HARTZ RANGE MINES PTY LTD

ACN: 084 999 413

EL 10335

8th ANNUAL REPORT

FOR THE PERIOD ENDING
14th AUGUST 2010

Submitted By

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ABSTRACT

Exploration of the Wollogorang Project by Hartz Range Mines Pty Ltd ("HRM") during the last period consisted of geological mapping of Packsaddle Dome area, geochemical sampling, and ground geophysics (IP survey). The latter was designed to test for sulphides at depth below or adjacent to the breccia pipes mapped last year, and the geochemical sampling confirmed results from previous sampling which were considered suspect.

Lagoon Creek Resources Pty Ltd ("LCR") continued operations on the Debbil Debbil Uranium Project in the southern part of the EL. Work consisted of soil geochemistry and compilation of scintillometer data collected previously. The results of this work were considered encouraging enough to complete a diamond drilling programme of nine holes for a total of 921.4 m.

KEYWORDS: NT, McArthur Basin, Wollogorang Copper Project, Debbil Debbil Uranium Project, copper, uranium, diamond, drilling, stream sediment, rock chip, airborne geophysical survey, IP survey, EM survey, Landsat, SPOT.

TABLE of CONTENTS

LIST of FIGURES

LIST of Tables

LIST of APPENDICES

LIST of MAPS

INTRODUCTION

Hartz Range Mines Pty Ltd ("HRM") continued work on Exploration Licence EL10335 at Wollogorang Station on the Northern Territory/Queensland border. Work was confined to the Northern section of the EL in the vicinity of Packsaddle Dome.

The Debbil Debbil Uranium Project, a joint venture with Lagoon Creek Resources, has continued within the southern portion of EL10335, and occupies the same area as described in the 2009 annual report. (see Figure 1)

TENEMENT DETAILS

The tenement was renewed for two years in August 2008, and is due for renewal or relinquishment on 15 August 2010. The company intends to renew a large portion of the the EL for a further two years

LICENCE	APPLICATION	GRANTED	BLOCKS	AREA (km^2)
EL10335	4 Jan 1999	15 Aug 2002	473	1519

Native Title - Authority Certificate C2006/107 has been amended to include track construction and drill pad construction.

REGIONAL GEOLOGY

The project area is located within the Wearyan Shelf tectonic domain of the south-eastern parts of the Palaeoproterozoic McArthur Basin. The McArthur Basin is a succession of essentially unmetamorphosed sedimentary and lesser volcanic rocks, deposited largely in shallow marginal marine and lacustrine settings (see Figure 2). The tenement covers a sequence of sediments and volcanics of the mid-Proterozoic Tawallah Group which flank the northern margin of the Lower Proterozoic Murphy Inlier. The Murphy Metamorphics are a sequence of isoclinally folded greenschist facies metasediments which are unconformably overlain by a felsic volcanic/pyroclastic sequence (Cliffdale Volcanics), intruded by granite/adamellite of the Nicholson Granite Complex. The Tawallah Group overlies the igneous and metamorphic complexes of the Murphy Inlier with an angular unconformity and disconformity. The Tawallah Group is the oldest group of the McArthur Basin sequence. The Westmoreland Conglomerate is the oldest unit of the Tawallah Group and consists of a thick sequence (up to 1800m) of fluvial arkosic conglomerate and quartz arenite. The Seigal Volcanics conformably overlie the Westmoreland Conglomerate and occur as a series of tholeiitic basaltic lavas and minor tuffaceous interbeds along the southern margin of the project area. The McDermott Formation conformably overlies the Seigal Volcanics along the southern margin and forms a narrow, poorly outcropping unit characterised by alternating beds of shallow-water marine arenites, shale and dolostone.

The carbonate rocks of the McDermott Formation are conformably overlain by the Sly Creek Sandstone sequence which grades upwards into glauconitic sandstone named the Aquarium Formation. The conformable units encompass the majority of the project area and are characterised by a series of open folds with north-east oriented axes.

The continental Settlement Creek Volcanics conformably overlie the Aquarium Formation and consist of a series of basaltic lava flows, sills and siltstone interbeds. Exposure of the volcanics is limited and is obscured by recent alluvium denoting the Settlement Creek valley.

Minor siltstone and sandstone of the Early Cretaceous Mullaman Beds overlie the Tawallah Group sediments. Soils, alluvium and lateritic deposits of Tertiary and Quaternary age mask the underlying Proterozoic lithologies along the major watercourses (after Jackson *et al*, 1987 and Ahmad & Wygralak, 1989).

