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Companies Announcements Office
Australian Stock Exchange

4 June 2019

Update on Tartana Resources Limited

SciDev Ltd (ASX:**SDV**, **SciDev** or the **Company**) is pleased to advise that Tartana Resources Limited has released excellent Exploration Targets for the Tartana Copper/Zinc Project (Queensland) and an Indicated Resource for the Zeehan Project (Tasmania).

The full text of Tartana's announcement is attached. SciDev understands that Tartana Resources Limited is moving towards commencing its ASX IPO capital raising process in the near future.

SciDev currently owns 19.9% of Tartana Resources Limited and will hold a significant position in the Company moving forward. This will give SciDev and its shareholders exposure to the exciting upside at all Tartana's project areas, particularly the Tartana and Zeehan Projects.

Further details will be provided as they come to hand.

On behalf of SciDev Ltd

Lewis Utting
Managing Director and CEO
SciDev Ltd

Heath Roberts
Company Secretary
SciDev Ltd

Quantification of Exploration Targets on the Tartana Copper/Zinc Project and announcement of an Indicated Resource for the Zeehan Zinc Slag Project

Tartana Resources Limited ("**Tartana**") is pleased to announce that it has commissioned the services SRK Consulting (Australasia) Pty Limited ("**SRK**") to provide JORC 2012 compliant Open Pit Exploration Targets for the Queen Grade Zinc Project, the Copper Sulphide Project below the existing open pit and the Valentino Copper Project. These three projects are on granted Mining Leases which are located approximately 40 km northwest of Chillagoe, north Queensland.

Encouragingly, while the Exploration Targets are classified as conceptual in nature and which may not be substantiated by further drilling, these Exploration Targets have been supported by historical drilling and represent separate material zinc and copper targets reflecting both zinc skarn and porphyry copper systems.

TABLE 1. QUEEN GRADE EXPLORATION TARGET AT NOMINAL 1% ZN CUT-OFF GRADE

Queen Grade Zinc Open Pit Exploration Target*	Tonnage		Zinc Grade		Contained Zinc	
	Low (Mt)	High (Mt)	Low	High	Low (t)	High (t)
	0.3	**3.0**	**4%**	**10%**	**11,000**	**290,000**

*The potential quantity and grade is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: SRK Dr Stuart Munroe.

TABLE 2. DEEPER COPPER SULPHIDE AND VALENTINO EXPLORATION TARGET AT NOMINAL 0.5% CU CUT-OFF GRADE

Copper Sulphide Open Pit Exploration Targets*	Tonnage		Copper Grade		Contained Copper	
	Low (Mt)	High (Mt)	Low	High	Low (t)	High (t)
Below existing open pit	7.3	20.0	0.60%	0.80%	44,000	161,000
Valentino Prospect	3.9	27.0	0.60%	0.80%	20,000	215,000
Total	**11.2**	**47.0**	**0.60%**	**0.80%**	**64,000**	**376,000**

*The potential quantity and grade is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: SRK Dr Stuart Munroe.

The contained zinc and copper in the Exploration Targets is for open pit mining only and do not reflect deeper targets associated with each project that may be amenable to underground mining methods. Details of these Exploration Targets are outlined in the following sections.

The mining leases also include a heap leach - solvent extraction - crystallisation plant which has been on care and maintenance since 2014. This plant can produce copper sulphate for sale into the domestic market and Tartana is

investigating the opportunity of restarting production. However, the Exploration Targets stated below do not refer to oxide copper mineralisation which would be suitable for leaching and this will be the subject of a separate drilling campaign.

In addition, Tartana has commissioned Bluespoint Mining Services Pty Ltd ("**BMS**") to estimate an Indicated Resource Statement which is JORC 2012 compliant for the Zeehan Zinc Slag Project in consultation with SRK. This is the first time that these zinc bearing stockpiles have been classified under JORC classification.

TABLE 3. ZEEHAN ZINC SLAG INDICATED MINERAL RESOURCE AT ZERO CUT-OFF GRADE

Zeehan Zinc Slag Indicated Mineral Resource*	**Tonnes**	**Grade**	**Contained Metal**
Slag in stockpiles	469,000		
Zinc Grade		13.3%	62,377 t
Lead Grade		1.7%	7,973 t
Silver Grade (g/t)		53.0	799,171 oz

* JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: BMS Geoff Reed

The Indicated Mineral Resource tonnage is higher than previous non JORC reported estimates by previous owners and reflects recent work on further quantifying the density and volume of the stock piles and this includes a recent 7 hole air core drilling programme. In addition, the average grade of indium from samples from the recent 7 hole air core programme was 52 ppm in the north stockpile and 28 ppm in the south stockpile but there are insufficient data to categorise these average grades as indicative of the entire resource as indium was not assayed in samples from an earlier drilling programme.

On reviewing the results, Chairman Dr Steve Bartrop commented that this work is a significant achievement in allowing investors to appreciate the potential of our projects. The Tartana Project has been held in private hands for over 20 years and while it successfully produced copper sulphate for many years, the opportunities existing within its mining lease have not been quantified before. In addition, the higher level of confidence in the Zeehan zinc slag resource will assist the Company to be able to commercialise this resource.

Tartana Copper/Zinc Project

The Tartana Copper/Zinc Project consists of four granted mining leases located approximately 40 km northwest of Chillagoe, north Queensland (Figure 1). The location of the Queen Grade Zinc Project, the Tartana Copper Mine and the Valentino Project within the mining leases is also indicated on Figure 1 along with site infrastructure.

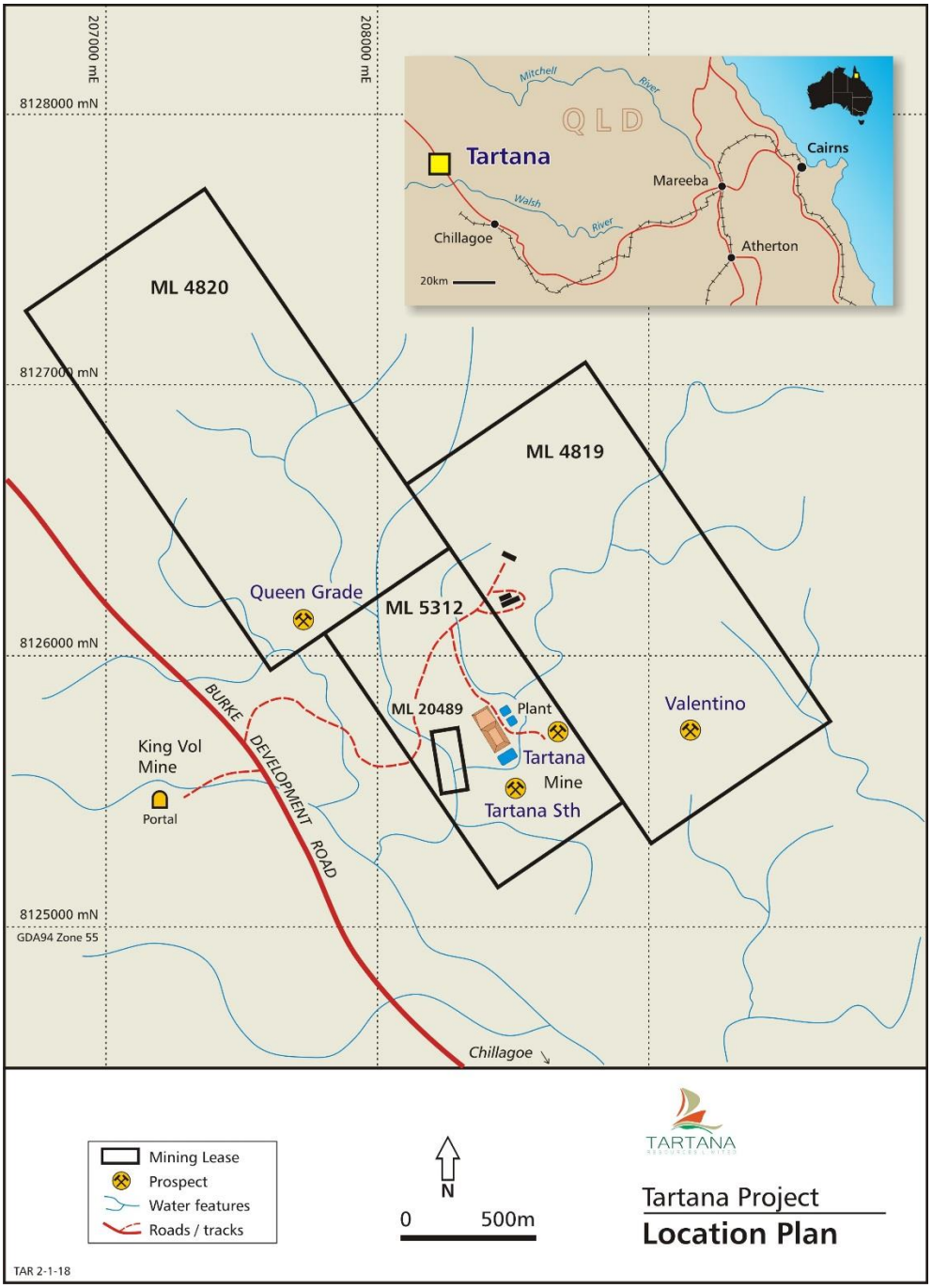

Figure 1. Tartana Mining Leases.

Queen Grade Exploration Target

The Queen Grade Zinc Project represents outcropping proximal zinc skarn mineralisation which is similar to neighbouring King Vol mineralisation and other skarn mineralisation in the Chillagoe Belt. Historical drilling has involved a number of RC programmes since the early 1990's and more recently, selected diamond drilling for a total of 12 holes.

