



EXPLORATION LICENCES
EL 22/2007 AND EL 23/2007
SORELL PENINSULA REGION, WESTERN TASMANIA

COMBINED ANNUAL REPORT FOR THE YEAR ENDED
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1 EXECUTIVE SUMMARY

EL22/2007 and EL23/2007 are contiguous licences located south of Macquarie Harbour and comprise a large part of Macquarie Harbour Mining Limited's Western Tasmania Project. They cover a relatively unexplored area prospective for nickel and platinum group metals within ultramafic/mafic rocks, and volcanic hosted massive sulphide (VHMS) deposits within the Cambrian Noddy Creek Volcanics. Of particular interest is evidence for intrusive related (porphyry style) copper gold mineralisation at the Thomas Creek prospect which straddles the boundary between the two licences.

An extensive literature review of published documents and open-file company reports relating to previous exploration on these tenements formed the major part of the work during the first year of tenure. Two short helicopter assisted reconnaissance trips, to visit various prospects and determine requirements for future access, were made into the area in 2008.

The economic downturn in the mining industry in the latter part of 2008 was reflected in a cut in MHM's exploration budget. Although a drilling programme was planned for Thomas Creek during the 08/09 field season this did not eventuate. An investigation into previous geophysical surveys over the three tenements by Mitre Geophysics was also carried out at this time.

The main work during the current reporting period was an extensive heliborne VTEM survey flown by Geotech Airborne Ltd and managed by Geoforce Pty Ltd. Data interpretation undertaken by Geoforce has highlighted several areas of interest which will be followed up by field work. A short report on recommendations for field investigations based on previous exploration immediately south of Macquarie Harbour by Consultant Geologist Luke Vanzino was also written.

The appointment of an Exploration Manager at the beginning of 2010 has added impetus to work on MHM's Western Tasmanian tenements and a substantial field programme is planned for the forthcoming summer months.

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Appendix 1 Geotech Airborne Ltd: Survey and Logistics Report on a Helicopter Borne Versatile Time Domain Electromagnetic (VTEM) Survey on the Sorell, Tasmania Area for Macquarie Harbour Mining Ltd. April 2010

Appendix 2 VTEM Survey Data Files, Blocks 3,4, 5A and 5B. ***(digital copy of report only)***

Appendix 3 Geoforce Pty Ltd: Report to Macquarie Harbour Mining Ltd on Interpretation of VTEM Survey, Sorell Peninsula and Macquarie Harbour Western Tasmania. May 2010. **(Includes relevant digital data – digital copy of report only)**

Appendix 4 Vanzino L: Memorandum to Macquarie Harbour Mining on EL's 21/2007 and 22/2007 – Literature Review, Recommendations and Logistics. December 2009

(Note: Appendix D as listed in the Geoforce Report is Appendix 1 in this Annual Report).

2 INTRODUCTION

This is the third annual report on EL22/2007 (113 sq km) and EL23/2007 (171 sq km) which are held in the name of Goldstock Mining Pty Ltd, a wholly owned subsidiary of Macquarie Harbour Mining Ltd ("MHM"). These tenements lie south of Macquarie Harbour (see Figure 1), with Birches Inlet and the South West National Park forming the eastern boundary and EL23/2007 extending as far south as the Wanderer River. All fall within the South West Conservation Area and any exploration requires continual consultation with the relevant government authorities, particularly Mineral Resources Tasmania and Parks and Wildlife Services.

3 REGIONAL GEOLOGY

The Exploration Licences cover parts of the southern sections of the Mount Read Volcanics which hosts a number of significant deposits including Mt Lyell (Cu, Ag, Au), Rosebery (Zn, Pb, Cu, Ag, Au), Hellyer (Zn, Pb, Cu, Ag, Au), Que River (Zn, Pb, Cu, Ag, Au) and Henty (Au, Ag). The discovery of the Avebury nickel deposit west of Zeehan raised awareness of the potential for similar economic mineralisation within the Hibbs Ultramafic Belt.

EL22/2007:

Covering Cambrian rocks of the Point Hibbs Belt containing units which are correlates of the Mount Read Volcanics and other prospective geology north of Macquarie Harbour this tenement is regarded as highly prospective for ore deposit types similar to those of economic significance elsewhere on the west coast of Tasmania. General location is shown in Figure 1 and geology in Figure 2.

The western contact of the belt is a major fault striking at N 15° E with Proterozoic rocks to the west and faulted strips of Late Cambrian and possibly Ordovician to the east. This contact runs from Bryans Bay in the north to the northern end of Hibbs Bay. Immediately to the east of these contact rocks are fault bounded strips of early Cambrian ultramafic rocks with associated serpentinites and in places gabbroic rocks which are referred to as the Hibbs Ultramafic Belt, known to contain nickel mineralisation.

The body of the licence is largely mapped as Noddy Creek Volcanics comprising volcano-sedimentary sequences of sandstone, siltstone, and conglomerate, with intercalated andesitic volcanics and intrusives, felsic volcanics and intrusives, and minor basalts. In the central to south east of the licence there is a synclinal basin of Ordovician sedimentary rock with an NW-SE axis which is referred to as the Timbertops Syncline and consists of sandstones and siltstones with a core of limestone. The eastern boundary of the licence closely follows the boundary of the exposed Palaeozoic rocks with the overlying Tertiary cover rocks to the east.

