



STONEHENGE METALS  
LIMITED

ABN 81 119 267 391

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## ANNUAL REPORT

EL 17/2003 - STONEHENGE CREEK

AND

20M/2001 - MCCLEAN CREEK

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9 JULY 2009 TO 9 JULY 2010

COMPILED:

R JEWSON AND D HAMLYN

JULY 2010



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## INTRODUCTION

This report details exploration activities by Stonehenge Metals Limited (“SHE”) within EL17/2003 and 20M/2001 during the period to 30 June 2010.

Exploration Lease EL17/2003 covers an area of 7km<sup>2</sup> and is located approximately 3km southwest of Zeehan on the Tasmanian west coast. The lease was transferred to Stonehenge Metals Limited in 2006 subject to Stonehenge’s subsequent listing on the Australian Stock Exchange on 20th December 2006. Mining Lease 20M/2001 McClean Creek (Sunshine) covers 21ha and lies within EL17/2003 as shown in Figure 3, for the purposes of completeness and continuity all work done on this mining lease will also be included in this annual report. 20M/2001 was also transferred to Stonehenge Metals Limited in December 2006.

Stonehenge Metals Limited began active exploration of the tenement in January 2007. Its principal targets of interest are Proterozoic shear hosted lead-zinc-silver deposits, carbonate-hosted lead, zinc, silver deposits and ultramafic hosted nickel sulphide deposits. On the lease there are approximately 7km of strike length to explore on three trends each of which contain several historical mines

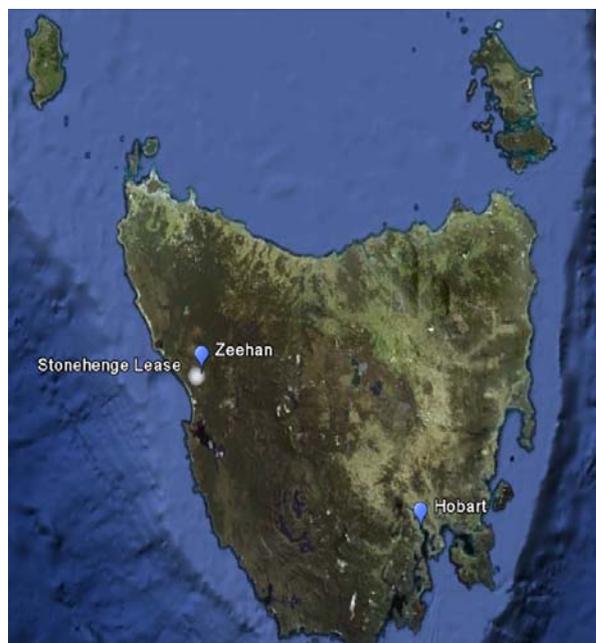


**Figure 1.** Location Map showing location of the Stonehenge Lease.

## LOCATION ACCESS AND TENEMENTS

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Stonehenge Lease EL17/2003 is located (approx -41.9038 lat, 145.313 long) approximately three kilometres southwest of the west coast mining township of Zeehan, Tasmania.



**Figure 2.** Regional location plan of Tasmania & Stonehenge Lease E17/2003.

Access to the project area is provided via the Spray Tunnel and tramway. The tramways have a generally well-compacted surface suitable for 4WD during the wet winter months or two-wheel drive during drier periods. 20M/2001 (Sunshine) is located within EL17/2003.

Topography is typically moderately undulating to quite rugged, relief ranges from 300 to 750m. In general low lying areas are covered by button grass, with heavily forested gullies and incised steep hill slopes (inaccessible by foot).

Annual rainfall in the area is usually heavy – up to 2.5m, with most falling in the winter months. Outcrop over both open ground and hill slopes is generally sparse; however tramway cuttings provide excellent rock exposures.

All map co-ordinates in this report are relative to the GDA94 datum and located in UTM Zone 55 and use MGA94 co-ordinates.

## REGIONAL GEOLOGY

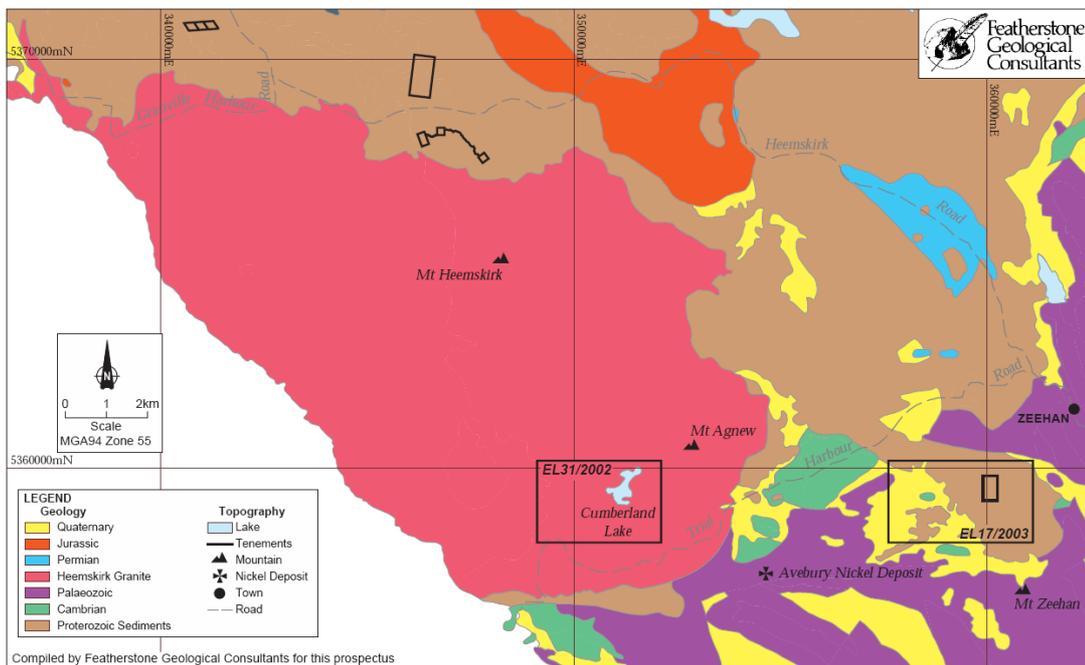
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The regional geology is dominated by a considerably large intrusive granitic dome which intruded a sequence of Proterozoic sedimentary rocks (older than 600 My) during Late Devonian times (c.390 My ago). The granite is known as the Mt Heemskirk Granite with the mountain of that name being located in the north east of the granite outcrop and rising to 742m. Mt Agnew, another significant topographic feature, is located in the south eastern area of the granite outcrop, rises to 848m, and lies 9km due west of the township of Zeehan.



**Figure 3.** Regional photo of Mt Heemskirk Granite.

The broad regional geology is presented in Figure 4 which also illustrates other Stonehenge tenements in this area.



**Figure 4. Regional Geology of the Zeehan Area.**

The Heemskirk granite is a coarse grained tourmaline rich muscovite granite, cropping out roughly oval in shape, elongated E-W, with the western portions extending to the west under the sea. The outcrop is 10km north to south and the granite is not homogeneous with several textural and mineralogical variants identified. Peripheral zones of the intrusive illustrate characteristic chilled margins within 2m to 3m of the contact where it is a fine grained, white, aplitic granite. The main body of the intrusion is formed of a red granite but in some areas a white granite is present and tin mineralisation may be associated with the white granite.

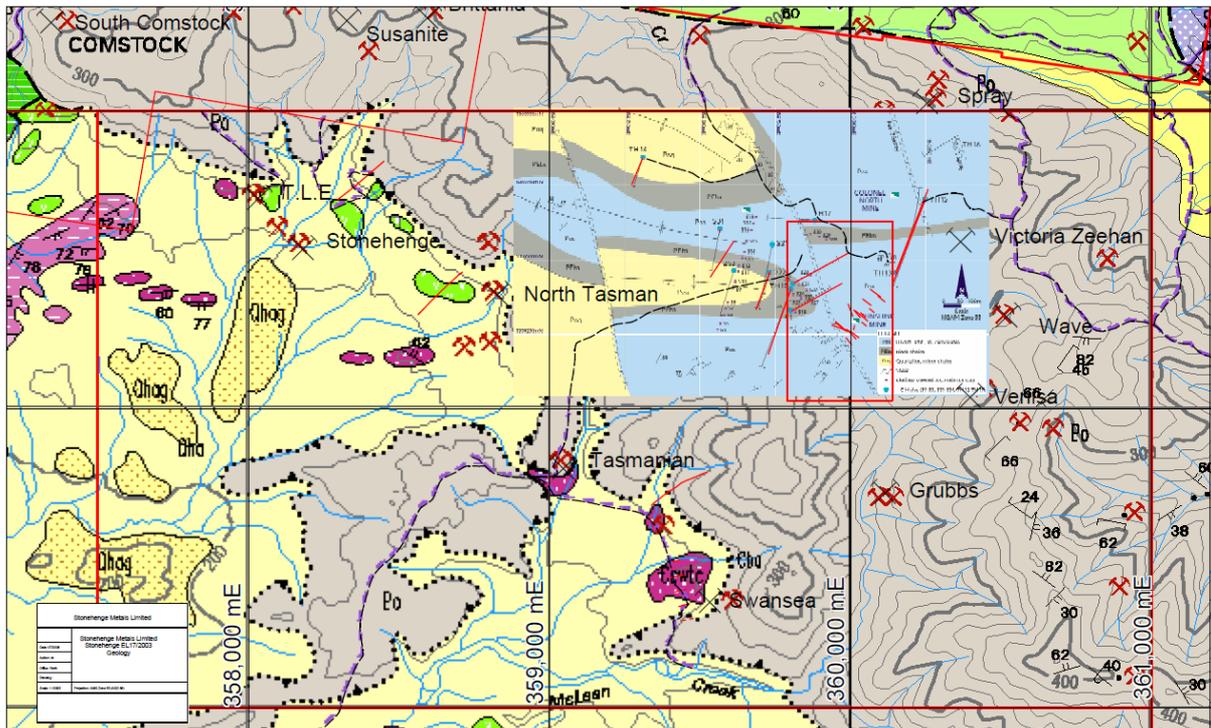
Proterozoic rocks are predominantly comprise of quartzite, micaceous quartzite, and black shale of the Oonah Formation. Carbonate rich beds are also present. These lithologies have been subjected to medium grade regional metamorphism and may also have been subjected to contact metamorphic proximal to intrusives. In the south east and the south rocks of Cambrian age are present and these are also intruded by the granite. These are mostly sedimentary but also include some ultramafic bodies which are attracting attention as part of a new geological model for economic nickel deposits such as that being currently developed at Avebury.

