HONG KONG PROPERTY EVALUATION OF MAX-MIN FOLLOW-UP SURVEY ON VTEM AIRBORNE EM ANOMALIES

2.31301

WALLBRIDGE MINING COMPANY LTD

By Martin St. Pierre, P. Geophysicist February, 2005

1.0 INTRODUCTION

During February of 2005, Martin St. Pierre, P. Geophysicist was contracted by Wallbridge Mining Company Ltd. to evaluate Max-Min horizontal loop EM carried out over seven anomalies detected by a VTEM airborne survey that was carried out in during the second half of 2004. The Max-Min used 150 meter cable length, and the four following frequencies: 222, 444, 888 and 1776 Hz. Most lines were separated by 50 meters. The anomalies are contained within five grids denothed as A to E with their locations presented in Figure 1. It was found that the Max-Min data was deterministic enough on anomalies B1 and E in order to define drill holes. Anomalies B2, C and D were detected by the Max-Min, but not clearly enough to design drill holes. The anomaly on grid A showed only a very marginal Max-Min response and no drill holes can be designed from the data. There exist a significant possibility that the anomalies A, B1, C and D are too deep to be clearly defined by the Max-Min, and it is strongly recommended that they be surveyed ground Time Domain EM methods in order to acquire the necessary information for proper drill hole design.

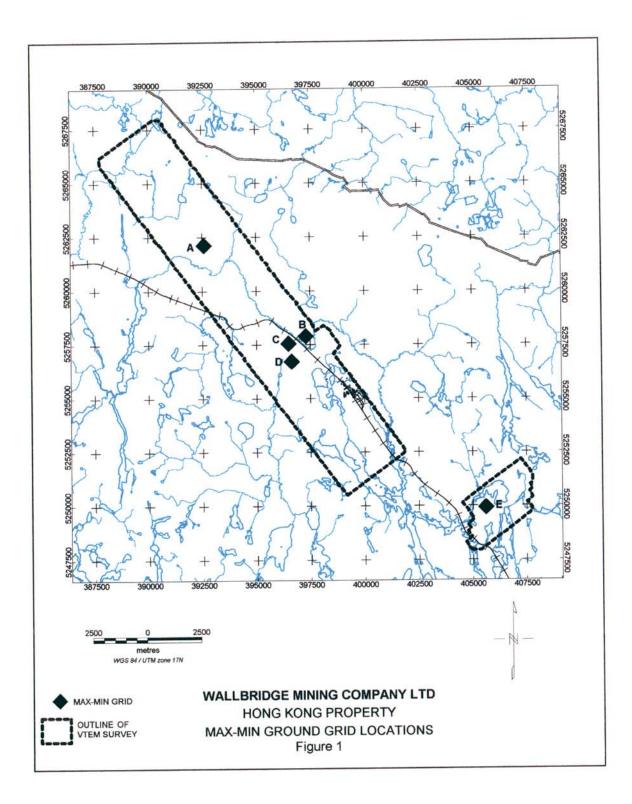
2.0 MAX-MIN SURVET RESULTS

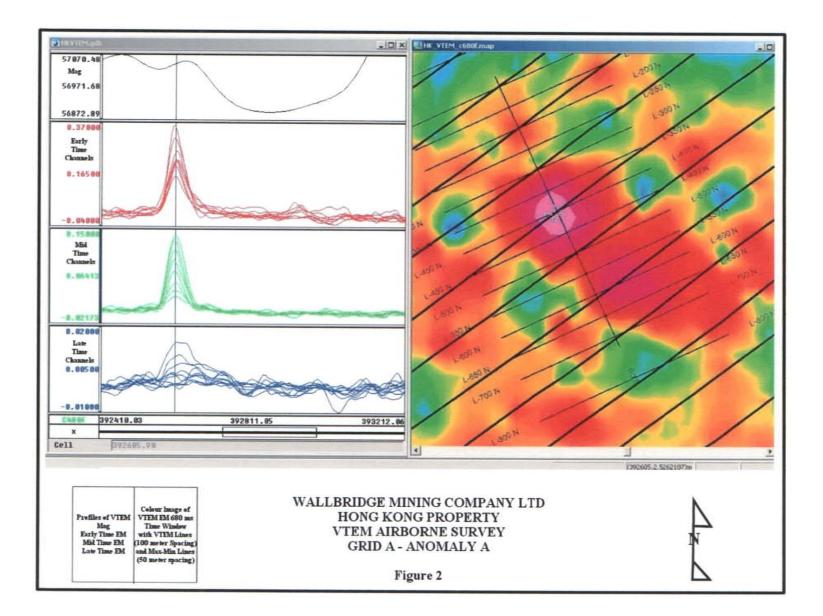
The following will contain a discussion of the Max-Min surveys carried out over selected VTEM airborne anomalies.

