ANNUAL REPORT
(INCLUDING A BRIDGING REPORT COMPONENT)
TO COVER EXPLORATION ACTIVITIES OVER MLC’s 23 & 58 - 62
01 JANUARY 2001 – 31 December 2011

MLC’s 23 & 58 - 62
Verdot Group

LICENSEE:
SANTEXCO PTY LTD
A.C.N. 002 910 296

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Department of Resources
Central Land Council
Emmerson Resources Ltd

MAP SHEETS:
□ TENNANT CREEK SE53-14
□ TENNANT CREEK 1:250 000
□ TENNANT CREEK 5758
□ TENNANT CREEK 1:100 000
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1. SUMMARY

Mineral Leases 23 & 58 - 62, Verdot Group, were acquired by Santexco Pty Ltd (Santexco) to search for Tennant Creek style iron oxide copper-gold deposits.

This Annual (& bridging) report records the exploration work done on these group of tenure during the term 01 January 2001 to 31 December 2011.

As detailed below Emmerson will continue to conduct exploration in the Gecko Area to further develop the application, understanding and execution of targeting HeliTEM and/or VRMI anomalies. The HeliTEM survey over the Chariot – TC8 corridor located immediately to the west and has implications for the geology and geophysics (any VRMI anomalism). With the encouraging results from work in the Gecko Area the detailed interpretation, analysis and modelling of the HeliTEM data from the Chariot – TC8 corridor will occur during 2012, aimed at identifying target for drill testing, should results be encouraging from this work then the Verdot Group of tenements would be a prime candidate for further HeliTEM surveys, due to the identified VRMI anomalism and historical mine workings.
2. INTRODUCTION

Mineral Leases 23 & 58 - 62, Verdot Group, were acquired by Santexco Pty Ltd (Santexco) to search for Tennant Creek style iron oxide copper-gold deposits.

This Annual (& bridging) report records the exploration work done on these group of tenure during the term 01 January 2001 to 31 December 2011.

3. LOCATION

Mineral Leases 23 & 58 - 62 has no overlying tenure and is located on the western outskirts of the Tennant Creek Township, as displayed in figure 1 and access is via the Chariot Haul Road, and is accessible all year round.

Figure 1 shows the location of the Verdot Group tenure with respect to the Tennant Creek Township.

Figure 1: Location of the Verdot Group
4. TENURE

Tenure details for the Verdot Group is as follows:

<table>
<thead>
<tr>
<th>Tenure</th>
<th>License Holder</th>
<th>Blocks &amp; part-blocks</th>
<th>Area (ha)</th>
<th>Expiry Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLC 23</td>
<td>Santexco Pty Ltd</td>
<td>6</td>
<td></td>
<td>31st December 2022</td>
</tr>
<tr>
<td>MLC 58</td>
<td>Santexco Pty Ltd</td>
<td>1</td>
<td></td>
<td>9th February 2014</td>
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<td>MLC 59</td>
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<td>MLC 61</td>
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<td>2</td>
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<td>2</td>
<td></td>
<td>31st December 2022</td>
</tr>
</tbody>
</table>

Mineral Leases 23 & 58 - 62 lie within a variety of land status; Crown Land NT Parcel 02080 & 02093; Power and Water Authority NT Parcel 01002; Air Services Australian Land NT Parcel 00985 and Department of Transport and Works land NT Parcel 01238.

Figure 1 shows the tenure area as it was during the reporting term.

5. GEOLOGY

5.1 Regional Geology

The reader is referred to AusIMM Monograph 14 (Geology of the Mineral Deposits of Australia and Papua New Guinea), Volume 1, pp. 829-861, to gain an introduction to the regional geology and styles of gold-copper mineralisation of the area.

In 1995 the Northern Territory Geological Survey released a geological map and explanatory notes for the Tennant Creek 1:100,000 sheet, which covers the area of the license.

The rocks of the Warramunga Formation host most of the ore bodies in the region and underlie the Exploration License.
5.2 Local Geology

The tenure covers an area of intermittent outcrops.

The cover is dominated by Quaternary sediments and these include dissected colluvial fan deposits, red soil plains and alluvial deposits in active channels and on floodplains. The Quaternary deposits are assumed by mapping to cover the Palaeoproterozoic Warramunga Formation meta-sediments that have been intruded by later quartz-feldspar porphyries.

In 1995 the Northern Territory Geological Survey released geological maps and explanatory notes for the Tennant Creek 1:250,000 sheet, and the Tennant Creek (5758) 1:100 000 sheets, which covers the area of the tenure.