During the final phases of crystal fractionation of the large granitic body a substantial quantity of metal rich fluids were developed which significantly contributed towards the level of mineral endowment for the region. Stresses produced by the intrusion resulted in faults and fractures in the country rocks and also fractures in the granite itself in some places. Mineralised solutions entered some of these structurally prospective zones and resulted in the precipitation of minerals which

crystallised on the walls of the fissure and formed a vein. Such fissures are called lodes and such mineralisation is referred to as hydrothermal mineralisation. Quite commonly these lode structures occur as multiples either stacked or in close proximity to one another as a result of structural repartitions. Since different metallic minerals crystallize at different temperatures those that crystallize at higher temperatures are deposited first and the others further along, or up, the lode. This results in a zonation of the mineralisation with high temperature minerals near the granite and lower temperature minerals further away.

## PROSPECT GEOLOGY

The project scale geology of the tenement is relatively structurally complicated. Five sets of folds have been identified in the area (Upton 1996). The axes of the folds trend north-west with an inferred wavelength of approximately 2km. North trending and east trending faults transect the tenement, crenulation cleavage, with variable orientation, is visible in outcrops of phyllite and slate along several of the track cuttings. Fault trends (Devonian?) are generally west-northwest and north-northwest to north-northeast.



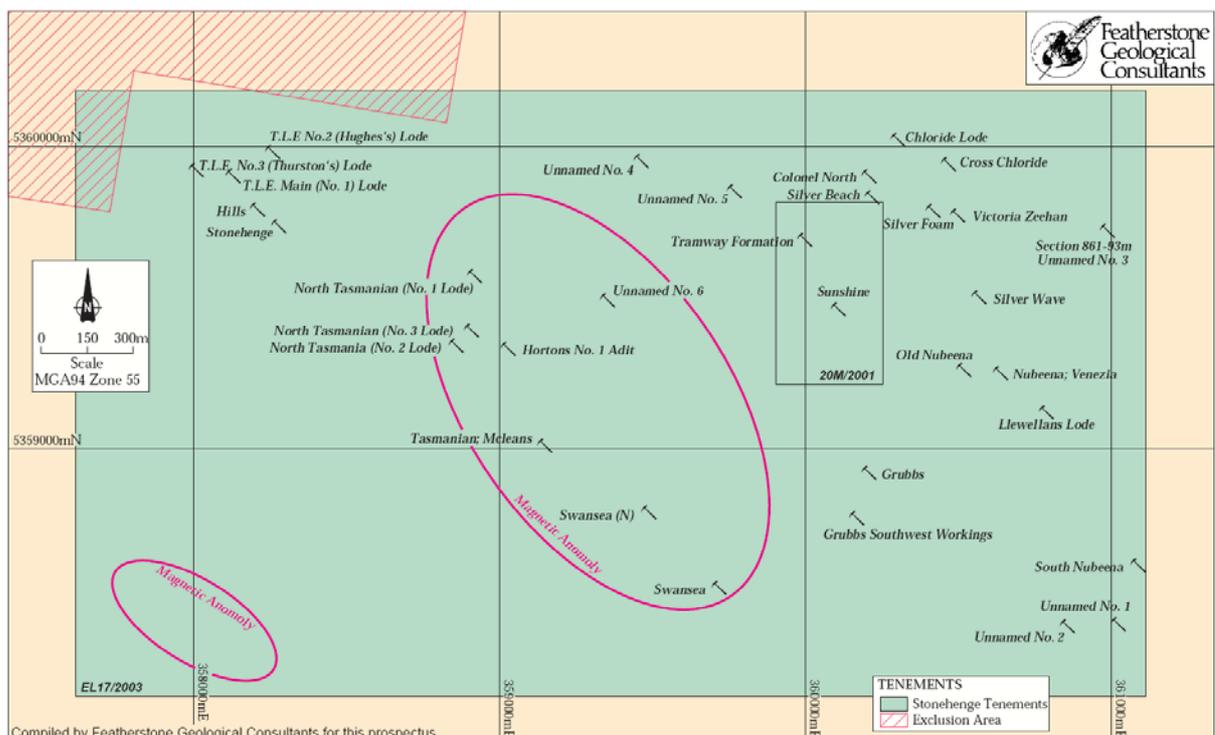
**Figure 5.** Prospect Geology of Stonehenge Lease E17/2003.

Predominantly the lithologies are comprised of the Oonah and the Crimson Creek Formations. The Oonah Formation is of Precambrian age (quartzites, micaceous quartzites, siltstones, shales, graphitic shales and dolomitic units) and has been thrust over the younger Cambrian sediments of the Crimson Creek Formation (interbedded volcanoclastics, basalts, mudstones and shales) by the low angle Tenth Legion Thrust. The Devonian age Heemskirk Granite lies about 3 to 4km to the northwest of the EL and is gravity-inferred to underlie the project area at a depth of 1 to 2km.

## HISTORICAL EXPLORATION/MINING

EL 17/2003 is located within the historical South Heemskirk Mineral Field. The general area has been subjected to rather sporadic exploration activity since the 1870s, intimately associated with the various commodity cycles throughout these periods. Numerous old silver-lead-zinc fissure-load prospects most of which were worked in the period 1882-1910. From 1919 until 1946 the field jwith relatively untouched except for occasional, sporadic, relatively low-intensity exploration activity. During the 1980's and 1990s the Stonehenge area was targeted for stanniferous sulphide-rich carbonate replacement (Renison-Bell style) mineralisation by RGC and for Proterozoic shale-hosted zinc deposits by CRAE. CRAE entered a joint venture arrangement with Allegiance Mining NL during the 1990s; this work resulted in the discovery of the Avebury nickel deposit. When CRA withdrew from the JV (and the state) in 1996, Allegiance gained title to the entire EL. Allegiance relinquished the eastern half of EL 28/88 and 7km<sup>2</sup> of it was taken up by the McDermott brothers, as EL 17/2003. This holding was subsequently sold to the current holders - Stonehenge Metals Limited – in December 2006.

This Exploration Licence (EL17/2003) contains the Mining Lease (20M/2001) wholly within its boundaries so in describing the 33 prospects in this area those within the Mining Lease will not be identified separately and all will be described as being located within the Exploration Licence. On the map of the prospects the boundaries of the mining lease will be shown enabling those prospects lying within the Mining Lease to be identified. The locations of the prospects are presented in Figure 3.



**Figure 6. Lead-zinc-silver prospects on the Stonehenge Lease.**

The prospects and old mines have been put into two groups based on their location within the Exploration Licence. Recent exploration activity took place on a large grid known as the Stonehenge Grid and this work will be described in a third section. The groups are:

The Tasmanian Mine and South Western Group.

The Grubbs Mine and North Eastern Group.

The Stonehenge Grid.

These prospects were typically pegged and relinquished quite regularly possibly with limited periods of production which will not be described in detail. The basic geology and total recorded production together with any important features of the mineralisation will be presented. In the early days it was the lead/silver ore that was sought after and the presence of the zinc mineral sphalerite incurred penalties. The ore had to be amenable to hand cobbing and hand sorting to produce a high grade product ready for smelting.

If the topography at a mine was suitable a drainage adit would be driven from the nearest low topographic point to remove water from the workings and enable extraction of ore above the adit. After this ore had been won it was necessary to sink a shaft below the water table and this was a problem during the 19<sup>th</sup> Century and the early days of the 20<sup>th</sup> Century. At a number of mines, shafts were sunk to 50m but efficient pumping equipment and the means of powering it were lacking and expensive so it was impossible or uneconomical for many to go deeper.

Exposure within the licence area is poor and selective. The limestones and shales, which drilling indicates are a major proportion of the stratigraphy, are rarely seen in outcrop. One of the features of the area is the presence of numerous outcrops of Precambrian Oonah Formation. Work during the 1990s has confirmed that these areas of Oonah rocks are bounded by sections of the 10<sup>th</sup> Legion Fault which is present as a low angle thrust. The older Precambrian rocks have been thrust over the younger rocks and subsequent weathering and erosion has removed much rock leaving isolated patches of Proterozoic rock resting on the Cambrian and Post-Cambrian succession in some places. These are known as klippe and these klippen rest on the fragmented thrust plane. Some of the larger klippe of Oonah Formation are reported to be up to 300m thick.

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## THE TASMANIAN AND SOUTH WESTERN GROUP

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### THE T.L.E. PROSPECT

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This prospect (Tasmanian Land Exploration) is located on the northwest end of the line of lode in the northwest corner of the licence. The first lease on the property was taken out in 1888. The Main Lode (No.1.) strikes at 36° and dips 75° W with a shaft to about 34m. The No.2. Lode (67m east of No.1.) strikes at 34° and was found soon after and subsequently the No.3. Lode was found to the west of No.1. Lode striking at 356°. In 1913 a government prospecting party cut 830m of trenches near the T.L.E. without success. Some ore was raised in 1925 and the ground held from 1951-1959. The Mines Dept. attempted to drill the lode in 1957 but the hole was abandoned at 7m.

The country rocks are Cambrian conglomerate, greywacke, and shale. The Tenth Legion Fault Zone lies a short distance to the north bringing Proterozoic quartzite and slate over the Cambrian rocks. The ore is described as massive pale yellow to mid brown sphalerite with minor galena and quartz gangue but galena rich patches and shoots occur with good silver grades.

Up until 1911 at least 300t of galena was produced containing 200t of lead and 30,000oz of silver. In 1954 5.52t of ore were raised containing 2.85t of lead, 0.76t zinc, and 31oz silver.

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### MR HILL'S PROSPECT

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The location of the prospect is given on the MRT database. In fact Mr R.B. Hill was a very active prospector in this area in the 1950s and held the T.L.E., Stonehenge, and Tasmanian prospects. The prospect named after him is a small copper show located about 120m west of Stonehenge. The outcrop showed copper mineralisation grading 15% copper. A shaft put down 6m failed to find any sign of a lode or vein.

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### THE STONEHENGE PROSPECT

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Located 200m southeast of the T.L.E. Main Shaft this was first pegged in 1888. In 1893 the Stonehenge Silver Mining Co. NL was formed to work the property. The company ceased work in 1894. Approximately 45t of ore was raised containing some 30t of lead and 2,700oz silver.

Three lodes were present striking NNE but only one was exploited. This lode strikes at a bearing of 25° and had a very steep SE dip in the upper workings changing to NW in the lower. The mineralisation was present in a vein of sulphides 150mm wide within quartz siderite gangue 0.5m wide. The sulphides consisted of pyrite and sphalerite with some chalcopyrite with galena as bands and blebs.

In the 1990s CRA mounted an exploration programme for skarn style mineralisation in calc-silicate hosts and Irish style base metal model mineralisation in limestones and shales. One of the areas identified as prospective was that secured by Stonehenge Metals current tenement. This area was covered by a large grid which had its origin just west of the Stonehenge Mine and also near Stonehenge Creek and was named the Stonehenge Grid. Work by CRA was followed by Renison/Goldfields and then by Allegiance Mining NL.

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### NORTH TASMANIAN (NO.1) AND TASMANIAN NO. 2 AND NO.3.

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These mines are located about 700m southeast of Stonehenge and were part of a group of mines acquired by the Tasmanian Silver Mining Co. Ltd between the T.L.E. Mine in the northwest and McLeans Creek in the southeast.