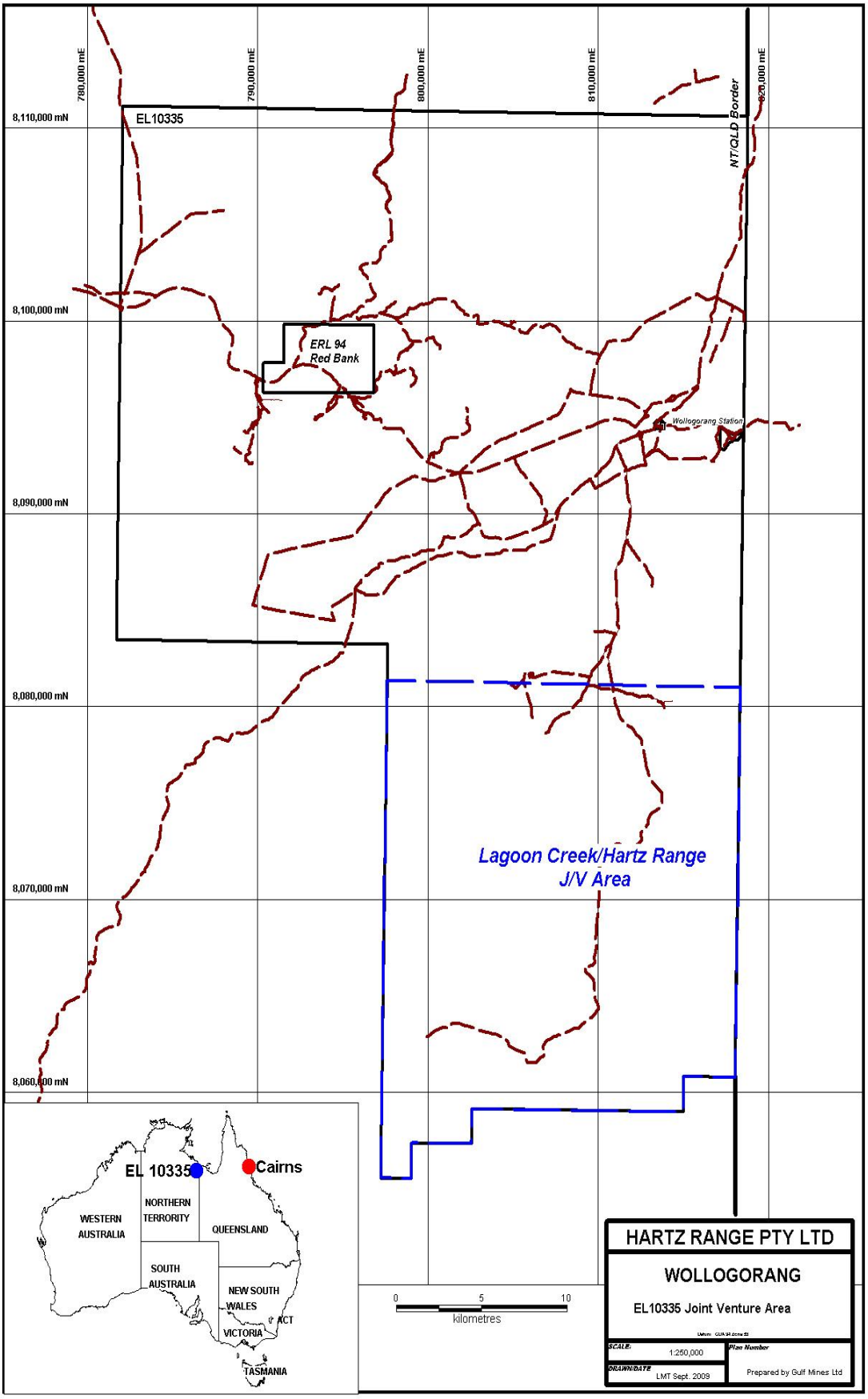

Figure 1 - Location Plan

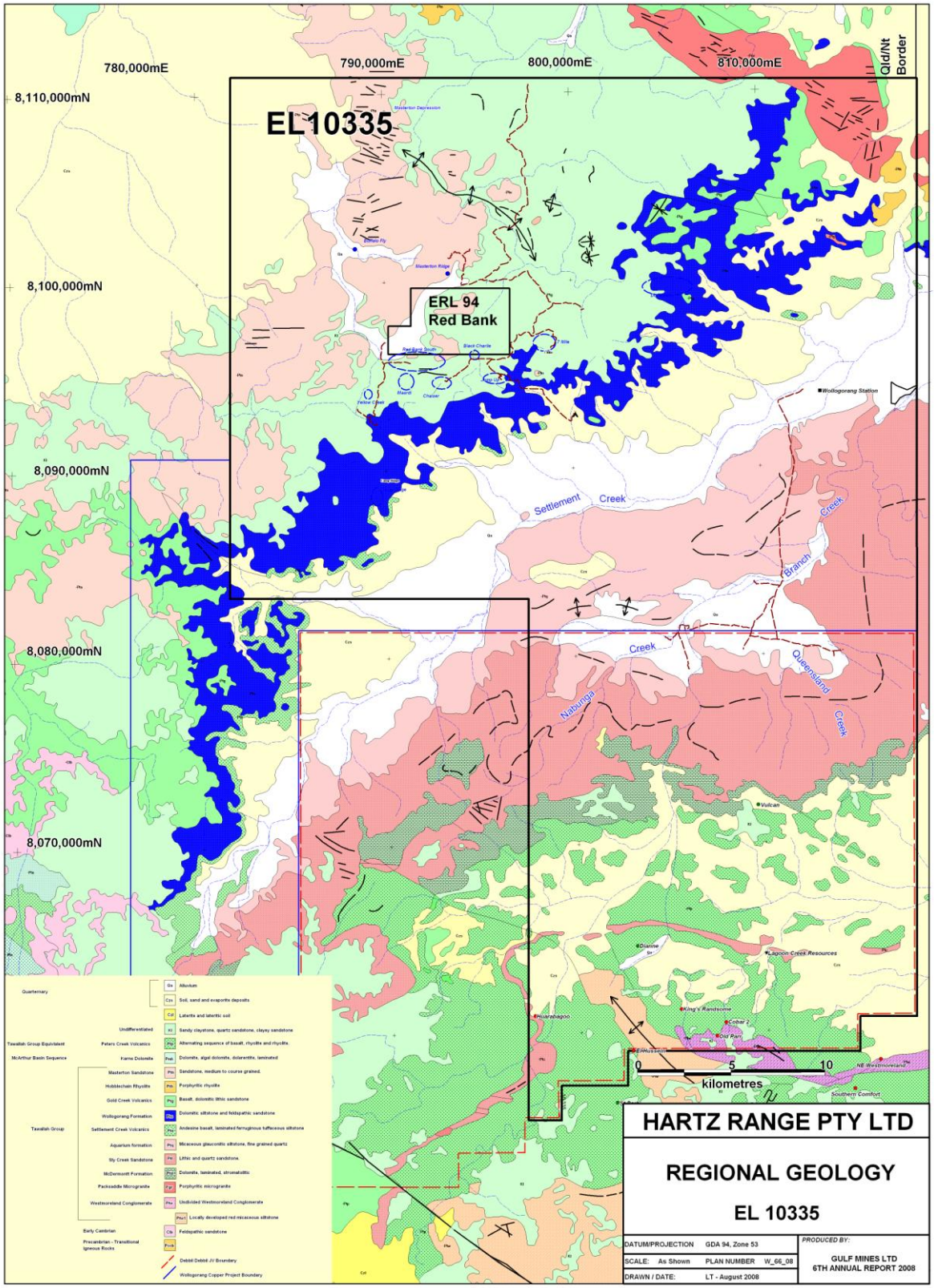

Figure 2 - Regional Geological Setting

EXPLORATION CONDUCTED

Lagoon Creek Resources

Exploration carried out during this period by Lagoon Creek Resources (LCR) consisted of additional scintillometer surveys of defined target areas, soil sampling of target areas, and diamond drilling of those target areas where considered warranted.

The radiometric surveys were conducted over 11 preselected targets. The scintillometer that was used was a 512-Channel Gamma-Ray Spectrometer for field use. At each site the machine was used to record the Uranium concentration in parts per million (ppm).

The results of the scintillometer survey can be found in **Appendix 1** and can be seen in Figure 3 which shows an overall picture and Figures 4 to 14 show each target area in more detail.

From these target areas nine drill targets were selected. The locations are shown in Figure 15. A total of nine diamond drill holes were drilled for a total of 921.4 m. Each hole has been logged in a preliminary fashion to determine gross formation boundaries, and the results are recorded in the accompanying tables. Gamma logging was completed in each hole, with some outstanding peaks being recorded at the unconformity in several holes. Samples have been dispatched for analysis, but the results are not yet at hand. Copies of the gamma logs are found in **Appendix 2** and shown as Figures 16 to 24.

No written report on the activity has been received from LCR at the date of this report.