6. PREVIOUS EXPLORATION

MLC’s 23 & 58 - 62

Verdot (Explorer 45) 414 311E 7 827 458N

Exploration pre-Emmerson (up to 01 August 2006)

No exploration activities have been conducted over these group of tenure during this period.

7. WORK DONE DURING THE REPORT PERIOD

MLC’s 23 & 58 - 62

Verdot (Explorer 45) 414 311E 7 827 458N

Exploration post-Emmerson (after 01 August 2006)

During 2010 Emmerson and contract geophysical consultants, Spinifex Geophysics, further developed a processing technology, Vector Residual Magnetic Intensity (VRMI) aimed at existing magnetic data from Emmerson’s Tennant Creek tenure package, figures 2 (pre-VRMI) & 3 (VRMI) represent the success of the VRMI technology. Immediate identification of highly prospective VRMI targets reprioritised Emmerson’s target matrix,
Figure 2: Conventional Magnetics

Figure 3: VRMI
the Red Bluff Area in Emmerson’s Western Project Area became the No. 1 priority area for exploration activities. Drilling during 2010 at Red Bluff confirmed the VRMI technology with significant intercepts of thick ironstones, although assay results were mixed, the successful ironstone intercepts were evidence to support the development and use of VRMI technology. The VRMI preliminary assessment of MLC’s 23 & 58 - 62 identified a VRMI target within the group of Leases, which also coincides with the historical Verdot prospect, refer to figure 4 below.

![Figure 4: MLC’s 23 & 58 - 62 vs. VRMI](image)

Further to the application of VRMI Emmerson conducted a geophysical survey called HeliTEM - Heli-TEM is a helicopter mounted system capable of measuring the conductivity of the rocks to significant depth and utilises the world’s most powerful airborne, time-domain electromagnetic system. A breakthrough during late 2010 and early 2011 has been the recognition that drill core from the mineralised portions of Tennant Creeks historic deposits is conductive up to 80 times the background levels. Emmerson completed the first round of ‘Proof of Concept’ drilling of identified HeliTEM targets in the Gecko and Orlando Areas and resulted in success with the several intersections of mineralisation, gold and copper rich. Further drilling will be conducted in this area to further define the economic potential and further develop and refine the application of HeliTEM.

The most significant factor in the application of HeliTEM has been the Goanna and Monitor discoveries (in the Gecko Area) as it occurs in subdued magnetic signatures,
therefore confirming that magnetic anomalies are not the only potential hosts for economic mineralisation in the Tennant Creek Field. Figure 5 below shows the magnetic image (VRMI) of the Gecko Corridor, it can be seen that the drilling at both Monitor and Goanna has focused on the ‘blue’ area (magnetic low), compare this with the HeliTEM image in figure 6 and it can be seen that the drilling has focused on a HeliTEM anomaly not seen in the magnetics, this has vast implications for exploration in the rest of the field and particularly the prospective tenure, including MLC’s 23 & 58 - 62.

Figure 5: Gecko Corridor vs. VRMI

The HeliTEM survey over the Chariot – TC8 corridor located immediately to the west of the Verdot Group has implications for the geology and geophysics (any VRMI anomalism). With the encouraging results from work in the Gecko Area the detailed interpretation, analysis and modelling of the HeliTEM data from the Chariot – TC8 corridor will occur during 2012, aimed at identifying target for drill testing, should results be encouraging from this work then the Verdot Group of tenements would be a prime candidate for further HeliTEM surveys, due to the identified VRMI anomalism and near-by historical mine workings.
8. REHABILITATION

Exploration within the Verdot Group consisted of non-invasive geophysical surveys and detailed desktop studies. As no on ground exploration was conducted no rehabilitation has been completed.

Any future exploration activity rehabilitation will be completed as per the guidelines and commitments made under the Southern Project Area (SPA) Mining Management Plan (MMP) Authorisation 0475-03.

9. CONCLUSIONS

As detailed above Emmerson will continue to conduct exploration in the Gecko Area to further develop the application, understanding and execution of targeting HeliTEM and/or VRMI anomalies. The HeliTEM survey over the Chariot – TC8 corridor located
immediately to the west and has implications for the geology and geophysics (any VRMI anomalism). With the encouraging results from work in the Gecko Area the detailed interpretation, analysis and modelling of the HeliTEM data from the Chariot – TC8 corridor will occur during 2012, aimed at identifying target for drill testing, should results be encouraging from this work then the Verdot Group of tenements would be a prime candidate for further HeliTEM surveys, due to the identified VRMI anomalism and near-by historical mine workings.