At the North Tasmanian Mine there are two lodes. The No.1 Lode strikes at 20° and dips NE. There was a shallow adit drive for about 60m and stopping to surface. A shaft was sunk to 58m with a level at 30m and a good shoot of galena and sphalerite was taken out up to surface. About 65m to the

west of the shaft, the No.2 Lode was discovered striking at 10° and dipping 80° W. This was worked from adit stopes to surface for about 50m.

The Tasmanian No.3 Lode may be a faulted continuation of the No.2 Lode. It was discovered by a tributor named Riley and is also referred to as Riley's Workings. The lode strikes at 322° with a vertical dip. The ore was not of high grade at 20% lead and 40% zinc and a 16t parcel failed to cover cartage costs due to penalties for the zinc content so mining was halted.

These workings are in Proterozoic Oonah Formation and also Cambrian Dundas Group basalts, shales and greywackes. The host rock for the No.1 Lode is hydrothermally altered soft pale shale of the Oonah Formation. The vein consists of pyrite, siderite, and sphalerite, being replaced by galena and arsenopyrite with the galena containing minor copper mineralisation.

Production figures for these mines are not quoted but the production is included in the figures for the Tasmanian Mine.

A government prospecting trench 350m long was put in about 70m north of Main Shaft in 1913 on a bearing of 70°. No mineralisation was found. In 1957 three boreholes were drilled by the Mines Department under the No.3 Lode for 29.6m, 29.9m, and 31.4m depressed at 55°. A few veinlets of galena, sphalerite, and pyritized shale were cut and the results discouraged further exploration.

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## TASMANIAN MINE

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The Tasman Mine is also known as Tasmanian; McLeans. The Main Shaft is situated 640m SE of the North Tasmanian shaft. The mineralized zone was traced NNW from the Swansea Mine about 750m to the SSE in 1888 passing through Swansea North.

An adit was driven the on the lode and its bearing for 64m but no mineralisation was found after 36m. The ground was described as "broken and the lode was found not to rise into it." The northern part of the workings lie within sheared and shattered Proterozoic quartzite, siltstone, and shale which are faulted to the south against Cambrian chert-conglomerate and siltstone. The lode strikes at 327° and generally varies from 0.5m to 1m but may be up to 1.5m. The ore is sphalerite – pyrite associated with quartz.

The main shaft was sunk to 22m. Stopping was carried out up to the adit level. Sulphide mineralisation ranged from 100mm up to 1.2m wide but was patchy and contained much sphalerite. Little production occurred until 1933 when it was acquired by J.Hill and there was steady production to 1941. From 1942 until 1961 the lease was held by J. J. Hill and small quantities of ore were produced spasmodically.

Total production for the Tasmanian Mines was 1,200t for 730t of lead, 41,299oz silver, and 8t of zinc.

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## THE SWANSEA NORTH SHAFT

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This shaft is located about 300m NNE of the Swansea Mine and is on the extension of the lode from the Swansea Mine and is really part of that mine. The workings can be followed to within 30m of an E – W cross-cutting fault about 50m north of the shaft.

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## THE SWANSEA MINE

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The mine is located 200m north of McLeans Creek. The lode channel strikes at 335° and dips shallowly at about 45° and is 9.9m wide. The sulphides occur in shoots striking obliquely across the channel at 319°. These shoots tend to anastomose within the lode and extend along strike to the NNW for 320m just past the Swansea North Shaft. Host rocks are considered to be Cambrian (Dundas Group) sediments.

The lode was worked to the No.4 Level at 46m but the lowest level was only just being developed when the mine closed. There were three main ore shoots in the upper levels with two of them merging at the No.2 Level (24m) and it was thought that development on the No.4 Level (46m) would find that they had merged into one shoot at this depth.

In 1922 A. M. Reid reported the presence of a narrow pyroxenite dyke at Swansea striking NW and bearing small quantities of various nickel sulphides. This dyke therefore lies roughly along the axis of the large magnetic anomaly on this tenement. The occurrence of nickel sulphides within the magnetically anomalous area does not confirm the presence of prospective nickeliferous ultramafic rocks at depth but is certainly a very positive feature.

Production to 1929 was 2,260t of galena ore and 1,240t of sphalerite ore containing 1,340t of lead, 35,630oz silver, 579t zinc, and 41t cadmium.

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## THE SILVER WAVE

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This mine is located about 700m east of the North Tasmanian Mine and worked two main lodes consisting of fracture zones containing veins of galena bearing at 30° and dipping NE at 80°. It had a shaft to 12m and operated during the early years of the field. Production took place under the ownership of the Nubeena and also the Victoria Zeehan mining companies and was not reported separately.

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## THE GRUBBS MINE AND NORTH EASTERN GROUP.

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### THE GRUBBS MINE

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This mine is located just south of the centre of the eastern half of EL17/2003 on the eastern side of McLeans Creek. From 1888 to 1903 the mine was worked by W.C.Grubbs when it was taken over by Colonel North Mines and Railway Co. NL.

This was one of the more substantial mines with the main shaft finally sunk to 98m with five levels developed. The mine closed due to lack of ore but the reason is not clearly explained. The lode may have been faulted out between the No.4 and No.5 Levels, where a fault is shown on a section of the mine. While this might be the case the mineralisation was reported to be weakening with depth and below the No.3 Level there was sphalerite veining reported but little galena. The proportion of recovered silver to lead at close down had fallen to half that at the start of mining and together with the galena ore becoming less abundant with depth mining may have become uneconomic.

The Beauments Prospect is located just east of Grubbs Mine but no data is available.

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## COLONEL NORTH

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The shaft here was sunk by Grubbs Silver Mining Co. NL in 1890. The operation was suspended in 1896 due to financial difficulties and was sold to Colonel North Mines and Railway Co. NL in 1903. This company bought up a number of properties in this area and had mining operations on several of them at different times. The shaft was sunk to a final depth of 61m. A crosscut was then driven northeast from the bottom level but not completed. Further work on this crosscut was carried out by Silver Beach tributors and then the Victoria Zeehan Co. with it being driven a total length of 137m. The end of the crosscut intersected two barren quartz siderite lodes. No Further work was reported.

The mineralisation was in two lodes dipping to the east. The sulphides were in siderite quartz gangue.

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## THE SUNSHINE PROSPECT

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This prospect is located south of the Colonel North mine.

The strike here is NE and roughly parallel to the strike of the Grubbs lode but is off line to the east. Mineralisation and gangue material along the lode may be present in the wall of the current shallow pit but is difficult to interpret. A 22m long adit was driven by the old miners along the structure.

There is no lode structure visible in the main area of the shallow pit that has been excavated by McDermott Mining P/L (MDM). Prior to mining by MDM there was a small hill about 30m high on this site. The pit is in a broad zone of pyritic material which looks like a loose fine black sand containing rock fragments that are hard to see or pick out until the material is washed when the fragments can be separated. These appear to be fragments of slate that are bleached and contain mostly sphalerite with some galena. This material is believed to be an eluvial deposit formed by the near surface enrichment of sulphides by the solution of the carbonates forming a calc-silicate. This process has left a layer of black sulphidic sand sitting on what is surmised to be limestone underneath. The chemistry of this process has not been established but it is possible that a low pH in the swampy peaty conditions combined with the acidic products of the weathering of pyrite has led to solution of the calc-silicate leaving the minerals that were dispersed within it to accumulate. The black sand is reported to be commonly found on calc-silicate units. The zinc grade of these deposits is considered to be related to the presence of stratiform mineralisation in the limestone and is very likely to form ore bodies.

No production reported to MRT.

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## THE TRAMWAY FORMATION

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This located on McLeans Creek just east of Grubbs Tramway about 300m SW of the Colonel North Shaft.

The lode is 1.2m wide containing a sulphide vein 450mm wide. The gangue is porous quartz and pyrite with galena and sphalerite veining. The lode is exposed in two holes but trenching north and south has failed to pick it up.

To the NW of this prospect are two unnamed sites where minor prospecting has been carried out.

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## SILVER FOAM ADIT AND SHAFT

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In 1901 the Silver Foam Tributing Co. drove an adit 183m NE from a point near the tramway 60m west of the later Victoria-Zeehan Shaft. The target was the southern extension of the Spray No.1 Lode from the Spray Mine to the north. Records are not consistent but it seems probable that the intersection with the lode was made at 127m. It was then driven for 25m to the north but only a little pyrite was found. Some patches of galena were found in a winze sunk 18m. Only traces of galena occurred on the hanging wall in a shaft sunk 30m from the adit. At the 15m level in the shaft the Victoria-Zeehan Co. later found a small vein of jamesonite and galena which was followed for 8m.

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## THE VICTORIA-ZEEHAN MINE

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This is located ESE of the Colonel North Shaft. In 1907 a shaft was sunk by the Colonel North Mines and Railway Co. NL to a depth of 95m. A crosscut was driven east for 66m with the Spray No.1 lode being intersected at 56m. The lode was 1.8m wide and was driven on for 47m where a thin vein of galena was found. Further driving was prevented by an inrush of water which flooded the lower part of the mine. More powerful pumping equipment was installed in 1909 but failed to drain the shaft.

In 1908 recorded production of 28.5t of ore (including ore from the Foam Adit).

Approximately 100m east of the Victoria-Zeehan Mine some un-named prospecting has taken place.

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## OFFICE ADIT

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From about 60m due south of the Colonel North Shaft the Silver Beach Tribute Party drove an adit 183m to the NE. Three siliceous gossans were intersected within the decomposed slate but no mineralisation of significance was found.

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## CHLORIDE AND CROSS CHLORIDE LODES

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The Chloride Lode lies 150m N of the Silver Beach Adit and the Cross Chloride 200m ENE. The lode contains bands and nodules of hematite and limonite bearing silver chloride and native silver which were worked by tributors around 1900. Small patches of ore are reputed to have graded 1,000 oz/t but average stoped ore graded 40 oz/t.

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## SILVER WAVE WORKINGS

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These consist of a shaft and several adits and are found about 400m due east of the Sunshine Mine. The Silver Wave Tributing Party explored at least one ore body striking NNW and dipping east prior to 1900. Further investigation by later parties also found small sphalerite veins with galena that were rapidly worked out.

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## THE NUBEENA WORKINGS

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These workings extend SSE in a line from the Silver Wave Workings. The Old Nubeena workings are located about 100m to the W of Nubeena; Venezia and were on a galena-pyrite lode striking at 17° and dipping east. The mineralisation was first discovered in 1889. The vein was reported to be up to 120mm wide. The vein was subsequently driven on for 40m and the lode drive was accessed from a crosscut adit. Production was small and intermittent and the property changed hands frequently over the following years with another lode drive being driven above the original one.

