High Grade Cobalt Data Outlines Potential Tabac Surface Expression

Tabac Cobalt-Gold Project

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- **Multiple high grade cobalt results reported by previous explorers from surface XRF geochemistry over Riva's Tabac Cobalt-Gold Project in Western Australia**
- **Highest values of 2,660 ppm (0.26%) Co and 2,082 ppm (0.2%) Co overlying drill hole PP011 with 128 samples of >500ppm cobalt within E53/1895**
- **XRF data sourced from a comprehensive review of public domain information, including surface geochemistry and geophysics**
- **Gravity inversion modelling confirms Zambian Copperbelt model as appropriate for the geological setting at Tabac, refining exploration targeting for the upcoming drilling program**

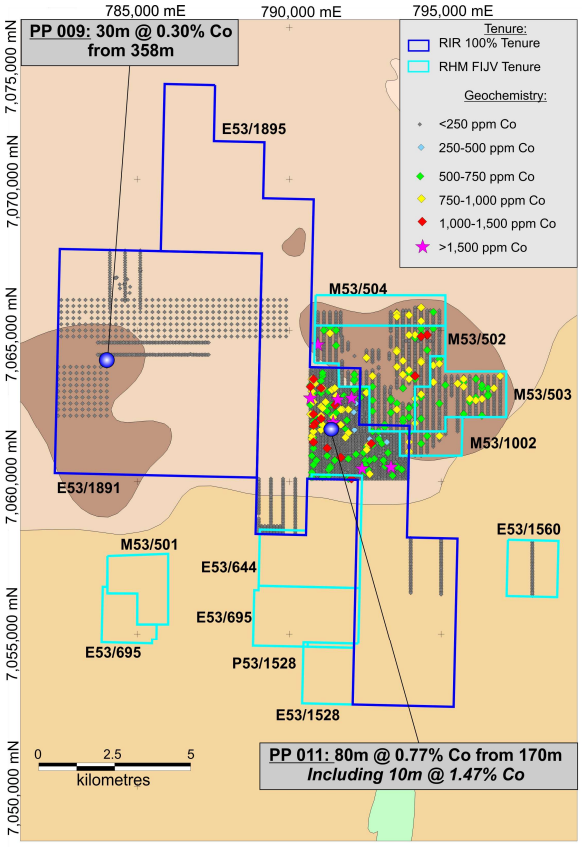

Figure 1: XRF Cobalt soil geochemical results over Riva's tenure (dark blue) and the RHM FIJV ground (light blue).

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Riva Resources Limited (ASX: RIR) ("Riva") has defined widespread cobalt anomalism from legacy surface XRF geochemistry data across the Tabac - Cobalt Gold Project.

The work, undertaken by Magellan Metals and Abra Mining between 2008 and 2010, was to explore for extensions to the carbonate-hosted Paroo Station Lead Mine. Of the 5,750 number of readings, 249 samples reported values exceeding 500ppm, with 28 exceeding 1,000ppm (or 0.1%) Co.