2.1 Grid A

The VTEM data for anomaly A is presented in figure 2, and the Max-Min data is presented in figure 3. The VTEM data shows a moderate to strong conductor as the late time channel do not all respond to the anomaly. The maximum response is seen at the northwest end of the anomaly, and the anomaly can be clearly seen continuing on 3 more lines to the southeast. With 100 meter line spacing this indicates a strike length of at least 300 meters. The anomaly has a symmetrical shape suggesting a steeply dipping body. As you progress from the northwest to the southeast, the amplitude of the anomaly decreases but the number of channels responding to the anomaly remains relatively constant, indicating the possibility that the top of the conductor's depth increases to the southeast.

The Max-Min data for anomaly is presented in figure 3, and shows little to no response. Two small negative peaks spaced by150 meters can be seen on the base line apart. They are located close to the maximum VTEM response and such may represent a response to the conductor. However the data is in no way deterministic enough in order to design a drill hole. It is therefore recommended that a ground TEM survey be carried out in irder to better define and target anomaly A.





2.2 Grid B

The VTEM data for anomalies B1 and B2 is presented in figures 4 and 5 respectively, and the Max-Min data is presented in figure 6. The VTEM data for anomaly B1 shows a very strong conductor with very clean responses on all channels and the highest amplitude of all the anomalies detected to date. This anomaly is very symmetrical suggesting a steeply dipping body. This anomaly can be seen on 5 lines and has an estimated strike length of 400 meters. The most southern line is still responding on all channels, but the amplitude is decreasing possibly indicating increasing depth to top to the southeast. The VTEM for anomaly B2 shows a very similar response as B1, but with slightly weaker relative response on the late times and less amplitude. It is also very symmetrical indicating a steep dip, and there is also some evidence of increasing depth to top to to top towards the south. It is detected on 4 lines and has an estimated strike length of 350 meters.

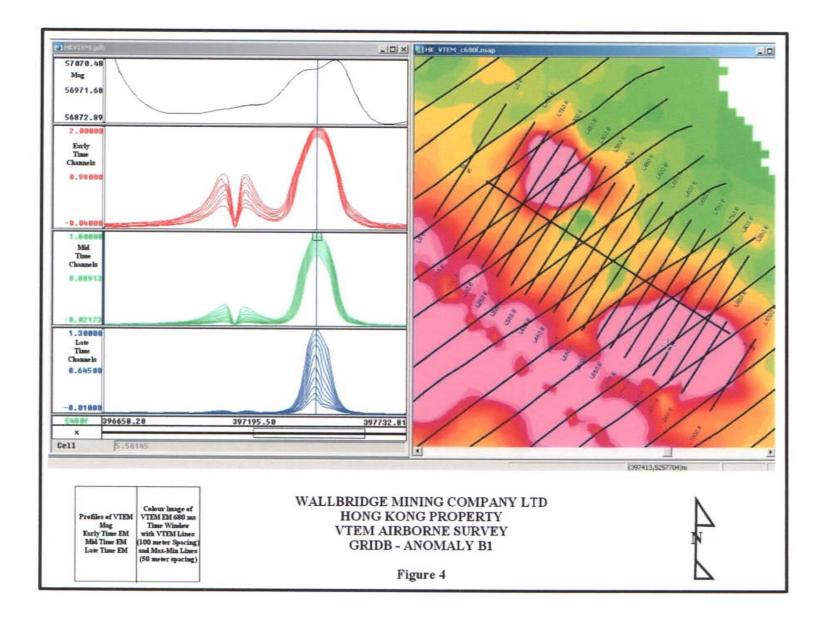
The Max-Min data for anomalies B1 and B2 is presented in figure 6, and shows very good association and detection for anomaly B1. For anomaly B2 the Max-Min clearly detects the anomaly, but only on 2 lines and relatively weakly.