In 1904 at the Nubeena Venezia an E-W adit was driven and intersected three lodes – Jaeger's, No.1, and Barnett's. Jaeger's Lode was up to 1.5m wide with 150mm vein of galena but limited stoping revealed the mineralisation was irregular. The No.1 Lode contained only minor veining and was not exploited. Barnett's Lode was intersected 60m east of Jaeger's and was a quartz lode in slate with patches of ore and a 150mm vein near the footwall. It was driven on for over 50m and stoped to a height of 30m over a strike of 45m.

About 100m ESE of Venezia adits were driven in 1904 that found Llewelin's lode. Two lode drives were driven one 12m above the other. The mineralisation was patchy but a shoot about 12m long and up to 0.5m thick was found in the upper lode drive.

The country rock in the Nubeena locality appears to have suffered greater stress than the surrounding areas and the rocks are highly fissured and faulted. The mineralisation that is present is more variable than that typically found in the Zeehan field which makes it difficult to assess and mine.

It has been estimated that about 500t of concentrates were produced from the Nubeena Mine containing around 325t of lead and 42,000oz of silver.

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## SOUTH NUBEENA

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This lode was considered to be like Llewelin's Lode. The galena veins were only up to 50mm wide but assayed at 70% lead and 100 oz/t silver. About 78t of ore were produced containing 50t of lead and 7,000oz silver.

About 220m and 530m south of South Nubeena prospecting has been conducted but these areas are not named and there is no information on them.

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## SUMMARY

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In most of the old workings on EL17/2003 the narrow veins present are not economic to mine today. The zinc ore, sphalerite, that is present in most of them was not of interest when these mines operated but is a saleable item today. Mines such as Grubbs should be reviewed in the light of current market conditions

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## REGIONAL EXPLORATION PROGRAMMES.

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Between 1946 and 1960 Zeehan Explorations Pty Ltd (a joint venture between North Broken Hill and Broken Hill South) carried out ground surveys to determine the continuity of the Spray – Nubeena lode zone and initiated the BMR managed magnetic, gravity, and electrical, surveys. The work obtained some encouraging responses around the Oceana Mine which was then re-opened and subsequently produced 131,000t of ore grading 11.6% Pb, and 4.87 oz/t silver between 1954 and 1960. The Mineralisation here was recognised by Amoco (Cyprus Mines) as both stratiform and epigenetic stratabound within the Gordon Limestone and of the sediment hosted exhalative (Irish) type.

From 1966-1970 Placer Prospecting Pty Ltd focussed their attention on the Spray Mine conducting a TURAM EM survey over the main lode. Minops Pty Ltd farmed into the project and drilled several holes. This work was largely to the north of Stonehenge Metals tenement.

From 1970-1972 Tenneco Pty Ltd dewatered, sampled, and drilled the Spray Lodes. They cut a jamesonite lode (0.2m at 16.8% Pb, 0.08% Zn, 8.8% Sb, 1.4% Cu, and 271 oz/t Ag.) but it was of very limited extent. A TURAIR airborne EM survey covered much of the Gordon Limestone outcrop. Follow up gravity, Turam ground EM, and SP surveys, produced mixed results. Again this work concentrated mainly to the north of Stonehenge Metals tenement.

From 1974 Mt Lyell Mining and Railway Co. Ltd (SPL129 granted 1973) and Renison Ltd (EL11/1976 granted 1976) commenced an extensive programme of exploration on the area between the coast and Zeehan. Prior to this most exploration had consisted of further investigation of known deposits. In 1976 EL11/1976 covered the area from the coast to the east covering most of the Hemskirk Granite and SPL129 covered the Proterozoic and Early Palaeozoic rocks around the granite margin to the south and south east and across to south of Zeehan. The easterly area of the SPL included the ground currently held by Stonehenge Metals with EL17/2003. Gold Fields Exploration Pty Ltd (backed by RGC Ltd) joined Mt Lyell and Renison and became operator of the JV which continued until 1986.

In 1974-75 the Barringer Input Airborne EM System was trialed and obtained a number of conductive anomalies with associated magnetic anomalies. In 1981-82 the Turair and Dighem airborne EM systems were compared. The Dighem was considered to be more sensitive and gave similar responses to the Input system. In 1982-83 the ground based VLF EM was used as follow up and identified weaker anomalies than Dighem.

In 1980 more detailed ground work commenced and major grids were established over the Federation and Mt Agnew areas and in 1982 the Stonehenge Grid was put in over the north eastern area of the SPL. It seems it was named Stonehenge because the origin of the grid lies to the NW of the prospect of that name and also the creek of that name. This grid covered most of the area now held by Stonehenge Metals. In 1983 a DIGHEM survey was carried out over the grid and a report on the results of geophysical surveys was made. SPL129 was amalgamated into EL11/1976 in 1984. The Gold Fields group drilled six DC holes (TH12-17) completing the programme in 1985-86. With no further work recommended the licence was surrendered in 1987.

The Exploration Licence EL28/1988 was granted to the Duke of Avram in 1988. In May 1989 it was acquired by Major Mining Ltd. This was a large licence with the main body of the tenement extending 17km from the coast in the west, to east of Zeehan in the east, and 9km north to south. The licence also had a narrow arm extending north from its eastern margin to north of Zeehan. EL17/2003 of Stonehenge Metals was located within this licence on its north eastern boundary.

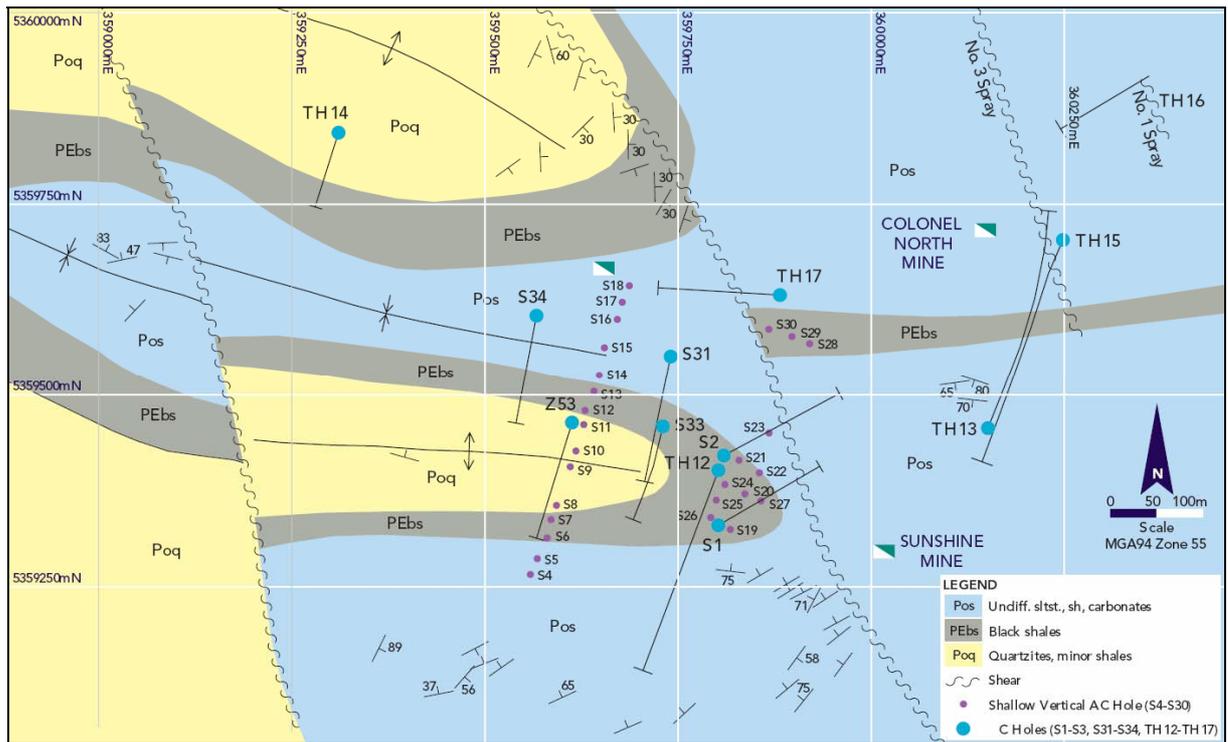
This company initially focussed its interest on an area to the south east of the Comstock Mine looking for extensions to this mineralisation. This work just extended into the north western corner of Stonehenge Metals' tenement.

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### THE STONEHENGE GRID (RENAMED TRAMWAY)

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The airborne EM anomalies were followed up with bedrock geochemistry, ground magnetics, VLF EM and gradient array IP surveys. R.Poltock, for Renison Ltd, mapped the eastern end of SPL129 in detail during May-June 1981 however exposure is generally poor in the area. Part of the area mapped is shown on Figure 8 which also shows the location of the drilling carried out at various times.



**Figure 7. The Stonehenge (Tramway) and Sunshine area.**

**TH12:**

In May 1983 a DC hole TH12 was drilled in an attempt to test the broad VLF EM anomaly at depth. The hole was collared at 359911.3mE and 5359567.5mN MGA on a bearing of 199° and depressed at 55°. The summary log is:-

Depth m	TH12
0 - 10.5	Pseudo-gossan and clay
32.0	Black Shale
41.0	Mineralized fault breccia
59.0	Dolomite
79.3	Poor recovery zone
82.0	Mineralized fault breccia
128.5	Dolomite
129.8	Fault breccia
280.7	Interbedded black shale and sandstone
398.7	Spilite
400.0	Fault breccia
401.5	Spilite

The intersected dolomitic sedimentary horizon, although unmineralized in this hole, is a suitable host rock for skarn type replacement mineralisation.

*Assay Summary:*

Two significant base metal rich fault zones were intersected which also contained high values of arsenic and antimony but below 0.01% Sn.

32.0–42.0m : 0.06% As, 0.02% WO<sub>3</sub> , 0.02% Cu, 1.0% Pb, 2.49% Zn, 32 g/t Ag, 0.04% Sb.

79.0-82.0m : 0.25% As, 0.07% WO<sub>3</sub> , 0.85% Cu, 1.0% Pb, 10.3% Zn, 261 g/t Ag, 0.73% Sb.

This hole reached a depth of 329m below surface but has not revealed the source of the VLF EM anomaly. The location of the prospects can be inaccurate but Mineral Resources Tasmania recently undertook checking of reports and issued revised location data which was used in compiling Figure 7.

TH13:

In 1983-84 a further three holes were completed. DC hole TH13 was drilled to test the southern extension of the Spray No.3. Lode. It was collared 200m NNE of Sunshine at 360261.0mE and 5359613.3mN MGA on a bearing of 21° and depressed at 46°. The summary log is:

Depth m	TH13
0 - 10.0	Surface debris
- 64.0	Poor recovery – weathered dolomite or fault zone
- 75.3	Mineralized breccia
- 165.5	Altered dolomite
- 220.2	Dolomitic siltstone
- 272.8	Shale
- 389.7	Dolomite
- 397.7	Black shale
- 418.2	Dolomite
- 421.0	Quartz dolomite vein
- 431.2	Dolomite

*Assay Summary*

64.0-75.3: <0.01% Sn, <0.01% WO<sub>3</sub>, 0.13% Pb, 0.43% Zn, 6 g/t Ag.