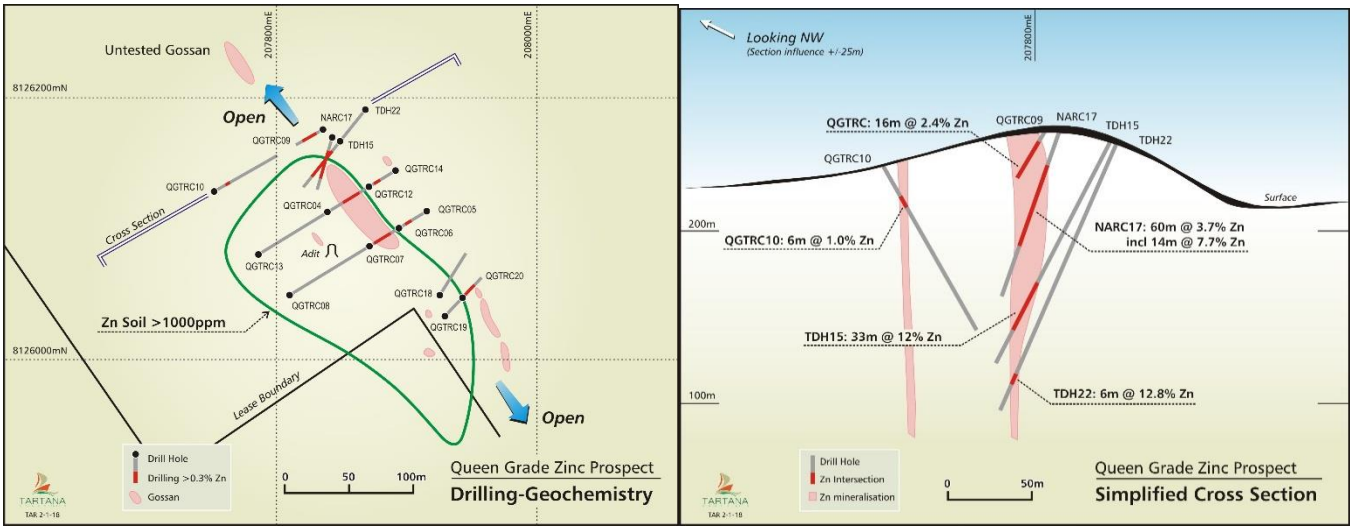

Figure 2. Historical drilling at Queen Grade

SRK reports that the drilling and surface alteration expression have been used to estimate a strike (200 to 400 m), width (thickness 10 m to 25 m) and depth below oxide (50 m to 100 m) for a deposit that may be recovered by open pit mining methods. This density (2.7 to 2.9 t/m^3 range) has been based on mineralisation observed in drill core.

In addition it notes that while the grades at the nearby King Vol deposit are high enough to support an underground mine, the grade and depth at Queen Grade have yet to be sufficiently tested to support an underground Exploration Target.

The Queen Grade Exploration Target considered accessible to surface (open pit) mining is shown in Table 4.

TABLE 4. QUEEN GRADE EXPLORATION TARGET AT NOMINAL 1% ZINC CUT-OFF GRADE

Queen Grade Zinc Open Pit Exploration Target*	Tonnage		Zinc Grade		Contained Zinc	
	Low (Mt)	High (Mt)	Low	High	Low (t)	High (t)
	0.3	3.0	4%	10%	11,000	290,000

*The potential quantity and grade is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: SRK Dr Stuart Munroe.

Deeper Copper Sulphide and Valentino Exploration Targets

The Tartana copper mine operated a heap leach - solvent extraction -– crystallisation plant to produce copper sulphate until 2014 when it was placed on care and maintenance. Duing its operations it mined oxide copper ore in a shallow open pit which was crushed and placed on the heaps.

The Company proposes to explore below this open pit mine as part of the Deeper Copper Sulphide Project as well as the Valentino Project. These targets are identified on ground based Induced Polarisation (IP) and Resistivity Surveys as well as Geochemistry Surveys.

The IP Survey identifies a significant target (the green in Figure 3 as it also coincides with mineralisation which has been drilled below the open pit (red zone).

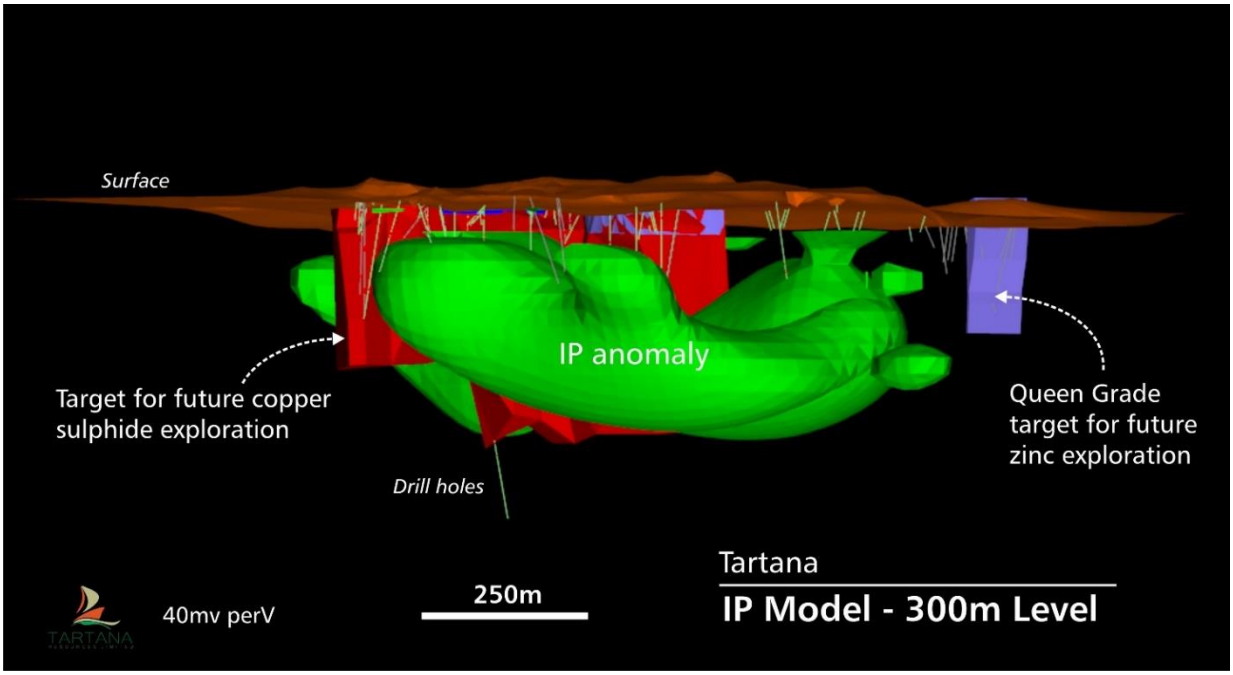

Figure 3. IP Model below and to the north of the open pit and also encompassing Valentino

The Resistivity and the Soil Geochemistry plans provide a surface trend of the exploration targets estimated by SRK and these are presented in Figure 4 and 5 below. In particular, prior to mining the oxide copper resource was well exposed at surface with a a prominent copper-in-soil anomaly.

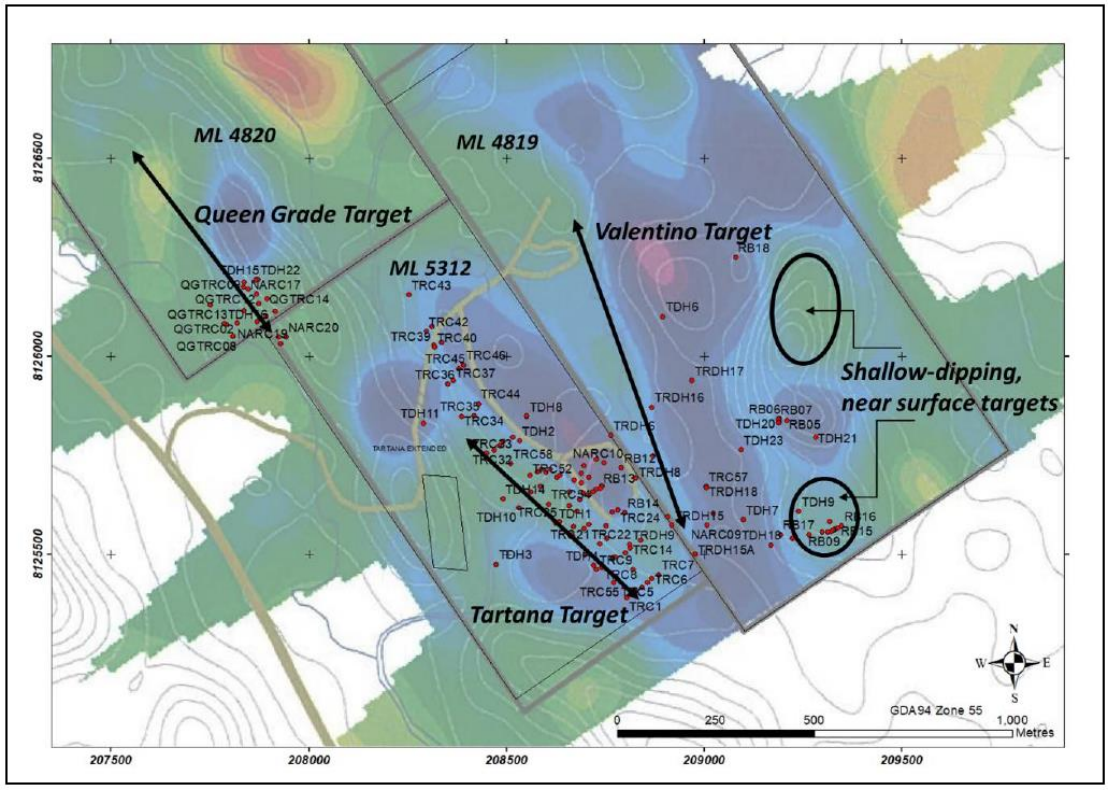

Figure 4. The Deeper Sulphide (Tartana Target) and the Valentino Target and resistivity survey.

