WALFORD SOUTH PROSPECT – EXPLORATION UPDATE

- Diamond drilling completed with thick intersections of pyritic shale in all three widely spaced drill holes.
- Gravity survey completed with anomalies related to the Calvert Fault.
- New gravity target area identified at Kingfisher West.

Introduction

The Walford South Prospect which is located within Superior’s wholly owned Nicholson Project is situated 350km north-northwest of Mount Isa in northwest Queensland (Figure 1).

Figure 1. Superior Resources Limited – Nicholson Project and Walford South Prospect locations.
Drilling at the Walford South Prospect has recently been completed. A gravity survey over the Walford South Prospect, to assist further targeting in the area, has also been completed.

The main target deposit at the Walford South Prospect is a large Proterozoic stratiform lead-zinc-silver deposit similar to the major Century Deposit located 100km to the south of the Nicholson Project or a copper deposit associated with any lead-zinc-silver deposit.

The main potential at the Walford South Prospect lies within the Mt Les Siltstone which hosts the Walford Creek mineralization which is located 5km north of Walford South. The Mt Les Siltstone dips southerly from Walford Creek and occurs at depth in the Walford South Prospect area.

The Walford South Prospect was originally identified from modelling of the results of a Versatile Time-Domain Electromagnetics (VTEM) survey, completed by Superior, as well as reinterpretation of two previous explorer’s airborne electromagnetic (EM) surveys. The prospect was further highlighted by the compilation of historical gravity data from previous explorers which showed a gravity anomaly in the Walford South area.

**Drilling**

Three diamond drill holes have recently been completed at the Walford South Prospect for a total of 2435m of drilling. Details of the drill holes are included in Table 1 and the holes are shown in Figure 2.

<table>
<thead>
<tr>
<th>Hole</th>
<th>Easting (MGA)</th>
<th>Northing (MGA)</th>
<th>RL (m)</th>
<th>Azimuth (MGA)</th>
<th>Dip (°)</th>
<th>Depth (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS001</td>
<td>208577.099</td>
<td>8025723.279</td>
<td>104.259</td>
<td>0.0</td>
<td>-90</td>
<td>863.0</td>
</tr>
<tr>
<td>WS002</td>
<td>208807.609</td>
<td>8027100.607</td>
<td>98.481</td>
<td>0.0</td>
<td>-90</td>
<td>745.0</td>
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<tr>
<td>WS003</td>
<td>209474.138</td>
<td>8025801.136</td>
<td>97.434</td>
<td>0.0</td>
<td>-90</td>
<td>827.0</td>
</tr>
</tbody>
</table>

All drill holes intersected the Mt Les Siltstone and terminated in the underlying Walford Dolomite. The drilling indicated a thickening of the Mt Les Siltstone and the overlying Doomadgee Formation towards the south and this was partly responsible for the intersections being deeper than predicted.

Pyritic shale was intersected within the Mt Les Siltstone in all drill holes at Walford South with the intersection in hole WS003 (Table 2) being slightly thicker than in the other holes.

<table>
<thead>
<tr>
<th>Hole</th>
<th>From (m)</th>
<th>To (m)</th>
<th>Thickness* (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WS001</td>
<td>804.70</td>
<td>821.25</td>
<td>16.55</td>
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<tr>
<td>WS002</td>
<td>681.92</td>
<td>703.00</td>
<td>21.08</td>
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<tr>
<td>WS003</td>
<td>774.63</td>
<td>795.89</td>
<td>21.26</td>
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</tbody>
</table>

*The pyritic shale contains an estimated 30 to 80% pyrite

All holes contained some scattered areas of low-grade sphalerite (zinc) mineralization and although most assay results are yet to be received this is expected to be well below what would be considered to be economic grades.

The presence of substantial amounts of strongly pyritic shale in the drill holes is encouraging as pyritic shale halos are associated with many of the large stratiform lead-zinc-silver deposits in northwest Queensland and the Northern Territory.
Core from the diamond drilling has been logged and mostly split for assay. Assay results for hole WS001 have been received but assay results for holes WS002 and WS003 are still outstanding.

It is hoped that the results from the three drill holes can be used to vector in on any lead-zinc-silver or copper deposit that may exist in the area.

Drilling of the Walford South Prospect was supported by a grant up to an amount of $150,000 by the Queensland Department of Mines and Energy as a 50% subsidy of the direct drilling costs under the Queensland Government’s Collaborative Drilling Initiative (CDI).

Photograph 2. Pyritic shale intersected in hole WS001 at the Walford South Prospect.

Photograph 3. Diamond drilling in progress on hole WS003 at the Walford South Prospect.
Gravity Survey

Following the intersection of pyritic shale in the three drill holes at Walford South a gravity survey was recently completed over the Walford South Prospect to assist future drill targeting. Haines Surveys of Adelaide (www.hainessurveys.com.au), who specialize in gravity surveys for the exploration industry, completed the gravity survey.

The gravity survey involved the reading of 870 gravity stations at 100m intervals along 24 lines spaced at both 200 and 400m intervals over the Walford South Prospect area.

