

# VTEM SURVEY IDENTIFIES 14 NEW HIGH PRIORITY MASSIVE SULPHIDE TARGETS AT MERLÉAC

- Successful completion of VTEM survey and modeling work over southern section of Merléac exploration licence
- Numerous VTEM conductors identified within the same rock sequences that host the high grade Porte-aux-Moines zinc-lead-copper-silver-gold VMS deposit, confirming the high prospectivity of Merléac
- Initial modelling work defined 14 'Tier 1' high priority targets, a number of which have similar geophysical characteristics to Porte-aux-Moines
- Several targets lie adjacent or along strike from ferruginous outcrops containing elevated base and precious metal values that may represent other VMS deposits
- VTEM anomaly extends for approximately 400 metres over Porte-aux-Moines potentially adding significant strike length to currently defined high grade mineralisation
- Targets defined from the survey will be followed up with ground EM, soil geochemistry and drilling

Variscan Mines Limited (ASX: VAR) is pleased to announce that it has completed modelling of a large, heli-borne, Versatile Time Domain Electromagnetic survey (VTEM) survey recently carried out by its wholly owned European subsidiary Variscan Mines SAS over the southern section of its Merléac exploration licence in Brittany, France.

The VTEM survey was designed to test the key target areas in and around the high grade zinclead-copper-silver-gold Porte-aux-Moines VMS deposit that has been the focus of recent Variscan work.

The survey covered approximately 60 strike kilometres of prospective volcanics and sediments known to host VMS mineralisation to provide an initial geophysical test for the presence and geometry of potential sulphide zones.

The VTEM survey successfully extended the potential strike length of high grade mineralisation at Porte-aux-Moines and defined a number of new targets within three belts across the Merléac licence, possibly representing base and precious metal bearing zones similar to those found at Porte-aux-Moines.



#### **Previous work**

Recent work by Variscan within the Merléac exploration licence has focussed on the high grade Porte-aux-Moines zinc-lead-copper-silver-gold deposit where resampling of available old BRGM (Bureau de Recherches Géologiques et Minières - the French geological survey) core recorded a number of high grade, zinc-dominant, polymetallic intersections such as **31 metres** @ **10.4% zinc**, **2.1% lead**, **1.2% copper**, **105.5 g/t silver**, **1.0 g/t gold from 236 metres (including 8 meters** @ **25.0% zinc**, **5.4% lead 1.6% copper**, **208.5 g/t silver**, **1.39 g/t gold from 236 metres) in PAM5** (see ASX announcements 19 May, 20 and 29 July 2015).

Porte-aux-Moines exhibits many of the classic geological features found in other VMS deposits, in particular the possibility for a cluster of sulphide lenses within the project area. Logging of the BRGM holes has recorded multiple intersections of polymetallic mineralisation indicating perhaps three mineralising events over a 50 meter interval within the mine sequence. This suggests the scope for the discovery of a stacked massive sulphide system and provides encouragement that Porte-aux-Moines could be significantly larger than currently defined.

In addition, the regional potential within the Merléac licence for additional VMS deposits is considered excellent. Porte-aux-Moines is hosted within a sequence of vitric tuffs and pyritic black shales (the mine sequence) located in a bimodal sequence of felsic and intermediate/mafic volcanics. This sequence of rocks can be traced for approximately 80 kilometres along strike and within structurally repeated blocks in the Merléac licence.

Within these rock units Variscan has defined outcropping gossanous zones containing highly anomalous base and precious metal values interpreted to represent the oxidised expressions of underlying sulphides (see ASX announcements from 8 December 2014 and 5 February 2015). Some of these gossans were previously mined by shallow open pits for iron up until the 19th century and generally have not been explored below the iron oxide cap aside from shallow BRGM drilling in some locations.

### VTEM programme

To help target VMS mineralisation around Porte-aux-Moines and within the region, Variscan recently completed a large heli-borne electromagnetic (VTEM) survey covering approximately 160 square kilometres of the southern section of the Merléac licence (Figure 1), testing about 60 strike kilometres of the Porte-aux-Moines host stratigraphy.

Data produced from the survey has been now been modelled by Resource Potentials Pty Ltd, an independent geophysical group specialising in the processing of VTEM. This work has generated a large number of conductive anomalies within the survey area (Figure 1), many of which are due to subsurface electromagnetic (EM) responses.

The survey -

A. Detected the Porte-aux-Moines deposit which clearly stands out as a bulls-eye anomaly with a modelled strike length of about 400 metres at the projected position of mineralisation as defined in the old BRGM drilling and development (Figures 1 and 2). Previous work by Variscan indicated that high grade mineralisation at the deposit extended for at least 250 metres at the -150 metre level with excellent potential to expand. This potential has been confirmed by the results from the VTEM survey.



