

WILLIAMSFORD EL 48/2011 ANNUAL REPORT

FOR THE PERIOD ENDING 4TH JUNE 2014

Author: S. P. Maloney

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Submitted By: Neil Rankine

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Rosebery Report No:

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APPENDICES

Appendix A:	CROSS SECTION OF WSP16
Appendix B:	DIAMOND DRILL LOG FOR WSP16
Appendix C:	RESEARCH THESIS: CORRELATIONS AND EXPLORATION SIGNIFICANCE OF THE NATONE VOLCANCIS, ROSEBERY GROUP, WESTERN TASMANIA

DIGITAL DATA

Product	Format
Drillhole data; collar-survey-lithology-assay	<i>.csv</i>
Report and Appendices	<i>.pdf</i>

1 SUMMARY

Work completed during the reporting period included drilling of one diamond drillhole which was collared on MMG's adjacent licence to the east (EL10/2011) but drilled predominantly in the Williamsford EL. A graduate diploma study through the University of Tasmania was also completed on the Natone Volcanics. The minimum expenditure commitment of \$145,000 for the first two years of the licence has been met.

2 INTRODUCTION

EL 48/2011 Williamsford conjoins with the western edge of the Rosebery Mine lease. The tenement is located just to the west of the of Rosebery township (Figure 1). Access to the project area is from the Murchison Highway via the Williamsford road and various tracks. EL48/2011 is coincident with state forest under management of Forestry Tasmania and administered under the Forestry Act (45 of 1998). EL 48/2011 is a 23.5 km² Exploration Licence the tenement was granted on the 3rd July August 2012 for a 5-year period. MMG have committed to an expenditure commitment of \$145,000 in the first two years.

Recent diamond drilling by MMG to the north of the Rosebery Mine Lease has intersected encouraging mineralisation west of the Rosebery Fault. These results have subsequently led to a re-appraisal of the prospectivity for VMS style deposits west of the Rosebery Fault. A new prospective package of rocks now lies between the Marionoak and Rosebery Faults, the majority of which is contained within EL 48/2011.