87.0-148.0: <0.01% Sn, 0.01% WO<sub>3</sub>, 0.90% Pb, 0.59% Zn, 29 g/t Ag.

418.2-422.0: <0.01% Sn, <0.01% WO<sub>3</sub>, 0.01% Pb, <0.01% Zn, 1 g/t Ag.

The last intersection above is interpreted to be the extension of the Spray No.3. Lode.

TH13:

DC hole TH14 was designed to test a brecciated sandstone with a combined geochemical and VLF EM anomaly and was collared 1km NNE of the Tasmanian at 359429.4mE and 5360023.6mN MGA on a bearing of 202° and depressed at 55°. The summary log is :-

Depth m	TH14
0 - 37.8	Weathered siltstone and shale
- 48.6	Weathered fault zone
- 55.1	Black shale
- 58.7	Fault zone
- 67.4	Dolomitic siltstone and shale
- 68.5	Breccia
- 125.7	Silty sandstone
- 170.0	Sandstone

*Assay Summary:*

37.8-48.5: <0.01% Sn, <0.01% WO<sub>3</sub>, 0.12% Pb, 0.04% Zn, 2 g/t Ag

55.1-58.7: <0.01% Sn, <0.01% WO<sub>3</sub>, 0.12% Pb, 0.04% Zn, 1 g/t Ag.

143.1-147.0: <0.01% Sn, <0.01% WO<sub>3</sub>, 0.02% Pb, 0.01% Zn, 7 g/t Ag.

The target returned 10.7m at 0.12% Pb, 0.04% Zn, and 2 g/t Ag.

TH15:

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Report Name

DC hole TH15 was designed to test the southern extension of the Spray Lodes. It was collared 500m NNE of Sunshine and drilled at the opposite azimuth to TH13. Collar at 360360.6 mE and 5359877.8 mN MGA on a bearing of 201° and depressed at 60°. The summary log is :-

Depth m	TH15
0 - 61.4	Quartzite
- 206.0	Fault zone (breccia and clay)
- 240.8	Interbedded black shale and dolomite
- 305.7	Black shale and siltstone
- 369.2	Interbedded black shale and dolomite
- 464.1	Black shale
- 487.3	Interbedded black shale and dolomite
- 508.85	Dolomite
- 518.6	Black shale
- 521.6	Pyritic mineralized zone
- 557.8	Dolomite
- 563.75	Pyritic mineralized fault zone
- 599.0	Dolomite and minor black shale

#### *Assay Summary*

61.4-100.5 (39.1m) : >0.01% Sn, <0.01% WO<sub>3</sub>, 0.30% Pb, 0.21% Zn, 7 g/t Ag.

167.0-191.0 (24m) : <0.01% Sn, <0.01% WO<sub>3</sub>, 0.27% Pb, 0.54% Zn, 1 g/t Ag.

557.8-563,75 (5.95m) : <0.01% Sn, 0.43% As, 0.01% WO<sub>3</sub>, 0.08% Cu, 0.22% Pb, 0.12% Zn, 35 g/t Ag, 0.05% Sb.

This hole intersected a different sequence from that in hole TH13 which could result from several different possibilities but the geology is not well known enough to confidently state what is the correct interpretation. This hole again intersected zones of low grade mineralisation.

In 1985 additional ground EM surveys and ground magnetic surveys were performed and two more DC holes were completed on the Stonehenge Grid.

#### TH16:

Hole TH16 was drilled in a further attempt to locate extensions of the Spray mineralisation to the south. This hole was just outside the northern boundary of Stonehenge Metals licence and intersected the Spray No.1.Lode in shale and sandstone instead of in dolomite as planned. The intersection at 333m (200m vertical) was interesting in being devoid of lead, zinc, and silver, but anomalous in tin, arsenic, and copper, which is interpreted to confirm the expected mineral zoning with tin increasing with depth. The planned down hole geophysics had to be abandoned when the hole blocked after the steel casing was removed and before plastic casing could be inserted.

### TH17

Hole TH 17 was designed to investigate a subtle combined magnetic and EM anomaly located in what is now the north east corner of Stonehenge Metals current tenement. The anomaly was considered to be due to graphitic black shales and limited assaying was carried out.

None of the above drilling targeted the strong magnetic anomaly which modelling estimates should lie at a depth of 400m.

In March 1986 the poor tin prices were stated to warrant a review of the project and it was proposed that the exploration licence be reduced to roughly the ground now covered by EL17/2003. It is not known if this recommendation was followed but all the ground had been relinquished by 1988 when it was acquired by the Duke of Avram and Cavenridge Pty Ltd as EL28/1988 granted on 09/11/88. This and several other licences were acquired by Major Mining Ltd in May 1989 (name change to Allegiance Mining NL in 1993) and consolidated into one as EL28/1988 of 129 km<sup>2</sup>. Major Mining mounted some geophysical exploration programmes then on 23<sup>rd</sup> April 1991 formed a joint venture partnership with CRA (Rio Tinto Exploration Pty Ltd). CRA considered the Zeehan area showed fundamental similarities with Lawn Hill in NW Queensland and was prospective for shale hosted stratabound Zn-Pb deposits.

In 1992 CRA conducted geochemical testing of IP targets near the Sunshine workings which were encouraging with IP suggesting a possible strike of 1,000m. The valley running west of Sunshine and the swamp near the workings were anomalous. The Stonehenge Mine was also identified as a target area within the TLE to Swansea trend. Three DC holes were drilled near Sunshine with S1 and S2, 100m apart, investigating mineralisation in the Grubbs Shear NW of Sunshine. S3 was collared about 200m west of S1 to test the potential for stratiform mineralisation in the black shale, refer to Figure 8.

DD92ZS1 Collared at 359912mE 5359483mN MGA on a bearing of 61° depressed at 50°.

DD92ZS2 Collared at 359912mE 5359568mN MGA on a bearing of 61° depressed at 45°.

DD92ZS3 Collared at 359737mE 5359633mN MGA on a bearing of 201° depressed at 45°.

Intersections better than 1% Zn were :-

DD92ZS1 - 119.2-121.35m - 2.15m at 7.8% Zn, 10.1% Pb, 191 g/t Ag.

- 150.5-162.35m - 12.35m at 2.1% Zn, 0.4% pb.

- 223.8-232.65m - 8.85m at 1.5% Zn, 0.4% Pb.

DD92ZS2 - 100.5-112.0m - 11.5m 4.1% Zn, 1.1% Pb, 10 g/t Ag.

- 124.0-136.0m - 12.0m at 1.8% Zn, 0.4% Pb, 19.5 g/t Ag.

- 190.25-190.5m - 0.25m at 20.0% Zn, 12.3% Pb, 415 g/t Ag, 2.9% Cu, 2.2% Sb.

DD92ZS3 – 159.5-160.6m – 1.1m at 3.5% Zn, 0.1% Pb, 19 g/t Ag

This mineralisation was present as a 5mm wide sphalerite-dolomite vein along the core.

This drilling of the Sunshine black shale in 1992 showed the mineralisation is dominated by shear controlled ankerite-sulphide veins of limited tonnage potential. No stratiform base metal sulphides were intersected. AC drilling of the Sunshine mineralisation was recommended even though it was probably too small for CRA.

In 1995 geochemical sampling by two 300m traverses of AC holes (27 labelled S4 to S30) spaced at 25m was undertaken, see Figure 8. Holes were shallow and drilled to sample fresh bedrock. Sampling was over 3m intervals and analysed for Ag, Fe, Mn, Cu, Pb, and Zn. A follow up DC hole DD95ZS31 (S31) was drilled on the geochemical anomaly revealed by the AC programme. S31 yielded an intersection of 6.5m at 6.3% Zn, 2.9% Pb, 41 g/t Ag, from 34m with several lower grade intervals deeper down. Recoveries in the shale were poor reducing confidence in the grade estimates. The sphalerite/galena mineralisation is hosted in black shales at the contact with an underlying mixed siltstone-dolomitic limestone-sandstone sequence. The bedrock sampling indicated a 400m strike length for this mineralisation. Diamond drilling of this target to establish a resource was recommended. Structural mapping of the target area was undertaken during 1996 showing that the area is structurally complex. Two phases of sulphide mineralisation were recognised. The first pre-cambrian stratiform pyrite in black shale and the second Heemskirk granite related veins (and one skarn) of Devonian age.

In 1997 relinquishment of 55% of EL28/1988 to 28.7 km<sup>2</sup> was followed by a farm out agreement with Allegiance Mining NL.

In 2000 Allegiance Mining drilled two DC holes S33 and S34.

S33 Collared at 359847 mE and 5359728 mN MGA on a bearing of 192° and depressed at 50°, EOH 150.5m.

S34 Collared at 359679 mE and 5359796 mN MGA on a bearing of 191° and depressed at 50°, EOH 245m.

S33 was designed cover the same geology as S31 at a deeper level and S34 to test the mineralisation 200m to the west, refer to Figure 8. Core recoveries in the black shale were extremely poor with no core from 87.0 to 102.0 in S33 which interval appears to correlate with the high grade interval in S31. Poor recoveries were experienced in the black shale and particularly where it was mineralized.

Allegiance then decided to concentrate all their attention on the Avebury nickel sulphide deposit about 10km WSW of Sunshine and therefore in October 2002 they relinquished the eastern portion of EL28/1988 containing the Stonehenge grid. The area was then granted to McDermott Mining Pty Ltd (MDM) in 2003.

MDM have since carried out limited prospecting activities on some of the mines within EL17/2003. The Sunshine Mine was given more attention than most with mining and minor treatment of the shear hosted sphalerite.

## RECENT EXPLORATION BY STONEHENGE METALS LIMITED

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### INTRODUCTION

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Stonehenge Metals has conducted the following work on the Stonehenge Creek lease up to July 2010.

- Collation of historical, geological, geochemical, geophysical and topographic data into a GIS (MapInfo) database & imported into micromine resource modeling/exploration targeting package
- Preliminary mapping of the Sunshine and Swansea prospects
- Geochemical sampling of regional exploration targets
- Track rehabilitation and repair to allow drilling access
- Diamond drilling of the Sunshine and Swansea Prospects
- Geophysical survey
- Resource estimation at Sunshine deposit.

SHE completed its initial diamond drilling program at the Sunshine Mine Prospect in late April, 2007. The company's aim at Sunshine was to establish an open-cut zinc+/-lead+/-silver resource. A total of seven diamond drill holes have been drilled at Sunshine for a total of 348.45m. Difficulties were experienced in recovering core from the very soft clay/pug target zone.

GPX Airborne of Perth W.A. completed a helicopter magnetic and radiometric survey over EL 17/2003. The results were included in the reporting period to July 2008.

## WORK COMPLETED DURING THE REPORT PERIOD

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A regional reconnaissance sampling campaign was conducted over targets identified from a combination of historical exploration geochemistry and conceptual structural targets derived from geophysics.