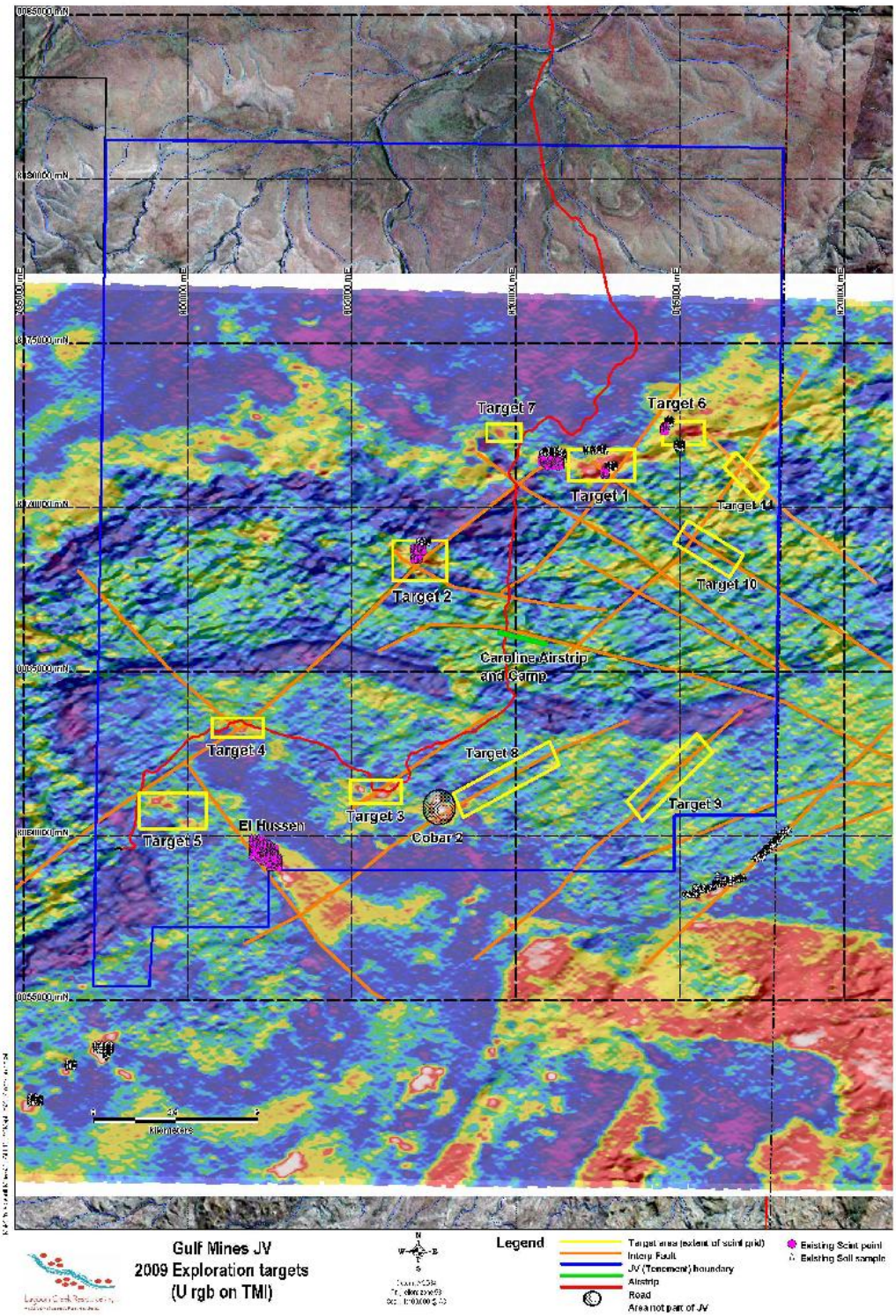

Figure 3 – Lagoon Creek Resources Scintillometer Survey

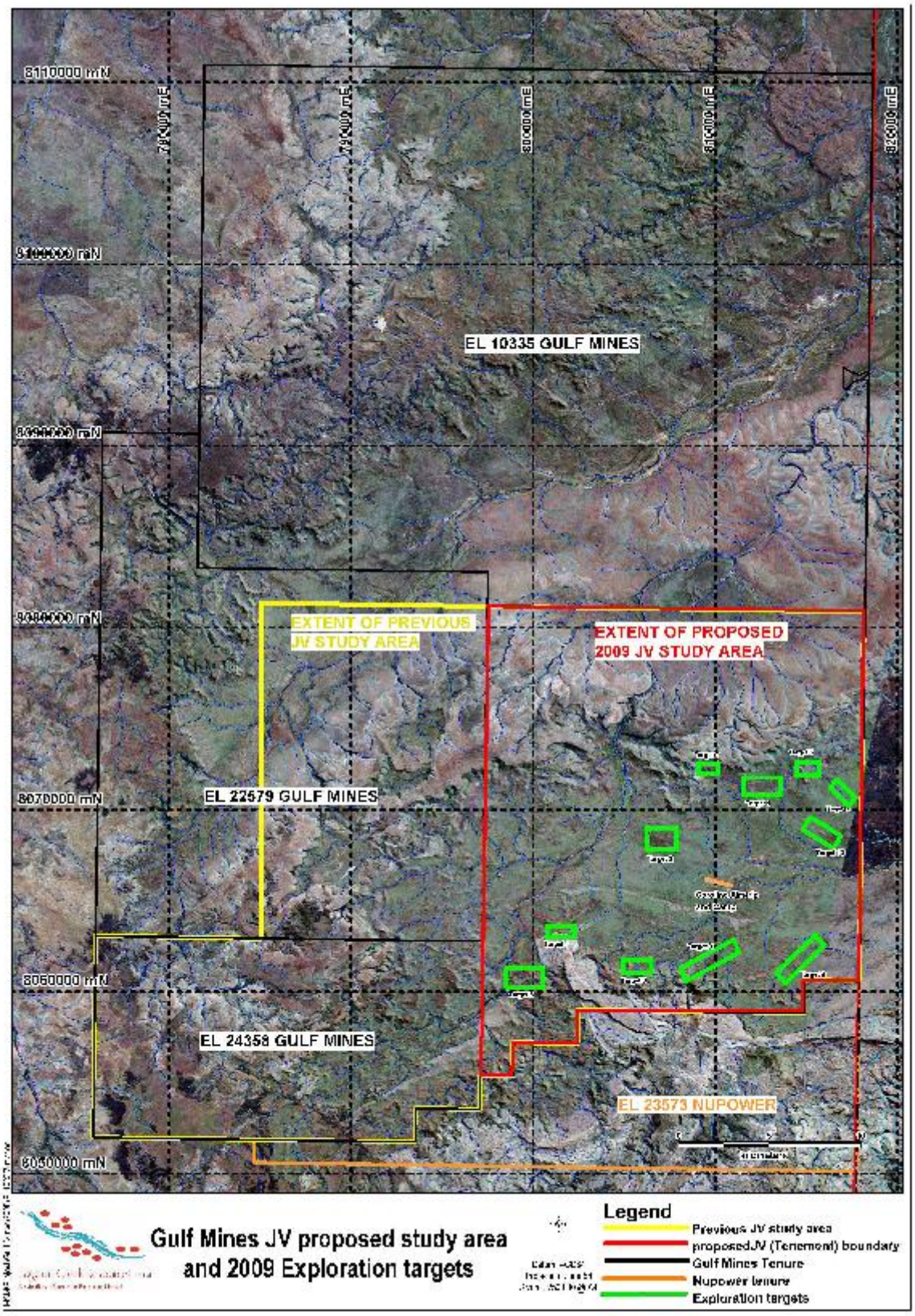

Figure 15 – Lagoon Creek Resources_Overview of Drilling Targets

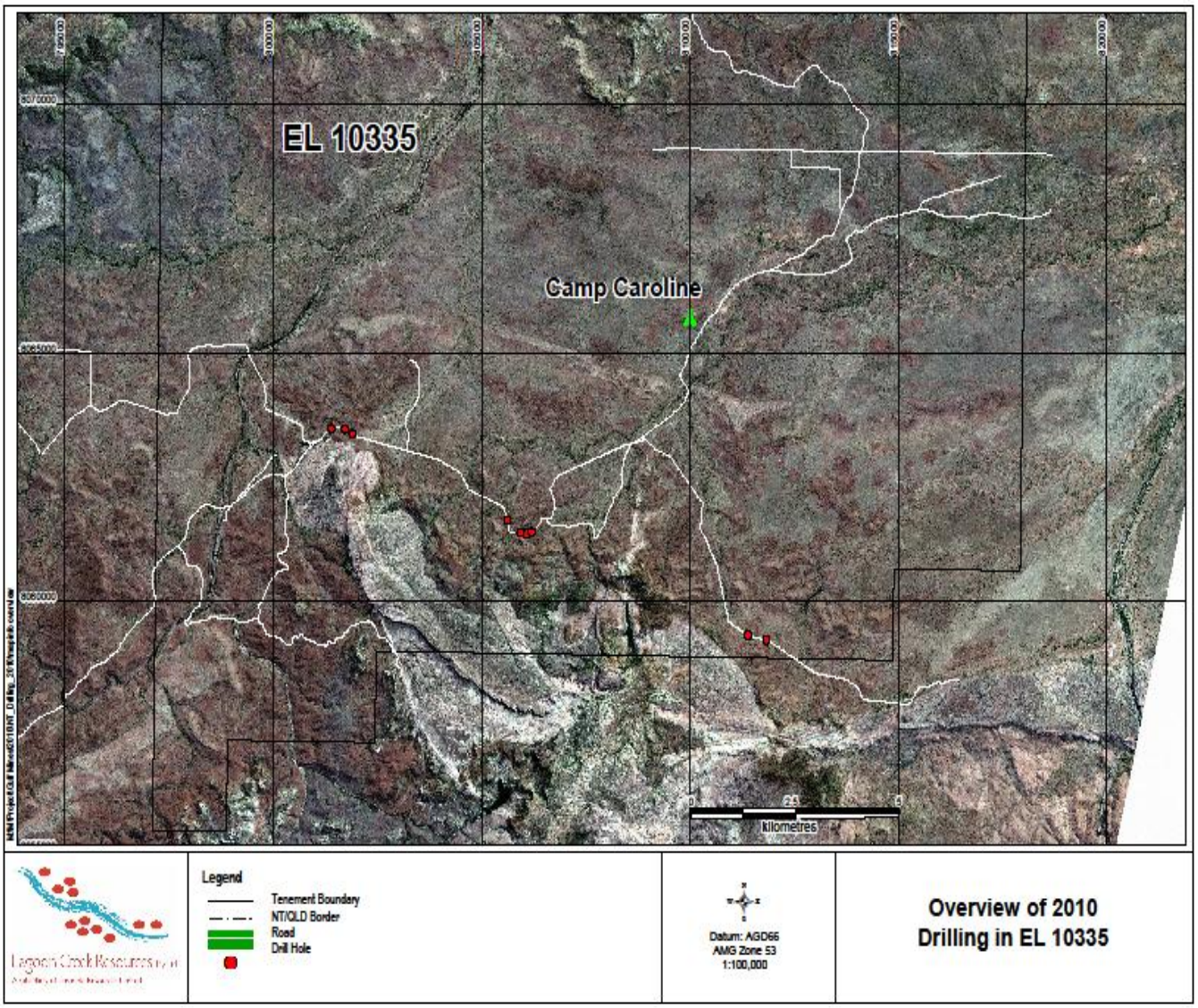

Fig 25_Overview of Drilling in 2010 by Lagoon Creek Resources

Hole_ID	From	To	Lithology	TD
NTDD10_001	-	69.0	PTS	
NTDD10_001	69.0	96.5	PTW4	96.5
NTDD10_002	-	55.5	PTS	
NTDD10_002	55.5	85.0	PTW4	85.0
NTDD10_003	-	40.0	PTS	
NTDD10_003	40.0	70.2	PTW4	70.2
NTDD10_004	-	61.0	PTS	
NTDD10_004	61.0	95.6	PTW4	95.6
NTDD10_005	-	52.0	PTS	
NTDD10_005	52.0	82.8	PTW4	82.8
NTDD10_006	-	57.0	PTS	
NTDD10_006	57.0	86.0	PTW4	86.0
NTDD10_007	-	85.0	PTS	
NTDD10_007	85.0	116.0	PTW4	116.0
NTDD10_008	-	99.0	PTS	
NTDD10_008	99.0	104.0	Siltstone	
NTDD10_008	104.0	131.0	PTW4	131.0
NTDD10_011	-	134.0	PTS	
NTDD10_011	134.0	142.0	Siltstone	
NTDD10_011	142.0	161.0	PTW4	161.0
			Total	924.1

Please note that the Siltstone bed is present in all holes, but was not recorded in all summary logs

Depths are approximate. Exact depths will be available once full logging is complete

Table 1_ Lagoon Creek Resources Drilling _ Lithology

Hartz Range Mines

Exploration carried out by HRM consisted of geological mapping, rock chip sampling. A NITON hand held XRF analyser was used for the sample analysis with only some samples being sent for laboratory analysis. Samples were analysed in the field using the NITON and then a selection of samples were collected and forwarded to ALS Chemex in Townsville to be analysed in the lab for comparison. IP surveys were also carried out in the tenement area.

Geochemical Sampling