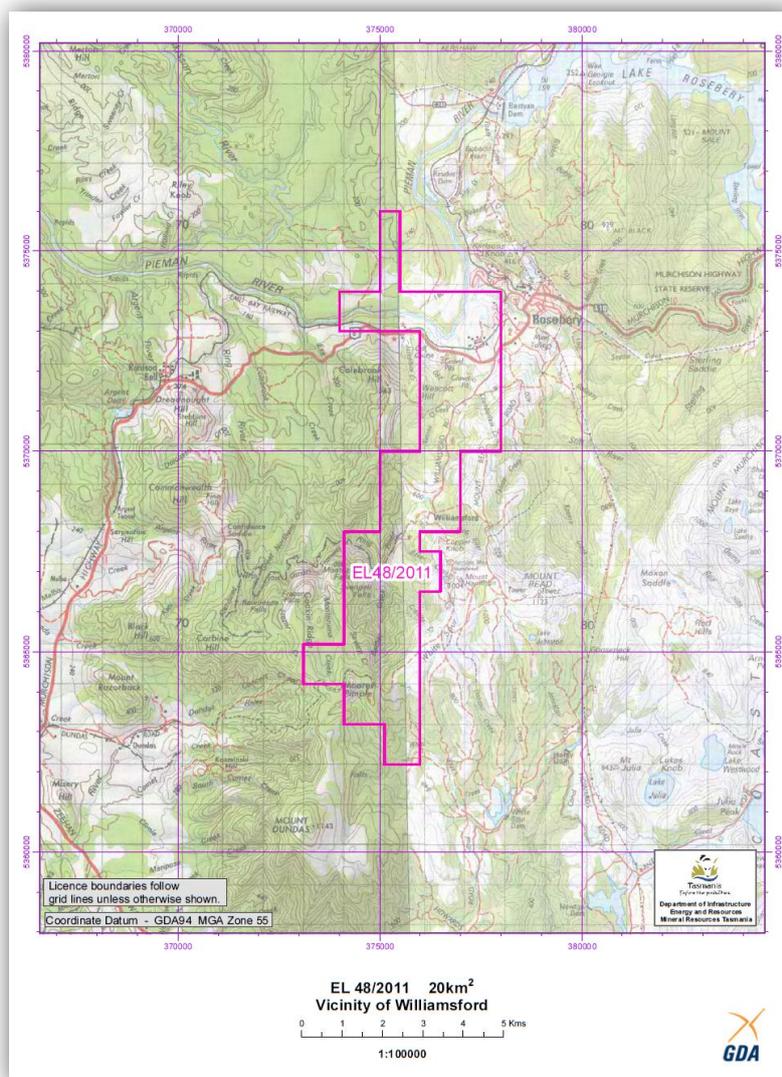


Figure 1: Location of EL 48/2011 Williamsford

3 GEOLOGY

The geology of EL 48/2011 is dominated by two major structures – the Rosebery Fault and Marionoak Fault. The intervening rocks – are referred to as the Rosebery Group. The “Rosebery Group” west of the Rosebery fault includes rock packages that have previously been correlated with the White Spur Formation, the Owen Conglomerate, the neoproterozoic Cleveland-Waratah association are of uncertain affinities (e.g., the Salisbury Conglomerate, the Westcott Argillite and the Natone Volcanics) and although the area has been the subject of previous studies (Campana and King, 1963; Green, 1983; Lees, 1987, Corbett and Lees, 1987, Parfrey, 1993), little work has been completed in recent years. In the western part of this area are a north-south trending, approximately 170m wide band of “Felsic Tuffs” which extend from the Pieman River, in the north and are truncated by the Rosebery Fault in the vicinity of the Jupiter Prospect, that were called the Natone Volcanics by Campana and King (1963). As described in the literature (Green, 1981; Lees, 1987, Parfrey, 1993) the Natone Volcanics are lithologically, and geochemically (Parfrey, 1993) similar to the White Spur Formation, and thus may be part of the MRV and hangingwall to the Rosebery ore position. However, more recently they have been included in the “Marine Owen Group” by Corbett (2004). Although the overall distribution of the Natone Volcanics is well defined their internal structure, contacts with enclosing units, provenance and potential correlations are poorly understood.

