# ASX ANNOUNCEMENT

22<sup>nd</sup> February 2018

# Further Sampling Confirms High Grade Zinc Discovery and identifies High Grade Vanadium Potential at Braeside

## **Highlights**

#### **Devon Cut Prospect High-Grade Zinc Discovery**

Re-assaying of composites samples and additional multi-element analysis has confirmed the Devon Cut Prospect (tested by a single RC drill hole within a 2km zinc soil anomaly) as a significant discovery and has identified high-grade vanadium potential.

- The high-grade zone returned **5m @ 8.0% Zn, 0.35% Pb from 32m** within a broad zone of lower grade zinc mineralisation which returned **30m @ 1.5% Zn** from 28m.
- Strong alteration (silica sericite chlorite) is associated with the base metal mineralisation. Alteration extends from 17m to 88m EOH. Elevated Hg (mercury) and In (indium), indicative of high level porphyry related base metal systems, is associated with the high grade Zn mineralisation.
- Grab sampling near the Devon Cut Prospect returned high-grade vanadium which is inferred to be related with a large mafic dyke system intrusion (magnetic and vanadiferous) that occurs immediately west of the Devon Cut zinc mineralisation.
  - Grab sampling results include high grade 3.29%, 1.82% and 1.52% V<sub>2</sub>O<sub>5</sub>.
  - The Devon Cut discovery hole intercepted 3m of vanadium anomalism from 53m within altered andesitic basalt.

#### **Braeside Potential**

- The base metal mineralisation extends for 34km strike within E45/2032 and is completely open with the mineralisation associated with two main structures from the Ragged Hills Mine to the south all the way through to north, with up to four strongly mineralised structures occurring over a 5km wide corridor (north of the Devon Cut Prospect).
- Within the E45/2032 tenement there are eleven (11) groups of significant base metal in soil anomalism, of these groups, only four (4) have been partly tested with the latest reconnaissance RC drilling. E45/2032 represents approximately 15% of the total Braeside Project (>1000km<sup>2</sup>).
- The single drill hole testing the Barker Well Prospect area intercepted **124m** @ **0.19% Pb, 900ppm Zn** (no lower cut-off) over the entire hole length in association with pervasive silica-sericite-chlorite alteration. The intercept is considered very significant as it indicates the fluids were consistently metal rich and the flow was voluminous to allow the pervasive alteration of the host rock (andesitic basalt) in association with fracture/feeders likely related to a deeper porphyry source.
- Rumble is targeting high-grade fault breccia pipe type deposits (**2-5Mt of high-grade Zn and Pb**). In addition to this target type, recent sampling has shown that base metal mineralisation is closely associated with wide zones of alteration, in the case of Barker Well Prospect, over 100m in width. Rumble considers there is potential for larger tonnage lower grade disseminated base metal deposits (**30-50Mt**).



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Rumble Resources Ltd (ASX: RTR) ("Rumble" or "the Company") is pleased to announce that the completion of re-split assaying of previous composites and additional composite sampling from the maiden reconnaissance drilling program (completed Dec 2017) at the Braeside Project (E45/2032) has confirmed high grade zinc mineralisation at the Devon Cut Prospect and identified high-grade vanadium potential.

Additional assaying included multi-element analysis of the high-grade zinc mineralisation. Further grab samples were collected at the Devon Cut, Sugar Ramos and North Ragged Hills prospects.

