930	>10000	>10000	>10000	>10000	ppm
Hg	3	13	4	2	2	ppm
K	84	220	812	679	409	ppm
Li	<1	<1	2	4	4	ppm
Mg	56	93	483	728	848	ppm
Mn	88	131	758	1017	1021	ppm
Mo	3	4	15	18	6	ppm
Na	44	150	66	69	47	ppm
Ni	20	18	78	96	39	ppm
Pb	>10000	4222	>10000	1848	843	ppm
Sb	234	70	27	21	18	ppm
Se	1	1	<1	1	1	ppm
Sr	5	8	55	76	76	ppm
Ti	2	7	6	4	4	ppm
Tl	3	27	2	2	5	ppm
V	3	2	9	6	4	ppm
Zn	>10000	>10000	>10000	2829	1343	ppm

Table 4. McGregor Metallurgical Composite Sample Details

HOLE ID	SAMPLE ID	FROM	TO	INTERVAL	kg	Pb %	Zn %	Ag ppm	As ppm	Bi ppm	Cd ppm	Co ppm	Cu ppm	Fe %	Hg ppm	Mn ppm	Ni ppm	S %	Sb ppm	Tl ppm
Z_4069_027	56951	457.4	458.4	1	1.64	0.005	0.005	0.5	25	50	5	5	25	0.11	4	300	5	0.06	70	25
Z_4069_027	56952	458.4	458.75	0.35	0.73	0.74	12.7	4	390	25	540	10	25	15.8	4	1360	10	23.8	90	25
Z_4069_027	56953	458.75	459	0.25	0.61	0.09	3.54	2	290	25	150	5	25	9.02	4	1070	10	11.8	50	25
Z_4069_027	56954	459	459.7	0.7	1.41	0.96	13.7	5	650	25	620	10	25	24.2	4	990	10	33.3	100	70
Z_4069_027	56955	459.7	459.95	0.25	0.48	0.02	0.62	0.5	160	25	20	20	25	1.54	4	1230	10	1.96	90	25
Z_4069_027	56956	459.95	460.75	0.8	1.65	4.09	26.2	12	500	25	1360	5	25	17.55	11	780	20	32.5	180	80
Z_4069_027	56957	460.75	461.35	0.6	1.40	3.68	29.8	12	510	25	1410	5	25	17.85	4	490	20	34.3	80	25
Z_4069_027	56959	461.35	461.75	0.4	0.72	0.05	1.52	1	210	25	70	5	25	5.32	4	1170	20	6.63	350	25
Z_4069_027	56961	462.05	462.85	0.8	1.44	0.01	0.05	0.5	25	25	5	10	25	0.62	4	1290	5	0.71	50	25
Z_4069_027	56962	462.85	463.25	0.4	0.77	7.73	30.4	3	370	25	1310	5	25	9.57	4	750	5	26.1	90	90
Z_4069_027	56963	463.25	463.5	0.25	0.47	2.19	13.55	1	70	25	560	5	25	1.68	4	2240	5	8.82	90	25
Z_4069_027	56964	463.5	464	0.5	1.07	2.05	15.2	1	380	25	570	5	25	12.9	4	1490	10	22.1	50	25
Z_4069_027	56965	464	464.8	0.8	1.57	3.64	19.55	11	420	25	910	5	25	17.15	4	960	20	28.9	110	25
Z_4069_027	56966	464.8	465.2	0.4	0.72	0.08	0.47	0.5	110	25	20	5	25	9.66	4	1740	10	11	60	25
Z_4069_027	56967	465.2	465.9	0.7	1.23	0.09	1.54	0.5	25	25	60	5	25	0.89	23	840	5	1.72	50	25
Z_4069_027	56968	465.9	466.65	0.75	1.47	0.25	18.7	4	260	25	670	5	25	9.27	4	1250	30	19.55	80	25
Z_4069_027	56971	467.25	468.1	0.85	1.92	12.65	25.8	7	510	25	1210	5	25	11.5	4	910	5	27.1	130	25
Z_4069_027	56972	468.1	468.6	0.5	0.72	0.05	0.09	0.5	60	25	5	5	25	1.55	4	2700	5	1.71	25	25
Z_4069_027	56973	468.6	469	0.4	0.71	0.37	1.77	2	290	25	80	5	25	17.05	4	2170	10	20.1	50	25
Z_4069_027	56974	469	469.7	0.7	1.21	12.95	27.7	6	370	25	1190	5	25	9.68	13	920	5	26	300	60