No new areas were soil sampled, however a linear copper anomaly observed in the soil samples from last year was resampled to confirm its existence. Originally, since the grades were relatively low, and the NITON was known to be intermittently malfunctioning at that time, the particularly linear results were treated with caution. Recollecting samples during late 2009, analysing with the NITON, and sending some on to the laboratory for further analysis strongly confirmed the existence of the soil copper anomaly (a variety of metals are anomalously low or high in the same area). The grade of the anomaly is not high enough to warrant further work, and no follow up work is proposed for the anomaly at this stage. These re-samples have not been included in the appendices as they are no different from the results reported last year.

A small number of NITON soil samples were taken around a small mineralised breccia pipe a little to the west of Green Rock. The results did not show much, other to confirm that there was some minor copper mineralisation in the area. The results for the various 2009 soil surveys can be seen in **Appendix 4**.

RC and Diamond Drilling

No drilling was undertaken by Gulf Mines during the reporting period. Interpretation of the 2008 drilling was undertaken to reconcile the geological logs with the original geophysical anomalies, and so determine what, if any, prospectivity remained. Most of the drilling results were self explanatory (most notably Nabunga) and no further analysis was required. The main area of interpretation was the Masterton Ridge Prospect, which based on the size of the magnetic low, was originally considered the most prospective target in terms of potential scale. The conceptual target was a very large breccia pipe (hopefully mineralised) creating the magnetic low. The sedimentary and volcanic bedding was found to be essentially