EL23/2007:

Covering extensions of the prospective but unexplored Noddy Creek Volcanics this tenement lies directly south of EL22/2007 (Figure1).The detailed geology is shown in Figure 3.

Near the headwaters of Thomas Creek an intermediate sub-volcanic intrusive complex is considered to represent a major volcanic centre prospective for “porphyry style” copper/gold mineralisation and related high level vein mineralisation.

Sections of the Hibbs Ultramafic Belt which are present in the northwest of the licence have been subjected to considerable folding and faulting which has resulted in portions being offset and the strike direction changing. At Hibbs Point the headland is formed of dolerite of Jurassic age with segments of Carboniferous, Devonian, Silurian, and Ordovician sediments outcropping further east.

4 REVIEW OF WORK BY PREVIOUS EXPLORERS

Modern exploration commenced south of Macquarie Harbour in the mid-1950's and has been carried out intermittently since then, led by a relatively small number of companies which have expended considerable time and effort in an area with no existing infrastructure and a climate which limits concerted field programmes to the warmer months.

EL22/2007:

In 1957 the LEE JV investigated two prospects on the shores of Macquarie Harbour which were brought to it by a prospector, Gravelly Beach and Birchs Inlet. The company reported that in the creeks draining north into Gravelly Beach grains of chromium were found, together with osmiridium and gold.

BHP spent considerable resources cutting tracks and costeans along the northern part of the Hibbs Ultramafic Belt, concentrating on the nickel and chrysotile asbestos potential. Exploration in the headwaters of Noddy Creek commenced in the 1967-68 field season with the bulldozing of access tracks across and along the strike, together with geological mapping at 1:25,000. Detailed mapping at 1:5,000 and ground geophysics (magnetics, SP and EM), mainly aimed at evaluating asbestos occurrences led to a single diamond drillhole (DDH 1) targeting the peak of an EM anomaly. The hole penetrated serpentinised pyroxenite and laminated siltstone before being abandoned at 95 m. The cause of the anomaly was explained as 3 m of graphite.

In 1968-69 work concentrated further on the serpentinite. The following occurrences of nickel were found -

- (a) A zone of disseminated pentlandite about 12 m wide occurring as small blebs up to 6 mm in slightly sheared olive green serpentinite. Three samples were assayed and contained 1200 ppm, 1000 ppm and 400 ppm nickel.
- (b) Specks of pentlandite in shear planes in an asbestos costean about 320 m to the south of (a).
- (c) Smears of pentlandite in shear planes in DDH 1 about 130 m south of (b).

All three of these occurrences are aligned along strike near the base of the ultramafic body. BHP recommended that EM traverses be run at 30 m intervals along strike but no further work was done on nickel.

Asbestos was recognized at locations from Asbestos Point in the north to the Spero River in the south. In the 1970-1971 season eight diamond holes were drilled to assess asbestos fibre. Vigorous attention was focussed on the Eastern Ultramafic Belt and four of the holes were drilled in the Noddy Creek – Timbertops area (DHNC6-9) with hole 7 reporting disseminated sulphides in the ultramafic rock at a number of places down the hole. Hole 8 ended in heavily carbonated and carbonate veined ultramafic.

Amoco carried out additional Dighem airborne EM covering selected areas on this tenement. The survey consisted of 659 line km with 150m line spacing at a bird height of 35m. An aeromagnetic survey covering all the tenements was then flown by Austirex International Ltd employing a Nomad aircraft flying at 70m on a line spacing of 150m for 4,204 line kilometres. These data were processed by Pitt Research Pty Ltd and analysed by Mitre Geophysics. EM anomalies identified by this work were then followed up in the field and the new data reviewed and compared with that obtained by BHP. The ground follow up included geology, the collection and assaying of stream and soil samples, and ground magnetometry. Work conducted during 1984-85 was focussed on tin and gold and included fieldwork on Noddy Creek and Thomas Creek. No encouragement was given at Noddy Creek and follow-up at Thomas Creek is described under EL23/2007 (see next section of this report).

In 1992 Plutonic Operations Ltd were granted EL4/1992 and EL7/1992 (High Rocky Point) Rocky Point) which covered most of the ground currently held by MHM. These tenements covered the Noddy Creek Volcanics Belt which is now identified as part of the prospective Mt Read Volcanics. In 1992-93 Plutonic considered that this belt was prospective for volcanogenic massive sulphide deposits and had not received the ground based follow up that it justified. The company firstly undertook detailed checking of previous results reported by earlier explorers. Amoco had conducted airborne EM surveys but in 1993-94 Plutonic decided to carry out its own airborne EM survey using improved Geotem equipment. Delays meant this was not eventually carried out until March 1996. In the meantime Plutonic undertook reprocessing of Amoco data to form the basis for reinterpretation of the geology and an updated geological map of the tenement area. Plutonic's work on the Thomas Creek Prospect falls into EL23/2007 and will be discussed in the next section of this report.