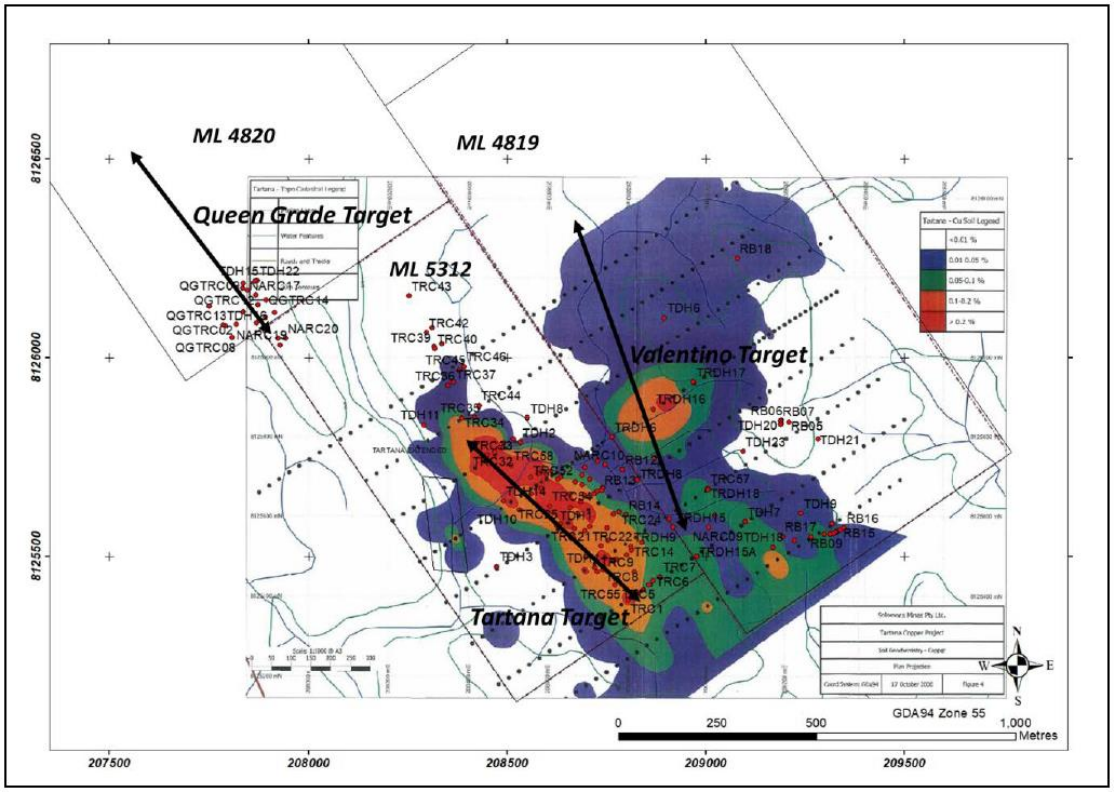

Figure 5. The Deeper Sulphide (Tartana Target) and the Valentino Target and copper in soil geochemistry.

The Tartana Deeper Sulphide target is in both the weathering transition zone (supergene zone) and primary rock beneath the previously mined open pit oxide copper resource (now partially backfilled). The final survey for the existing pit has yet to be located, consequently, there is some uncertainty about the location of the top of the deposit and which will be defined with future drilling programmes.

SRK note that the sulphide resource has been intersected in a number of deeper holes which indicates it dips steeply south-west. The strike (est. 500 m to 600 m), width (thickness 40 m to 60 m) and dip extends below the oxide to a depth (est. 140 m to 200 m) that it believes may reasonably be mineable from an open pit.

The density range (2.6 to 2.8 t/m^3) has been based on density determinations from Tartana core and typical densities for the rock types present at the Tartana Project. A grade range of 0.6% to 0.8% Cu has been used to reflect the average grades from drilling assays that intersected the sulphide zone.

SRK has based the Valentino conceptual Exploration Target on a surface copper in soil anomaly which covers an area that is smaller than the anomaly at the Tartana Copper Mine (due to poor surface expression) and a number of mineralised intersections from shallow drilling. The Valentino geochemical target (identified from soil and shallow drilling) coincides with an NNW striking IP resistivity high that has a strike of 700 m to 800 m. The target is poorly drilled and highly conceptual with wide spaced drilling although drill holes TRDH 15A, TRDH 16, TRDH 18 and RB 11 all intersected mineralisation that coincides with the IP anomaly. An additional zone of mineralisation in the southern part of ML4819 also coincides with a smaller IP resistivity high and may be shallowly dipping.

SRK note that a deeper target for possible underground mining has not been considered at this stage due to a lack of data to determine continuity at higher grade. The depth to the base of oxide is approximately 30 to 40 m from surface. The depth of the sulphide below oxide used for the Exploration Target is 40 m, representing up to 240 m below surface where the deposit is assumed to be 60 m thick.

The Copper Sulphide Exploration Targets are summarised in Table 5.

TABLE 5. COPPER SULPHIDE EXPLORATION TARGETS AT NOMINAL 0.5% CU CUT-OFF GRADE

Copper Sulphide Open Pit Exploration Targets*	Tonnage		Copper Grade		Contained Copper	
	Low (Mt)	High (Mt)	Low	High	Low (t)	High (t)
Below existing open pit	7.3	20.0	0.60%	0.80%	44,000	161,000
Valentino Prospect	3.9	27.0	0.60%	0.80%	20,000	215,000
Total	**11.2**	**47.0**	**0.60%**	**0.80%**	**64,000**	**376,000**

*The potential quantity and grade is conceptual in nature, and there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: SRK Dr Stuart Munroe.

Zeehan Zinc Slag Indicated Mineral Resource

The Zeehan Zinc Slag Project comprises two historic smelter stockpiles on a granted mining lease near Zeehan, western Tasmania (Figure 6).

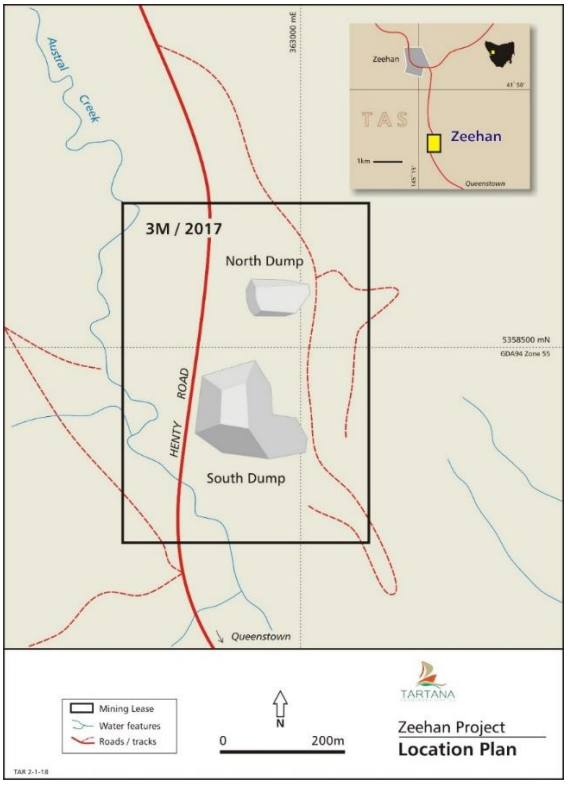

Figure 6. Location of the Zeehan zinc slag stockpiles (dumps).

The Mineral Resource estimate for the Zeehan Zinc Slag Project was completed during April 2019 by BMS and was based on the following data:

- The assay results and density measurements on a 7-hole air core drilling programme completed in March 2019 (see Appendix 1).

- A photogrammetry survey completed in April 2019 to provide surface detail for stockpile volume estimations.
- Historical drill logs and assay data from a 29-hole programme conducted in 1992 (see Appendix 1).
- Historical and independent reports on slag bulk density measurements and stockpile surveys.
- Other historical reports and discussions with personnel involved with the project over time.

TABLE 6. ESTIMATED INDICATED RESOURCE FOR THE ZEEHAN ZINC SLAG STOCKPILES

Zeehan Zinc Slag Indicated Mineral Resource*	Tonnes	Grade	Contained Metal
Slag in stockpiles	469,000		
Zinc Grade		13.3%	62,377 t
Lead Grade		1.7%	7,973 t
Silver Grade (g/t)		53.0	799,171 oz

* JORC 2012 Tables 1 & 2 are located in Appendix 2. Competent Person: BMS Geoff Reed

BMS completed resource estimates for the deposit using an Inverse Distance method, constrained by topographic surface wireframe based a photogrammetry survey (Figure 7) and incorporating mineralised intersections above the natural topography surface. No minimum width was used in the interpretation of the resource.

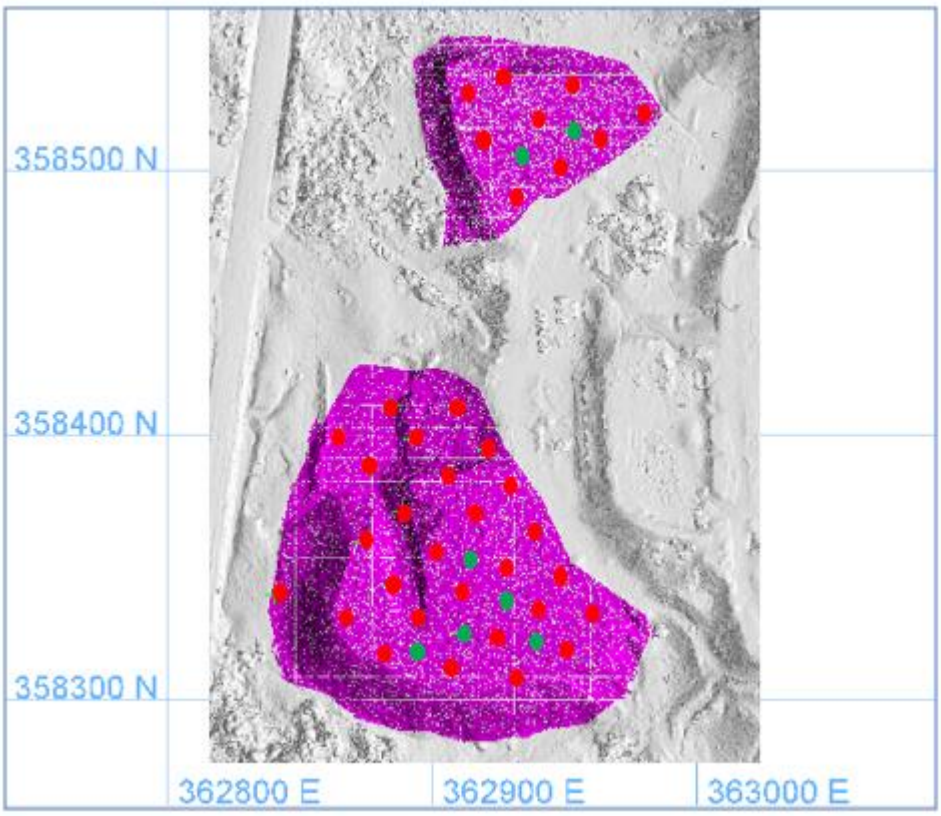

Figure 7. Photogrammetry survey of the Zeehan Zinc Slag Stockpiles or Dumps. (Green = drilling by Tartana in March 2019, Red = historical drilling).