undisturbed. Although some veining and breccia was intersected, it did not indicate a breccia pipe. Mineralisation was absent, except for minor occurrences at depth. The magnetic low has now been interpreted to be caused by a unit of sediments (probably the Pungalina Formation) overlying the more magnetic Gold Creek Volcanics, but beneath the much younger Masterton Formation sediments. Apart from the lack of meaningful mineralisation, this new geological interpretation removes any real exploration potential for this prospect.

IP Surveys

An IP/Resistivity survey was completed in October/November 2009. Planetary Geophysics Pty Ltd undertook the program. Equipment used for the survey consisted of an Elrec Pro 10 channel IP/resistivity receiver manufactured by Iris Instruments of Orleans, France and a GDD 5000 transmitter manufactured by GDD instrumentation of Quebec Canada. All IP measurements were made in the time-domain using a two second half-duty cycle. An integration window of 0.5 to 1.1 seconds has been used for the final chargeability calculation. Two Gradient Array blocks and 3 Pole Dipole lines were read on the Packsaddle Prospect. Gradient Array was read at 50m dipole spacing with 100m line spacing, Pole Dipole lines were read using 100m dipole spacing using GDA94 Zone 53, see figure 27, and **See Appendix 5** for the IP results.

An analysis of the results initially proved discouraging as there were no anomalously high chargeability readings. This suggested minimal sulphide mineralisation. The resistivity results indicated the possible presence of a couple of breccia zones. IP has not always been successful in highlighting breccia pipes in the nearby Redbank Copper mining lease. Gulf Mines' survey was therefore inconclusive.