**B.** Successfully identified 14 other 'Tier 1' targets with moderate to strong, early to late time EM responses, in many cases similar to those generated at the Porte-aux-Moines deposit and which are possibly caused by sulphide-rich bedrock sources.

Target	East (NUTM30)	North (NUTM30)	VTEM Decay Channels (msec)	Amplitude (pV/Am4)	Strike length (m)	Estimated Depth (m)
PAM	504,979	5,348,733	Mid-late time	Moderate	400	80
VTEM-1	500,128	5,345,487	Mid-late time	Moderate	520	120
VTEM-2	500,139	5,345,233	Late time	Low	200	80
VTEM-3	501,088	5,345,830	Mid-late time	Moderate	270	80
VTEM-4	502,227	5,345,914	Early-late time	High	220	80
VTEM-5	502,724	5,346,031	Mid-late time	Moderate	300	100
VTEM-6	503,734	5,344,557	Mid-late time	Low	380	150
VTEM-7	505,487	5,344,579	Mid-late time	Low	800	100
VTEM-8	503,973	5,347,240	Early-mid time	Low	170	80
VTEM-9	504,862	5,346,673	Mid-late time	High	750	220
VTEM-10	506,783	5,347,114	Mid time	Moderate	250	80
VTEM-11	501,869	5,349,275	Mid time	Low	340	100
VTEM-12	508,245	5,346,639	Mid time	Moderate	700	150
VTEM-13	515,515	5,350,366	Early-late time	Moderate	800	120
VTEM-14	518,630	5,351,321	Mid time	Moderate	300	100

These are as follows -

**C.** Identified approximately 50 other conductors that may be due to sulphide zones but are close to buildings, power lines or other 'conductive' infrastructure which requires field checks to confirm the source of the anomalism.

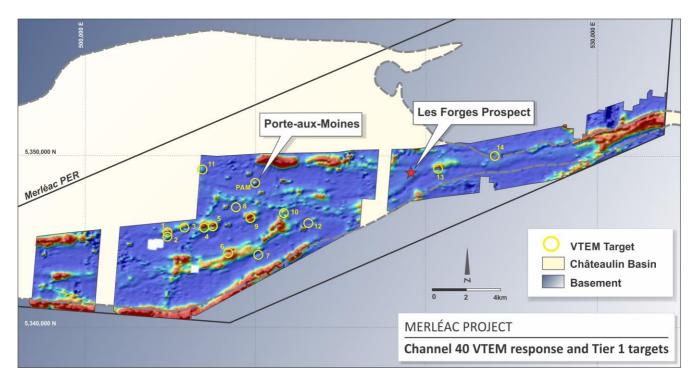


Figure 1: 'Tier 1' VMS targets over Channel 40 response plot at Merléac

The Tier 1 conductors are located in three principal areas. These are -

- Within the main Porte-aux-Moines block, to the west and east of the deposit (targets 11, 13, 14). At the La Forges prospect (Figure 1), EM anomalism has been detected over a length of about 800 metres immediately along strike from an area where previous float sampling by Variscan over old iron workings had generated strongly anomalous zinc-lead-copper-gold assays (including up to 3.7g/t gold).
- 2. A west-north-west oriented belt located approximately two kilometres south of Port-aux-Moines (Figures 1 and 2). Eight moderate to intense anomalies (1 to 5 and 8 to10) have been detected over a strike length of about seven kilometres. No significant previous exploration is believed to have been conducted in much of this area.
- **3.** A third volcano-sedimentary belt located approximately four kilometres south of the Port-Aux-Moines where previous work by Variscan had identified geochemically anomalous gossanous and stockwork material in the west of the Merléac licence. The VTEM survey defined an intense region of conductive bedrock to the east of these prospects containing three targets (6, 7 and 12) with strike lengths up to 800 metres.

Each of the three target regions is located within or adjacent to strongly magnetic bedrock sources interpreted to represent either basaltic/andesitic/dacitic volcanic rocks closely related to mineralisation at Porte-aux-Moines or intrusives that may have been the heat engines that assisted VMS deposit formation.