Competent Persons' Statement

The Exploration Targets were estimated by Dr Stuart Munroe who is a full-time employee of SRK Consulting (Australasia) Pty Limited and has sufficient experience which is relevant to the style of mineralisation and types of miner deposits under consideration, and to qualify as a Competent Persons as defined in the 2012 Edition of the JORC Code. Dr Munroe consents to the inclusion of the Exploration Target information in the form and context in which they appear.

The Zeehan Zinc Slag Project was estimated by Mr Geoff Reed who is a full-time employee of Bluespoint Mining Services and has sufficient experience which is relevant to the style of mineralisation under consideration, and to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. Mr Reed consents to the inclusion of the information on the Zeehan Zinc Slag Project in the form and context in which they appear.

Disclaimer

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This document may contain certain "forward-looking statements" which may not have been based solely on historical facts, but rather may be based on assumptions, estimates, analysis and opinions of management made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors that management of the Company believes to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect. The Company has prepared this presentation based on information available to it at the time of preparation. To the maximum extent permitted by law, the Company does not make any representation or give any warranty or undertaking, express or implied, as to the accuracy, fairness, sufficiency, reliability, adequacy or completeness of the material, information, opinions, beliefs and conclusions contained in this presentation, including any forward-looking statement.

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Disclosure: Dr Stephen Bartrop is a director and shareholder of Bluespoint Mining Services ("BMS") and a director and shareholder of Tartana Resources Limited.

Appendix 1. Tartana Project Drilling Data

Hole_ID	Hole_Type	Max_Depth	Orig_Grid	Orig_East	Orig_North	Orig_RL	Collar_Dip	Collar_Az	Company	Prospect
NARC17	RC	108	GDA94_55K	207847	8126170	264.789	-67	206.5	Solomons	Queen Grade
NARC18	RC	72	GDA94_55K	207925	8126049	249.308	-58	32	Solomons	Queen Grade
NARC19	RC	54	GDA94_55K	207930	8126032	249.87	-71	44	Solomons	Queen Grade
NARC20	RC	30	GDA94_55K	207943	8126048	249.312	-50	48	Solomons	Queen Grade
QGTRC01	RC	100	GDA94_55K	207868.28	8126156.89	263.16	-60	240	Dominion	Queen Grade
QGTRC02	RC	100	GDA94_55K	207819.57	8126084.4	247.78	-60	10	Dominion	Queen Grade
QGTRC03	RC	100	GDA94_55K	207836.42	8126186.06	264.16	-60	190	Dominion	Queen Grade
QGTRC04	RC	100	GDA94_55K	207837.78	8126115.31	259.07	-60	60	Dominion	Queen Grade
QGTRC05	RC	100	GDA94_55K	207915.16	8126113.56	255.47	-60	240	Dominion	Queen Grade
QGTRC06	RC	100	GDA94_55K	207893.48	8126100.63	258.24	-60	240	Dominion	Queen Grade
QGTRC07	RC	100	GDA94_55K	207870.87	8126086.83	255.52	-60	240	Dominion	Queen Grade
QGTRC08	RC	100	GDA94_55K	207809.85	8126049.91	237.53	-60	60	Dominion	Queen Grade
QGTRC09	RC	34	GDA94_55K	207835.5	8126175.11	264.95	-60	240	Dominion	Queen Grade
QGTRC10	RC	110	GDA94_55K	207750.83	8126129.01	242.04	-60	60	Dominion	Queen Grade
QGTRC12	RC	100	GDA94_55K	207873.16	8126132.16	262.88	-60	240	Dominion	Queen Grade
QGTRC13	RC	128	GDA94_55K	207787.07	8126081.98	241.8	-60	60	Dominion	Queen Grade
QGTRC14	RC	100	GDA94_55K	207894.78	8126144.86	258.39	-60	240	Dominion	Queen Grade
QGTRD11	DDH	115	GDA94_55K	207866.65	8126192.17	258.39	-60	240	Dominion	Queen Grade
TDH15	DDH	150.1	GDA94_55K	207868	8126193	256	-60	217	Solomons	Queen Grade
TDH16	DDH	171.3	GDA94_55K	207791	8126081	239.5	-60	37	Solomons	Queen Grade
TDH22	DDH	171.1	GDA94_55K	207872	8126193	256	-65	222	Solomons	Queen Grade
RB11	RAB	15	GDA94_55K	208870	8125749	234	-90	7	Solomons	Tartana Flat
RB12	RAB	12	GDA94_55K	208791	8125719	231.179	-90	7	Solomons	Tartana Flat
RB13	RAB	12	GDA94_55K	208738	8125667	235.922	-90	7	Solomons	Tartana Flat
RB14	RAB	15	GDA94_55K	208800	8125605	237.131	-90	7	Solomons	Tartana Flat
RB15	RAB	25.5	GDA94_55K	209339	8125567	247.989	-90	7	Solomons	Tartana Flat
RB16	RAB	15	GDA94_55K	209348	8125572	243.788	-90	7	Solomons	Tartana Flat
RB17	RAB	24	GDA94_55K	209193	8125550	268.05	-90	7	Solomons	Tartana Flat
RB18	RAB	15	GDA94_55K	209080	8126249	232.296	-90	7	Solomons	Tartana Flat
NARC01	RC	51	GDA94_55K	208719	8125658	237.576	-60	242	Solomons	Tartana Hill
NARC02	RC	48	GDA94_55K	208708	8125649	237.749	-60	242	Solomons	Tartana Hill
NARC03	RC	51	GDA94_55K	208685	8125639	234.13	-60	237	Solomons	Tartana Hill
NARC04	RC	51	GDA94_55K	208690	8125705	234.036	-60	262	Solomons	Tartana Hill
NARC05	RC	51	GDA94_55K	208696	8125724	230.059	-60	232	Solomons	Tartana Hill
NARC06	RC	51	GDA94_55K	208671	8125687	235.017	-60	242	Solomons	Tartana Hill
NARC07	RC	51	GDA94_55K	208727	8125740	225.423	-60	132	Solomons	Tartana Hill
NARC08	RC	48	GDA94_55K	209023	8125604	235.508	-60	277	Solomons	Tartana Hill
NARC09	RC	48	GDA94_55K	209007	8125574	235.697	-60	277	Solomons	Tartana Hill
NARC10	RC	24	GDA94_55K	208746	8125731	227.657	-90	7	Solomons	Tartana Hill
NARC11	RC	66	GDA94_55K	208728	8125664	236.711	-62	236	Solomons	Tartana Hill
NARC12	RC	26	GDA94_55K	208742	8125673	235.224	-59	240	Solomons	Tartana Hill
NARC16	RC	54	GDA94_55K	208659	8125622	230	-60	231.5	Solomons	Tartana Hill
NARC21	RC	60	GDA94_55K	208601	8125707	231.72	-90	7	Solomons	Tartana Hill
NARC22	RC	72	GDA94_55K	208742	8125671	235.392	-60	239	Solomons	Tartana Hill
TDH1	DIAMOND	243	GDA94_55K	208625	8125579	229.912	-60	57	CEC	Tartana Hill
TDH10	DIAMOND	300	GDA94_55K	208532	8125618	225.507	-60	57	OTUK	Tartana Hill
TDH11	DIAMOND	300	GDA94_55K	208292	8125831	225.717	-60	87	OTUK	Tartana Hill
TDH12A	DDH	149.3	GDA94_55K	208840	8125535	238.5	-45	201	Solomons	Tartana Hill
TDH13	DDH	330.1	GDA94_55K	208562	8125657	228.5	-55	87	Solomons	Tartana Hill

Appendix 1. Tartana Project Drilling Data (cont.)