Table 1: >1,000ppm Co XRF results

WAMEX	SAMPLE	ZONE	EAST	NORTH	RL	METHOD	CO_PPM
a087724	NT_10-015_2322	MGA94_50	792400	7060450	525.0	NITON_XRF	**2,660.1**
a087724	NT_10-015_1830	MGA94_50	792050	7062800	537.4	NITON_XRF	**2,082.9**
a087724	NT_10-015_1095	MGA94_50	791450	7062000	530.0	NITON_XRF	**1,860.0**
a087724	NT_10-015_1295	MGA94_50	791600	7062750	534.3	NITON_XRF	**1,745.8**
a087006	a087006_1238	MGA94_50	790943	7064553	533.3	NITON_XRF	**1,715.2**
a087724	NT_10-015_055	MGA94_50	790700	7062800	530.0	NITON_XRF	**1,565.9**
a087724	NT_10-015_2998	MGA94_50	793350	7060500	525.0	NITON_XRF	**1,517.9**
a087724	NT_10-015_2612	MGA94_50	792700	7061250	531.6	NITON_XRF	**1,496.8**
a087724	NT_10-015_257	MGA94_50	790850	7061950	530.0	NITON_XRF	**1,366.0**
a087724	NT_10-015_499	MGA94_50	791050	7063100	530.4	NITON_XRF	**1,260.3**
a081744	M062636	MGA94_50	794543	7064851	536.7	NITON_XRF	**1,150.9**
a087006	a087006_1362	MGA94_50	794543	7064851	536.7	NITON_XRF	**1,150.9**
a087724	NT_10-015_1776	MGA94_50	792050	7060100	527.4	NITON_XRF	**1,125.4**
a087724	NT_10-015_213	MGA94_50	790800	7063400	530.0	NITON_XRF	**1,113.8**
a087724	NT_10-015_1456	MGA94_50	791700	7060800	527.4	NITON_XRF	**1,105.4**
a087724	NT_10-015_479	MGA94_50	791050	7062100	530.0	NITON_XRF	**1,091.7**
a087724	NT_10-015_062	MGA94_50	790700	7063150	530.0	NITON_XRF	**1,088.1**
a081744	M062575	MGA94_50	794344	7064800	536.1	NITON_XRF	**1,083.5**
a087006	a087006_1346	MGA94_50	794344	7064800	536.1	NITON_XRF	**1,083.5**
a087724	NT_10-015_1167	MGA94_50	791500	7061850	530.0	NITON_XRF	**1,039.3**
a087724	NT_10-015_947	MGA94_50	791350	7061900	530.0	NITON_XRF	**1,030.2**
a081744	M062838	MGA94_50	794144	7063501	556.7	NITON_XRF	**1,028.7**
a087006	a087006_918	MGA94_50	794144	7063501	556.7	NITON_XRF	**1,028.7**
a087724	NT_10-015_751	MGA94_50	791250	7061100	530.0	NITON_XRF	**1,023.4**
a087724	NT_10-015_171	MGA94_50	790800	7061300	530.0	NITON_XRF	**1,017.4**
a087724	NT_10-015_190	MGA94_50	790800	7062250	530.0	NITON_XRF	**1,014.5**
a087724	NT_10-015_1153	MGA94_50	791500	7062550	532.7	NITON_XRF	**1,007.4**
a087724	NT_10-015_182	MGA94_50	790800	7061850	530.0	NITON_XRF	**1,006.2**

Importantly, the most substantial values exist adjacent to the historic drillhole PP011, which contained the following significant cobalt and gold intercept:

- PP011: 80m at 0.77% Co from 170m, including 10m at 1.47% Co & 40m at 0.73 g/t Au.

The Company notes that no significant correlations exist with Fe or Mn readings in the dataset, therefore suggesting that matrix interferences are minimal

The sampling was unveiled during a comprehensive review of all legacy public domain information captured on the project, including surface geochemistry, drilling and remotely sensed data.