Z_4069_027	56976	469.7	470.1	0.4	0.88	6.62	22.7	6	330	25	920	5	25	11	4	1430	20	24	110	25
Z_4069_027	56977	470.1	470.7	0.6	1.23	2.46	19.85	6	360	25	980	5	25	12.35	9	1590	10	23.7	100	60
Z_4069_027	56978	470.7	471.3	0.6	1.06	3.54	12.7	3	400	25	600	5	25	16.45	4	1330	10	25.1	100	25
Z_4069_027	56979	471.3	472.1	0.8	1.69	2.28	18.35	5	570	25	800	10	25	22.9	4	820	20	34.4	150	25
Z_4069_027	56980	472.1	472.8	0.7	1.41	3.63	34.2	12	460	25	1360	5	25	12.15	8	810	5	30.3	90	60
Z_4069_027	56982	473.5	474.1	0.6	1.14	4.34	26.6	5	460	25	1130	5	25	12.4	4	330	10	27.2	90	25
Z_4069_027	56983	474.6	475.3	0.7	1.09	0.36	3.01	2	380	25	120	10	25	12.75	4	1570	20	15.9	220	25
Z_4069_027	56984	475.3	476.05	0.75	1.51	1.05	21.9	6	630	25	860	5	25	19.8	9	860	20	32.5	100	25
Z_4069_027	56987	476.45	477.2	0.75	1.28	0.57	8.99	4	730	25	370	10	25	26.3	4	630	50	33.6	90	50
Z_4069_027	56988	477.2	478	0.8	1.25	0.01	0.1	0.5	70	25	5	10	25	2.7	4	2070	5	3.08	25	25
Z_4069_027	56989	478	478.9	0.9	1.72	1.84	21	7	610	25	910	5	25	14.3	8	1050	30	25.9	80	60
Z_4069_027	56990	478.9	479.1	0.2	0.34	0.01	0.11	0.5	25	25	5	5	25	0.18	4	780	10	0.23	60	25
Z_4069_027	56991	479.1	479.55	0.45	0.73	0.35	5.42	3	530	25	220	10	25	16.15	4	1210	60	21.1	80	25
Z_4069_027	56992	479.55	480.15	0.6	0.88	0.005	0.01	0.5	25	25	5	5	25	0.13	4	540	5	0.12	25	60
Z_4069_027	56993	480.15	480.5	0.35	0.38	0.38	9.58	3	580	25	350	5	25	11.9	4	1290	50	18.35	80	80
Z_4069_027	56994	480.5	481.6	1.1	1.70	0.66	8.23	2	390	25	340	5	25	6.61	4	1450	30	11.75	90	25
Z_4069_027	56996	481.6	482.5	0.9	1.58	0.01	0.11	0.5	170	25	5	10	25	3.35	4	1310	40	3.75	50	25
Z_4069_027	56997	482.5	483.5	1	1.51	0.05	0.31	1	360	25	10	10	25	7.08	4	1070	40	8.17	60	25
Z_4069_027	56998	483.5	484.8	1.3	2.17	0.04	0.03	1	160	25	5	5	25	4.73	4	1960	50	5.3	80	25
Z_4069_027	56999	484.8	485.5	0.7	1.11	0.15	3.27	2	460	25	110	5	25	13.55	4	1570	40	17.05	25	25
Z_4069_027	57000	485.5	485.8	0.3	0.52	0.03	0.01	0.5	50	25	5	10	25	1.31	4	2210	50	1.35	50	25
Z_4069_027	66051	485.8	486.9	1.1	1.86	0.21	1.35	1	310	25	50	10	25	12.05	4	1780	60	14.4	60	25
Z_4069_027	66052	486.9	487.5	0.6	1.02	0.11	0.15	1	230	25	10	10	25	9.21	4	1850	60	10.55	70	25
Z_4069_027	66053	487.5	487.9	0.4	0.65	0.04	0.02	0.5	25	25	5	5	25	1.07	14	1720	10	1.19	25	25
Z_4069_027	66054	487.9	488.5	0.6	0.68	0.06	0.19	1	210	25	10	10	25	7.39	4	1510	90	8.4	25	25
Z_4069_027	66055	488.5	489.5	1	1.60	0.03	0.04	1	160	25	5	10	25	4.31	4	2010	40	4.81	25	25
		Weighted Average				**1.8**	**10.1**	**3**	**324**	**26**	**438**	**7**	**25**	**10.1**	**5**	**1269**	**25**	**16.4**	**88**	**34**