Hole_ID	Hole_Type	Max_Depth	Orig_Grid	Orig_East	Orig_North	Orig_RL	Collar_Dip	Collar_Az	Company	Prospect
TDH14	DDH	276.1	GDA94_55K	208492	8125640	231	-55	209	Solomons	Tartana Hill
TDH2	DIAMOND	244	GDA94_55K	208533	8125787	234.173	-60	237	CEC	Tartana Hill
TDH3	DIAMOND	528	GDA94_55K	208475	8125475	222.142	-60	57	CEC	Tartana Hill
TDH4	DIAMOND	194	GDA94_55K	208721	8125472	235.368	-60	57	CEC	Tartana Hill
TDH6	DIAMOND	124	GDA94_55K	208895	8126100	240.841	-70	277	CEC	Tartana Hill
TDH7	DIAMOND	207	GDA94_55K	209099	8125587	250.604	-50	277	CEC	Tartana Hill
TDH8	DIAMOND	207	GDA94_55K	208552	8125848	236.669	-60	237	CEC	Tartana Hill
TDH8A	DIAMOND	248	GDA94_55K	208552	8125849	236.726	-60	237	CEC	Tartana Hill
TDH9	DIAMOND	181	GDA94_55K	209239	8125609	260.476	-45	237	CEC	Tartana Hill
TRC1	RC	34	GDA94_55K	208804	8125390	232.469	-60	57	MAJESTIC	Tartana Hill
TRC10	RC	34	GDA94_55K	208767	8125489	245.089	-45	237	MAJESTIC	Tartana Hill
TRC11	RC	46	GDA94_55K	208771	8125491	245.367	-60	237	MAJESTIC	Tartana Hill
TRC12	RC	28	GDA94_55K	208775	8125493	245.136	-45	57	MAJESTIC	Tartana Hill
TRC13	RC	52	GDA94_55K	208801	8125504	241.704	-45	237	MAJESTIC	Tartana Hill
TRC14	RC	52	GDA94_55K	208814	8125517	240.328	-45	237	MAJESTIC	Tartana Hill
TRC15	RC	52	GDA94_55K	208698	8125499	236.779	-45	57	MAJESTIC	Tartana Hill
TRC16	RC	58	GDA94_55K	208737	8125526	251	-45	237	MAJESTIC	Tartana Hill
TRC17	RC	52	GDA94_55K	208753	8125541	251	-45	237	MAJESTIC	Tartana Hill
TRC18	RC	40	GDA94_55K	208666	8125550	237.575	-45	47	MAJESTIC	Tartana Hill
TRC19	RC	40	GDA94_55K	208696	8125566	245.947	-45	237	MAJESTIC	Tartana Hill
TRC2	RC	28	GDA94_55K	208828	8125408	236	-45	237	MAJESTIC	Tartana Hill
TRC20	RC	40	GDA94_55K	208670	8125570	236.751	-60	237	MAJESTIC	Tartana Hill
TRC21	RC	40	GDA94_55K	208709	8125575	245.951	-60	57	MAJESTIC	Tartana Hill
TRC22	RC	52	GDA94_55K	208737	8125526	251	-42	237	MAJESTIC	Tartana Hill
TRC23	RC	40	GDA94_55K	208768	8125607	239.188	-45	147	MAJESTIC	Tartana Hill
TRC24	RC	40	GDA94_55K	208782	8125612	237.626	-45	147	MAJESTIC	Tartana Hill
TRC25	RC	58	GDA94_55K	208635	8125582	230.604	-45	57	MAJESTIC	Tartana Hill
TRC26	RC	58	GDA94_55K	208695	8125655	237.005	-45	237	MAJESTIC	Tartana Hill
TRC27	RC	52	GDA94_55K	208659	8125658	230.239	-45	237	MAJESTIC	Tartana Hill
TRC28	RC	46	GDA94_55K	208659	8125658	230.239	-60	237	MAJESTIC	Tartana Hill
TRC29	RC	46	GDA94_55K	208516	8125796	235.883	-51	58	MAJESTIC	Tartana Hill
TRC3	RC	34	GDA94_55K	208826	8125411	236	-60	57	MAJESTIC	Tartana Hill
TRC30	RC	46	GDA94_55K	208492	8125785	237.599	-48	57	MAJESTIC	Tartana Hill
TRC31	RC	46	GDA94_55K	208483	8125775	238	-47	57	MAJESTIC	Tartana Hill
TRC32	RC	46	GDA94_55K	208469	8125762	238	-45	57	MAJESTIC	Tartana Hill
TRC33	RC	40	GDA94_55K	208450	8125755	237.776	-45	57	MAJESTIC	Tartana Hill
TRC34	RC	40	GDA94_55K	208387	8125848	234.495	-51	57	MAJESTIC	Tartana Hill
TRC35	RC	40	GDA94_55K	208419	8125849	236.902	-45	57	MAJESTIC	Tartana Hill
TRC36	RC	40	GDA94_55K	208352	8125930	236.63	-47	57	MAJESTIC	Tartana Hill
TRC37	RC	40	GDA94_55K	208367	8125939	237.999	-45	57	MAJESTIC	Tartana Hill
TRC38	RC	40	GDA94_55K	208337	8126034	238.083	-48	57	MAJESTIC	Tartana Hill
TRC39	RC	40	GDA94_55K	208317	8126028	236.582	-45	57	MAJESTIC	Tartana Hill
TRC4	RC	52	GDA94_55K	208842	8125416	235.267	-45	237	MAJESTIC	Tartana Hill
TRC40	RC	40	GDA94_55K	208319	8126022	236.505	-45	237	MAJESTIC	Tartana Hill
TRC41	RC	40	GDA94_55K	208312	8126075	237.543	-45	237	MAJESTIC	Tartana Hill
TRC42	RC	40	GDA94_55K	208298	8126062	236.901	-45	237	MAJESTIC	Tartana Hill
TRC43	RC	40	GDA94_55K	208254	8126155	234.995	-45	237	MAJESTIC	Tartana Hill
TRC44	RC	40	GDA94_55K	208430	8125880	238.416	-45	237	MAJESTIC	Tartana Hill
TRC45	RC	40	GDA94_55K	208380	8125969	239.223	-45	237	MAJESTIC	Tartana Hill
TRC46	RC	40	GDA94_55K	208393	8125978	239.995	-45	237	MAJESTIC	Tartana Hill

Appendix 1. Tartana Project Drilling Data (cont.)

Hole_ID	Hole_Type	Max_Depth	Orig_Grid	Orig_East	Orig_North	Orig_RL	Collar_Dip	Collar_Az	Company	Prospect
TRC47	RC	40	GDA94_55K	208635	8125700	232.892	-48	238	MAJESTIC	Tartana Hill
TRC48	RC	28	GDA94_55K	208628	8125695	230.877	-50	237	MAJESTIC	Tartana Hill
TRC49	RC	52	GDA94_55K	208690	8125680	235.986	-45	237	MAJESTIC	Tartana Hill
TRC5	RC	52	GDA94_55K	208857	8125429	233.449	-45	237	MAJESTIC	Tartana Hill
TRC50	RC	40	GDA94_55K	208611	8125715	232	-45	57	MAJESTIC	Tartana Hill
TRC51	RC	40	GDA94_55K	208579	8125708	232	-45	57	MAJESTIC	Tartana Hill
TRC52	RC	40	GDA94_55K	208560	8125699	231.491	-45	57	MAJESTIC	Tartana Hill
TRC53	RC	40	GDA94_55K	208587	8125672	230.684	-45	57	MAJESTIC	Tartana Hill
TRC54	RC	40	GDA94_55K	208608	8125627	229.888	-45	57	MAJESTIC	Tartana Hill
TRC55	RC	40	GDA94_55K	208772	8125429	231.675	-45	57	MAJESTIC	Tartana Hill
TRC56	RC	40	GDA94_55K	208821	8125462	237.553	-45	237	MAJESTIC	Tartana Hill
TRC57	RC	40	GDA94_55K	209006	8125671	235.043	-45	147	MAJESTIC	Tartana Hill
TRC58	RC	40	GDA94_55K	208511	8125729	233.238	-45	57	MAJESTIC	Tartana Hill
TRC6	RC	52	GDA94_55K	208867	8125439	233	-45	237	MAJESTIC	Tartana Hill
TRC7	RC	52	GDA94_55K	208885	8125449	234.08	-45	237	MAJESTIC	Tartana Hill
TRC8	RC	46	GDA94_55K	208741	8125468	237.249	-45	57	MAJESTIC	Tartana Hill
TRC9	RC	46	GDA94_55K	208728	8125462	234.66	-45	57	MAJESTIC	Tartana Hill
TRDH10	ROTARY	155.45	GDA94_55K	208907	8125594	227.087	-90	7	CEC	Tartana Hill
TRDH11	ROTARY	228.59	GDA94_55K	208590	8125715	232	-90	7	CEC	Tartana Hill
TRDH12	ROTARY	152.39	GDA94_55K	208562	8125658	229.364	-90	7	CEC	Tartana Hill
TRDH13	ROTARY	228.59	GDA94_55K	208708	8125695	234.588	-63	272	CEC	Tartana Hill
TRDH14	ROTARY	228.59	GDA94_55K	208752	8125572	246.606	-63	251	CEC	Tartana Hill
TRDH15	ROTARY	108.2	GDA94_55K	208918	8125574	231.424	-60	276	CEC	Tartana Hill
TRDH15A	ROTARY	228.59	GDA94_55K	208978	8125500	243.285	-62	237	CEC	Tartana Hill
TRDH16	ROTARY	152.39	GDA94_55K	208868	8125871	234.419	-90	7	CEC	Tartana Hill
TRDH17	ROTARY	152.39	GDA94_55K	208969	8125939	238.374	-90	7	CEC	Tartana Hill
TRDH18	ROTARY	158.49	GDA94_55K	209005	8125668	234.708	-90	7	CEC	Tartana Hill
TRDH6	ROTARY	152.39	GDA94_55K	208764	8125800	224.284	-90	7	CEC	Tartana Hill
TRDH7	ROTARY	228.59	GDA94_55K	208679	8125608	229.117	-90	7	CEC	Tartana Hill
TRDH8	ROTARY	152.39	GDA94_55K	208828	8125693	231	-90	7	CEC	Tartana Hill
TRDH9	ROTARY	228.59	GDA94_55K	208812	8125525	241.138	-90	7	CEC	Tartana Hill
NARC13	RC	90	GDA94_55K	209299	8125556	262.934	-60	77	Solomons	Valentino
NARC14	RC	54	GDA94_55K	209326	8125560	255.069	-62	84	Solomons	Valentino
NARC15	RC	78	GDA94_55K	209266	8125549	262.726	-90	7	Solomons	Valentino
RB01	RAB	21	GDA94_55K	209333	8125565	251.863	-90	7	Solomons	Valentino
RB02	RAB	21	GDA94_55K	209329	8125562	254.049	-90	7	Solomons	Valentino
RB03	RAB	18	GDA94_55K	209326	8125561	255.184	-90	7	Solomons	Valentino
RB04	RAB	24	GDA94_55K	209322	8125558	256.097	-90	7	Solomons	Valentino
RB05	RAB	15	GDA94_55K	209209	8125837	265.4	-90	7	Solomons	Valentino
RB06	RAB	15	GDA94_55K	209191	8125842	267.126	-90	7	Solomons	Valentino
RB07	RAB	15	GDA94_55K	209188	8125841	268.171	-90	7	Solomons	Valentino
RB08	RAB	30	GDA94_55K	209321	8125558	256.533	-90	7	Solomons	Valentino
RB09	RAB	30	GDA94_55K	209312	8125557	259.364	-90	7	Solomons	Valentino
RB10	RAB	30	GDA94_55K	209318	8125582	260.606	-90	7	Solomons	Valentino
TDH17	DDH	180.4	GDA94_55K	209223	8125541	251	-90	367	Solomons	Muscleville
TDH18	DDH	180.3	GDA94_55K	209170	8125524	252	-60	77	Solomons	Muscleville
TDH19	DDH	111.2	GDA94_55K	209190	8125834	270	-60	57	Solomons	Muscleville
TDH20	DDH	150.3	GDA94_55K	209189	8125833	270	-70	57	Solomons	Muscleville
TDH21	DDH	69.2	GDA94_55K	209282	8125796	251	-60	77	Solomons	Muscleville
TDH23	DDH	200.5	GDA94_55K	209094	8125764	253	-45	55	Solomons	Muscleville