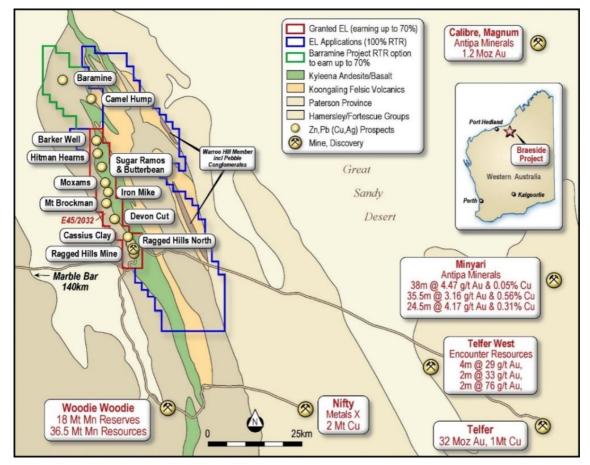


Image 1. – Location and Regional Geology Plan – Braeside Project

# About the Braeside Project

The Braeside Project lies 140km east of Marble Bar and is located on the eastern margin of the Pilbara Craton in the northwest of Western Australia (**see image 1**). The project hosts the Braeside Pb-Ag-Zn mining district which includes the Ragged Hills mining centre (discovered in 1901) and numerous small mines along a series of north trending structures (informally called the Braeside Fault Zone - BFZ). The historic mines were operative from 1925 to 1967. The BFZ contains high grade poly-metallic mineralisation over 34km of strike with dominant galena and associated sphalerite and chalcopyrite. The BFZ and associated mineralisation are hosted in Fortescue Group mafic volcanics and volcaniclastics (Maddina Basalt and the Kylena Basalt). The Koongaling Felsic Volcanics sequence is the same age as the Kylena Basalt (bimodal) and lies further east.

Rumble has the right to earn 70% of granted licence E45/2032 and holds 100% of 5 contiguous exploration licences (under application). To the north of the granted licence, Rumble has an option on the Barramine Project which lies along strike from the BFZ. The total area of prospective terrane for high grade Zn–Pb Cu, Ag and Au deposits is now over 1000km<sup>2</sup>.

Prior to Rumble's acquisition of the high-grade project there had been no modern systematic exploration on the project.



During 2017, Rumble completed the first ever modern systematic exploration on the Braeside project.

The systematic exploration program included soil sampling (regional and infill), Heli - VTEM and prospect geological mapping with grab sampling which generated thirteen (13) targets that were subsequently tested by nineteen (19) first pass reconnaissance RC drill holes. Significantly in the maiden RC Drilling program at the Braeside Project, seventeen (17) of the drill holes intersected anomalous Zn-Pb mineralisation with eight (8) of the targets delineating significant Zn-Pb (> 1% Pb/Zn) mineralisation along with a new zinc discovery at the Devon Cut Prospect.

Pervasive widespread silica-sericite-chlorite alteration with potassic (Kspar), hematite and magnetite is associated with the major fault/fracture zones – BFZ – which host widespread disseminated to massive base metal mineralisation over the entire 34 km strike. The structures are likely laterally extensive feeders associated with known sub volcanic rhyolites that outcrop further to the east. Research and litho-geochemical studies by Rumble has shown mineralisation (Pb dating), the rhyolite and the host andesitic basalt are approximately the same age.

The porphyry related base metal geological/deposit model developed by Rumble has been supported by the latest multi-element geochemistry which has highlighted elevated mercury and indium with the high-grade Zn mineralisation.

The latest round of grab sampling has returned high-grade vanadium assays from the Devon Cut prospect area. Regional mapping and interpretation has outlined an extensive north trending mafic dyke sequence (both cross cutting and conformable to lithologies) which is magnetic and vanadiferous.

# Additional Sampling and Multi-Element Analysis

During January 2018, a total of **485 RC chip samples** were assayed. Sampling included 1 metre re-splits of composites and additional composite sampling from the entire nineteen (19) hole RC drilling programme that was conducted in November-December 2017. Select detailed multi-element analysis (**18 samples**) was completed on the higher-grade base metal mineralisation. Further grab sampling (**12 samples**) was completed on the Devon Cut, Sugar Ramos and Ragged Hill North prospect areas.

# Devon Cut Prospect (BRRC019) – New Zinc Discovery (image 2 & 3)

Single metre re-sampling of previous composite samples and multi-element analysis returned:

#### 5m @ 8.0% Zn, 0.35% Pb from 32m

#### inc 1m @ 21% Zn, 0.97% Pb from 34m.

The high-grade intercept was within a broad zone of zinc anomalism:

#### 30m @ 1.5% Zn from 28m

Strong silica-sericite-chlorite-hematite alteration was intercepted from 17m to end of hole (88m). Geological interpretation from logging and position of high grade mineralisation at surface indicates that the high-grade intercept is approximate true width. Multi-element analysis of the high-grade intercept returned up to 21.3 ppm Hg (mercury) and 16 ppm In (indium).

Mineralisation at the Devon Cut is completely open along strike and down dip.