ADDITIONAL INFORMTION
JORC CODE, 2012 EDITION – TABLE 1

The following sections are provided for compliance with requirements for the reporting of exploration results under the JORC Code, 2012 Edition.

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• The Company is focused on exploring the Allenwood Graben Zn Project which is part of the larger Kildare group of prospecting licences. • Given the distinct lack of surface rock outcrop and the prevalent glacial till cover the Company specifically relies on exploration diamond drilling to determine the 3D geological, structural and mineralisation context of the Allenwood Graben. As such the Company endeavours at all times to extract the maximum amount of geological information from its drill core. • The Company's current set of procedures for processing diamond drill core would be considered 'industry best practice'.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• Commonly tri-coning occurs through the overburden (glacial till) to depths of approximately 20m or when solid rock is encountered. • Diamond drill core diameter may be PQ/HQ3/NQ or NQ2. • Hex or full hole locking couplings are used on an as needs basis to promote hole stabilisation and reduce hole deviation as appropriate. • The core was orientated at the drill site using a Reflex ACT III tool.

Criteria	JORC Code explanation	Commentary
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 fine/coarse material.*	• Drill core has been logged for recovery by length of run, RQD and recovery per sample interval. • Triple tube coring has been used on an as needs basis to date. • There does not appear to be a relationship between core recovery and grade and assessment remains ongoing on a regular basis. • Sample recovery is maximised by drilling shorter length runs within zones of poor rock quality.
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.*	• Drill holes have been logged by a competent geologist in Ireland. The current logging procedures would be sufficient to meet the requirements for a mineral resource estimate. • Mineralisation/alteration/brecciation types, intensities, amounts and interpreted lithologies have been completed using a standardised logging template and ZMI's stratigraphic coding and nomenclature that has been defined so as to be relevant to the local geology and the styles of alteration, structure and mineralisation encountered. • Core photography (wet & dry) is routine.
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.*	• Sampling has occurred within lithological/mineralised domains as and where appropriate. The Company marks up the core in regular sample intervals i.e. 2m intervals NQ and 1.5m intervals HQ3 (maximum sample size) and uses industry standard core cutting machines to cut the core into two halves with the right-hand side of the core downhole being sampled consistently. The remaining half-core is retained for reference and the selection of bulk density samples. • The Company's sample preparation process would be considered "industry best practise" for this mineralisation style.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• Samples are prepared by ALS Loughrea, Co Galway by jaw crushing to a nominal 70% passing 2mm with a representative 250g sample then split using a rotary splitter. The split sample is pulverised to 85% passing 75um in a LM-2. • (ALS Code: ME-ICPORE) Ore grade analysis for base metals and associated elements by ICP-AES, following a strong oxidizing acid digestion. Elements (low reporting limit/upper limit) –units are % unless indicated otherwise: Ag (1/1500 ppm (µg/g)), As (0.005/30.0), Bi (0.005/30.00), Ca (0.01/50.0), Cd (0.001/10.0), Co (0.001/20.0), Cu (0.001/40.0), Fe (0.01/100.0), Hg (8/10000 ppm (µg/g)), Mg (0.01/50.0), Mn (0.005/50.0), Mo (0.001/10.0), Ni (0.001/30.0), P (0.01/20.0),