Appendix 1. Tartana Project Drilling – Significant Results

Hole_ID	From	To	Width (m)	Cu %	Zn %
NARC01	16	27	11	3.04	
NARC02	10	20	10	1.61	
NARC03	6	27	21	1.63	
NARC03	43	50	7	1.18	
NARC04	21	31	10	0.95	
NARC06	14	25	11	0.85	
NARC06	35	51	16	0.83	
NARC08	28	34	6	0.92	
NARC09	29	33	4	0.61	
NARC10	9	14	5	1.58	
NARC11	11	66	55	0.73	
NARC13	31	39	8	0.7	
NARC14	18	23	5	1.62	
NARC15	24	44	20	0.93	
NARC16	7	20	13	0.72	
NARC17	25	85	60		3.66
NARC21	5	11	6	1.05	
NARC21	39	43	4	1	
NARC22	15	18	3	0.71	
NARC22	33	42	9	0.56	
NARC22	48	61	13	0.5	
RB02	1.5	4.5	3	0.53	
RB02	13.5	16.5	3	0.68	
RB03	15	18	3	1.9	
RB04	15	21	6	1.83	
RB06	10.5	13.5	3	0.56	
RB08	21	27	6	1.71	
RB09	24	27	3	3.35	
TDH1	56.69	98.45	41.76	0.55	
TDH1	130.91	167.17	36.26	0.5	
TDH10	97	110	13	0.88	
TDH10	199	285	86	0.54	
TDH11	234	276	42	0.79	
TDH2	162.76	175.86	13.1	0.5	
TDH3	325.51	373.36	47.85	0.6	
TDH4	115.51	182.87	67.36	0.66	
TDH7	69.98	75.37	5.39	0.61	
TDH8	172.78	207.77	34.99	0.57	
TDH8A	198.11	229.87	31.76	0.8	
TDH9	137.82	144.35	6.53	0.65	
TRC10	2	24	22	0.59	
TRC11	6	31	25	0.71	
TRC13	30	52	22	0.86	
TRC15	38	52	14	0.59	
TRC16	2	30	28	1	
TRC17	10	51	41	0.77	
TRC18	15	40	25	0.8	
TRC19	2	40	38	0.56	
QGTRC06	26	46	20		1.44
QGTRC07	45	47	2		1.47
QGTRC09	18	34	16		2.4

Appendix 1. Tartana Project Drilling – Significant Results (cont.)

Hole_ID	From	To	Width (m)	Cu %	Zn %
QGTRC10	21	27	6		1.06
QGTRC10	92	93	1		1.5
QGTRC10	106	109	3	0.67	0.78
QGTRD11	108.6	111.85	3.25	0.64	
QGTRC12	37	45	8		6.4
QGTRC13	116	119	3	0.28	4.07
QGTRC13	125	128	3		2.6
QGTRC14	33	35	2		1.29
DH12A	67.8	112	44.2	0.65	
TDH14	48	53.5	5.5	2.3	
TDH15	95.5	128.5	33	12	12
TDH16	145.1	154.45	9.35	5.92	5.92
TDH18	146.39	150.9	4.51	0.56	
TDH19	22	25.8	3.8	2.29	
TDH20	24.8	29	4.2	0.97	
TDH22	147.7	154.6	6.9	0.2	12.8
TDH23	109.7	111	1.3	1.3	
TRC2	1	4	3	0.57	
TRC20	1	40	39	0.61	
TRC21	1	11	10	0.65	
TRC22	1	51	50	0.63	
TRC24	37	40	3	0.54	
TRC25	0	21	21	0.53	
TRC25	51	58	7	0.81	
TRC26	4	57	53	0.9	
TRC27	9	45	36	1.82	
TRC28	10	46	36	1.95	
TRC32	15	42	27	0.57	
TRC35	29	37	8	0.58	
TRC47	0	40	40	0.79	
TRC48	9	25	16	1.57	
TRC49	21	29	8	0.85	
TRC50	11	29	18	0.53	
TRC51	3	19	16	1.34	
TRC53	8	38	30	0.86	
TRC54	12	18	6	0.97	
TRC54	32	37	5	0.86	
TRC55	31	35	4	0.58	
TRC56	1	40	39	0.71	
TRC6	42	45	3	0.87	
TRC8	2	5	3	0.73	
TRC8	28	45	17	0.53	
TRDH11	4.57	13.72	9.15	1.03	
TRDH11	89.91	105.15	15.24	1.02	
TRDH13	131.06	158.49	27.43	0.67	
TRDH14	27.43	36.57	9.14	0.57	
TRDH14	67.05	124.96	57.91	0.59	
TRDH15A	201.16	216.4	15.24	0.5	
TRDH18	79.24	152.39	73.15	0.59	
TRDH19	135.63	149.34	13.71	0.54	

Appendix 1. Zeehan Zinc Slag Project Drilling Data

Hole_ID	Hole_Type	Max_Depth	Orig_Grid	Orig_East	Orig_North	Orig_RL	Collar_Dip	Collar_Az	Company	Prospect
TNA19AC001	AC	10	GDA94_55K	362951.9	358515.6	174	-90	360	Tartana	Zeehan
TNA19AC002	AC	10	GDA94_55K	362932.8	358505.8	173.886	-90	360	Tartana	Zeehan
TNA19AC003	AC	15	GDA94_55K	362914.7	358353.5	173.445	-90	360	Tartana	Zeehan
TNA19AC004	AC	14	GDA94_55K	362927.3	358336.9	173.462	-90	360	Tartana	Zeehan
TNA19AC005	AC	10	GDA94_55K	362938	358322.5	173.236	-90	360	Tartana	Zeehan
TNA19AC006	AC	12.6	GDA94_55K	362911.3	358324.9	173.308	-90	360	Tartana	Zeehan
TNA19AC007	AC	14.8	GDA94_55K	362894.7	358319	172.834	-90	360	Tartana	Zeehan
Hole_ID	**Hole_Type**	**Max_Depth**	**Orig_Grid**	**Orig_East**	**Orig_North**	**Orig_RL**	**Collar_Dip**	**Collar_Az**	**Company**	**Prospect**
ZAC01	AC	9	GDA94_55K	362930.4	358490.7	173.4	-90	360	Pyrosmelt	Zeehan
ZAC02	AC	9	GDA94_55K	362919.9	358507.7	173.8	-90	360	Pyrosmelt	Zeehan
ZAC03	AC	11	GDA94_55K	362910.5	358524.8	173.8	-90	360	Pyrosmelt	Zeehan
ZAC04	AC	8	GDA94_55K	362947.4	358501.2	173.7	-90	360	Pyrosmelt	Zeehan
ZAC05	AC	9	GDA94_55K	362937	358518.2	173.7	-90	360	Pyrosmelt	Zeehan
ZAC06	AC	11	GDA94_55K	362927.4	358533.6	173.8	-90	360	Pyrosmelt	Zeehan
ZAC07	AC	9	GDA94_55K	362963.6	358511.7	174.8	-90	360	Pyrosmelt	Zeehan
ZAC08	AC	10	GDA94_55K	362953.9	358528.7	174	-90	360	Pyrosmelt	Zeehan
ZAC09	AC	9	GDA94_55K	362979.5	358522.2	174.7	-90	360	Pyrosmelt	Zeehan
ZAC10	AC	11	GDA94_55K	362908.7	358410.6	171.8	-90	360	Pyrosmelt	Zeehan
ZAC11	AC	9	GDA94_55K	362920.6	358394.4	172	-90	360	Pyrosmelt	Zeehan
ZAC12	AC	5	GDA94_55K	362932.4	358378.3	172.4	-90	360	Pyrosmelt	Zeehan
ZAC13	AC	8	GDA94_55K	362944.3	358362.2	172.4	-90	360	Pyrosmelt	Zeehan
ZAC14	AC	9	GDA94_55K	362956.1	358346.1	172.3	-90	360	Pyrosmelt	Zeehan
ZAC15	AC	10.5	GDA94_55K	362968.6	358330.4	172.3	-90	360	Pyrosmelt	Zeehan
ZAC16	AC	11.8	GDA94_55K	362954.3	358314.9	172.2	-90	360	Pyrosmelt	Zeehan
ZAC17	AC	12	GDA94_55K	362940	358334.3	172.7	-90	360	Pyrosmelt	Zeehan
ZAC18	AC	12	GDA94_55K	362928.1	358350.4	172.7	-90	360	Pyrosmelt	Zeehan
ZAC19	AC	12	GDA94_55K	362916.3	358366.5	172.7	-90	360	Pyrosmelt	Zeehan
ZAC20	AC	8.8	GDA94_55K	362904.8	358383.3	172.1	-90	360	Pyrosmelt	Zeehan
ZAC21	AC	12	GDA94_55K	362892.6	358398.7	171.9	-90	360	Pyrosmelt	Zeehan
ZAC22	AC	12	GDA94_55K	362884.4	358411.1	171.6	-90	360	Pyrosmelt	Zeehan
ZAC23	AC	14	GDA94_55K	362877.1	358387.3	171.9	-90	360	Pyrosmelt	Zeehan
ZAC24	AC	14	GDA94_55K	362888.3	358370.8	172.2	-90	360	Pyrosmelt	Zeehan
ZAC25	AC	15	GDA94_55K	362901.6	358355.3	172.5	-90	360	Pyrosmelt	Zeehan
ZAC26	AC	19.7	GDA94_55K	362912	358338.6	172.4	-90	360	Pyrosmelt	Zeehan
ZAC27	AC	18	GDA94_55K	362924.2	358321.3	172.4	-90	360	Pyrosmelt	Zeehan
ZAC28	AC	21	GDA94_55K	362907.8	358310.6	172.3	-90	360	Pyrosmelt	Zeehan
ZAC29	AC	18	GDA94_55K	362935.1	358308.5	172.3	-90	360	Pyrosmelt	Zeehan
ZAC30	AC	15	GDA94_55K	362895.9	358326.7	172.1	-90	360	Pyrosmelt	Zeehan
ZAC31	AC	15	GDA94_55K	362884.1	358342.8	172.3	-90	360	Pyrosmelt	Zeehan
ZAC32	AC	15	GDA94_55K	362873.5	358359.7	172.3	-90	360	Pyrosmelt	Zeehan
ZAC33	AC	15	GDA94_55K	362868.5	358331.5	172.2	-90	360	Pyrosmelt	Zeehan
ZAC34	AC	17	GDA94_55K	362879.8	358316.4	172.2	-90	360	Pyrosmelt	Zeehan
ZAC35	AC	3	GDA94_55K	362865.2	358399.8	162.1	-90	360	Pyrosmelt	Zeehan
ZAC36	AC	3	GDA94_55K	362840.2	358339.2	162.1	-90	360	Pyrosmelt	Zeehan