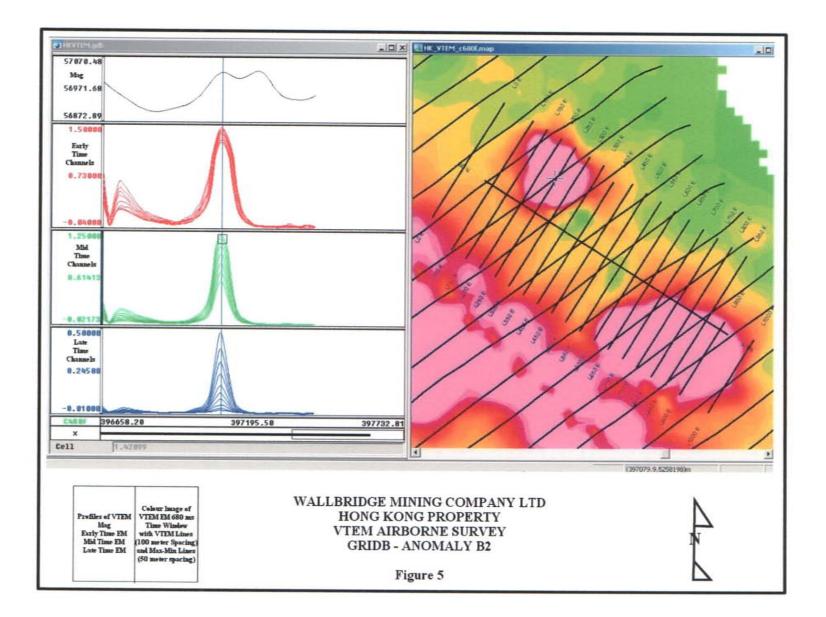
Anomaly B1 Max-Min profile shape is characteristic of a steeply dipping conductor with evidence of a northeasterly dip, a width less than 25 meters, a probable depth of 30 meters, and a strike of 105°. It is recommended that a drill hole with the following specification be executed: collar 397510E, 5257774N, azimuth 195°, dip 45° in order to target the conductor 50 meters bellow surface at 397497E, 5257726N or Line 850E, Station 62.5S.

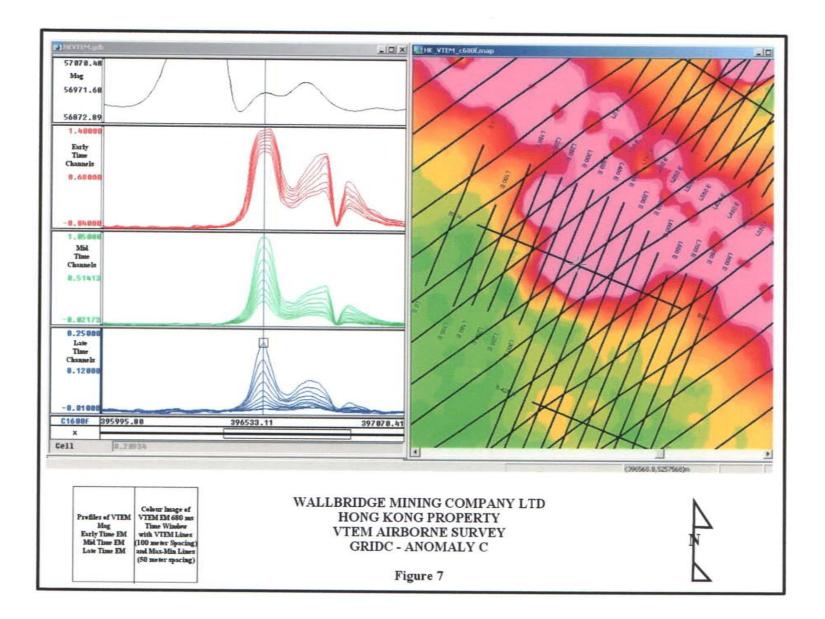
Anomaly B2 Max-Min profile shows two well defined negative peaks separated by 150 meters, which is the same distance as the transmitter-receiver separation. This type of profile is more similar to a flat lying conductor, however of we compare the VTEM response for the B1 and B2 conductors we would expect similar type of conductors with the B2 possibly at greater depth. It is my opinion that the anomaly is probably deep, possibly in the range of 75 meters, and the Max-Min profile does not provide reliable enough information to design a drill hole. It is therefore recommended that this anomaly be surveyed by ground Time Domain EM.

