BRIDGING REPORT TO COVER EXPLORATION ACTIVITIES
OVER MLC’s 304 - 313 & 562 - 574
01 JANUARY 2001 – 31 JULY 2007

MLC’s 304 - 313 & 562 – 574
Northern Star Group

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

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JULY 2007

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Central Land Council
Emmerson Resources Pty Ltd

MAP SHEETS:
TENNANT CREEK SE53-14
FLYNN 5759
1:250 000
1:100 000
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Figure 1. Location Map of the Northern Star Group Tenure Area
1. SUMMARY

Mineral Leases 304 - 313 & 562 - 574, Northern Star Group, were acquired by Santexco Pty Ltd (Santexco) to search for Tennant Creek style iron oxide copper-gold deposits.

This bridging report records the exploration work done on these group of tenure during the term 01 January 2001 to 31 July 2007.

During the report period no exploration was conducted over the Northern Star Group tenure area. The Northern Star Group Tenure area was included in large scale regional reviews of tenure. The Northern Star Group tenure area is located within EL 22165.

Giants Reef did not consider this area as a high exploration priority, however Emmerson considers the proximity to many past producing mines and many smaller historical mines in the area still make it an attractive area to explore.
2. INTRODUCTION

Mineral Leases 304 - 313 & 562 - 574, Northern Star Group, were acquired by Santexco Pty Ltd (Santexco) to search for Tennant Creek style iron oxide copper-gold deposits.

This bridging report records the exploration work done on these group of tenure during the term 01 January 2001 to 31 July 2007.

3. LOCATION

Mineral Leases 304 - 313 & 562 - 574 are tenure located within Exploration Licence 22165, approximately 3km west of the Stuart Highway and 35km north of the Tennant Creek Township.

Access to MLC’s 304 – 313 & 562 – 574 is gained north via the Stuart Highway then west via a series of 4WD tracks leading to the historical Northern Star, Jasper Hills and Granites mine workings.

Figure 1 shows the location of the Northern Star Group tenure with respect to the town of Tennant Creek.
4. TENURE

Tenure details for the Northern Star Group is as follows:

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The tenure lie’s within NT Portion 00408, Perpetual Pastoral Lease 946, Phillip Creek Station.

MLC’s 562 to 574 were initially granted to Australian Development Limited (ADL) in 1964 for a period of 21 years, renewed in 1985 for a period of ten years and finally renewed again in 1995 for twenty years. MLC’s 304-313 were granted to ADL in 1975 for a period of 21 years. An application for the renewal of all theses leases was lodged by PosGold Limited (now Normandy) in 1995 and granted on the 31/1/1996 with an expiry date of 31/12/2004, a further renewal was granted in 2004 for a period of ten years.

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

MLC’s 304 to 313 are characterised by flat aeolian cover. MLC’s 562 to 574 contain outcrop of ironstone and sediments on the east-west trending hills of North Star Hill, Northern Star, Jasper Hill, and Katherine’s Star. Northern Star has been mined as both an underground and an open cut mine.

The Northern Star Leases cover several zones of Au-Cu-Bi mineralisation, hosted by Warramunga Formation metasediments. The Warramunga Formation is a monotonous sequence of hematitic / chloritic siltstones and fine-grained greywacke. The magnetite and/or hematite rich ironstone bodies are discordant with stratigraphy and act as the dominant host to gold, copper and cobalt mineralisation. Locally, mineralisation extends into the chlorite-rich hydrothermally altered sediments, which generally encase the ironstones.

Structurally, the Northern Star Leases are located on the southern limb of an upright, first order anticline which trends approximately E-W. The D1 deformation on the Northern Star Leases produced a well-defined axial plane cleavage. The ironstone emplacement is thought to be related to early D1, possibly associated with the emplacement of granitoids and porphyries, whilst the Cu-Au-Co(-Bi) mineralisation is thought to be associated with later deformation, where shearing occurred along pre-existing lines of weakness. Competency contrasts between the ironstone and surrounding sediments may account for a later deformational event preparing the ironstone and surrounding sediments for gold and sulphide mineralisation.

There are four major mineralised zones on the Northern Star Leases. Number 1 hill is the site of the Northern Star open cut (Au) and, Jasper Hill (to the south) hosts the largest known mineralised body on the Northern Star Leases (Cu, Au, Co). Katherine’s Star hosts a copper-mineralised body, which has increasing Au but decreasing Cu with depth, whilst the Northern Star Deeps mineralisation is characterised by a series of high grade but
irregular Au intersections in both magnetite ironstones and highly chloritic hydrothermally altered sediments.