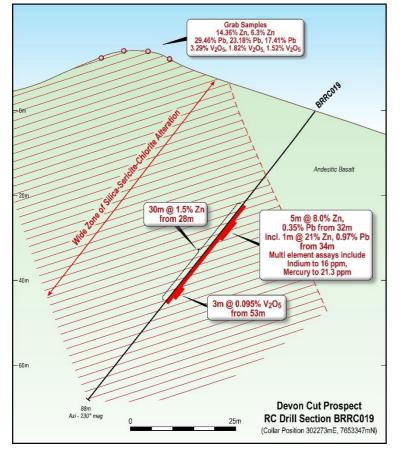


Image 2. Devon Cut RC Drill Section – BRRC019

Grab sampling at the Devon Cut Prospect returned high grade vanadium:

# $V_2O_5 - 3.29\%$ , 1.82% and 1.52%

BRRC019 intercepted weak vanadium anomalism from 53m (0.095%  $V_{2}O_{5}$ ). Geological investigation has highlighted a mafic intrusion immediately west of the Devon Cut Prospect mineralisation (BRRC019 did not intercept the mafic intrusion). The intrusion (dyke) is gabbroic to tonalitic in composition and is strongly magnetic.

Anomalous vanadium in soil geochemistry elsewhere within E45/2032 has been observed with up to 560ppm  $V_2O_5$  over or nearby the inferred position of the mafic dyke

With rock chip samples reporting high grade vanadium, the mafic intrusion is considered significant and further work is planned for this year.

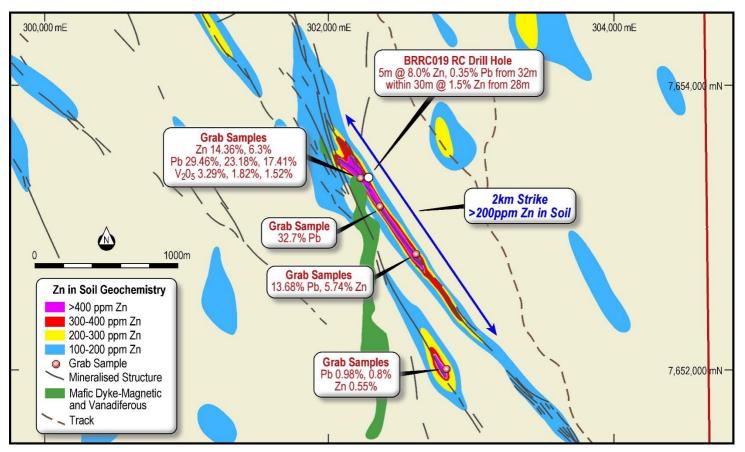
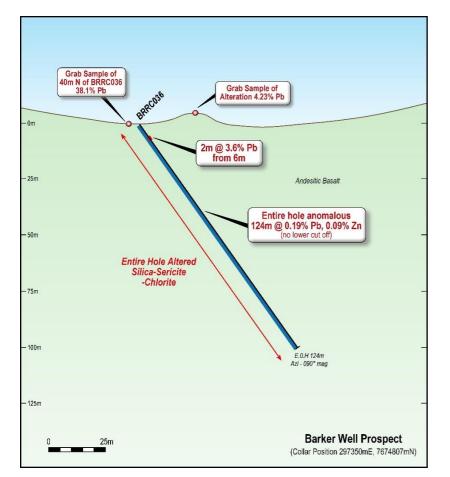


Image 3. Devon Cut Prospect Area – RC Drill Hole, Zn in Soil Geochemistry, Mafic Dyke and Grab Sample Location Plan



# **Results of the Re-Assaying and Composite Sampling – RC Drilling**

Of the nineteen (19) drill holes sampled, seventeen (17) drill holes returned anomalous base metal intercepts (mineralisation >1000 ppm Zn and/or Pb), with eight (8) of the drill holes discovering significant Zn-Pb mineralisation along with a new zinc discovery at the Devon Cut Prospect – (see above). The re-assaying of the previous composites as one metre samples has confirmed the previously reported lower grade intercepts, however, more importantly, it has highlighted that the widespread base metal anomalism is closely associated with the pervasive alteration.



The single drill hole testing the Barker Well Prospect area (BRRC036) returned anomalous Pb and Zn over the entire length (124m) in association with pervasive silica-sericite-chlorite alteration.

The drill hole returned an intercept of 124m @ 0.19% Pb, 900ppm Zn from surface (no lower cut-off).

This is very significant as it indicates the fluids were consistently metal rich and the flow was voluminous to allow the pervasive alteration of the host rock (andesitic basalt) over significant widths wide) association (>100m in with fracture/feeders likely related to a deeper porphyry source.

Image 4. Barker Well Prospect – RC Drill Hole BRRC036

# **Multi-element Geochemistry**

In general, the Braeside mineralisation is zinc (sphalerite) and/or lead (galena) dominate with associated copper, silver and minor gold. Other elevated elements include Mo (molybdenum), Hg (mercury) and In (indium). Indium is directly associated with sphalerite (indium is a common by-product of zinc). Anomalous Ba (barium) is observed with higher grade galena (Pb) without sphalerite (Zn).