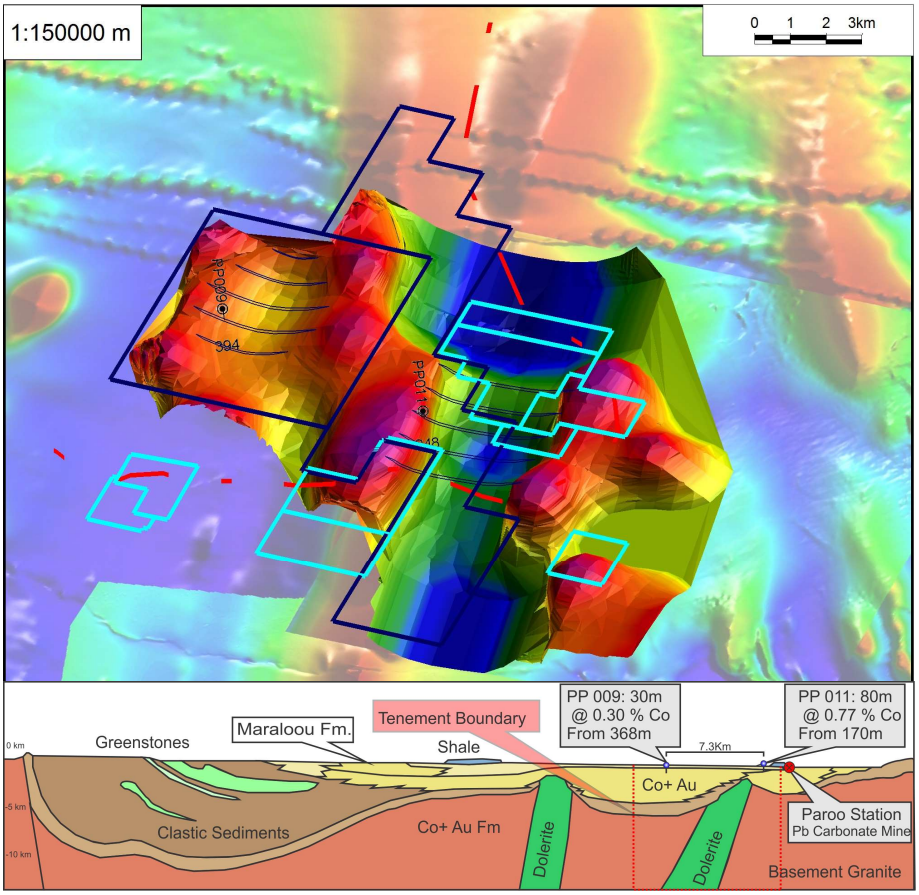

Figure 2: Top - Gravity inversion model over magnetics showing distinct sub-basin development within the Yerrida Basin: Riva's tenure dark blue, RHM FIJV Light Blue. Bottom - Stylised cross section of the Yerrida Basin proposed by ACM in 1983.

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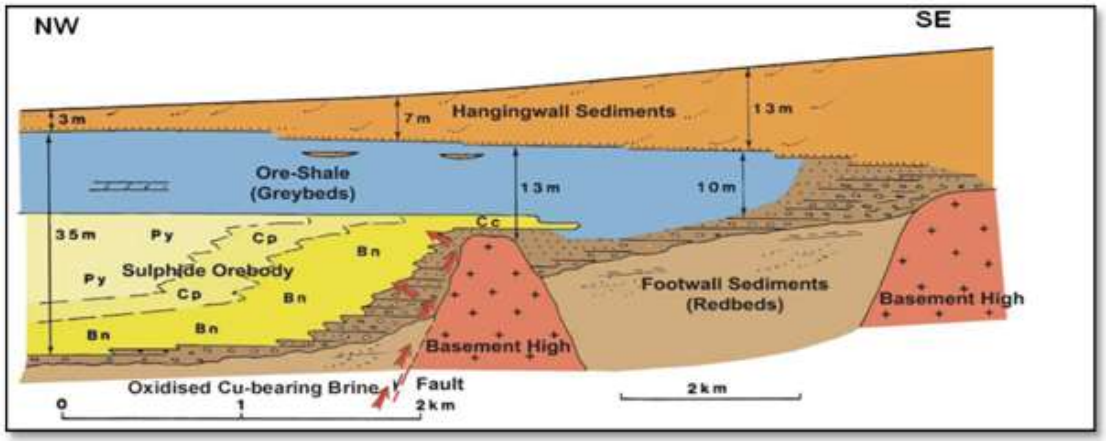

Figure 3: Schematic geological model for the Zambian Copperbelt

The Zambian Copperbelt model analogy, which forms the basis of Riva's targeting strategy, is confirmed through the reinterpreted gravity covering the Tabac project area. As in the Zambian Copperbelt, the drill intersected mineralisation at Tabac lies on the flanks to basement topographic highs. The basement highs, or headlands, are interpreted to have originally extended into the developing basin (i.e. forming seas). These headlands also served to shelter the adjacent bays from damaging wave and wind action, protecting the developing carbonate platforms and sabkha environments. As the basin widened and deepened, the headlands, along with the carbonate platform sediments, were overwhelmed by sediment and subsequently buried. The mineralising event occurred later during an orogenic event, with the migrating mineralised fluids from deeper in the basin being introduced at shallower levels. The ore fluids became destabilised in the presence of the preserved organic carbon and carbonate precipitating the contained metals.