Appendix 1. Zeehan Zinc Slag Project Drilling Data – Assay data

Hole_ID	From	To	Width (m)	Zn%	Pb%	Ag g/t	Prospect
TNA19AC001	0	8	8	8.13	1.89	54.77	Zeehan
TNA19AC002	0	8	8	10.53	1.76	52.97	Zeehan
TNA19AC003	0	15	15	14.17	1.73	66.9	Zeehan
TNA19AC004	0	12	12	11.37	1.41	47.4	Zeehan
TNA19AC005	0	10	10	10.69	1.53	51.09	Zeehan
TNA19AC006	0	12.6	12.6	16.67	1.5	46.93	Zeehan
TNA19AC007	0	14.8	14.8	16.76	1.45	49.37	Zeehan
Hole_ID	**From**	**To**	**Width (m)**	**Zn%**	**Pb%**	**Ag g/t**	**Prospect**
ZAC01	0	7.5	7.5	13.44	1.7	173.4	Zeehan
ZAC02	0	8.5	8.5	7.84	1.96	55	Zeehan
ZAC03	0	9.4	9.4	11.35	1.72	67.2	Zeehan
ZAC04	0	6.8	6.8	14.13	1.7	48.6	Zeehan
ZAC05	0	8	8	8.4	1.82	53.6	Zeehan
ZAC06	0	9	9	11.2	2.1	71	Zeehan
ZAC07	0	7.5	7.5	9.3	18	67.75	Zeehan
ZAC08	0	8	8	11.16	2.095	72.83	Zeehan
ZAC09	0	7.5	7.5	12.74	1.59	63.63	Zeehan
ZAC10	0	9	9	13.93	1.77	64.88	Zeehan
ZAC11	0	6.8	6.8	13.78	2.48	79.43	Zeehan
ZAC12	0	3	3	13.59	2.82	50.33	Zeehan
ZAC13	0	6	6	11.61	2.73	35.33	Zeehan
ZAC14	0	8.6	8.6	12.51	1.68	55.5	Zeehan
ZAC15	0	7.5	7.5	13.55	1.62	61	Zeehan
ZAC16	0	9.8	9.8	11.69	1.497	48	Zeehan
ZAC17	0	10.6	10.6	11.56	1.74	66.36	Zeehan
ZAC18	0	10	10	11.11	3	66.4	Zeehan
ZAC19	0	11	11	10.48	2.18	68.18	Zeehan
ZAC20	0	8.8	8.8	11.15	1.63	70	Zeehan
ZAC21	0	10	10	14.65	1.93	59.7	Zeehan
ZAC22	0	10.4	10.4	14.84	2.04	57	Zeehan
ZAC23	0	11.8	11.8	13.03	2.34	61.83	Zeehan
ZAC24	0	12.7	12.7	12.09	2.39	63.92	Zeehan
ZAC25	0	13.5	13.5	11.65	1.97	49.07	Zeehan
ZAC26	0	18	18	14.35	1.47	43.77	Zeehan
ZAC27	0	17	17	14.77	1.44	44.05	Zeehan
ZAC28	0	18	18	15.02	1.48	49.5	Zeehan
ZAC29	0	21	21	14.87	1.58	44.95	Zeehan
ZAC30	0	13	13	15.3	1.38	44.38	Zeehan
ZAC31	0	12.8	12.8	17.89	1.42	42.15	Zeehan
ZAC32	0	12.8	12.8	13.48	1.5	52.1	Zeehan
ZAC33	0	14	14	15.57	1.28	50.57	Zeehan
ZAC34	0	15	15	15.73	1.26	50.33	Zeehan
ZAC35	0	3	3	10.45	2.18	28.5	Zeehan
ZAC36	0	3	3	8.65	1.44	30.5	Zeehan

Appendix 2.

JORC Code, 2012 Edition – Table 1 Tartana Project

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (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.*	Tartana Project: Sampling of historic 1960s and 1970s reverse circulation (RC) holes was generally in 3 feet increments and sampling of drill core was generally in 10 feet or 30 feet increments, no duplicates, standards or blanks are known to have been used. Sampling of historic 1990s drill core was generally 1 m intervals, no duplicates, standards or blanks are known. Details of the sampling of 1990s reverse circulation (RC) drilling is generally not known. The use of duplicates, standards or blanks are not known. Sample weight of historic sampling is unknown. Sampling of 2006 reverse circulation (RC) was generally in 1 m increments. No duplicates, standards or blanks are known to have been used. Sampling of 2009 to 2012 drill core was generally in 1 m intervals, no duplicates, standards or blanks are known to have been used. .

Criteria	JORC Code explanation	Commentary
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).*	Tartana Project: Historic Drilling: Surface drilling only was conducted at Tartana Project involved Diamond drilling (DD), Reverse circulation (RC) and Rotary Air Blasting (RAB) Average depth of diamond drilling (DD) was 200m, average depth of reverse circulation (RC) was 50m and average depth of rotary air Blasting (RAB) was 20m. No core orientation was carried out.
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.*	Tartana Project: Historical core recovery rate has not been recorded. Measures were not taken to maximise sample recovery historically. Relationship between sample recovery and grade cannot be determined. 2006 RC drilling delivered >87.5% recoveries. 2009 to 2012 DD holes produced >85% recovery in general.
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.*	Tartana Project: Some historic drill holes have geological logs attached with their sample Intervals recordings. Individual samples are not specifically described geologically. Geotechnical logging is absent. Logging is qualitative in nature. 2009 to 2012 DD holes were logged with emphasis on visual of rock types, amount and percentage of veining and identification of minerals present. Core was photographed.
Sub-sampling techniques	• *If core, whether cut or sawn and whether quarter, half or all core taken.*	Tartana Project:

Criteria	JORC Code explanation	Commentary
and sample preparation	• *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.*	Historic core preparation has generally not been documented for RC for RAB drilling. Historic sample nature, quality and appropriateness is generally unknown. Majority of historic sampling does not include reported quality control procedures. Measures to ensure that sampling is representative of in situ material unknown or may not have been carried out for historic drilling.
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 checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	Tartana Project: Nature, quality and appropriateness of assaying and laboratory procedures are unknown for historic sampling. 2009 to 2012 DD hole samples were assayed by SGS Laboratories Townsville, Australia The use of standards and blanks have not been documented for historic sampling from the drilling and no information is available on their accuracy or precision.
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.*	Tartana Project: Verification of significant intersections by Independent for historic drilling was carried out in 2006. Original assay sheets as received from the designated SGS laboratory and are available for 2009 to 2012 drilling programmes. Depths in historic drill holes are stated in feet and were converted into metric units using a conversion factor.

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.*	Tartana Project: Drill hole positions have been recorded using handheld GPS units which were regularly checked against several base station survey points established by Kagara Zinc Ltd. The results confirm that the handheld GPS units are within 1 m and 3 m accuracy for x and y co-ordinates and within 2 m to 4 m for the z co-ordinate. Drill holes that could not be located due to collar destruction were estimated by reconstructing the Majestic grid in relation to GDA94 and measured graphically. These are generally considered to be within 5 m to 10 m of their true position. Data was captured in Map Grid of Australia GDA 94, Zone 55. No down hole surveys were carried out except for drilling of two Outokumpu diamond drill holes. Majority of DD holes are dipping at -60 degrees. Majority of RC are dipping at -45 degrees and majority of RAB holes are -90 degrees.
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.*	Tartana Project: Data Spacing varies depending on the era of drilling. Drilling has been conducted on 100 m x 100 m spacing then dependent on results, the follow-up drilling was typically on a 50 m x 50 m spacing or 20 m x 20 m spacing. Where spacing is 20 m x 20 m spacing it could be possible to determine the degree of geological and grade continuity. This is certainly apparent in the oxide zone where more than half of the orebody has been mined by open pit mining methods. No mineral resource has been estimated. No sample compositing has been applied.

Criteria	JORC Code explanation	Commentary
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.*	Tartana Project: Geological information is not considered complete enough to develop a structural geological model. Mineralisation is defined on the limits of geochemical data primarily from surface DD, RC and RAB drilling over a strike length > 600 m. It is not considered that there is a sampling bias.
Sample security	• *The measures taken to ensure sample security.*	Tartana Project: The various companies that drilled at the Tartana Project maintained their own sample security measures. All sampled core from 2009 – 2012 drilling was transmitted to Townsville SGS assay laboratories. All remaining core is stored on site.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Tartana Project: A review of drilling prior to 2006 was carried out by Stevens and Associates (2006).

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.*	Tartana Project: TNA holds 100% interest in the Tartana Project and Zeehan Project. Tartana Project consists of ML 4819, ML 4820, ML 5312 and ML 20489. A 1.5% Net Smelter Royalty exists over ML 4819, ML 4820, ML 5312 and ML 20489.

Criteria	JORC Code explanation	Commentary
		The previously mined Tartana open pit, leach pads, and copper sulphate production facilities are located on ML 5312.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Tartana Project and Mt Hess Project: Historic Exploration carried out by numerous different parties. All Legacy data sources are cited by TNA within company database structure.
Geology	• *Deposit type, geological setting and style of mineralisation.*	Tartana Project: The Tartana project is located on a belt of Silurian and Devonian age siltstone, fine grained sandstone, chert and limestone rocks (Chillagoe Formation) that trends north-west and dips steeply to south-east. The Chillagoe Formation is separated from the Pre-Cambrian Dargalong Metamorphics by the Palmerville Fault which passes underneath the Tartana leases and is a regionally extensive, major Basin-forming fault. Regionally, the same belt of rocks hosts the Red Dome porphyry copper-gold, Mungana porphyry copper-gold-zinc deposit and the Redcap and King Vol skarn deposits.
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*	Drill hole information is included in a table within Section 5 of the report.