Pacific-Nevada Mining Pty Ltd acquired ELA9/1997 in June 1997 from Morritt Holdings Pty Ltd which covers a similar area to that of EL22/2007 and the licence (EL9/1998) was granted the following year. This company considered that the ground was prospective for copper and gold mineralization. After reviewing previous work a reconnaissance field assessment programme of regional stream sediment and rock chip sampling was mounted. This work identified the West Baylee and Hill 99 Prospects. Grids were put in over these and ground geophysics (IP and TEM) was carried out. Geochemical results at Hill 99, located just south of Asbestos Point, defined a copper – zinc anomaly, with some associated gold values, along strike to the south of an outcrop of massive pyrite/quartz on the shore. A subtle coincident IP anomaly was also identified. In 1999 a three hole diamond drilling programme was designed to test the geochemical anomaly and a fourth hole to test the IP anomaly. Only three diamond holes were drilled from a single drill pad totalling 668.8m. Two were fanned out to make two intersections under the base metal anomaly (296m and 255.5m) and the third to test the IP anomaly. The third hole had to be abandoned in a shear zone at 117.3m. The holes intersected mafic and felsic volcanoclastic rocks that had undergone intense chlorite/carbonate alteration. No massive sulphide mineralization was intersected but fine veins and disseminated base metal sulphides were identified in the drill core. Within the sequence fuchsite-carbonate-pyrite alteration zones are a distinctive feature. West Baylee is located 400m SW of the Gravelly Beach Prospect. Anomalous gold values were roughly coincident with an IP anomaly. A programme of three diamond holes was completed in early 2000. WB001 tested a nickel soil anomaly showing that it was present over a sub outcropping serpentinite with a nickel content below that of the soil anomaly. WB002 was targeting a coincident IP and geochemical anomaly. The IP anomaly was due to pyritic carbonaceous shales and no mineralization was found to explain the geochemical anomaly. WB003 was drilled to test various rock and soil geochemistry along an ultramafic – Cambrian sediment contact. Poor ground conditions resulted in significant core loss in these three holes and the casing and drill string were not retrieved from the last hole. No significant mineralization was intersected in these holes and no further work was reported on this tenement.

Discovery Nickel Ltd was granted EL22/2004 in July 2004 and then acquired and compiled available data on the area. They then undertook processing of the geochemical results. The nickel and copper anomalies in the area of the Modder River magnetic anomalies were then followed up with a field visit to collect rock chip samples. Geochemical analysis of the rock chip samples indicated that the ultramafics were not prospective for magmatic nickel-copper deposits but were favourable for the formation of hydrothermal related "Avebury Style" nickel sulphide deposits. In 2006 the board of Discovery Nickel had a change of focus away from Australia to Africa and in June relinquished EL22/2004.

EL23/2007:

This licence was covered in the airborne geophysical survey of the LEE joint venture but no significant anomalies were defined that warranted ground follow-up.

In 1971 BHP carried out a short ground survey over the ultramafics at Hibbs Lagoon and Spero River as part of the assessment of the asbestos potential in the Hibbs Ultramafic Belt.

Copper and gold mineralisation was first recognised at the Thomas Creek prospect by Amoco in the mid-1980's during a ground reconnaissance programme, with a sample assaying 2000 ppm Cu, 0.97 ppm Au and 1050 ppm Ba associated with a diorite intrusion. Geochemical sampling on a grid

followed and this outlined a zone of anomalous copper (300 m x 400 m) which was >250 ppm Cu.

Following on from Amoco in 1987 Cyprus Minerals undertook a brief field examination of the southern end of the Hibbs Ultramafic Belt near the mouth of the Spero River to assess its potential for platinum group metals (PGM's) and gold using rock chip and stream sediment geochemistry. A total of nine sites were sampled using both pan concentrates and minus 80 mesh sediments. PGM's assayed at higher levels than gold with platinum having the greatest range of values from 0.5 – 420 ppb, the maximum in a panned concentrate draining gabbros, with associated ruthenium, rhodium, iridium and osmium ranging from 18 – 52 ppb. High levels of osmium (250 ppb) occur in a panned concentrate draining serpentinite with an associated platinum value of 150 ppb. Seven rock chip samples did not produce any anomalous gold or PGM values.

Plutonic Operations Ltd. acquired ground covering Thomas Creek in 1992 and conducted a large programme of gridding, soil sampling, ground magnetics and IP. This enlarged the copper anomaly to 600 m x 400 m which was found to lie within a potassic - phyllic alteration zone with coincident IP zones related to extensive pyrite development. The zone straddles an area between a magnetic high and low.

Drilling of 8 diamond holes in 1996 by Plutonic using a light "Gopher" rig tested areas of high Cu soil geochemistry and corresponding IP chargeability over an area measuring approximately 400m by 300m .Core recovered was commonly weathered and broken, with significant core loss, particularly in some clay-rich zones. The drilling revealed widespread copper anomalism, including 58 m @ 0.08% Cu from 40 m in TCD2 and 0.05% Cu from 45 m in TCD3. The low grade disseminated and vein hosted chalcopyrite - pyrite mineralisation is generally associated with magnetite rich silica-chlorite-actinolite-potassic alteration surrounding micro-monzodiorite dykes.

After failing to attract a joint venture partner Plutonic relinquished the area in 1998.

5 PREVIOUS WORK BY MHM (2007-2009)

Early work was mainly directed towards the compilation of a large amount of published and unpublished technical information and its interpretation. This enabled a more thorough understanding of the prospectivity of the tenements in the light of geological similarities with mineralised areas elsewhere on Tasmania's west coast. A helicopter reconnaissance trip in 2008 landed at Thomas Creek at the site of the previous drilling by Plutonic. No outcrops were visible in the vicinity and it was noted that considerable regrowth has taken place.

A report summarising regional geophysical surveys by previous explorers on EL21/2007, EL22/2007 and EL23/2007 was provided by Mitre Geophysics at the request of MHM. This is included in the previous combined annual report for these three tenements. Recommendations arising from this study focussed on potential for follow-up at various prospects including Hill 99 at the northern end of EL22/2007, where base metal mineralisation is accompanied by strong alteration.