The gravity isosurface at Tabac clearly shows holes PP009 and PP011 being drilled on the margins to discrete sub-basins separated by a NNW-SSE striking magnetic high (in red).

This setting is consistent with Copperbelt/Kuferschiefer-style mineralisation where deposits are defined by sabkha (salt flat) type evaporative conditions prevailing across a wide carbonate inner ramp preserving organic carbon and the formation of syngenetic to early diagenetic pyrite. The later introduction of

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an oxidising cobalt-bearing brine reduces against this preserved carbonaceous front resulting in the deposition of stratabound mineralisation.

Riva is also pleased to advise that the heritage survey on the Rosslyn Hill Mining Joint Venture (RHJV) tenements is scheduled for later this month with drilling anticipated to commence soon after.

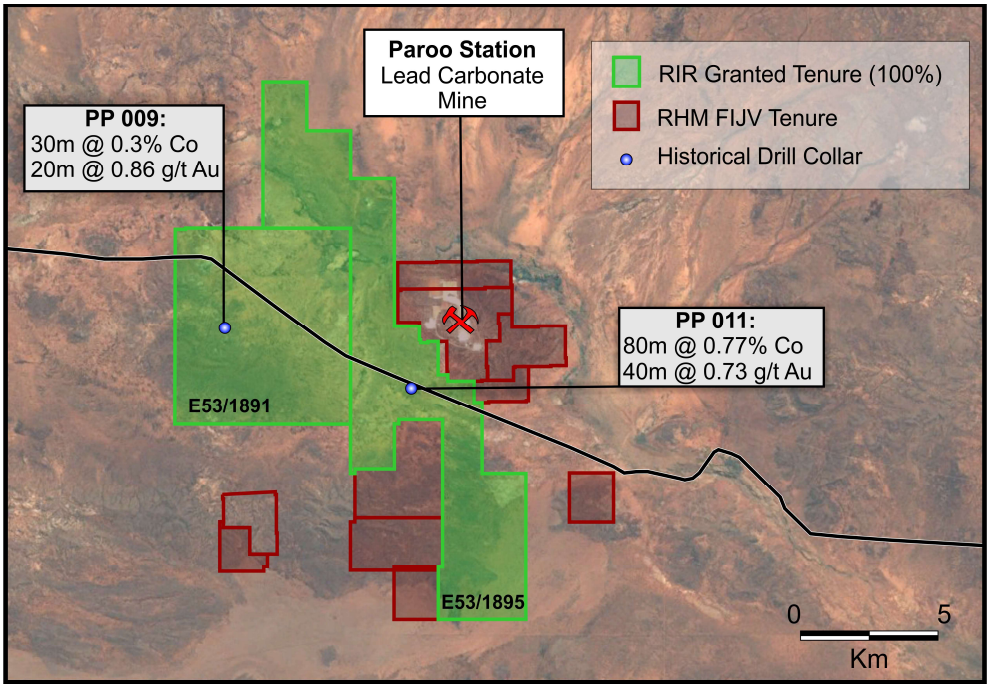

Figure 4: Tabac project tenement plan

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Competent Persons Statement

The information in this announcement that relates to Tabac Cobalt-Gold Project is based on information compiled and fairly represented by Mr Jonathan King, who is a Member of the Australian Institute of Geoscientists and is an employee of Riva Resources Limited. Mr King has sufficient experience relevant to the style of mineralisation and type of deposit under consideration, and to the activity which he has undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr King consents to the inclusion in this report of the matters based on this information in the form and context in which it appears.