Rock chip samples were taken at the following locations and have been submitted for assay.

Company	Sample	Project	Date	Sample_No	LocE	LocN	Grid_Id
Stonehenge	Rockchip	EL17-2003	20100308	10001	358486	5359740	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100308	10002	358905	5358506	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10003	360031	5359422	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10004	359970	5359219	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10005	359998	5359299	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10006	359827	5359252	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10007	359731	5359265	GDA94_55
Stonehenge	Rockchip	EL17-2003	20100309	10008	359584	5359328	GDA94_55

Sample_No	Description
10001	Rock chip from road cutting, silicious sediment, minor sulphides
10002	Colluvial boulder sample
10003	Qtz vein and alteration through Graphitic Shale
10004	Qtz vein
10005	Qtz vein in ridge outcrop- steep topography
10006	Veining through foliated siltstone
10007	Weathered out Sphalerite Qtz vein
10008	Veining through foliated siltstone



**Figure 8.** *Sample No. 10001*



**Figure 9.** *Sample 10003. Quartz veining and alteration profile across graphitic shale.*



**Figure 9.** Sample 10004. Quartz veining through sandstone.



**Figure 10.** *Sample 10005. Quartz veining through ridge outcrop.*



**Figure 11.** *Sample 10006. Quartz veining in foliated siltone/sandstone.*



**Figure 12 & 13.** Sample 10007. Weathered out Sphalerite Quartz Vein.

## OBSERVATIONS AND RECOMMENDATIONS:

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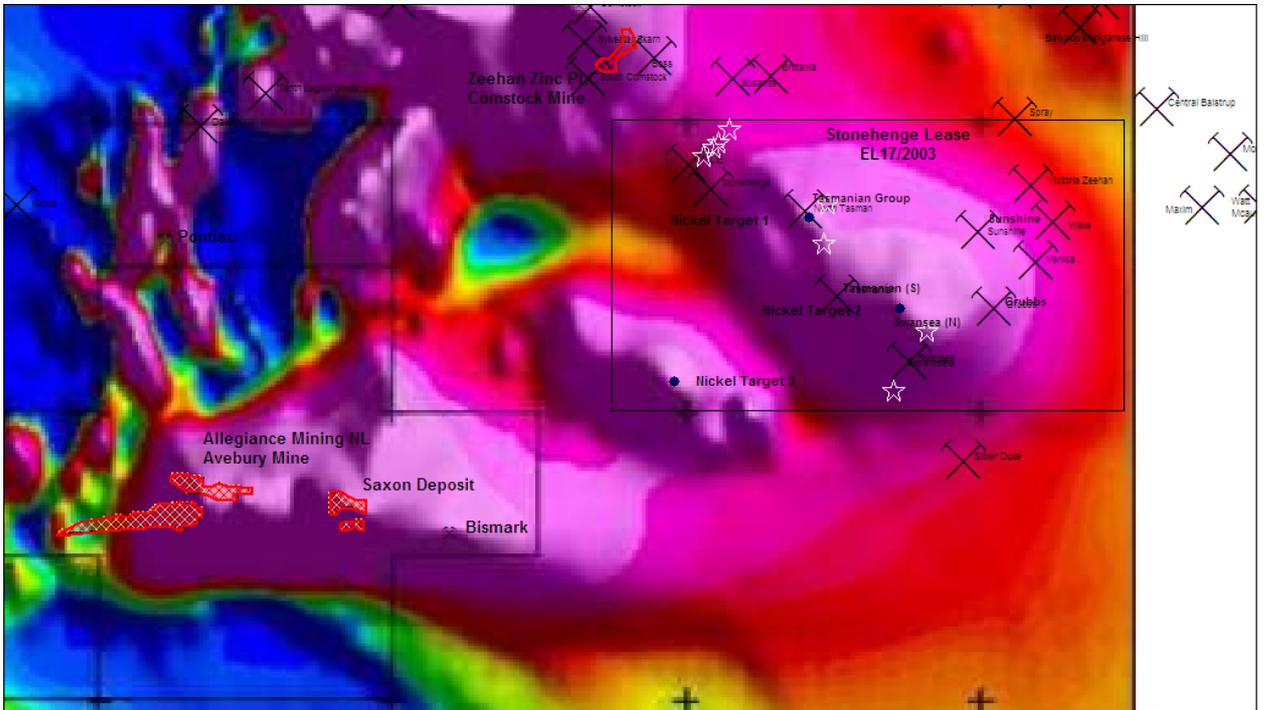
After walking the area previously covered by geochemical sampling, it became clear that drilling was not conducted over the highest anomalies, but drilled over anomalies of lower magnitude which coincided with flat ground. The most intense anomalies occurred on steeper ground away from existing tracks and would require a higher expenditure commitment for further investigation.



**Figure 14.** *Drill pads over Sunshine Resource.*

Drilling has been focused around the flat lying regions, failing to test more prospective anomalies recorded on steeper terrain.

Drill traces of the two holes drilled to target potential Nickel mineralisation appear not to intersect the interpreted Nickel exploration target. Core recovery from this drilling was extremely limited and detailed logging of the core was not undertaken.



**Figure 15. Interpreted Nickel Targets.**



**Figure 16. Drill traces appear not to intersect the Interpreted Nickel Targets.**

Holders of the adjacent leases, Create Resource Holdings (which contain the Comstock Zinc mine) have undertaken a detailed Aeromagnetic survey which encompassed the Stonehenge tenement and have indicated the data from this survey will be available for purchase.

Zeehan based Geologists from Create Resource Holdings indicated a high level of interest in acquisition of the tenement representing a JV possibility for Stonehenge.

Of the base metals prospects on the lease, the Grubbs mine was of significant interest due to the sulphide-bearing waste rocks on a waste dump near the portal and the mine closure being attributed to the lode possibly having been faulted out between the No.4. and No.5.Levels, where a fault is shown on a section of the mine. While it is accepted this might not be the case the mineralisation was reported to be weakening with depth below the three level, where sphalerite veining was reported to be increasing relative to galena (It is important to note that at the time of closure sphalerite in Lead ore carried penalties).

Old rail line cuttings provide good rig access at Grubbs although no drill pads have been cleared meaning drilling around the old shaft would have to be conducted from on the waste dumps if earth works were not undertaken.



**Figure 17.** *Ferrosulphide rocks stockpiled on a waste dump near the shaft at Grubbs.*



***Figure 18 & 19. Waste dump around the old Grubbs mine shaft.***

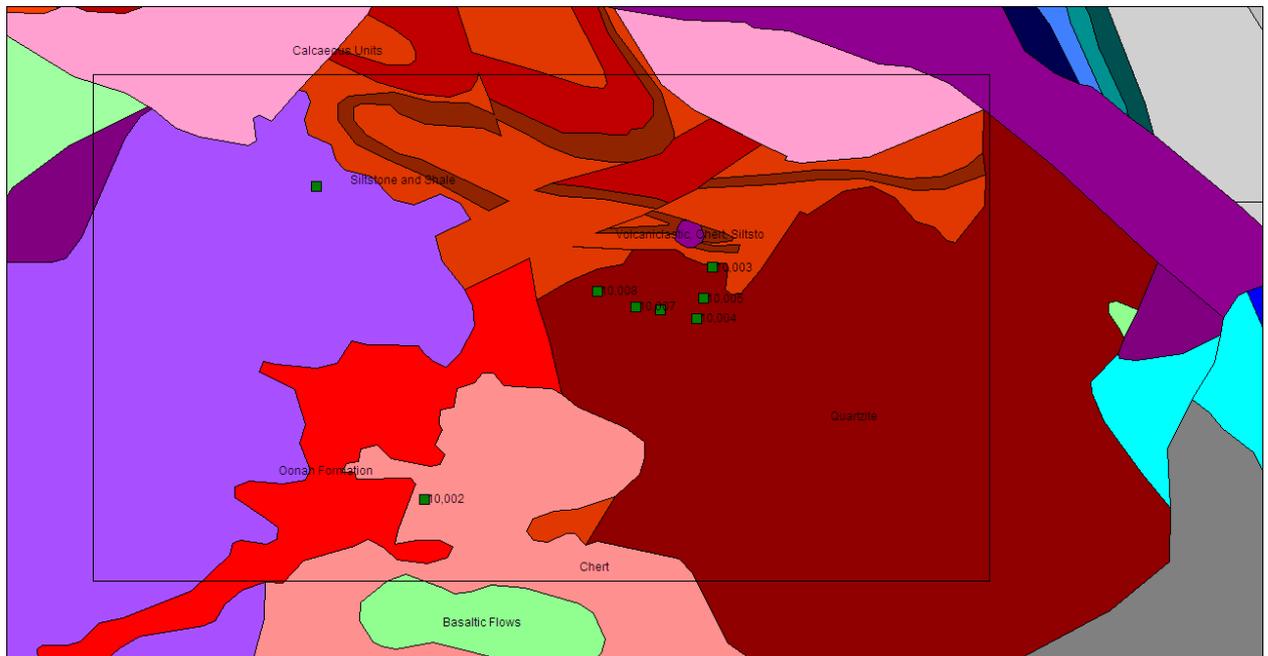
## RESULTS:

Results from the rock chip samples are tabled below:

Sample	Cu	Pb	Zn	Ag	Ni	As	Au
	ppm						
10001	437	<1	139	1	113	16	<0.01
10002	13	<1	56	1	55	163	<0.01
10003	9	36	56	<1	<1	250	<0.01
10004	4	13	34	1	<1	150	<0.01
10005	4	21	56	<1	<1	344	<0.01
10006	4	26	33	<1	<1	109	<0.01
10007	5	18	20	<1	<1	97	<0.01
10008	6	24	45	<1	<1	270	<0.01

### Duplicates

Sample	Cu	Pb	Zn	Ag	Ni	As	Au
	ppm						
10008	4	18	39	<1	1	264	n/a



**Figure 20.** Location of rock chip samples

Stonehenge Metals Limited conducted a significant amount of work on the Stonehenge (EL17/2003) and Sunshine (20M/2001) leases during the 2008 reporting period which included;

- Drilling of 7 RC drill holes for 297m and 9 Diamond drill holes for 609.5m at Sunshine (21M/2003), 10 diamond drill holes for 346m at Swansea and two diamond drill holes for 1023.6m at the Stonehenge nickel project (one located in the Swansea area).
- Detailed topographic survey of the Sunshine area (20M/2001) and drill collar positions as indicated in the collar file.
- Interpretation and modelling by Southern Geoscience Consultants of aeromagnetic data commissioned by Stonehenge Metals Limited in the previous reporting period.
- Downhole EM survey by Outer-Rim Exploration Services on the two holes drilled within the Stonehenge nickel project.
- Definition of a JORC code compliant resource at the Sunshine deposit.
- Petrology on the two holes drilled at the Stonehenge nickel project.
- Maintenance of access tracks.
- Further compilation of historic reports.