6 EXPLORATION COMPLETED DURING THE REPORT PERIOD

During the third year of tenure four prospective target zones were surveyed using a helicopter borne electromagnetic system known as VTEM by Geotech Airborne Limited (March 2010). This survey, together with the interpretation of data by Geoforce Pty Ltd represents the main bulk of work performed on these tenements during the past year.

The first of the zones, referred to as Area 5b covers the NW portion of EL22/2007 and is considered to hold good potential for volcanic hosted massive sulphide (VHMS) base metal and gold deposits within the middle Cambrian Noddy Creek Volcanics as well as nickel, gold and platinum group metals in the Hibbs Ultramafic Belt. The second and third of these zones (Area 5a and Area 3) cover the extension of the Hibbs Ultramafic Belt through the SW of EL22/2007 into NW of EL23/2007. The remaining zone (Area 4), which straddles the boundary of the two licences, covers the Thomas Creek area which has drawn attention because of the recognition of porphyry style copper-gold.

Other activities include ongoing compilation of publically available geochemical information into the company's database and a report by Consultant Geologist Luke Vanzino on the northern part of EL22/2007 with recommendations for follow-up in the Hill 99 area. This report was completed prior to the commencement of the airborne geophysics.

VTEM survey – data acquisition and interpretation of results:

Geotech Airborne Ltd acquired time-domain helicopter electromagnetic and magnetic data over selected blocks within four MHM tenements in the Macquarie Harbour area from 1-16 March 2010. A total of 1437 line km was flown with flight line spacings ranged from 100-200m. The Survey and Logistics Report of this work, together with Data Files for Blocks 3, 4, 5A and 5b are included in this report (Appendix 1 and Appendix 2).

Following receipt of the final VTEM data from Geotech interpretation by Geoforce Pty Ltd resulted in a prioritisation of anomalies based according to the strength of the EM response and the likelihood of the anomaly being due to a localised bedrock conductor (as opposed to an extensive "stratigraphic" conductor) with anomalies ranked from 3 (best) to 1 (worst). The locations of these anomalies are shown in Figure 4 (EL22/2007) and Fig 5 (EL23/2007). A full report from Geoforce, which includes a description of the methodology used and a detailed section on interpretation is attached as Appendix 3.

A major high ranked (Level 3) anomaly cluster was delineated by Geoforce in EL22/2007, approximately 3-4 km south of Asbestos Point and along strike from Hill 99. This comprises a group of seven anomalies within an area less than one square kilometre. They are all within reasonable access of the old BHP track and about 1-2 km north of the shed that was built. The position of these anomalies with respect to mapped units on the 1:25,000 geological map (Sarah) indicates all lie within 100m of a strike fault at a boundary between the Cambrian volcano-sedimentary succession and gabbro (4 anomalies on eastern side of cluster) or serpentinite (3 anomalies on western side). There is also a lamprophyre dyke of Devonian age mapped in the vicinity.

Because the Cambrian succession, referred to as the Noddy Creek Volcanics, are considered a correlate of the Mount Read Volcanics it is considered that potential exists for the discovery of gold rich massive sulphides such as Rosebery or a high grade gold deposit like Henty.

Previous exploration in the district has been focussed on Hill 99 near the coast (Pacific Nevada) and further to the south (BHP). The only geochemistry close to the VTEM anomalies would appear to be district stream sediment sampling by BHP in 1969 with analysis for Cu, Zn and Ni. Although nickel prospects lying within sheared serpentinites were tested several kilometres to the south there were no elevated values in sparse sampling close to the current area of interest.

Of particular interest is the structural position of the VTEM anomalies with respect to Hill 99 which lies along strike to the north of the eastern anomalies. This prospect was discovered by Pacific Nevada in 1999 as a result of reconnaissance stream sediment sampling close to known massive pyrite –quartz

outcrop near Asbestos Point which lies about 700m to the north. Anomalous gold in pan concentrate resulted in the delineation of a south western trending zone of Cu/Zn in soils as well as the recognition of gossanous float boulders with gold values up to 50ppb Au and another float sample described as a "chlorite altered lithicwacke" which returned 92ppb Au.

Three diamond holes were drilled for 667m from a single drill pad at Hill 99 targeting VHMS (+ or – Au) in altered volcanics based on combined IP and the Cu-Zn soil geochemistry. Two of these holes corresponded with disseminated pyrite and chalcopyrite associated with quartz - carbonate veining, chlorite alteration and fuchsite - carbonate alteration within volcanoclastic rocks of mafic to rhyolitic origin. A vein in one of these holes yielded a value of 0.59% Cu associated with weak gold (0.03 ppm Au). The third hole was abandoned 30 m short of target depth due to poor ground conditions associated with a shear zone. Anomalous copper, lead and zinc were assayed just metres above this zone.

Indications are that a hydrothermal alteration and mineralisation system is present at Hill 99. Fuchsite alteration is present at a number of ore deposits in Tasmania, including Henty and Hellyer and is also an alteration feature in other styles of mineralisation such as lode gold in Western Australia. The carbonate - sericite alteration in the rhyolitic volcanoclastics is also similar to carbonate alteration at Henty and the proximal carbonate footwall zones of the Roseberry and Hercules deposits.