Criteria	JORC Code explanation	Commentary
	explain why this is the case.	
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.*	Tartana Project: Summary significant intersections are included in tables within Section 5 of the report. No high grade upper cuts were used as it was not considered to be inappropriate at this stage of the exploration programs. Significant intersections were calculated for >0.5% Cu when a minimum of 3 m downhole at this grade was intersected. >1% Zn significant intersections were also calculated. No metal equivalents were calculated
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Tartana Project: Mineralisation is defined on the limits of geochemical data primarily from surface DD, RC and RAB drilling over a strike length > 600 m. Geological information is not considered complete enough to develop a structural geological model. Downhole lengths are reported.
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.*	Maps and sections are provided within the report.
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.*	Details of other exploration results are recorded in Appendix 1 of this report.
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*	Details of other exploration results are recorded in Appendix 1 of this report.

Criteria	JORC Code explanation	Commentary
	deleterious or contaminating substances.	
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.*	Details of intended exploration activities are recorded in the report.

Appendix 2. continued.

JORC Code, 2012 Edition – Table 1 Zeehan Zinc Slag Project

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (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.*	Zeehan Slag Project: The project comprises two slag dumps (North and South dumps) on ML 3M/2017 and which is an historic smelter site. The slag is a smelter product which is amorphous and silica-rich and is difficult to physically beneficiate. In 2019 Tartana Resources ("TNA") completed a drilling programme involving 7 vertical air core (AC) drill holes. Samples were collected at 1 m intervals down hole. Samples were logged and sent to ALS (Burnie) for assay and weighing. The TNA programme supplemented as well as provided verification of an earlier (1992) drilling programme conducted by Pyrosmelt NL which completed 36 vertical air core (AC) drill holes. Samples were also collected at 1m interval down hole and analysed for base metals.
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).*	Zeehan Project: Air core (AC) drill holes using a conventional 3 inch face sampling blade to a nominal depth.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure*	Zeehan Project: 9 vertical air core (AC) drill holes completed into North slag dump and 27 vertical air core drill holes completed into South slag dump.

Criteria	JORC Code explanation	Commentary
	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.*	Sample recovery was reported to be high and there was no known sample bias. TNA has drilled a further 7 air core (AC) drill holes. Sample recovery was visually assessed, samples weighed and recorded. No known sample bias.
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.*	Zeehan Project: Limited variation in material as the dumps are relatively homogeneous. Basic descriptive logs.
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.*	Zeehan Project: No sub sampling.
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,*	Zeehan Project: 1992 samples were analysed for zinc, lead and silver by Analabs in Tasmania by peroxide fusion digest and an AAS finish. 10% of the samples were duplicated in the field to check assay precision. A further 40 sample duplicates were analysed by the same technique at Australian Assay Laboratories to check for assay accuracy.

Criteria	JORC Code explanation	Commentary
	duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	2019 samples were submitted to ALS laboratory in Brisbane for analysis. Once dried and pulverised, AC samples were analysed with by aqua regia digest, ICP-MS and XRF. Field QAQC of 15 standards, blanks, duplicates were inserted into the 100 samples. Assay results have been satisfactory and demonstrate an acceptable level of accuracy and precision. Laboratory QAQC involves the use of internal certified reference standards, blanks, splits and replicates. Analysis of these results also demonstrate an acceptable level of precision and accuracy.
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.*	2019 drilling intersections were visually field verified by TNA geologist. No twinned holes have been drilled but recently drilling was drilled between 4 drill hole locations of the earlier 1992 drill hole collars. Drill holes data is verified in MS excel before importing into MS Access. Maptek Vulcan software also has internal validation checks before importing. Assay values that were below detection limit were adjusted to 1/10 of the detection limit value.
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.*	Zeehan Project: Drilling completed on a nominal 20 m x 20 m spacing through the dumps. Both Coffey Geosciences Pty Ltd and Pyrosmelt NL modelled the surface of the dumps using drill hole data. The grid system is MGA 94 Zone 55. An aerial photogrammetry topographic survey was flown in 2019. A 10 cm resolution was used rather than the 5 cm for Mineral Resource estimation and is considered appropriate. A BCM volume of 160,675 was calculated from both slag dumps.

Criteria	JORC Code explanation	Commentary
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.*	Zeehan Project: Drilling completed on a nominal 20 m x 20 m spacing through the dumps. Both Coffey Geosciences Pty Ltd and Pyrosmelt NL modelled the surface of the dumps using drill hole data. Further drilling in 2019 means drilling has now been completed on a nominal 10 m x 10 m spacing through the dumps. There is sufficient continuity in grade for a Mineral Resource estimation and classification applied under the Australasian Code for the Reporting of identified Mineral Resources and Ore Reserves (JORC 2012). No sample compositing has been applied.
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.*	Zeehan Project: Not applicable to slag dumps.
Sample security	• *The measures taken to ensure sample security.*	Zeehan Project: 1992 Zeehan slag dump samples considered to be high between site and Analabs Tasmania and Australian Assay Laboratories. 2019 Zeehan slag dump samples considered to be high between site and ALS Laboratories.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	Zeehan Project. No audit or review of slag dump drilling.

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.*	Zeehan Project: Zeehan project consists of ML 3M/2017 currently held by Intec Zeehan Residues Pty Ltd which is 100% held subsidiary of TNA.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Zeehan Project: Pyrosmelt NL., Coffeys
Geology	• *Deposit type, geological setting and style of mineralisation.*	Zeehan Project: Relatively homogenous dumps of slag from historic smelter – hence limited geological relevance.

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.*
		Drill hole information is included in a table within Section 5 of the report.

Criteria	JORC Code explanation	Commentary
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.*	No metal equivalents were calculated
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').*	Zeehan Project: Not applicable to slag dumps due homogenous nature of dumps.
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.*	Maps and sections are provided within Section 5 of this report.
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.*	Details of other exploration results are recorded in Section 5 of this report.
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.*	Details of other exploration results are recorded in Section 5 of this report.
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,*	Details of intended exploration activities are recorded in the Section 4.4 Exploration Budget of this report.

Criteria	JORC Code explanation	Commentary
	including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	Zeehan drill hole data is stored in MS Access database and hand drawn drill hole logs are stored in scanned digital form. Data validation checks are routinely run when data is interpreted in 3D visualization and modelling software. A cross-check of historical Zeehan collar coordinates in the database against original drill hole plans was performed in 2019.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	Breakaway Mining Services has conducted a site visit as part of 2019 drilling campaign The CP is of the opinion that this work has all been completed in line with industry best practice and to an appropriate standard for the mineral resource reported.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	No geology is relevant at the Zeehan Project as it comprises dumps of smelter slag. Previous mining records, the original drill logs from a 29 hole programme conducted in 1992, numerous reports including pre-JORC ore resource estimations, independent slag bulk density and stockpile surveys/ Recent site inspections have helped to guide the most recent 7 Drill hole program of 2019. This new information from drilling has improved the bulk density of historical drilling, the number of samples and confirmed the grade tenors encountered in the historical drilling. A recent photogrammetry survey has also conducted over the two slag dumps.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below*	The modelling domain containing the Zeehan Project has a North Slag Dump of nominally 60 m x 45 m and a South Slag Dump of

Criteria	JORC Code explanation	Commentary
	surface to the upper and lower limits of the Mineral Resource.	nominally 125 m x 125 m. The maximum vertical extent of the smelter slag is 20 m. Estimation of the dumps volume is supported by a photogrammetry survey completed in April 2019. The base of the dumps is well constrained by drilling and edge surveying.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	The smelter slag is present as two separately located slag dumps. These two domains defined by surface photogrammetry survey and depth of drilling intersecting the natural soil profile surface below the smelter slag. Inverse Distance (IVD) interpolation with an equal distance ellipsoid search was used to estimate Pb, Ag and Zn grades in the two domains. BMS has calculated the Mineral Resources on the bearing of 360 degrees. The Mineral Resources have been estimated within an area with approximately 15-20 m x 15-20 m drill density. The block dimensions used in the model were 25 m NS x 25m EW x 5 m vertical with sub-cells of 5 m x 5 m x 1 m A rotation of 0 degrees Bearing, 0 degrees Plunge and 0 degrees Dip were applied to the blocks. The grade variables populated in the block model were Zn, Ag, Pb. Discretisation steps of 3 x 3 x 3 were used. No assumptions were made using recovery of by-products or estimations of non-grade variables. No assumptions were made on selective mining units or correlation between variables
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages in the model are estimated on a dry in-situ basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	No high grade cuts were applied. The estimate has been reported at zero cut-off grade which is appropriate for a slag dump where selective mining is not possible.

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Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	No Mining factors were assumed in the Mineral Resource Estimate.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	A trial sample (5,000 tonnes) was excavated in January 2018 and processed in Nyrstar's Port Pirie Smelter in South Australia. Tartana was advised that the processing performance of the slag met Nyrstar's expectations.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	No environmental factors were assumed in the Mineral Resource estimate.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones*	TNA carried out 16 pulp density measurements at ALS Laboratories in Burnie, Tasmania by specific gravity-displacement method. A median value of 4.08 t/m^3 was taken from dry weight drilling samples from the 2019 drilling which represents an upper limit of estimated bulk density. Bulk density pit sample work carried out by Coffey in 2000 is considered to be more representative of the total bulk density. A

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	within the deposit. • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	bulk density of 2.92 t/m^3 was estimated from truck weights and surveys of, taking into consideration of porosity and void cracks within the dumps. This value was used for the Resource Estimate.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	The classification of blocks was defined by constructing smoothed, realistic 3D solids that define regions of high to medium confidence in grade and continuity. The Resource is classified as Indicated Resource within areas of reasonable drill spacing (15-20m x 15-20m) due to the well documented continuity and predictability of Zinc grades, well constrained density estimates and well constrained volume estimates.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	A review of the Mineral Resource estimate has been undertaken by Dr Stuart Munroe from SRK Consulting Ltd.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	The Zeehan Project has been tested with high quality drilling sampling and assaying. Drilling and logging has defined the base of the smelter slag to provide an accurate volume. The bulk of the deposit has been classified as indicated Mineral Resource. These Resource estimates are Global in nature until relevant tonnages and relevant technical and economic evaluations have been undertaken in further sections of the Australasian Code for the Reporting of identified Mineral Resources and Ore Reserves (JORC 2012).