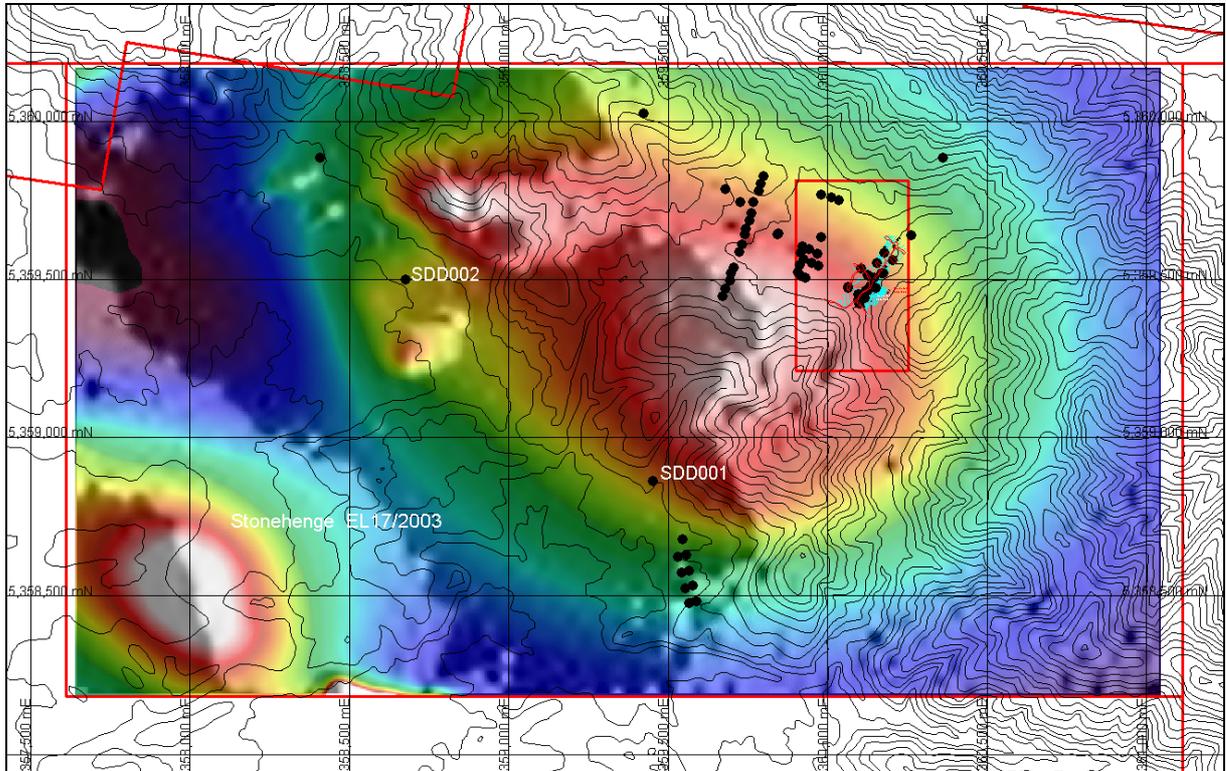
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## REGIONAL ACTIVITIES

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### ACTIVITY MAP

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**Figure 21.** Map of Stonehenge lease showing SDD001, SDD002, Total Magnetic Intensity (TMI) image and topographic contours.

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## GEOPHYSICS

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An airborne geophysical survey and digital terrain mapping was carried out over the entire Stonehenge and Sunshine Lease area by GPX Airborne Pty Ltd in June 2007. The data had been processed by August 2007, this included removal of diurnal variations in the magnetic field, subtraction of the earth's field (IGRF) from the recorded data, gridding and levelling. The survey collected magnetic and radiometric information, the data was included in the 2008 Annual report.

Southern Geoscience produced a three dimensional magnetic model of the large magnetic anomaly (from the Total Magnetic Intensity) at Stonehenge, this anomaly had been well know and documented previously. Three target zones were generated by the modelling. subsequently two deep drill holes were drilled to target these zones.

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## DRILLING

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Based on the results of the TMI modelling two diamond cored drill holes (SDD001 and SDD002) were drilled to primarily target Avebury style nickel mineralisation. Details are below and full drilling details were presented in the 2008 Report.

Hole No	Depth	East	North	RL	Drilling Company	Driller	Date Completed	Date Started
SDD001	603.6	359451	5358861	242	OME Drilling	Brian Williams	12/12/2007	19/10/2007
SDD002	420	358675	5359500	242	OME Drilling	Brian Williams	25/01/2008	13/12/2007

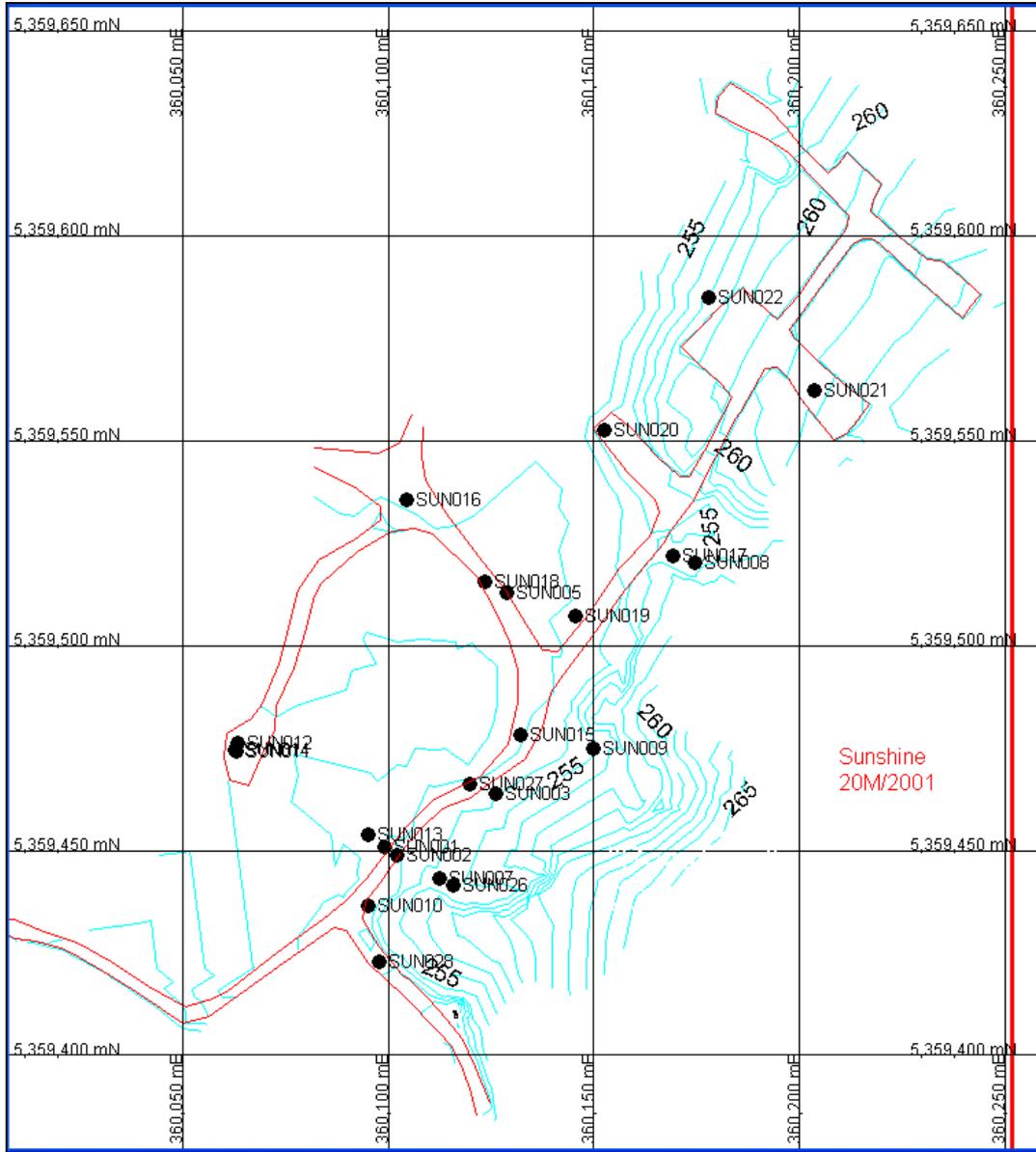
No significant nickel mineralisation was intersected in the holes although some minor base metal mineralisation was encountered. Logs, assay results and down hole direction surveys are included in the 2008 Report.

A down hole Pulse Electromagnetic (PEM) survey was carried out on SDD001 and SDD002 in early February 2008 by Outer-Rim Exploration Services. The results and details of this survey were included in the 2008 Report.

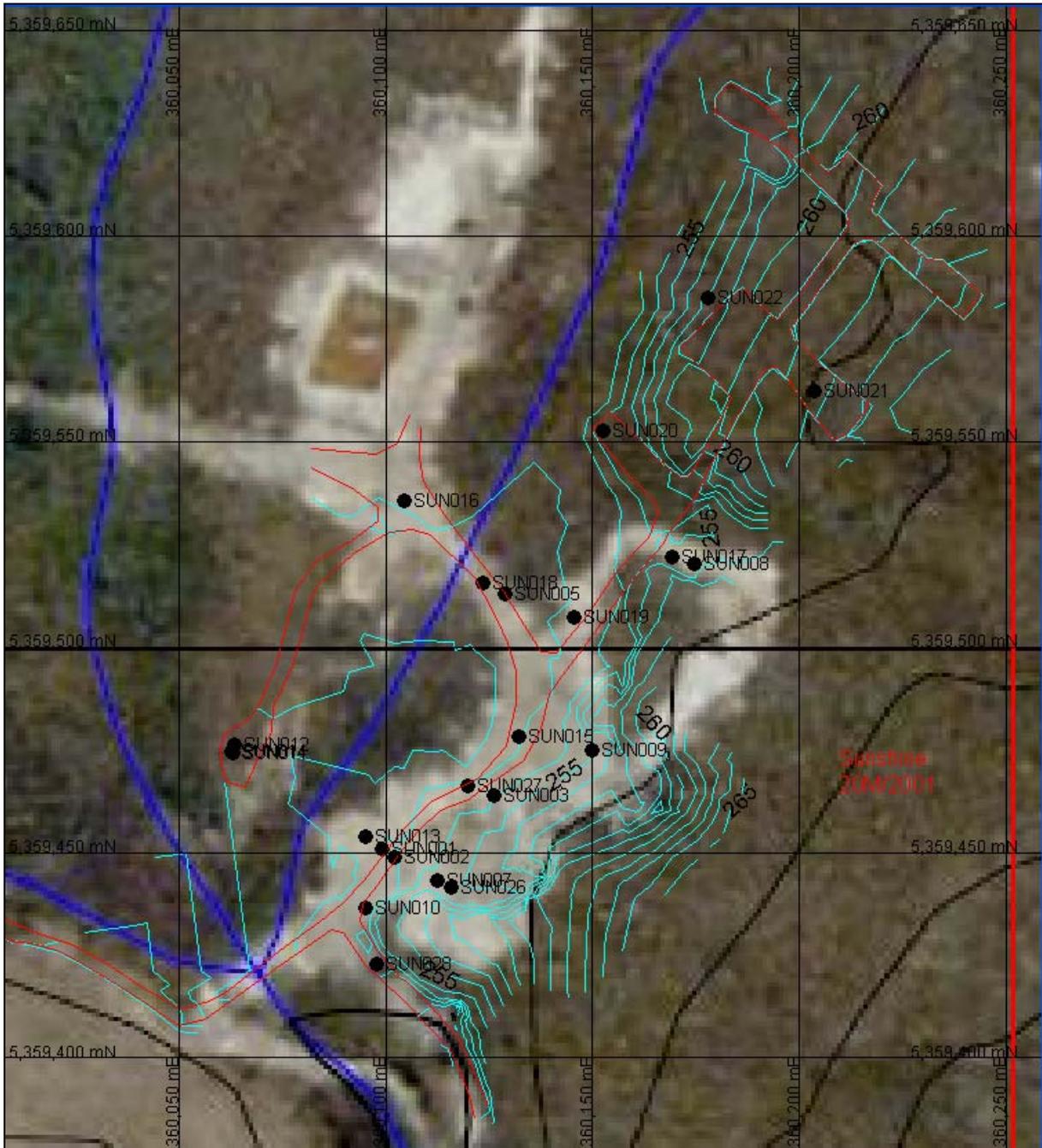
The drilling has only partially tested these targets and a third magnetic target in the south west corner of EL17/2003 remains to be tested. Further refinement of the PEM results is warranted to assist with additional drill targeting in the vicinity of SDD001 and SDD002.