Gravity surveys are widely used in mineral exploration to detect mineral deposits. The strength of the gravitational field of the earth at any locality is in part determined by the density of the rocks immediately beneath that location and the results from a gravity survey can allow predictions about what lies below the land surface. Large sulphide mineral deposits that have a significant density contrast with the enclosing host rocks can usually be detected by gravity surveys. Note that gravity surveys will detect any rock type that has a density contrast with the enclosing host rocks and gravity anomalies are not specific to mineral deposits.

Processing of gravity data to produce results that reflect local variations in the density of the underlying rocks is complex and requires adjustments to gravity station readings for a variety of factors including height and latitude. Gravity data that has been processed to reflect local density variations is usually referred to as bouguer gravity data. Today's accurate GPS technology greatly assists the process of making these adjustments and results in higher quality processed data which more accurately reflects the density variations in the subsurface. Modern computer software is also available to assists the modelling of gravity survey results.

A coloured image of the processed bouguer gravity results from Walford South is shown in Figure 2. This survey largely validates the earlier compilation of historical gravity data for the area but provides much more accurate detail than was previously available. No modelling of the gravity data has yet been completed but it appears that the bouguer gravity anomaly in the centre of the area is reflecting the denser pyritic sediments intersected in the drilling including the strongly pyritic shale in the Mt Les Siltstone.

Figure 2 indicates a close association of the bouguer gravity anomaly with the Calvert Fault Zone and the Calvert Fault forms the southern boundary to the main bouguer gravity anomaly at Walford South. This is encouraging in that many of the large stratiform lead-zinc-silver deposits in northwest Queensland and the Northern Territory occur adjacent to large regional faults such as the Calvert Fault and the faults are considered to play important roles in the formation of the deposits.

Four preliminary target areas for further work have been identified from the gravity survey results as shown on Figure 2. Subject to confirmation from density modelling these will become the focus for future work at Walford South.

From a conceptual point of view, the three gravity target areas north of the Calvert Fault Zone have potential for lead-zinc-silver mineralization. Only one of these target areas (Target Area 1) has been tested by drilling to date. The remaining two target areas lie in the gap between the current drilling and the northern branch of the Calvert Fault where the best potential for lead-zinc-silver deposits is considered to occur.

On the other hand the gravity target area lying within or close to the Calvert Fault Zone (Target Area 4) is considered to have better potential for copper mineralization and this target area is therefore given a high priority.
Comparison of the recent bouger gravity results with those from historical surveys completed by previous explorers has allowed the re-levelling of previous survey results to Superior’s more detailed and accurate survey. Figure 3 shows an image of the re-levelled compiled results for the wider Walford South Prospect area. Note that the ‘spottiness’ in this image shows the imprecision in the results of the historical surveys. Despite this imprecision, this work has identified an interesting bouger gravity anomaly at the Kingfisher West Prospect worth of further investigation. The next stage of work on this anomaly is to verify the anomaly by further gravity surveying.

Figure 2. Walford South Prospect – Bouger gravity image derived from Superior’s gravity survey showing recent drill holes and target areas.
Figure 3. Walford South Prospect – Image of compiled re-levelled historical bouguer gravity data combined with Superior’s new gravity survey data and showing the newly identified bouguer gravity anomaly at the Kingfisher West Prospect.

Further information on the Walford South Prospect is available in previous ASX releases or alternatively on Superior’s web site at http://www.superiorresources.com.au.

About Superior Resources Limited

Superior Resources Limited (ASX:SPQ) is exploring for large copper and lead-zinc-silver deposits in northwest Queensland, Australia. Diamonds, uranium and phosphate are secondary target deposits. Superior currently holds a total of 15 exploration permits and applications. It has an active exploration program on these project areas in northwest Queensland.

Superior has a very strong focus on northwest Queensland with most activity directed to the discovery of a major base metal deposit of the Mount Isa style.

Superior utilises advanced exploration methods in its search (particularly geophysics) with modern computer modelling of results to produce target areas for further testing. In 2007 Superior used the heliborne Versatile Time-Domain Electromagnetic (VTEM) system on three project areas with a total of approximately 2000 km flown in 2007. Superior also uses ground gravity surveys on prospect areas as this method is applicable to the search for large sulphide mineral deposits.

Drilling is also an important part of Superior’s exploration programs and drill testing of target areas is seen as an essential part of the exploration process. The search for large mineral
deposits requires deeper drilling than is required for smaller deposits.

Superior utilises experienced explorers in its exploration as they offer the best chance for the discovery of resources.

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Managing Director

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The term “Target” as used in this release should not be misunderstood or misconstrued as an estimate of Mineral Resources or Ore Reserves as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’ and therefore the term has not been used in this context. It is uncertain if further exploration or feasibility studies will result in a Mineral Resource or Ore Reserve.

The information in this report that relates to Exploration Results is based on information compiled by Mr Ken Harvey, a full-time employee of the Company, who is a Member of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Harvey 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 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Harvey consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.