In conclusion it is considered that Hill 99 was not thoroughly tested and that further potential exists along strike to the south. Like Hill 99 the current target anomalies lie in prospective geology of the right age close to major regional faulting. These anomalies will be followed up during the forthcoming field season.

Lower order anomalies in the vicinity of the Thomas Creek porphyry prospect (EL22/2007 and EL23/2007) which are considered significant because of the geological setting will also be followed up on the ground.

Literature Review, Recommendations and Logistics

In December 2009, Consultant Geologist Luke Vanzino who has had past experience working with Pacific Nevada in the northern part of EL22/2007, was contracted by MHM to prepare a short report on previous exploration work in a zone close to the south coast of Macquarie Harbour and to make recommendations as to what targets should be followed up. This report (see Appendix 4) recommended that further investigation should be carried out along strike immediately to the south of Hill 99.

Planned Exploration

Follow up work for these tenements in the fourth year of tenure will be directed towards both office and field based work. To that end a geologist with a strong working knowledge of porphyry copper-gold systems is being employed on a full-time basis to assist the company's Exploration Manager. Preliminary work has already commenced on drill core from Plutonic's 1996 programme which is available at the MRT core storage facility. This will be reported in the next Annual Report.

7 REFERENCES

- Anon. 1957. Report on the Photogeological Interpretation of LEE Mosaic Sheets T8, T12, T16. Adastra Hunting Geophysics Proprietary Limited, Electrolytic Zinc Company of Australasia Ltd, Mt Lyell Mining and Railway Co. Ltd. (LEE JV) MRT Ref. 57_0179.
- Arndt C.D, Bumstead E.D, Corbett E.B, Fenton G.R, Hall W.D.M, McGregor P.W, McIntyre M.H. 1969. Report on Field Work in Exploration Licence 13/65, South-West Tasmania During 1967-68 Field Season. Broken Hill Proprietary Co. Ltd (Rep.793). MRT Ref. 69_0555.
- Arndt C.D, Fenton G.R, Hall W.D.M. 1969. The Double Cove Belt. Broken Hill Proprietary Co. Ltd. MRT Ref. 69_0555A.
- Banks M.R. 1962. Spero Bay Group. In *The Geology of Tasmania*, Spry A.H. & Banks M.R. (ed). Journal Geological Society of Australia 9:184-185.
- Berry R.F, Carey S.P. 1988. Thrust Sheets at Point Hibbs, Tasmania: Palaeontology, Sedimentology, and Structure. *AJES* 35:169-180.
- Berry, R.F., Crawford A.J. 1988. The Tectonic Significance of Cambrian Allochthonous Mafic-Ultramafic Complexes in Tasmania. *Australian Jour. of Earth Sci.* 35: 523-533.
- Berry R.F, Crawford A.J. 1992. Tectonic Implications of Late Proterozoic–Early Palaeozoic Igneous Rock Associations in Western Tasmania. *Tectonophysics* 214:37–56.
- Berry R.F, Meffre S, Hall M. 2000. Cambrian metamorphic complexes in Tasmania: tectonic implications. *Australian Journal of Earth Sciences* 47:971–985.
- Bishop J.R. 1984. An interpretation of the aeromagnetic and DIGHEM surveys over the Cape Sorell Peninsula (E.L.'s 35/83, 36/83, 37/83). Mitre Geophysics Pty Ltd (P000/343283) for Amoco Minerals Australia Company. MRT Ref. 84-2217A.
- Bishop J.R. 1985. Evaluation of the Results from the 1984-85 Field Season Programme Over the Sorell Peninsula. Amoco Minerals Australia Company, Mitre Geophysics Proprietary Limited, Placer Exploration Ltd (P082/106083). MRT Ref. 85_2466A2.
- Bishop J.R. 1986. Preliminary Interpretation of DIGHEM Surveys of the Muddy Cove, Spero River, and Wanderer River North Areas. Mitre Geophysics Pty Ltd for Cyprus Minerals Australia Co. (Amoco Minerals Australia Co.) & Placer Exploration Limited. MRT Ref. 86_2602A.
- Bishop J.R. 1987. Interpretation of electrical and electromagnetic surveys at Elliott Bay (E.L. 40/85) for Cyprus Minerals Australia Company. Mitre Geophysics Pty Ltd. MRT Ref. 87-2730A.
- Bishop J.R. 1988. A compilation of geophysical surveys carried out at Elliott Bay (EL 27/76) for Cyprus Minerals Australia Company. Mitre Geophysics Pty Ltd. MRT Ref. 88-2853A.
- Black L.P, Turner N.J, Kamperman M. 1998. Dating of Neoproterozoic and Cambrian Orogenies in Tasmania. *Australian Journal of Earth Sciences* 45:789–806.
- Boniwell J.B, Elms R.G, Scott B. 1959. Regional Report on Modder River Area. LEE JV. MRT Ref. 59_0279.
- Brown A.V., Collins P.L.F., Corbett K.D., Green G.R., Richardson R.G. 1982. The 1981 West Coast Aeromagnetic Survey: Summary of Information and Results. Department of Mines Tasmania. MRT Ref. UR1982_39.
- Brown A.V. Findlay R.H. McClenaghan M.P. Seymour D.B. 1991. Summary of the regional geology of the Macquarie Harbour, Point Hibbs and Montgomery 1:50,000 map sheets. Report by Division of Mines and Mineral Resources Tasmania. MRT Ref. UR1991_02.