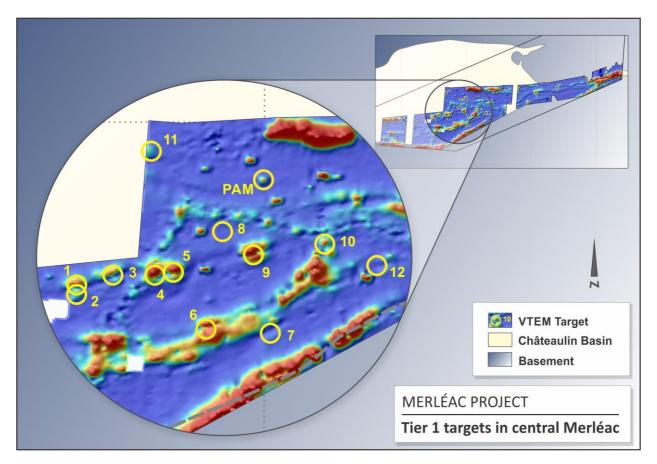


Figure 2: 'Tier 1' VMS targets over Channel 40 response plot in the centre of Merléac licence around the Porte-aux-Moines VMS deposit (PAM). Targets defined principally by anomalous early to mid-time responses (e.g. target 8) will appear subdued on this late-time image.



The Company is highly encouraged by the results of the survey and will commence immediate follow up work including -

- Detailed modelling of the key targets by Resource Potentials to define the depth, geometry and significance of the conductive zones,
- Where required, follow up ground EM surveys to more accurately pinpoint potential sulphide zones,
- Soil or possible shallow RAB drill traverses over selected conductors, and
- Drilling (possibly to be done in conjunction with drilling to extend mineralisation at Porte-aux-Moines).

Yours faithfully

Greg Jones Managing Director

The information in this report that relates to Exploration Results is based on information compiled by Greg Jones, BSc (Hons), who is a member of the Australasian Institute of Mining and Metallurgy. Mr Jones is a Director of Variscan Mines Limited and has sufficient experience which is 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 Jones consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# JORC Code – Table 1

### Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	<ul> <li>Geotech helicopter-borne VTEM system with flying height of 75-85 m and sensor height of 35- 45 metre. Configuration included: 26 metre diameter transmitter loop, high peak dipole moment, 25 or 30 Hz Component BField &amp; dB/dt</li> </ul>
Drilling techniques	• NA
Drill sample recovery	• NA
Logging	• NA
Sub-sampling techniques and sample preparation	● NA
Quality of assay data and laboratory tests	● NA
Verification of sampling and assaying	● NA
Location of data points	<ul> <li>On board differential GPS with accuracy of 3m.</li> </ul>
Data spacing and distribution	Readings taken at 2-3m intervals along flight lines nominally 200m apart.
Orientation of data in relation to geological structure	<ul> <li>Flight lines generally oriented perpendicular across dominant strike direction of rock units and structures where possible.</li> </ul>
Sample security	• NA
Audits or reviews	<ul> <li>Data produced from the survey was modelled by Resource Potentials Pty Ltd, an independent geophysical group specialising in the processing of VTEM.</li> </ul>
	<ul> <li>There has been no external audit or review of the Company's techniques or data.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land	Merléac PERM (Permis Exclusif de Recherche de Mine, a French exploration licence)
tenure status	No known impediments for future exploration and development
Exploration done by other	• Last significant exploration in area is believed to have been conducted by BRGM in the 1980s.
parties	VMS potential of the region was recognised by the BRGM who conducted regional stream
	sediment programmes during the mid-1970s. The Porte-aux-Moines deposit was discovered in
	1975 when follow-up soil sampling and shallow drilling intersected massive sulphides.
	<ul> <li>Subsequently the BRGM conducted substantial core drilling (+9km) and underground</li> </ul>
	development on Porte-aux-Moines.
	<ul> <li>In addition, the BRGM conducted significant mapping, geochemical and geophysical</li> </ul>
	programmes around Porte-aux-Moines and regionally.
Geology	Volcanogenic Massive Sulphide (VMS) deposits
Drill hole Information	• NA
Data aggregation methods	• NA
Relationship between	• NA
mineralisation widths and	
intercept lengths	
Diagrams	Diagrams have been generated from Resource Potentials modelling of VTEM data.
Balanced reporting	All significant available information for the survey has been published within the report.
Other substantive	• NA
exploration data	
Further work	• Detailed modelling of the key targets by Resource Potentials to define the depth, geometry and
	significance of the conductive zones,
	• Where required, follow up ground EM surveys to more accurately pinpoint potential sulphide
	zones,
	<ul> <li>Soil or possible shallow RAB drill traverses over selected conductors, and</li> </ul>
	<ul> <li>Drilling (possibly to be done in conjunction with drilling to extend defined mineralisation at Porte-aux-Moines).</li> </ul>