Weathering and oxidation often extends to 120-150m depth, and as a consequence high grade Cu mineralisation above this depth is often a result of secondary enrichment, and is present as native Cu, oxides and hydroxides. Below this level the primary Cu mineral is chalcopyrite.

In 1995 the Northern Territory Geological Survey released geological maps and explanatory notes for the Tennant Creek 1:250,000 sheet, and the Flynn (5759) 1:100 000 sheet, which covers the area of the tenure.
6. PREVIOUS EXPLORATION

MLC’s 304 - 313 & 562 - 574

Several companies have explored the area surrounding the leases and this historical research has been reported in Mouchet (1999).

Normandy actively explored the Northern Star Leases since the closure of the open cut. This exploration from 1975 up until December 1995 has been reported in Mouchet (1995). Work completed during that period included gridding, Jacro drilling (in 1981), RC/diamond drilling of the Northern Star orebody (in 1985-87), RC/diamond drilling (in 1987-92), RAB drilling (in 1992) and vacuum drilling (in 1995).

From 31 December 1995 to 1 August 1996, 262 vacuum holes (1682m) and twelve RC holes with diamond tails (2280.7m) were drilled, all available drill data for these holes accompanies this report.

During the period 1 August 1996 to 31 July 1997, Normandy completed thirteen RC holes were drilled for a total of 1,831.5m and four of these holes were extended with diamond tails for an additional 299.3m. All results are presented in West (1997).

Three RC/diamond holes (NSDD-132, NSDD-136 and NSDD-140) were completed in September-October 1997 at Northern Star. The first hole targeted a gold intersection below the Higgins Fault, north of the Northern Star pit. The second hole was drilled to test the extension to the gold mineralisation under Jasper Hill. Quartz veining and a wide alteration zone including 60m of dolomite was intersected.

The final hole tested for extensions to gold mineralisation associated with Katherine’s Star. A broad zone of disseminated chalcopyrite and anomalous Au mineralisation was encountered but all values were < 0.5 g/t. Katherine Star is now considered closed to the East. In addition the precollar section passed through the known main ore lenses at Jasper Hill, and provided additional information on them with a best intersection of 12m @ 5.54% Cu and 1.03 g/t Au.

Five RC holes for 529m were drilled in October-November 1997 with NSRC-142 (3m @ 10.2g/t Au from 24m) and NSRC-143 (1m @ 8.24g/t Au from 29m) having the best results.

A RC drilling program testing the strike and depth continuity of the Jasper Hill Shallow Gold trend was completed in 1998. The program consisted of eight holes, NSRC-146-150 & 153-155; holes NSRC 151 & 152 were cancelled. Ironstone and altered sediment interfaces similar to those that host gold in the previously tested portion of Jasper Hill Shallow Gold were encountered. Assay results from RC drilling at the Jasper Hill Shallow
Gold zone returned a maximum of 3m @ 2.43g/t Au from 69m, with all other results <1g/t Au. This effectively limits the resource potential to approximately 20-30,000t @ 8g/t Au.

An economic study was done in June 1998 to see if the Jasper Hill Shallow Gold resource warrants a RC drillout. This study has shown that a drillout is not warranted, even with the most optimistic grade/tonnage scenario. No further exploration work is planned for Northern Star in 1999, except for a review of all previous exploration. All drilling details were presented in Mouchet (1999).

7. WORK DONE DURING THE REPORT PERIOD

Northern Star 410 101E 7 863 601N
Granites 410 501E 7 863 501N
Jasper Hill 410 301E 7 863 501N

During the report period no exploration was conducted over the Northern Star Group tenure area. The Northern Star Group Tenure area was included in large scale regional reviews of tenure. The Northern Star Group tenure area is located within EL 22165.

Giants Reef did not consider this area as a high exploration priority, however Emmerson considers the proximity to many past producing mines and many smaller historical mines in the area still make it an attractive area to explore.

8. REHABILITATION

Extensive environmental rehabilitation was carried out in 1999 with a total of $187,730 expenditure. Rehabilitation included organising permits for clearance, soil contamination studies, earthworks, fencing, seeding and planting. Monitoring of rehabilitation areas continued into 2000.

9. REFERENCES