The high-grade vanadium is likely associated with a series of mafic intrusions trending north-south. The mafic dykes appear to be later than the main altered structures/feeders hosting the dominant Zn and Pb mineralisation as they often intrude along the same zones. Later veining (epigenetic veining commonly overprints the main mineralised structures) has potentially upgraded the vanadium at the Devon Cut Prospect.

Of the main oxide elements, K (potassium) is strongly associated with Ba and is often elevated in the hanging wall and footwall to the main base metal mineralisation. Kspar has been often observed along with muscovite within the alteration zones.



# Summary of Mineralisation and Target Type

The latest sampling and multi-element analysis of RC drilling completed last December has reinforced the geological/exploration model developed by Rumble. The Braeside base metal mineralisation is likely associated with wide pervasively altered fracture/fault zones which are feeder faults associated with porphyritic rhyolite. The highlights are:

- The base metal mineralisation extends for 34km within E45/2032 and is completely open.
- The mineralisation is associated with two main structures at the Ragged Hills Mine (southern end of granted tenement E45/2032) and further north, up to four strongly mineralised structures occur over a 5km wide corridor (north of the Devon Cut Prospect).
- The new Zn discovery at Devon Cut has been confirmed by the latest sampling. The high-grade intercept (**5m @ 8.0% Zn, 0.35%Pb**) within a broad altered lower grade intercept (**30m @ 1.5% Zn**) is considered very significant considering the reconnaissance nature of the single RC drill hole. The discovery lies within a 2km long Zn and Pb soil anomaly that is completely open along strike and at depth.
- Base metal mineralisation is associated with significant widths of alteration. At the Barker Well Prospect, the alteration is >100m in width and is anomalous in base metals (124m @ 0.19% Pb entire hole).

The target for Rumble is high-grade fault breccia pipe type deposits (2-5Mt of high-grade Zn and Pb), however, based on the recent re-assaying which has shown that base metal is closely associated with wide zones of alteration, in some cases > 100m in width, there is also potential for larger tonnage lower grade disseminated base metal deposits (30-50Mt).

### Soil Geochemistry and Future Targeting

Soil sampling conducted during 2017 has been the most effective tool to highlight the base metal mineralised trends and structures. Follow up grab sampling has been limited to only a small percentage of the available Zn/Pb soil anomalies and in most cases, grab sampling has confirmed mineralisation within the soil anomalies with high-grade base metal values.

Granted tenement E45/2032 represents approximately 15% of the total project area (including the Barramine option) and within the tenement there are eleven (11) groups of significant base metal in soil anomalism (**see image 5**). Of these groups, only four (4) have been partly tested with the latest reconnaissance RC drilling. In the case of the Devon Cut and Barker Well Prospects, only single holes have been completed (both returned very significant mineralisation including a new Zn discovery).

To put into context the high level of prospectivity for the Braeside Project, the soil anomaly associated with the Devon Cut Zn (with Pb) discovery is approximately two (2) km long (**see image 5**). Elsewhere in E45/2032, significantly larger base metal anomalies (multiple zones with strike lengths up to 8km) have yet to be tested.

Note that **image 5** uses Pb in soil contouring for targeting as Pb is less geochemically mobile in the surface profile than Zn and therefore Pb anomalism is likely closer to the source of the base metal mineralisation.