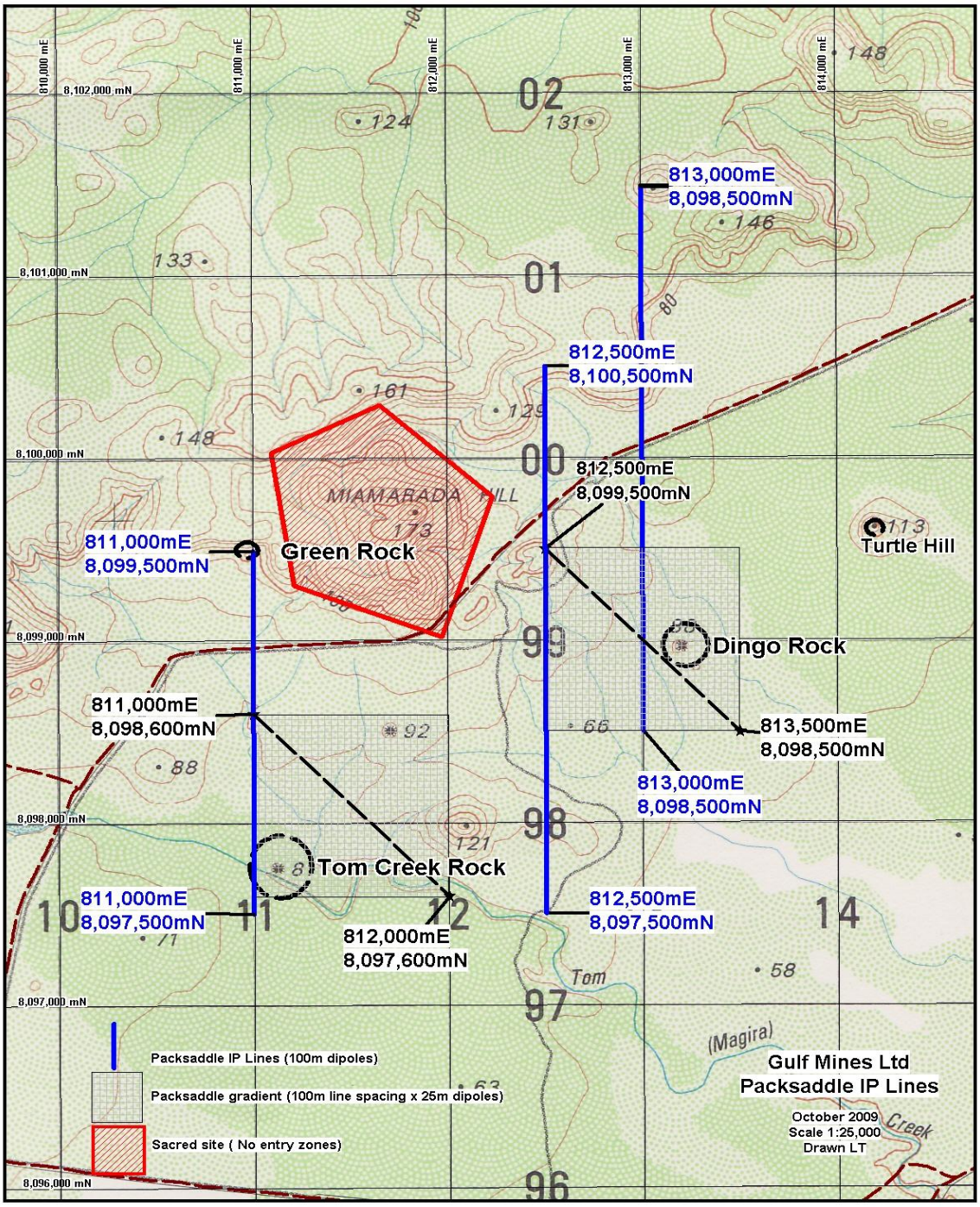

Fig 26_ Packsaddle Prospect _ IP survey

Geological Mapping

Geological mapping for the period was focused on reconnaissance in the Packsaddle Dome area and in the Debbil Debbil Joint Venture area. Detailed prospect maps were then produced for Vulcan, Dianne, and a number of small breccia pipes in the Packsaddle Dome area.

Prior to field work, a satellite photo of the Packsaddle Dome area was used to pinpoint small sharp knolls in the hope that these represented more prominently outcropping mineralised trachytes breccia bodies. Follow-up reconnaissance work visited these locations to determine if they were in fact breccia pipes. The majority were not, but in general were small resistive outliers of nearby more extensive sedimentary escarpments. A very small number were minor trachyte or breccia bodies. Of these, one or two displayed traces of copper mineralisation, and were included in the mapping. **See Appendix 6** for copies of the fact maps.

The noted copper prospect at Vulcan was visited and mapped, however no sign of historical workings or copper mineralisation could be found. Unsystematic use of NITON showed elevated Cu, so the area may have once been recognized as geochemically anomalous in copper, so designating it a “prospect”. Alternately it may be incorrectly located on the government geological map, and actually be a couple of kilometres away. It was found that anticlines generally coincided with topographic spurs in the area. This is often not the case in geology, so it was concluded that the more resistive sediments overlying an unconformity lead to an inverted topography as the unconformity was gradually exposed.