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JORC Code, 2012 Edition – Table 1

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 (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	All samples referenced in this announcement are from Handheld XRF samples taken by Magellan Metals in 2009 and ABRA Mining in 2009/10.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	No references in historical reports are made with respect to sample representivity and the appropriate calibration of any measurement tools or systems used.
	• Aspects of the determination of mineralisation that are Material to the Public Report.In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.	All XRF analysis was of surface material and was not ground disturbing activity. The sampling was undertaken with Lead as the target commodity defining extensions to the Paroo Station (called "Magellan" at the time) Lead mine
	• In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine	All XRF analysis were of surface material and taken by placing the gun on the surface to collect a reading. The sampling was on uniform spacing, which changed with each survey and collected, on a regular grid. Several points were taken per site and a software calculated average value recorded.

Criteria	JORC Code explanation	Commentary
	nodules) may warrant disclosure of detailed information.	
Drilling techniques	• Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	N/A- Surface XRF Analysis only
Drill sample recovery	• Method of recording and assessing core and chip sample recoveries and results assessed.	N/A- Surface XRF Analysis only
	• Measures taken to maximise sample recovery and ensure representative nature of the samples.	N/A- Surface XRF Analysis only
	• 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.	No sample was recovered or stored
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.	N/A- Surface XRF Analysis only
	• Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	No systematic reference to the sample material was recorded. Brief notes were sporadically recorded relating to the origin of the material in a087006, frequently noting Breccia float
	• The total length and percentage of the relevant intersections logged.	N/A- Surface XRF Analysis only
Sub-sampling techniques and sample preparation	• If core, whether cut or sawn and whether quarter, half or all core taken.	N/A- Surface XRF Analysis only
	• If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	No reference retained
	• For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples did not undergo any form of preparation.

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Criteria	JORC Code explanation	Commentary
	• Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	No reference retained
	• 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.	N/A- Surface XRF Analysis only
	• Whether sample sizes are appropriate to the grain size of the material being sampled.	N/A- Surface XRF Analysis only
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.	No assays reported- XRF only
	• 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.	Niton XLt800 portable XRF with an internal calibration plate periodically reset and calibrated.
	• Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	No reference retained, just an internal calibration plate
Verification of sampling and assaying	• The verification of significant intersections by either independent or alternative company personnel.	A field exploration soil geochemical program has commenced to take representative samples using industry best practices to validate XRF results.
	• The use of twinned holes.	N/A- Surface XRF Analysis only
	• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All data reported here has been compiled from WAMEX reports a081744, a087006, and a087724
	• Discuss any adjustment to assay data.	No reported assays have been adjusted

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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.	MGA94z50
	• Quality and adequacy of topographic control.	A Gravity Survey DTM was used to determine surface RL
Data spacing and distribution	• Data spacing for reporting of Exploration Results.	Sampling reported in a087006 was reported on a 200 x 50m spacing and a087724 reported a sample spacing of 50 x 50m
	• 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.	N/A
	• Whether sample compositing has been applied.	No
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.	Sample was orientated to be perpendicular to the known strike of the Magellan Lead mine with no consideration given to the potential Cobalt mineralisation from the Maraloou formation at depth.
	• 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.	Given the depth of the Cobalt target mineralisation the sampling orientation is unlikely to define mineralisation and will require drilling
Sample security	• The measures taken to ensure sample security.	Not reported by previous operators
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	No audits have been undertaken