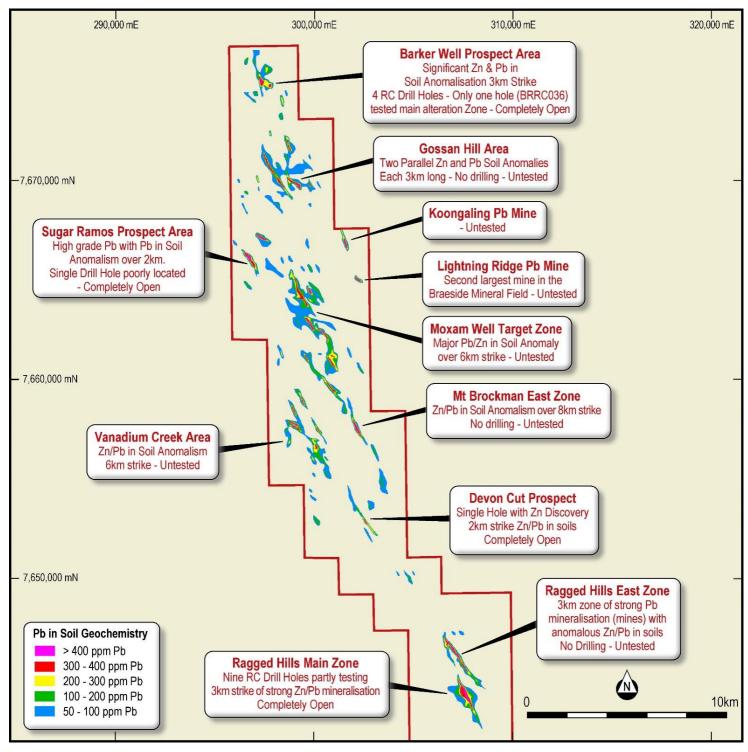


Image 5 – Exploration Status – E45/2032 - Pb in Soil Geochemistry Group Anomalies



# **Future Exploration**

#### Next stages for the 2018 systematic exploration field season includes:

- Detailed geochemistry (soil and grab sampling) and geological mapping of the strong base metal mineralisation discovered by the recent RC drilling with the aim to delineate the newly discovered mineralisation and generate further drill targets.
  - Focus will be on the Devon Cut and Barker Well Prospects.
- Detailed geochemistry and geological mapping of new targets to generate new drill targets.
  - As previously reported (announcement 16<sup>th</sup> Oct 2017 Numerous High-Grade Zn Pb Cu Ag
     Au V Targets Identified at Braeside Project from Infill Soil and Rock Chip Sampling), many base metal and Au soil anomalies and targets have been defined within E45/2032 and remain untested.
  - The high grade vanadium potential will be also investigated.
- First pass geochemistry (soil, stream sediment and grab sampling) of newly granted tenements within the Braeside Project area.
- It is anticipated there will be 2 rounds of drilling in 2018 with the next round of drilling scheduled for May 2018 (subject to wet season).

Shane Sikora Managing Director

#### - ENDS -

For further information visit or contact enquiries@rumbleresources.com.au.

#### About Rumble Resources Ltd

Rumble Resources Ltd is an Australian based exploration company, officially admitted to the ASX on the 1st July 2011. Rumble was established with the aim of adding significant value to its current gold and base metal assets and will continue to look at mineral acquisition opportunities both in Australia and abroad.

#### Forward Looking and Cautionary Statement

The information in this report that relates to exploration results from work completed by Rumble.

#### **Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Brett Keillor, who is a Member of the Australasian Institute of Mining & Metallurgy and the Australian Institute of Geoscientists. Mr Keillor is an employee of Rumble Resources Limited. Mr Keillor has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Keillor consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# Section 1 Sampling Techniques and Data



Criteria		JORC Code explanation		Commentary
Sampling techniques	•	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	•	Rumble completed a 19 hole RC drilling programme for a total of 2004m within E45/2032 (Braeside Project) last Dec 2017. First pass reporting of select assays were announced 16 <sup>th</sup> Jan 2018 "High grade Zinc Discovery at Braeside". Re-split and addition composite sampling has now been completed. <b>485</b> samples (including standards and blanks) have now been assayed and reported in this announcement. The Braeside Project is a Zn and Pb sulphide mineralisation system with associated Cu, Ag, Au and V. RC chip samples split using cone splitter. • Large volume sample preparation • 1.2 kg • All samples dry. Good recovery. RC drilling collected 2 single metre split samples per metre. Composite sampling was collected from the bulk RC cuttings bag. Samples were pulverised and assayed using a four-acid digest. Industry standards and blanks used. The current re-split and composite sampling is from archive storage held in Marble Bar, Western Australia. All recent sampling as per this announcement is from previous split 1m RC chip sampling collected November-December 2017.
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.)	•	Drilling completed by Strike Drilling. The RC rig uses a Schramm T450 platform with 3½ in rods with depth capacity to 300m. The compressor is a 400 psi/1240cfm unit. Collar position taken by GPS and down hole surveys utilized a gyro camera.
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	•	RC chip bag consistent weight. Minimal or no water issues due to overall shallow drilling. All samples went through cone splitter. Two single metre splits collected and archives. No loss of sample due to dry conditions (generally shallow holes)