- Brown A. V. (1992) Platinum group elements and their host rocks in Tasmania: a summary review. Tasmania's development Environment. Bull. Geol. Surv. Tasm. 70: 48-55. MRT Ref. GSB70.
- Brown A.V. Seymour D.B, Goscombe B.D, McClenaghan M.P, Everard J.E, Geological Atlas 1:50,000 series. Sheet 71 (7912N). Point Hibbs. Tasmania Department of Resources and Energy.
- Bumstead E.D., McGregor, P.W. 1969. The Hibbs Belt EL13/1965. Broken Hill Pty Co Ltd. MRT Ref. 69_0555B.
- Bumstead E.D. McIntyre M.H. 1967. Southwest Tasmania, Geochemical Report E.L. 13/65 1966- 67. Broken Hill Pty Co Ltd. MRT Ref. 67_0493.
- Chamberlain M., Hallett M. 1996. Logistics and Interpretation of a Geotem Airborne EM and Magnetic Survey over the Sorell Peninsula, Tasmania. EL4/92 & EL7/92 (Job 8-735). Geoterrex Pty Ltd for Plutonic Operations Ltd. MRT Ref 97_3989A1.
- Close R.J. 1972. The geology and economic potential of the Hibbs Ultramafic Belt in the Noddy Creek area of South West Tasmania. BHP Exploration. MRT Ref. 72_0889.
- Close R.J, Reid R. 1995. Exploration Licences 4/92 and 7/92 Sorell Peninsula. Annual report on exploration activity Sept. 1993 to Aug. 1995. Plutonic Operations Ltd. MRT Ref. 95-3784.
- Close R.J. 1996. Exploration Licence 7/92 High Rocky Point, Sorell Peninsula. Report on southern area relinquished in September 1996. Plutonic Operations Ltd. MRT Ref. 96-3951.
- Close R.J, Reid R. 1997A. Annual Report – Sorell Peninsula – EL 4/92 and 7/92. Plutonic Operations Ltd. MRT Ref. 97_3989.
- Close R.J, Reid R. 1997B. Annual and Final Relinquishment Report – Sorell Peninsula, EL`s 4/92 and 7/92. Plutonic Operations Ltd. MRT Ref. 97_4084.
- Corbett K.D, McClenaghan M.P. 1985. Geochemical Diagrams of Cambrian Volcanic Rocks and Associated Intrusives from Western Tasmania. Unpublished Report Department of Mines Tasmania. MRT Ref. UR1985_63.
- Corbett K.D, Large R.R, Herrmann W. 1987. Base metal exploration of the Mount Read Volcanics, Western Tasmania. Pt. 1: Geology and exploration, Elliott Bay. Economic Geology 82:267–290.
- Corbett K.D, McClenaghan M.P. 1989. Mt Read Type Volcanics in .the Sorell Peninsula Area. Geology and Mineral Resources of Tasmania. Ed C.F.Burrett & E.L.Martin. Geol. Soc. Aust. Spec. Pub. 15: 118.
- Corbett K.D, Solomon M. 1989. Cambrian Mt Read Volcanics and Associated Mineral Deposits. Geology and Mineral Resources of Tasmania. Ed C.F.Burrett & E.L.Martin. Geol. Soc. Aust. Spec. Pub. 15. 84-153.
- Corbett K.D, Turner N.J. 1989. Early Palaeozoic deformation and tectonics. Geology and Mineral Resources of Tasmania. Ed C.F.Burett & E.L.Martin. Geol. Soc. Aust. Spec. Pub. 15. 154-180.
- Corbett K.D, Crawford A.J, Everard J.L. 1992. Geochemistry of the Cambrian volcanic-hosted massive sulphide rich Mt Read Volcanics, Tasmania, and some tectonic implications. Econ. Geol. 87:597-619.
- Corbett K.D. 1992. Stratigraphic-volcanic setting of massive sulphide deposits in the Cambrian Mount Read Volcanics, Tasmania. Economic Geology 87:564–586.
- Corbett K.D. Pemberton J, 1992. Stratigraphic facies associations and their relationship to mineralisation in the Mount Read Volcanics. Bulletin 70 Geological Survey Tasmania. MRT Ref GSB 70_167_176.

