

ASX Limited Company Announcements Office

14th February 2012

## ~140 sq km Heli VTEM Geophysical Survey Underway on the SMRV Project to Define Conductors for Drilling Targets

Frontier Resources Ltd is pleased to announce that exploration has resumed on the Elliott Bay (Wart Hill – EL 20/96) and Wanderer River (EL 33/10) exploration licenses in SW Tasmania (figure 1), with a regional helicopter borne Time Domain Electromagnetic Geophysical Survey (VTEM).

The airborne VTEM will take about 5 days to complete, cost approximately \$250,000 and will cover 140 km<sup>2</sup> (see figure 2). The survey is intended to locate major, non-outcropping, sulphide systems which are thought to occur in this relatively unexplored part of the highly prospective Mt Read Volcanics in Western Tasmania.

Frontier has already proved that massive sulphides, with similar geologic characteristics to the major Roseberry zinc/lead/silver/gold/copper mine, occur in this 45 km long part of the Mt Read Volcanics (figure 2).

Frontier's drilling in 2011 intersected very high grade mineralisation in two separate lenses at Wart Hill:

- Lens A: 4.0m grading 0.6g/t gold + 132g/t silver + 17.9% zinc + 10.2% lead + 0.16% copper.
- Lens B: 3.0m grading 0.8g/t gold + 680g/t silver + 21.9% zinc + 13.9% lead + 0.2% copper (see Figures 5 and 6 in ASX Release 7/6/2011 for detailed information relating to the Wart Hill mineralisation).



Peter McNeil MSc, Chairman and Managing Director of Frontier commented:

"The Wart Hill massive sulphide grades Frontier drilled last year are truly exceptional, with significant widths of 35% and 28% combined zinc and lead plus major credits such as 680 g/t in silver, plus gold and copper.

The VTEM geophysical survey is being undertaken for two equally important reasons. It will provide subsurface drilling targets that could represent extensions to known high grade polymetallic mineralisation at the Wart Hill Deposit (see ASX Release 7/6/2011 and perhaps more importantly it will locate non outcropping major accumulations of massive sulphides in the Wanderer River EL along strike to the north.

My first exploration program in the Wanderer River EL area was 19 years ago and numerous geochemical anomalies have now been defined (see prospects shown on Figure 2). Fortunately for Frontier, little significant exploration has been accomplished in the interim. VTEM is one of the few geophysical methods that provides direct drilling targets for massive sulphide deposits and we hope to spot and test drill targets directly off of the airborne results. Frontier's reward in this significantly under-explored region could be another Roseberry, Hellyer or Mt Lyell type of World Class deposit."

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PHONE +61 (08) 9295 0388 FAX +61 (08) 9295 3480 EMAIL info@frontierresources.com.au WEBSITE www.frontierresources.com.au The VTEM survey is being carried out by Geotech Airborne Pty Ltd and photographs of the survey are attached as figure 3a -3c.

The system being used is the Geotech Versatile Time-Domain Electromagnetic (VTEM) geophysical system, comprising the following main instrumentation:

- The VTEM Time Domain EM system for locating conductive anomalies and mapping earth resistivities.
- A high-sensitivity proton precession magnetometer for mapping geologic structure and lithology.
- A proton precession magnetometer base station for diurnal correction.
- A Radar altimeter with an accuracy of approximately 1 meter
- A GPS Navigation System providing an inflight accuracy up to 3 meters

The total survey is approximately 955 line kilometres (line spacing's of 150m). Data processing and

380,000 mE 400,000 mE 390,000 mE 5.285.000 mN Mt Le D'Aguilar Nth. D'Aguilar Sth D'Aguilar East Viking 3 & 4 Sprent R. Wes Sprent R. East Sprent R. Sth. 5,275,000 mN Condor R ondor R. East Thirkell Hill or R. West Hales R. Nth Hales R. NE Hales R. East Hales R. West Wanderer River Thirkell Hill Sth. Viking 14 Viking 1 EL 33/2010 Hales R. East 5.265.000 mN Voyager 35 Voyager 34 Voyager 22 Voyger 21 Voyager 20 5.255.000 mN Figure 2 Voyager 33 Ì Hill (V19 Voyager 31 20 5km ager 22 East Camp (V29W) Sassy Ck (V24) **Elliott Bay Outline of Airborne** EL 20/1996 5,245,000 mN Pleiades (V30 **EM Survey Pre-Carboniferous Geology** Ordovician-Devonian Ordovician limeston Ordovician silicilastic se Cambrian granite Cambrian Mt Read Volcanics (MRV) Cambrian sediments (not MRV) Precambrian metamorphics 5,235,000 mN

mapping will be by experienced consultants and geophysicists, using the latest computer technology and state of the art software. The survey is expected to be completed within 2 weeks, with results and interpretation by mid-March.





Geotech Airborne describe the VTEM system as follows: "The VTEM or Versatile Time Domain Electro Magnetic system is the most innovative and successful airborne electromagnetic system to be introduced in more than 30 years. The proprietary receiver design using the advantages of modern digital electronics and signal processing delivers exceptionally low-noise levels. Coupled with a high dipole moment transmitter, the result is unparalleled resolution and depth of investigation in precision electromagnetic measurements.

Key features include:

- Spotting drill targets directly off of the airborne results
- Superior Exploration Depth Over 400 metres
- Excellent resistivity discrimination and detection of weak anomalies
- Low Base Frequency (25 or 30 Hz) for Penetration through conductive cover
- High Spatial Resolution 2 to 3 metres
- Improved Interpretability due to Receiver-Transmitter symmetry
- Virtually impervious to atmospheric activity.



The system was designed to be field configurable to best suit a large variety of different geophysical requirements from deep penetration to optimizing the discrimination within a narrow range of resistivity values.

The recent surveys flown with VTEM have produced superior results over the same test areas flown by competing airborne EM surveys. VTEM has flown the Reid-Mahaffy, Caber, Perseverance and Montcalm test ranges and the results have demonstrated that VTEM provides the Industry's highest signal/noise ratio and conductor spatial resolution".

For additional information relating to Frontier Resources and/or its projects, please visit the Company's website at <u>www.frontierresources.com.au</u> or feel free to contact me

FRONTIER RESOURCES LTD

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P.A.McNeil, M.Sc. CHAIRMAN / MANAGING DIRECTOR

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by, or compiled under the supervision of Peter A. McNeil - Member of the Aust. Inst. of Geoscientists. Peter McNeil is the Managing Director of Frontier Resources, who consults to the Company. Peter McNeil has sufficient experience which is relevant to the type of mineralisation and type of deposit under consideration to qualify as Competent Person as defined in the 2004 Edition of the Australasian Code of Reporting Exploration Results, Mineral Resources and Ore Resources. Peter McNeil consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.