Criteria	JORC Code explanation	Commentary
	<ul> <li>nature of the samples.</li> <li>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.</li> </ul>	
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological logging conducted by experienced (&gt;10yrs) geologist.         <ul> <li>Each metre was geologically logged and RC chips collected for reference and archiving.</li> </ul> </li> <li>Additional Mag Sus and pXRF data collected.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain</li> <li>size of the material being</li> </ul>	<ul> <li>All RC chips were cone split.</li> <li>All samples were dry.</li> <li>Sample weight for analysis 1 – 2kg.</li> <li>Main sample bags all same size.</li> <li>QA/QC involved certified base metal standards and blanks.</li> <li>RC chip size consistent due to competent rock from surface.</li> <li>Entire sample pulverise 1.2 kg.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>sampled.</li> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis</li> </ul>	<ul> <li>Analysis was by Intertek Genalysis using four acid digest with OE/MS finish.</li> <li>QA/QC involved certified base metal standards and blanks.         <ul> <li>Industry standards were used.</li> <li>OREAS</li> <li>CRM 27b</li> <li>CRM620.621 and 623</li> <li>Standards and blanks every 30m and 50m.</li> </ul> </li> </ul>



Criteria	JORC Code explanation	
Unteria	-	Commentary
	<ul> <li>including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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.</li> </ul>	
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> </ul>	<ul> <li>Verification of significant intersections not vetted by independent personnel.</li> </ul>
	<ul> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>No twins. First pass drilling</li> <li>Logging initially hard copy, then transferred to standardised digital logging system</li> </ul>
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.	<ul> <li>Drill hole collars were surveyed via GPS.</li> <li>Down-hole survey by gyro camera.</li> </ul>
	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Grid system AGD94 Zone 51</li> <li>Utilised WA Landgate Imagery and GPS for topographic control.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample</li> </ul>	<ul> <li>Not applicable. RC drilling was maiden program and was reconnaissance. Most targets were tested by a single RC hole</li> </ul>
	compositing has been applied.	<ul> <li>Composite sampling was used in addition to single metre samples.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have</li> </ul>	<ul> <li>The RC drilling was first pass (no previous drilling). Orientation of drilling was from surface geological observations (dip of target). If the dip was unknown and/or drilling was likely downdip, the dip of the drill hole was flattened to 55°.</li> <li>Drilling was normal to the perceived targets wherever possible.</li> </ul>



Criteria		JORC Code explanation	Commentary						
		introduced a sampling bias, this should be assessed and reported if material.							
Sample security	•	The measures taken to ensure sample security.	•	Samples were transported by Rumble staff to Port Hedland and sent via reputable transport company.					
Audits or reviews	•	The results of any audits or reviews of sampling techniques and data.	•	Not applicable as no audit or review completed.					



# Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>The project comprises of a single granted exploration license – E45/2032.</li> <li>The license is currently owned by Maverick Exploration Pty Ltd. Rumble Resources has an earn in JV agreement</li> <li>The license is granted, in a state of good standing and has no known impediments to operate in the area.</li> <li>In addition to the granted EL, Rumble hold 100% of five (5) contiguous EL applications with a total area of 1000km<sup>2</sup>.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	Exploration solely completed by Rumble Resources
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Target is Zn, Pb, Cu and precious metals. Deposit type is conceptual. Porphyry related (including VHMS) polymetallic deposit type</li> </ul>
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>Drill – hole Summary – Reported 16/1/2018 "High grade Zinc Discovery at Braeside"</li> <li>Attached Table 1. RC Drill-hole Assays Pb, Zn, S - &gt;1000ppm Pb/Zn</li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Standard weight averaging technique used for intercepts. Many targets were tested and the lower cut-off grade is stated where appropriate.</li> <li>Aggregate intercepts using high grade and low grade assays clearly stated and presented.</li> <li>Discovery intercept at Devon Cut uses a 1% Zn lower cut off.</li> <li>Metal equivalent values not used.</li> </ul>
Relationship	These relationships are particularly important in the	



		RESOURCES LTD
Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	<ul> <li>reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>The geometry between mineralization and drill-hole angle is only approximate based on geological interpretation.</li> </ul>
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should</li> </ul>	<ul> <li>Image 1 – Braeside Location, Geology and prospect Plan</li> </ul>
	include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	<ul> <li>Image 2 - Devon Cut Prospect – RC Drill-hole Section BRRC019</li> </ul>
		<ul> <li>Image 3 – Plan of the Devon Cut Prospect Area – RC drill hole BRRC019 with Zn in Soil Contouring and Grab Sample Locations.</li> </ul>
		<ul> <li>Image 4 – Barker Well Prospect – RC Drill-hole BRRC036 Section.</li> </ul>
		<ul> <li>Image 5 – Exploration Status – E45/2032 - Pb in Soil Geochemistry Group Anomalies</li> </ul>
Balanced	Where comprehensive reporting of all Exploration     Desute is not practice black reporting of all exploration	RC Drilling Results Table 1.
reporting	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.	<ul> <li>Pb, Zn, S, &gt;1000ppm reported.</li> </ul>
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.	<ul> <li>Multi-element assaying was completed on the higher grade base metal mineralisation. 18 samples collected and assayed by Intertek using 4 acid digest (with OE and MS finish – 63 element suite) and Aqua regia for Au.</li> <li>Twelve (12) Grab sampling were assayed using 4 acid digest (OE finish – 34 elements including Au) – Table 2.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Prospect mapping, soil geochemistry and further grab sampling planned to test potential at Devon Cut and Barker Well Prospects,</li> </ul>