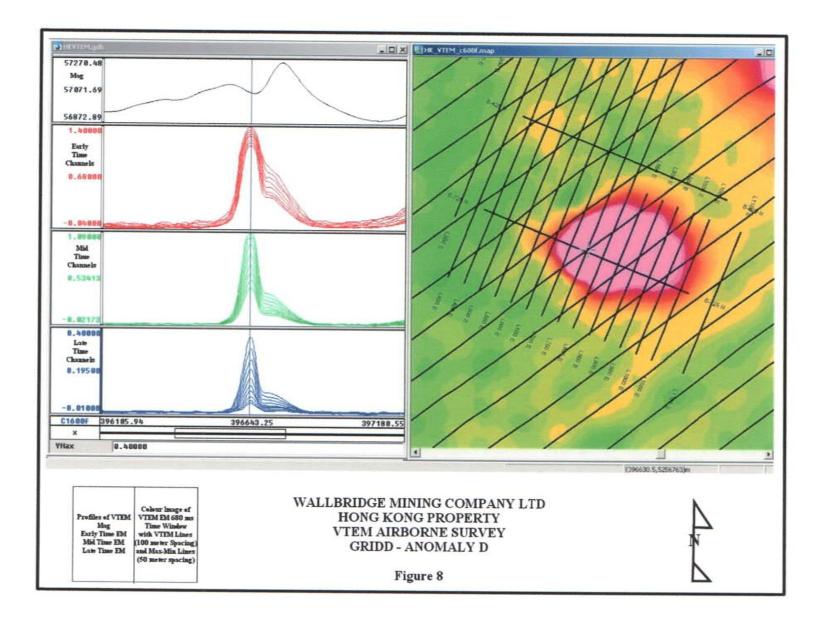
2.3 Grid C and Grid D

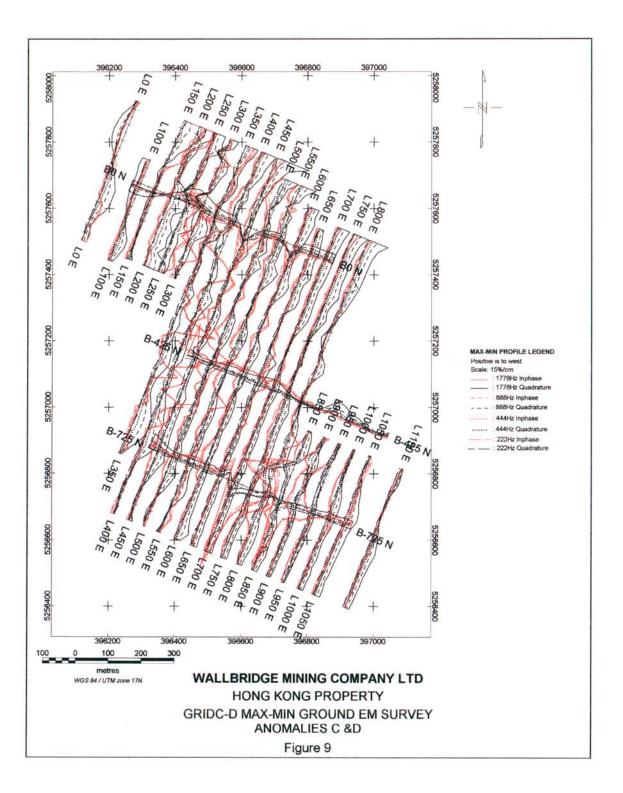
The VTEM data for anomalies C and D is presented in figures 7 and 8 respectively, and the Max-Min data is presented in figure 9. The VTEM data for anomaly C shows a moderate to strong conductor with very clean responses on all but last two channels. This anomaly is very symmetrical suggesting a steeply dipping body. This anomaly can be seen on 5 lines and has an estimated strike length of 400 meters. The most southern line is still responding on most channels, but the amplitude is decreasing possibly indicating increasing depth to top to the southeast. The VTEM for anomaly D shows a strong