- Corbett K.D. 2001. New mapping and interpretations of the Mount Lyell mining district, Tasmania: a large hybrid Cu-Au system with an exhalative Pb-Zn top. *Economic Geology* 96:1089–1122.
- Corbett K.D. 2002. Updating the geology of the Mt Read Volcanics belt. Record Tasmanian Geological Survey. MRT Ref. UR2002_19.
- Corbett K D, 2003. Western Tasmanian Regional Minerals Programme Mt Read Volcanics Compilation. A review of geology and exploration in the Macquarie Harbour Elliott Bay area, South West Tasmania. MRT Ref. UR2003_04.
- Cox S.F. 1989. The Cape Sorell Inlier. In *Geology and Mineral Resources of Tasmania*. Burrett C. F, Martin E. L. editors. Special Publication Geological Society of Australia 15:25.
- Crawford A.J. 1993. Petrology of the Thomas Creek Prospect, Appendix B. in MacDonald G. 1993. Exploration Licences 4/92 and 7/92, Sorell Peninsula. Annual report on exploration activity, September 1992 to August 1993. Plutonic Operations Ltd. MRT Ref. 93-3514.
- Ferris B. 1984. Progress report 12 months to September 1984. Sorell Peninsula Exploration Licences 35/83, 36/83, 37/83, Tasmania. Amoco Minerals Australia Company (Rep.401). MRT Ref. 84-2217.
- Findlay R.H., McClenaghan, M.P, Pemberton, J. 1993. Geological Survey Explanatory Report, Geological Atlas 1:50,000 series, Sheet 64 (7913S), Macquarie Harbour. ER7913S0.
- Fraser D.C. 1984. Dighem Survey of the Birchs Inlet Region of Southwest Tasmania for Amoco Minerals Australia Company. Dighem Ltd (Rep.369) MRT Ref 84_2217A.
- Hall G, Rodda P.1958. Magnetic Anomaly 17N/8: Spero River. Electrolytic Zinc Company of Australasia Limited, Mt Lyell Mining and Railway Co. Ltd, (LEE JV) MRT Ref. 58_0211.
- Hills C.L. 1914. Geological reconnaissance of the country between Cape Sorell and Point Hibbs. *Bulletin Geological Survey Tasmania* 18. MRT Ref. GSB18..
- Hungerford N. 1999. Interpretation of Geophysical Data on Pelias Cove & Hill 99 Grids, Cape Sorell Area (EL10/97 & EL9/98). Flagstaff GeoConsultants Pty Ltd (4/99) for Pacific Nevada Mining. MRT Ref. 99_4382V2A14.
- Johnstone A. 2007. Final Report, EL 22/2004 Modder River, Tasmania.Discovery Nickel Limited. MRT Ref. 07_5429.
- Jones, P.A. 1986. Progress Report, 12 Months to September 1986, Sorell Peninsula, Exploration Licences 35/83, 36/83, 37/83 Tasmania. Cyprus Minerals Australia Company, Placer Exploration Limited. MRT Ref. 86_2602.
- Kary G.L. 1985. Progress Report to September 1985, Sorell Peninsula, E.L.'s 35/83, 36/83 and 37/83 Tasmania. Amoco Minerals Australia Co., Placer Exploration Ltd. MRT Ref. 85_2466.
- Langlands J.G, Rees R.C. 1971. Report to the Tasmanian Mines Department on Exploration for Chrysotile Asbestos in Exploration Licence 13/65.December, 1970 to June, 1971. Broken Hill Pty Co. Ltd. Including Report on Noddy Creek Area for May and June 1971. MRT Ref. 71_0758.
- Leaman D.E. 1986. Mt Read Volcanics Project, Geophysical Report 2. Preliminary interpretation report: 1985 West Tasmania aeromagnetic survey (Macquarie Harbour south to Elliott Bay) Mineral Resources Tasmania. MRVGP2.
- Leaman D.E. 1988A. Review of Structural Implications of Geophysical Data, Sorell Peninsula, Western Tasmania. MRT Report UR1988_01.
- Leaman D.E. 1988E. Review of Structural Implications of Geophysical Data, Sorell Peninsula, Western Tasmania. Leaman Geophysics for the Mt Read Volcanics Project. MRT Ref. UR1988_01.

- Leaman, D.E., Webster, S.S. 2003. Quantitative interpretation of magnetic and gravity data for the Western Tasmanian Regional Minerals Programme. MRT Ref. UR2002_15.
- MacDonald G. 1993. Exploration Licences 4/92 and 7/92, Sorell Peninsula. Annual report on exploration activity, September 1992 to August 1993. Plutonic Operations Ltd. MRT Ref. 93-3514.
- McClenaghan M.P, Findlay R.H. 1989. Geological Atlas 1:50 000 series. Sheet 64 (7913S). Macquarie Harbour. Department of Mines, Tasmania.
- McClenaghan M.P, Findlay R.H. 1993. Geological Atlas 1:50 000 series. Sheet 64 (7913S). Macquarie Harbour. Explanatory Report Geological Survey Tasmania. ER7913S0.
- McClenaghan M.P., Reid R, Seymour D.B. 2006. New whole-rock geochemical analyses of the Middle Cambrian Thomas Creek intrusive complex and associated lavas of the Noddy Creek Volcanics, western Tasmania. MRT Ref. UR2005_06.
- McGregor P.W. 1969. Report on 1968-69 field work, EL 13/65, South West Tasmania. BHP Company Limited, MRT Ref. 69-0586.
- McGregor P.W. 1972. Exploration for Chrysotile Asbestos, Pad 2 to Hibbs Lagoon, EL 13/65, South West Tasmania. BHP Company Limited, MRT Ref. 72-0862.
- Mewkill P. Ground Geophysical Profiles – EM, Magnetic, and VLF. Amoco Minerals Australia Co. MRT Ref 85_2466A4.
- Newnham L.A. 2000A. EL 9/98 Cape Sorell area. Report on exploration programs, West Baylee area, Sept. 1999 to Feb. 2000. Newnham Exploration and Mining Services for Pacific- Nevada Mining Pty Ltd. MRT Ref. 00-4466.
- Newnham L.A. 2000B. Report on Exploration Programs – September 1999-February 2000 – EL10/1997 – Cape Sorell. Newnham Exploration and Mining Services for Pacific-Nevada Mining Pty Ltd. MRT Ref. 00_4495.
- Newnham L.A. 2000C. Partial Relinquishment Report – EL9/1998 – Cape Sorell Area. Newnham Exploration and Mining Services for Pacific-Nevada Mining Pty Ltd. MRT Ref. 00_4490.
- Pemberton J. 1993. Economic geology. Appendix A in: McClenaghan M.P, Findlay R.H. Geological Atlas 1:50 000 series. Sheet 64 (7913S). Macquarie Harbour. Explanatory Report Geological Survey Tasmania. MRT Ref. ER7913S0.
- Poltock R. 1988. Progress report twelve months to September 1988, Spero River Exploration Licence 37/83, Tasmania. Cyprus Gold Australia Corporation. MRT Ref. 88_2836.
- Poltock R, Torrey C.E. 1987. Progress Report Six Months to September 1987 Sorell Peninsula EL 35/83, 36/83, 37/83 Tasmania. Cyprus Minerals Australia Co. (Report 533), Placer Development Limited, Poseidon Minerals Ltd. MRT Ref. 87_2730.
- Pontifex J.R. 1984. Petrographic Report No. 4360. Pontifex & Associates Pty Ltd for Amoco Minerals Australia Company. MRT Ref. 84-2217A.
- Rea P. 1994. Sorell Peninsula EL 4/92 and 7/92. Annual Report September 1993 to August 1994. Plutonic Operations Ltd. MRT Ref. 94_3621.
- Reid A.M. 1920. Osmiridium in Tasmania. Geological Survey of Tasmania Bulletin No. 32 pp 86,87. MRT Ref. GSB32.
- Reid R.O. 2001. Cambrian intrusive-related copper mineralisation at the Thomas Creek prospect, Southwestern Tasmania. M. Econ. Geol. thesis, University of Tasmania.