# Table 1. RC Drill-hole Assays Pb, Zn, S - >1000ppm Pb/Zn

Hole_ID	From	То	Pb ppm	Zn ppm	S ppm	Hole_ID	From	То	Pb ppm	Zn ppm	S ppm
BRRC006	48	49	1040	188	819	BRRC009A	93	94	6498	2104	2974
BRRC006	49	50	22852	8872	9120	BRRC009A	96	98	1764	433	862
BRRC006	50	51	2532	19374	10430	BRRC009A	104	105	14642	758	3244
BRRC006	51	52	3039	37589	19667	BRRC009A	105	106	4307	354	1032
BRRC006	52	53	1847	3398	2224	BRRC009A	106	107	2156	229	2029
BRRC006	53	54	653	1024	883	BRRC009A	107	108	1985	208	578
BRRC006	54	55	262	2251	1596	BRRC009A	108	109	1185	166	518
BRRC009	18	19	5076	326	1698	BRRC009A	111	112	2512	122	1941
BRRC009	19	20	2322	247	897	BRRC009A	112	113	3302	144	1305
BRRC009	44	45	1153	641	1628	BRRC019	0	5	223	1125	149
BRRC009	45	46	26855	25510	17230	BRRC019	19	20	139	1104	58
BRRC009	46	47	4365	3412	3244	BRRC019	20	21	86	1516	0.01
BRRC009	48	49	948	1356	1175	BRRC019	28	29	406	1127	0.01
BRRC009	61	63	2044	1597	1813	BRRC019	29	30	112	1162	0.01
BRRC010	0	5	597	1176	78	BRRC019	30	31	213	1855	0.01
BRRC010	50	51	1307	1103	1522	BRRC019	31	32	282	1910	0.01
BRRC010	51	52	3168	2763	2442	BRRC019	32	34	2267	44954	13779
BRRC010	52	53	2158	195	948	BRRC019	34	35	9750	209946	91505
BRRC010	53	54	6673	662	1699	BRRC019	35	36	1455	85880	41402
BRRC010	62	63	23463	9141	8645	BRRC019	36	37	1392	13699	2268
BRRC010	63	64	1395	773	816	BRRC019	37	38	683	5342	278
BRRC001	0	5	58	1270	0.01	BRRC019	38	39	428	3042	148
BRRC001	10	14	15	4844	56	BRRC019	39	40	891	3270	97
BRRC001	14	18	26	3659	51	BRRC019	40	41	1574	2037	83
BRRC001	18	22	95	3528	150	BRRC019	41	42	2222	2254	0.01
BRRC001	22	24	72	1792	153	BRRC019	42	43	1553	2628	0.01
BRRC001	25	26	56248	250	9733	BRRC019	43	44	521	2534	0.01
BRRC001	26	27	11754	2772	3972	BRRC019	44	45	360	1945	0.01
BRRC001	27	28	2923	385	1093	BRRC019	45	46	583	3036	180
BRRC001	38	42	38	1069	1176	BRRC019	46	47	1292	1928	56
BRRC001	59	60	1718	10853	6579	BRRC019	47	48	1766	2248	0.01
BRRC001	60	61	853	3493	2428	BRRC019	48	49	3717	2702	0.01
BRRC001	125	130	262	2559	2139	BRRC019	49	50	4510	3866	0.01
BRRC004	54	55	1272	334	545	BRRC019	50	51	2809	2713	0.01
BRRC004	77	79	1094	1997	2162	BRRC019	51	52	1023	4893	0.01
BRRC004	79	80	4433	13160	8008	BRRC019	52	53	747	4875	59
BRRC004	80	81	1944	1719	1272	BRRC019	53	54	1882	4132	60
BRRC004	81	82	2513	2629	1953	BRRC019	54	55	2634	2806	71
BRRC004	82	83	1512	549	858	BRRC019	55	56	2282	2496	107
BRRC003	12	14	0.01	5283	0.01	BRRC019	56	58	585	1663	63
BRRC003	14	18	0.01	2431	0.01	BRRC020	42	43	4031	671	77913
BRRC003	59	60	2211	7970	4630	BRRC020	43	44	5700	655	149200
BRRC003	60	61	11461	49181	26610	BRRC020	44	45	53078	1105	35969
BRRC003	61	62	48143	12489	14285	BRRC020	45	46	3160	361	14840
BRRC003	62	63	3356	2627	2491	BRRC021	49	51	49	1184	627
BRRC003	63	64	1082	1244	1035	BRRC022	49	50	2032	835	1973
BRRC009A	30	31	403	3978	2285	BRRC023	70	71	1167	2297	11356
BRRC009A	92	93	16750	14932	11221	BRRC023	71	72	424	2475	8383