conductor with all channels responding. It shows a greatest complexity of all the followed up VTEM conductors as can be seen by the asymmetrical shape of the EM profiles, and by its changing character along its' strike length. It is detected on 4 lines and has an estimated strike length of 300 meters. Again the depth seems to increase to the southeast as the amplitude decreases, but the number of channels responding remains fairly consistent.

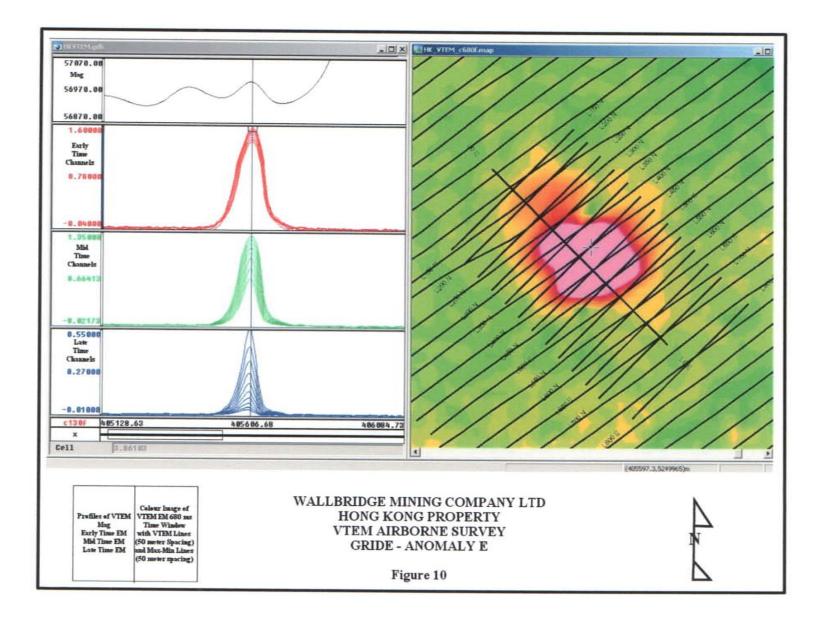
The Max-Min data over anomaly C shows a number of responses in close proximity to the VTEM anomaly, however I am unable to clearly discern a recognizable pattern and isolates an anomaly shape that can be used to localize a drill hole. The anomaly may be too deep or the shape too complex to recognize. It is therefore recommended that a ground Time Domain EM survey be carried out in order to define a viable target and define a drill hole.