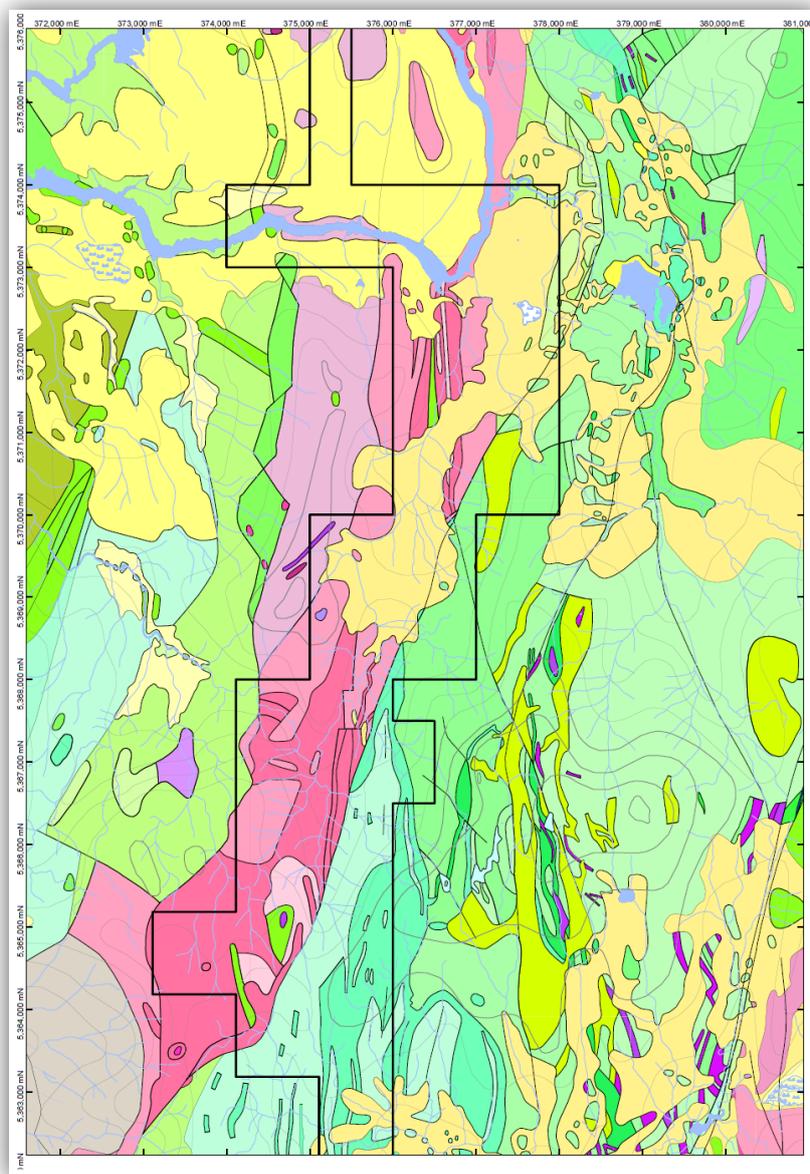


Figure 2: MRT 1:25K geology with EL 48/2011 – major pink units striking NNE are rocks west of the Rosebery Fault

4 WORK COMPLETED (YEAR 2)

4.1 DIAMOND DRILLING

Drillhole WSP16 was targeting a Rosebery-Hercules style VMS deposit at the contact of the White Spur Formation and Central Volcanic Complex (Rosebery/Hercules footwall pumice breccias).

The drillhole was collared just outside the Williamsford EL in the very south of the tenement (Figure 3), however, it was drilled towards the west, and therefore only 70m of the 857m drillhole is outside the Williamsford tenement. WSP16 targeted the mapped anticline to the west of WSP13 which had tested the related syncline. Drillhole WSP13 also intersected a ~20m package of host rocks which is one of the thickest intersections at the White Spur prospect. Mapping and drilling in the area suggested that the anticline should bring the CVC/WSF contact to a reasonable depth of 400-500m. Although bedding/cleavage relationships suggested WSP16 drilled very close to hinge of the anticline, a large unconformity was present at the CVC/WSF contact at 566.2m, potentially missing 100-200m of stratigraphy. Alteration of the CVC rocks was weak, dominated by pink albite-silica alteration. A more detailed summary log is provided below in Table 1.

Drill collar, survey, assay and geological information are included as appendices A-B and as digital data.

Table 1: Summary Log WSP16

FROM	TO	DESCRIPTION
0.0m	285.7m	WSF – interbedded greywacke and lithicwacke turbidites of the upper White Spur Formation.
285.7m	438.4m	WSF – crystal rich mass flow unit with a 40m mudstone top. The mass flow is composed of 20-25% feldspar and 2-5% Quartz crystals. Clasts composition includes; mudstone clasts up to 100cm, porphyritic rhyolite clasts, white/grey siliceous clasts and abundant pumice.
438.4m	566.2m	WSF – lithic and pumice rich mass flow unit. Unit is topped by approximately 10m of mudstone that becomes a fine siltstone to 520m, gradually coarsening downhole. The mass flow does not develop a coarse clast dominant base due to a sharp contact at 566.2m. This contact is interpreted as a unconformity, possibly representing an erosional time gap.
566.2m	857.3m	CVC – overall this is a feldspar crystal rich pumice breccia with variable pink silica-albite alteration throughout. Compositionally, it is dominated by wispy tube pumice, feldspar crystals and occasional dark bands of fiamme pumice. The black shale and host rocks were missing above the CVC (presumably eroded off). From 608.6-611.7m are grey/buff coloured clasts up to 30cm which were subsequently confirmed by geochemistry to be of a basaltic composition. A rhyo-dacite porphyry intrusive is apparent from 629.6-635m; however, this is possibly an alteration effect as the lower contact is difficult to determine.