#### Table 1. Continued

Hole_ID	From	То	Pb ppm	Zn ppm	S ppm
BRRC023	72	73	267	2643	7211
BRRC031	75	80	629	2465	2662
BRRC036	0	1	5351	767	52
BRRC036	3	4	7079	1039	529
BRRC036	4	5	1761	768	91
BRRC036	5	6	1175	755	93
BRRC036	6	7	60036	5214	8566
BRRC036	7	8	11951	1290	1253
BRRC036	8	9	7472	814	933
BRRC036	9	10	3419	588	667
BRRC036	10	11	2155	699	625
BRRC036	11	12	1773	499	349
BRRC036	12	13	2838	602	772
BRRC036	13	14	1835	686	496
BRRC036	20	21	580	1137	562
BRRC036	23	24	9118	1576	2562
BRRC036	23	25	1494	858	1554
BRRC036	24	29	1105	462	474
BRRC036	20	30	1692	739	671
BRRC036	34	35	1215	475	613
BRRC036	35	35	1950	473	667
BRRC036	35	40	1950	637	582
BRRC036	40	40	1972	384	542
BRRC036	40	41 42	2123	+ +	
	96	97	157	839	1253
BRRC036				1312	779
BRRC036	97	98	426	1343	854
BRRC036	98	99	298	1446	723
BRRC036	99	100	132	1184	573
BRRC036	100	101	496	1959	1072
BRRC036	101	102	303	1479	710
BRRC036	102	103	248	1529	798
BRRC036	103	104	189	1537	836
BRRC036	104	105	94	1228	658
BRRC036	105	106	642	3779	2536
BRRC036	106	107	775	2014	1298
BRRC036	107	108	147	1496	907
BRRC036	108	109	131	1536	826
BRRC036	113	114	245	1077	751
BRRC036	118	119	134	1321	729
BRRC036	119	120	194	1546	954
BRRC037	64	65	2275	1216	1081
BRRC037	65	66	1207	710	1380
BRRC037	66	67	1132	497	787
BRRC037	67	68	1893	513	971
BRRC008	10	11	76	1349	0.01
BRRC008	14	15	175	1868	0.01
BRRC008	85	86	1932	19197	10017
BRRC008	86	88	238	1755	1484
BRRC008	91	92	3328	829	1784



### Table 2. Grab Samples collected Dec 2017

Sample ID	Easting	Northing	Au ppm	Ag	Cu	Pb	S	v	Zn	V2O5	V2O5%
BR162	296764	7666133	0.014	0.01	246	919	428	37	319	66.05	0.01
BR163	296756	7666142	0.015	0.01	55	413	193	14	78	24.99	0.00
BR164	296740	7666134	0.02	12	628	55225	4238	72	301	128.52	0.01
BR165	296750	7666120	0.05	67	1067	542742	56454	6	27	10.71	0.00
BR166	296759	7666106	0.066	53	586	374073	41837	19	29	33.92	0.00
BR167	296935	7665748	0.006	4	177	27711	3943	126	58	224.91	0.02
BR168	296993	7665806	0.005	0.01	44	19624	2175	126	11	224.91	0.02
BR169	302180	7653411	0.007	0.01	111	1629	435	76	3080	135.66	0.01
BR170	302149	7653433	0.01	0.01	226	1013	707	61	1204	108.89	0.01
BR171	302234	7653332	0.344	10	4893	174144	268	18435	47910	32906.48	3.29
BR172	307527	7644394	0.53	12	85623	95255	579	59	27483	105.32	0.01
BR173	307519	7644407	0.206	344	542	478259	1944	322	1396	574.77	0.06