SUNSHINE

ACTIVITY MAPS



**Figure 22.** Map of Sunshine prospect showing Topographic survey by Trigpoint Surveying, access roads for drilling, and drill hole collars.



**Figure 23.** Map of Sunshine prospect showing Topographic survey by Trigpoint Surveying, access roads for drilling, and drill hole collars with ortho-image backdrop to highlight areas modified for drill access i.e. SUN020-022, SUN012, SUN014 and area in south-west corner of map.

## DRILLING

During the 2007/2008 year drilling of 7 RC drill holes for 297m and 9 diamond drill holes for 609.5m at Sunshine (20M/2001) was completed. The total drilled by Stonehenge Metals at Sunshine to date is 297m of RC drilling and 961.95m of diamond drilling. The drilling was planned to define a zinc-lead-silver resource and although a number of drill holes did not reach their targeted depth due to drilling difficulties, Stonehenge estimated an Inferred Resource of **287,600t grading 2.8% zinc, 1.5% lead and 31 g/t silver** containing 8,000 tonne of zinc, 4,200 tonnes of lead and 291,000 ounces of silver at the Sunshine deposit.

A current list of drill collars for the Sunshine prospect follows see appendices for full details.

Hole No	Hole Type	Depth	East	North	RL	Drilling Company	Survey Method	Date Completed	Date Started
SUN001	Core	20	360099	5359451	252.8	OME Drilling	GPS	22/03/2007	20/03/2007
SUN002	Core	60	360102	5359449	252.7	OME Drilling	GPS	20/03/2007	17/03/2007
SUN003	Core	29	360126	5359464	255.2		Differential GPS		
SUN005	Core	81.95	360128.7	5359513	252.8	OME Drilling	Differential GPS	29/03/2007	22/03/2007
SUN007	Core	104	360112.6	5359443.2	254.3	OME Drilling	Differential GPS	16/04/2007	9/04/2007
SUN008	Core	28.5	360174.7	5359520.4	255.4	OME Drilling	Differential GPS	18/04/2007	17/04/2007
SUN009	Core	29	360149.9	5359475	255.2	OME Drilling	Differential GPS	23/04/2007	20/04/2007
SUN010	RC	60	360095.04	5359436.35	252.268	Tasmanian Drilling Services	Differential GPS		
SUN011	Core	81	360063	5359474.3	251.7	Low Impact Drilling	Differential GPS	22/08/2007	20/08/2007
SUN012	Core	69	360063.28	5359476.31	251.735	Low Impact Drilling	Differential GPS	28/08/2007	24/08/2007
SUN013	RC	41	360095.03	5359453.82	252.545	Tasmanian Drilling Services	Differential GPS		
SUN014	Core	93	360062.8	5359474.5	251.7	Low Impact Drilling	Differential GPS	17/08/2007	10/08/2007
SUN015	RC	41	360132.1	5359478.3	252.8	Tasmanian Drilling Services	Differential GPS		
SUN016	Core	59	360104.44	5359535.65	252.959	Low Impact Drilling	Differential GPS	22/11/2007	17/10/2007
SUN017	RC	38	360169.1	5359521.9	255.5	Tasmanian Drilling Services	Differential GPS		
SUN018	Core	82.5	360123.5	5359515.7	252.5	Low Impact Drilling	Differential GPS	5/09/2007	29/08/2007
SUN019	RC	31	360145.56	5359507.1	253	Tasmanian Drilling Services			
SUN020	Core	54	360152.6	5359552.5	254.5	Low Impact Drilling	Differential GPS	31/10/2007	25/10/2007
SUN021	Core	45	360203.5	5359562.4	261.6	Low Impact Drilling	Differential GPS	6/11/2007	5/11/2007
SUN022	Core	66	360178	5359585	260	Low Impact Drilling	Differential GPS	13/11/2007	7/11/2007
SUN026	RC	60	360115.97	5359441.45	254.465	Tasmanian Drilling Services	Differential GPS		
SUN027	RC	26	360119.77	5359466.26	252.976	Tasmanian Drilling Services	Differential GPS		
SUN028	Core	60	360097.8	5359422.88	252.241	Low Impact Drilling	Differential GPS	24/11/2007	23/11/2007

## MINERALISATION, RESOURCES AND GEOLOGY

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In May 2008, Stonehenge Metals announced an Inferred resource of 287,600t at 2.8% zinc, 1.5% lead and 31 g/t silver containing 8,000 tonne of zinc, 4,200 tonnes of lead and 291,000 ounces of silver. The resource was calculated by T. Hibberd of Stonehenge Metals Limited.

The resource estimate was based on 21 diamond core and reverse circulation drill holes designed to intersect the mineralisation on a nominal 25m by 25m spacing. The deposit was modelled in three dimensions using cross sectional interpretations of the geology and mineralisation. The deposit boundary was defined by a 0.5% zinc cut-off grade which coincides with the geological boundary of the shear zone. Individual blocks were defined around drill hole intersections with block boundaries on and between cross sections were defined by the midpoints between adjacent holes and by geological constraints. Estimation methodologies included inverse distance squared and ordinary kriging. Based on statistical analysis, maximum sample assays were reduced to 30% zinc, 9% lead and 200 grams per tonne silver (top cuts) and all grades were length weighted. Block densities were assigned based on density analysis of samples collected from diamond core drill hole samples.

The full resource report which includes details of the geology and mineralisation and drilling logs were included in the 2008 Report appendices.

A review of this resource model was conducted during the current reporting period to identify drill targets for resource extensions and additional mineralised zones.

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SWANSEA

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ACTIVITY MAP

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**Figure 24.** Map of Swansea prospect showing drill locations access was created to drill locations were necessary, existing tracks were used where possible.

## DRILLING

At Swansea, 10 diamond drill holes for 346m were completed. No samples were taken from this drilling at the date of the report. Drill hole details are: -

<i>Hole ID</i>	<i>Depth</i>	<i>East</i>	<i>North</i>	<i>RL</i>	<i>Drilling Company</i>	<i>Date Completed</i>	<i>Date Started</i>
SWAN001	25	359564	5358477	242	Low Impact Drilling	11/09/2007	10/09/2007
SWAN002	22	359589	5358482	245	Low Impact Drilling	10/09/2007	6/09/2007
SWAN003	25	359554	5358525	238	Low Impact Drilling	14/09/2007	13/09/2007
SWAN004	52.5	359578	5358531	239	Low Impact Drilling	19/09/2007	17/09/2007
SWAN005	25.5	359542	5358574	238	Low Impact Drilling	12/09/2007	12/09/2007
SWAN005B	30				Low Impact Drilling	28/09/2007	26/09/2007
SWAN006	36	359566	5358580	239	Low Impact Drilling	25/09/2007	20/09/2007
SWAN007	30	359531	5358623	239	Low Impact Drilling	5/10/2007	3/10/2007
SWAN008	50	359555	5358628	240	Low Impact Drilling	2/10/2007	1/10/2007
SWAN010	50	359544	5358677	240	Low Impact Drilling	11/10/2007	8/10/2007

The geological logs are included in the 2008 Report appendices.

## ENVIRONMENTAL

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No ground disturbing activities were carried out during this reporting period.

Access track improvements and drill pad clearing was conducted at Sunshine and Swansea in the 2007/2008 reporting period and further work in these areas is planned so no remedial work has been undertaken.

## EXPENDITURE

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The expenditure commitment on EL17/2003 is \$10,000. The total estimated expenditure on EL 17/2003 for the year to 30 May 2010 was:

<b>Expenditure Category</b>	<b>Amount \$</b>
Geology	\$800
Geochemistry	\$10,183
Geophysics	\$0
Drilling	\$0
Administration Costs	\$1,098
<b>TOTAL</b>	<b>\$12,081</b>

## RECOMMENDATIONS AND FURTHER WORK

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### REGIONAL

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Historic and recent geophysics requires further assessment, particularly the down hole PEM survey and the geology of SDD001 and SDD002 to ascertain if any nickel or base metal targets exist in immediate vicinity of the drill holes.

Follow up on historical geochemical anomalies is warranted, particularly coincident Cu, Pb, Zn and Ag anomalies in the vicinity of the North Tasmania Mine.

### SUNSHINE

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The geology and mineralisation is under review to extending and/or upgrading the current resource and to define new mineralised zones. Other historic targets also exist in the immediate area and should be accessed.

### SWANSEA

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The core at Swansea has yet to be sampled and assayed as a precursor to resource estimation. The geology of the area also requires review following assaying of drill core and delineation of mineralised trends.

### PRELIMINARY BUDGET

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The proposed work program, depending on results, involves: -

Clearing of access tracks and grid lines for geochemical sampling/mapping	<b>\$10,000</b>
Geochemical sampling & Mapping	<b>\$12,500</b>
Potential core drilling at Sunshine, Swansea and North Tasmania (8 holes)	<b>\$80,000</b>
Inversion modeling of available magnetic data for Ni Targeting	<b>\$5,000</b>
Potential core drilling at Ni Target 3 (2 holes)	<b>\$80,000</b>
<b>TOTAL</b>	<b>\$187,500</b>

*Note: - Proposed drilling expenditure is dependent on results of geological and geophysical assessments.*

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