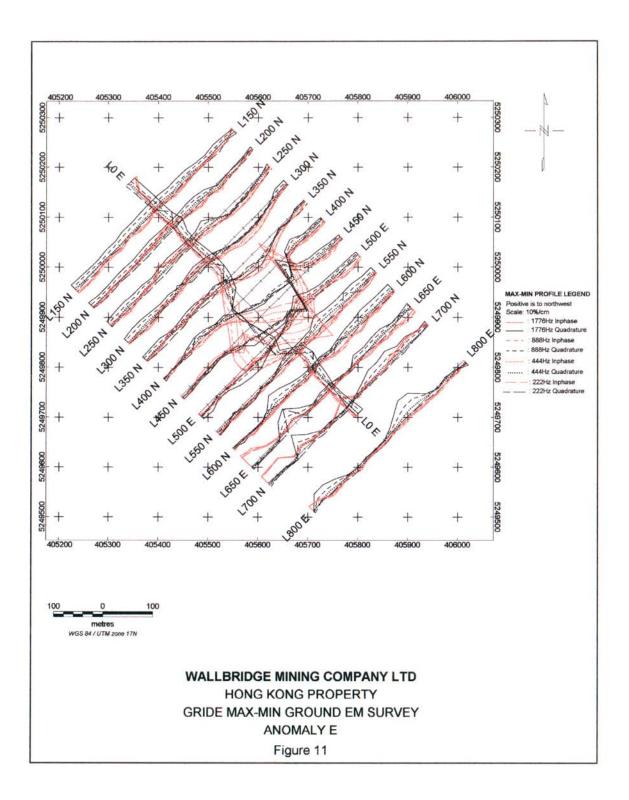
The Max-Min data over anomaly D shows a number of strong responses coincident with the VTEM anomaly. Again the profile shapes vary greatly from line to line an a clearly recognizable anomaly shape has not been recognized. Interestingly the strongest response is seen on baseline 750 where two very strong amplitude inphase peaks can be seen on all frequencies, indicating a close to surface strong conductor. It is recommended that a ground Time Domain survey be carried out in order to define a viable target and define a drill hole.

2.4 Grid E

The VTEM data for anomaly E is presented in figure 10, and the Max-Min data is presented in figure 11. The VTEM data shows a moderate to strong conductor, as the late time channels are relatively weak. The anomaly can be seen on 9 50 meter spaced lines and had an estimated strike length of 400 meters. The amplitudes decrease towards the northwest bet the relative channel response remains fairly consistent indicating an increase in depth to the northwest. The anomaly shape is fairly symmetrical, and on flight line 3150 shows a classic steeply dipping thin conductor profile.

The Max-Min data clearly detects the anomaly on 3 lines. The profile shape is squed towards the east side and on line 450N shows a strong positive inphase shoulder indicating an easterly dip. The date indicates a depth of 45 meters. It is recommended that a drill hole with the following specification be executed: collar 405694E, 5249990N Line450N, Station 125E), azimuth 225° (parallele to Max-Min survey line), dip 45° in order to target the conductor 75 meters bellow surface at 405640.6E, 5249937N (450N, 50E).





3.0 CONCLUSIONS AND RECOMMENDATION

During February of 2005, Martin St. Pierre, P. Geophysicist was contracted by Wallbridge Mining Company Ltd. to evaluate Max-Min horizontal loop EM carried out over seven anomalies detected by a VTEM airborne survey that was carried out in during the second half of 2004. The Max-Min used 150 meter cable length, and the four following frequencies: 222, 444, 888 and 1776 Hz. Most lines were separated by 50 meters. The anomalies are contained within five grids denothed as A to E with their locations presented in Figure 1. It was found that the Max-Min data was deterministic enough on anomalies B1 and E in order to define drill holes. Anomalies B2, C and D were detected by the Max-Min, but not clearly enough to design drill holes. The anomaly on grid A showed only a very marginal Max-Min response and no drill holes can be designed from the data. There exist a significant possibility that the anomalies A, B1, C and D are too deep to be clearly defined by the Max-Min and it is strongly recommended that they be surveyed ground Time Domain EM methods in order to acquire the necessary information for proper drill hole design.

It is recommended that anomalies B1 and E be drilled with the suggested drill holes designed from the Max-Min data and described in this report. For anomalies A, B2, C, D it is recommended that ground Time Domain EM surveys be designed and executed in order to acquire the necessary information for drill hole design.

Respectfully submitted this 21st of February, 2005 by,

Martin St. Pierre, Professional Geophysicist