Some structural understanding of the Dianne prospect was also gained by the mapping. Copper mineralisation was obvious in the area, and at least two past efforts at mining it have occurred. Past drilling has not specifically targeted this prospect, but instead the extension of the McGuiness Uranium Prospect to the south west. This prospect has not been sufficiently explored to discount its potential entirely although the host structure appears relatively narrow, and without obvious mineralisation along strike from the workings.

PROPOSED EXPLORATION

The proposed exploration includes further detailed geological mapping, regional mapping, soil surveys, and geophysical surveys and drilling. It is envisaged that this effort may be enhanced with the assistance of a joint venture partner.

CONCLUSION

Exploration in this tenement has provided interesting results with many areas requiring further exploration. Both LCR and HRM remain committed to field exploration for EL10335 during the coming year.

EXPENDITURE (Combined for Lagoon Creek Resources and Hartz Range Mines)

Please see attached Expenditure Form.

REFERENCES

Ahmad M and Wygralak AS 1989, 1:250000 Metallogenic Map Series. Explanatory notes and mineral deposit data sheets. Calvert Hills SE 53-08, NT.

Jackson MJ, Muir MD and Plumb KA 1987, Geology of the southern McArthur Basin, Northern Territory, BMR Bulletin 220.

Appendix 1

Lagoon Creek Resources Scintillometer Data

Figure 4 - Lagoon Creek Resources Scintillometer Survey_Target 1.pdf
Target 1 - Sample points completed_2_.txt
Figure 5 - Lagoon Creek Resources Scintillometer Survey_Target 2.pdf
Target 2 - Sample points results_final_2.txt
Figure 6 - Lagoon Creek Resources Scintillometer Survey_Target 3.pdf
Target 3 - Sample points complete_2.txt
Figure 7 - Lagoon Creek Resources Scintillometer Survey_Target 4.pdf
Target 4 - Sample points completed_2.txt
Figure 8 - Lagoon Creek Resources Scintillometer Survey_Target 5.pdf
Target 5a - Sample points complete_2.txt
Figure 9 - Lagoon Creek Resources Scintillometer Survey_Target 6.pdf
Target 5b - Sample points_2.txt
Figure 10 - Lagoon Creek Resources Scintillometer Survey_Target 7.pdf
Target 6 - Sample points complete_2.txt
Figure 11 - Lagoon Creek Resources Scintillometer Survey_Target 8.pdf
Target 7 - Sample points completed_2.txt
Figure 12 - Lagoon Creek Resources Scintillometer Survey_Target 9.pdf
Target 9 - Sample points complete 7July09_2.txt
Figure 13 - Lagoon Creek Resources Scintillometer Survey_Target 10.pdf
Target 10 - Sample points completed_2.txt
Figure 14 - Lagoon Creek Resources Scintillometer Survey_Target 11.pdf
Target 11 – Sample points complete_2.txt

Appendix 2

Lagoon Creek Resources Gamma Graphs

Fig 16_ NTDD10-001_GammaGraph.pdf
Fig 17_ NTDD10-002_GammaGraph.pdf
Fig 18_ NTDD10-003_GammaGraph.pdf
Fig 19_ NTDD10-004_GammaGraph.pdf
Fig 20_ NTDD10-005_GammaGraph.pdf
Fig 21_ NTDD10-006_GammaGraph.pdf
Fig 22_ NTDD10-007_GammaGraph.pdf
Fig 23_ NTDD10-008_GammaGraph.pdf
Fig 24_ NTDD10-0011_GammaGraph.pdf

Appendix 3

Drilling by Lagoon Creek Resources in 2010

Gulf Mines_Hole Summary.txt

Appendix 4

Geochem _ Soil and Rock Sample Results

Gulf Mines Rock Chip Results_REDUCED_24Feb10_2.txt
Gulf Mines Soil Sample Results_24Feb10.txt
Niton_11_Nov_09_edited.txt
Niton_Green_Rock_West_Soils_Jul09.txt

Appendix 5

Hartz Range Mines Geophysics_IP Survey

Fig 27 50m Gradient Array Block 1.pdf
Fig 28 50m Gradient Array Block 2.pdf
Fig 29 100 meter Pole-dipole IP/Resistivity Line 811000mE.pdf
Fig 30 Model resistivity with topography Line 811000mE.png
Fig 31 100 meter Pole-dipole IP/Resistivity Line 812500mE.pdf
Fig 32 Model resistivity with topography Line 812500mE.png
Fig 33 100 meter Pole-dipole IP/Resistivity Line 813000mE.pdf
Fig 34 Model resistivity with topography Line 813000mE.png

Appendix 6

Map 1	Dianne Fact Map_Geology
Map 2	Dianne Structural Interp.
Map 3	East of Heapsa_Geology
Map 4	Heapsa_Geology
Map 5	Hill_Geology
Map 6	Vulcan Fact Map_Geology
Map 7	Vulcan Folds & Cretaceous Block Diagram