Reid R. 1998. Annual Report – 5/12/97 to 5/12/98 – EL 10/97, Cape Sorell. Pacific-Nevada Mining Proprietary Limited. MRT Ref. 98_4230.

Rodda P. 1958A. Report on Examination of Tertiary Sediments Spero River, near Magnetic Anomaly 17N/8. Lyell EZ Explorations. (LEE JV) MRT Ref. 58_0209.

Richardson J. I. 2008. Combined Annual Report for the Year Ended 22 August 2008(EL 21/2007) and 21 September 2008 (EL22/2007, EL 23/2007). Macquarie Harbour Mining Limited.

Richardson J.I. 2009 Combined Annual Report for the Year Ended 22 August 2009 (EL21/2007) and 21 September 2009 (EL22/2007, EL23/2007). Macquarie Harbour Mining Limited.

Richardson R.G. 2006. Total Magnetic Intensity Image of Tasmania with northeast gradient enhancement, scale 1:500,000. Mineral Resources Tasmania.

Sampey D. 1957. Report on Examination of Western Shore, Macquarie Harbour Between Double Cove and Rum Point. Electrolytic Zinc Company of Australasia Ltd, Mt Lyell Mining and Railway Co. Ltd, (LEE JV) MRT Ref. 57_0162.

Scott B. 1957D. Report on Examination of Three Prospects on the Western Shore, Macquarie Harbour between Double Cove and Birch's Inlet. Electrolytic Zinc Company of Australasia Ltd, Mt Lyell Mining and Railway Co Ltd. (LEE JV) MRT Ref. 57_0152.

Scott B. 1958A. A Preliminary Interpretation of the Precambrian – Palaeozoic Geology of S.W. Tasmania. Electrolytic Zinc Company of Australasia Ltd, Mt Lyell Mining and Railway Co. Ltd. (LEE JV) MRT Ref. 58_0232.

Waller G.A. 1902. Report on Some Discoveries of Copper Ore in the Vicinity of Point Hibbs (Secretary for Mines Report 1901-1902). Geological Survey Tasmania. MRT Ref. OS_192.

Westbrook S. 1999. EL 09/98 Cape Sorell. Report on exploration activity 24-07-98 to 24-07- 99. Pacific-Nevada Mining Pty Ltd. MRT Ref. 99_4345.

Whitehead R.C. 1964. Summary of Investigations Southwestern Tasmania. Broken Hill Proprietary Company Limited. MRT Ref. 64_0379.

8 EXPENDITURE

Total annual expenditure for tenements EL22/2007 and EL23/2007.

Geoscientific Costs	
Geology	\$ 39,972
Geochemistry	
Geophysics	\$200,740
Remote sensing	
Drilling & Gridding Costs	
Gridding	
Drilling	
Earthmoving	
Land Access Costs	
Rehabilitation Costs	
Feasibility Costs	
Other Costs	\$ 26,006
Rental fees	
Vehicular track Construction	
Surveying, contract drafting etc	
Capital equipment purchase	
Administration Costs	
(note: not to exceed 10% of annual expend)	
Legal	
Office & Admin	
Total	\$266,718

9 APPENDICES

Appendix 1 Geotech Airborne Ltd: Survey and Logistics Report on a Helicopter Borne Versatile Time Domain Electromagnetic (VTEM) Survey on the Sorell, Tasmania Area for Macquarie Harbour Mining Ltd. April 2010

Appendix 2 VTEM Survey Data Files, Blocks 1 and 2. (*digital copy only*)

Appendix 3 Geoforce Pty Ltd: Report to Macquarie Harbour Mining Ltd on Interpretation of VTEM Survey, Sorell Peninsula and Macquarie Harbour Western Tasmania. May 2010

Appendix 4 Vanzino L: Memorandum to Macquarie Harbour Mining on EL's 21/2007 and 22/2007 – Literature Review, Recommendations and Logistics. December 2009

Note: Appendix D as listed in the Geoforce Report is Appendix 1 in this Annual Report