Criteria	JORC Code explanation	Commentary
		Pb (0.005/30.0), S (0.05/50.0), Sb (0.005/100.0), Tl (0.005/1.0), Zn (0.002/100.0). • The Company inserts appropriate certified reference material on a 1/20 basis. Field duplicates are taken on a 1/20 basis following the crushing stage and pulp replicates are taken on a 1/13 basis from the LM-2 bowl. • The laboratory (ALS Loughrea) also carries out its own comprehensive internal QAQC on all jobs submitted by the Company. • The Company QAQC data is reviewed by the responsible Geologist on a reported job basis and only after approval of said report is the data given the appropriate priority ranking within the acQuire database. • Nominal 30cm billets of half core are selected for bulk density determination either by standard weight in air/weight in water (non-porous rock) or by the wax coating method depending on the quality of the sample. Sample spacing is on a nominal 10m downhole basis for non-mineralised intervals and on a nominal 3m downhole basis within mineralised zones. • At present, approximately 17% of total analyses are related to the Company's QAQC programme. • Metallurgical testwork samples have been assayed at the Wheal Jane Laboratory, Cornwall, UK.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• All Company drill hole data is regularly validated upon its introduction into the acQuire database. The database Manager will report any potential sample overlaps, non-valid coding etc. to the responsible Geologist for appraisal. Until such a time as the responsible Geologist provides the correct information, said data resides within the database but is given a different 'priority level' and cannot be used as part of the final, validated database that would be used for a mineral resource estimate. • The Company has not specifically 'twinned' any historic (i.e. pre-ZMI) RC drill holes. • The Company has not specifically 'twinned' any historic (i.e. pre-ZMI) diamond drill holes and has not 'twinned' any of its own diamond drill holes. There may be some ZMI drill holes that would be considered as having been drilled 'near' to some historic drill holes. • The Company has on site a written set of procedures dealing with all aspects of the 'Exploration Programme' e.g. dealing with zones of core loss in drill core through to data flow 'sign off' requirements, all of which have been specifically designed to be used with the acQuire database management system.

Criteria	JORC Code explanation	Commentary
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Proposed drill hole collar surveys are determined by hand-held GPS in Irish Grid 65. • Final drill hole collars have been surveyed either by handheld GPS or by a differential GPS: Trimble GPS6000 (RTK GPS accurate to 5mm) • Downhole surveys are determined by Reflex EZ-TRAC. • The principal area of exploration drilling would be considered relatively flat with no significant topographic constraints.
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.*	• Drill spacing is currently appropriate to the level of exploration being conducted by the Company and have been designed to provide the maximum amount of geological, grade continuity and structural information.
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.*	• Base metal mineralisation at the 'base of reef' i.e. Waulsortian Limestone lower contact is known to be sub-horizontal based on the results of historic drilling.
Sample security	• *The measures taken to ensure sample security.*	• Samples are prepared and stored at the Company's secure Grangeclare West core shed facility until such a time as they are transported to the ALS Loughrea facility by Company representatives.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No material audits or reviews to date.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• The Kildare Project is comprised of 7 Prospecting Licenses, namely PL890, PL3846, PL3866, PL4069, PL4070, PL4072 and PL4073 all of which are in 'good standing'. • All tenements are 100% owned by Raptor Resources, a 100% owned subsidiary of Zinc of Ireland NL. • No historical, wilderness or national parks are known to infringe significantly on the tenure.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Historical exploration is outlined in GXN Announcement dated 17th March 2016 and associated annexes. • Also, please see asx.com.au, under 'ZMI'.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Kildare Project is situated approximately 2km NW of the Lower Palaeozoic Kildare Inlier on a northeast-southwest trending fault. Local geology consists of calcareous sediments conformably overlying Carboniferous Waulsortian Mudbank. This mudbank overlies a thick succession of carbonates and limestones above Paleozoic basement rocks. • The area is considered prospective for breccia-hosted Fe-Zn-Pb deposits similar to Irish-Type mineralisation.

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.*
		• **Z_4069_027**: 276254mE, 224941mN, 79mRL, -54 dip, 246 azimuth, total depth 587.50m.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade*	• Future reporting of mineralised intervals will incorporate the appropriate information.

Criteria	JORC Code explanation	Commentary
	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.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• The Company will endeavour to provide the requisite information on intercept lengths and mineralisation lengths relationships on an as required basis as exploration drilling results are returned.
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.*	• The Company regularly observes this requirement.
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.*	• The Company regularly observes this requirement.
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.*	• The Company regularly observes this requirement.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially*	• The Company regularly observes this requirement and acknowledges that it will inform the market to the best of its abilities providing that the information is not commercially sensitive.

Criteria	JORC Code explanation	Commentary
	sensitive.	