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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 Tabac Project consists of two exploration license applications E53/1891 and E53/1895 in Western Australia. The Applications are held by PETER ROMEO GIANNI and overly a miscellaneous held by ROSSLYN HILL MINING PTY LTD. Riva acquired a 100% interest in the Tabac Cobalt project through the purchase of Westview Pty Ltd (an entity associated with PETER ROMEO GIANNI). Payment consideration includes: • Option fee payment of $50,000 (excluding GST) refund for expenses incurred payable in cash • Payment of $50,000 (excluding GST) in cash refund for expenses incurred • Issuance of $1,200,000 value of shares at fixed price of $0.008 (0.8c) per share • Performance Shares 1- number of performance Shares when multiplied by $0.008 will be equal to $250,000 (Class A Performance Rights). Each Class A Performance Right will convert into one Share upon the achievement of an Inferred Mineral Resource in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 Edition) (JORC Code) (including cumulative production) of not less than 50,000 tonnes contained Cobalt at a minimum grade of 0.3% Cobalt with the Tenements • Performance Shares 2 - number of performance rights when multiplied by $0.008 will be equal to $250,000 (Class B Performance Shares). Each Class B Performance Share will convert into one Share upon the achievement of an Inferred Mineral Resource in accordance with the JORC Code (including cumulative production) of not less than 100,000 tonnes contained Cobalt at a minimum grade of 0.3% Cobalt with the Tenements • Payment of a 2% Net Smelter Royalty ("NSR") on the production of any metals from the project.
	· *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.*	E53/1891 and E53/1895 are still under application.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	· *Acknowledgment and appraisal of exploration by other parties.*	All work referenced in this announcement has been undertaken by previous project operators and is deemed appropriate to industry standards at the time of operation. The majority of the material work undertaken was by ACM in 1983 and 1984
Geology	· *Deposit type, geological setting and style of mineralisation.*	The general palaeoenvironment of the Tabac project lends encouragement for exploration for Zambian Copperbelt and/or Kuferschiefer-style mineralisation. This Glengarry Basin deposition model prosed by Drummond in the 1983/1984 exploration reports bears a close stratigraphic and age resemblance to the African Copperbelt and Zechstein deposit models. Copperbelt/Kuferschiefer-style mineralisation deposits are defined by sabkha (salt flat) type evaporative conditions prevailing across a wide carbonate inner ramp preserving organic carbon and the formation of syngenetic to early diagenetic pyrite. The later introduction of an oxidising Cobalt bearing brine reduces against this preserved carbonaceous front resulting in the deposition of strata bound sulphide mineralisation.
Drill hole Information	· *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*	The drill holes reported in this announcement have the following parameters applied:
	o *easting and northing of the drill hole collar*	Eastings and Northings are MGA94z50; PP009: 784265.620 mE and 7063889.340 mN, PP011; 791265.340mE and 7061579.610 mN
	o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*	RL is AHD; PP009- 560.000mRL, PP011- 529.000mRL

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Criteria	JORC Code explanation	Commentary
	o *dip and azimuth of the hole*	Dip is the inclination of the hole from horizontal (i.e. a hole drilled vertically down from the surface is -90^0) . Azimuth is reported in degrees as the direction towards which the hole is drilled. Both holes are vertical; -90^0 towards 360^0
	o *down hole length and interception depth*	Down hole length of the hole is the distance from the surface to the end of the hole, as measured along the drill trace. Interception depth is the distance down the hole as measured along the drill trace. Intersection width is the downhole distance of an intersection as measured along the drill trace.
	o *hole length.*	Hole length is the distance from the surface to the end of the hole, as measured along the drill trace. PP011; 247.5m and PP009; 394m
	· *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.*	All results relating to the drill sections provided have been stated
Data aggregation methods	· *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.*	No upper or lower grade truncations have been applied
	· *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.*	10m composite assays were taken from drill core by previous operators
	· *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	No Metal equivalence are reported.

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Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	· *These relationships are particularly important in the reporting of Exploration Results.*	The intersection width is measured down the hole trace and is not the true width. Cross sections provided in the announcement allow the relationship between true and down hole width to be viewed.
	· *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*	Drill holes are drilled perpendicular to the low angle strataform mineralisation. The geometry of the mineralisation is inferred by the matching stratigraphy of the two vertical holes
	· *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	All drill results within this announcement are downhole intervals only. True width is not known and will be calculated from further diamond drilling but is not expected to materially differ from the widths 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.*	Given the cross section only contains two drill holes, no plan view of the section was deemed appropriate
Balanced reporting	· *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	All results including those with no significant interceptions have been reported.

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Criteria	JORC Code explanation	Commentary
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.*	No other exploration data is considered meaningful and material to this announcement. Bulk density, groundwater, geotechnical and rock characteristics were not recorded in the historical drilling
Further work	· *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).*	Infill holes will be drilled to define the continuity of mineralisation and Specific Gravity, metallurgical and geotechnical samples.
	· *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	Future drilling areas have not currently been defined. Drill targeting and planning will commence once preliminary geophysical and geological studies are received.

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