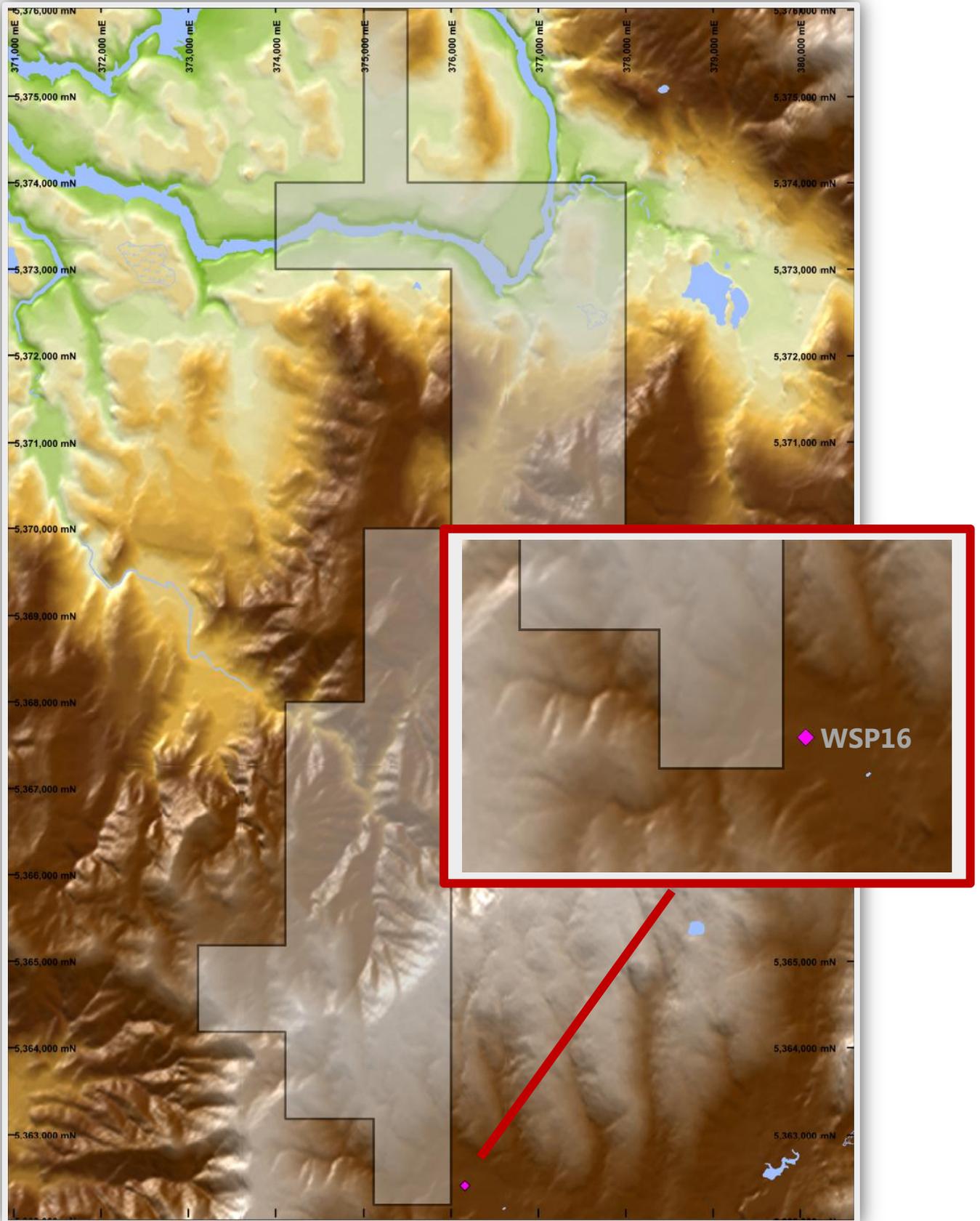


Figure 3: Location of the drillsite for WSP16 (pink diamond) in the far south of the tenement

4.2 EXTERNAL UNIVERSITY OF TASMANIA STUDY

A research thesis entitled “*Correlations and Exploration Significance of the Natone Volcanics, Rosebery Group, Western Tasmania*” was completed under the fulfilment of a Graduate Diploma by Wayne Baker of UTas (Appendix C). His data was gathered from logging and sampling of two drillholes along with minor outcrop mapping and sampling.

Key findings from the study were correlating the Natone Volcanics to the middle White Spur Formation, and a high precision U-Pb zircon date of 498.3 ± 0.8 Ma via CA-TIMS method.

A second study, also focused on the geology west of the Rosebery Fault was not completed by the student.

5 CONCLUSIONS & RECOMMENDATIONS

Recent drill intersections have highlighted the prospectivity for VMS style mineralisation in the package of rocks between the Rosebery and Marionoak faults, colloquially known as the “Rosebery Group”. A research thesis undertaken by a University of Tasmania student has provided geochemical and geochronological evidence that at least some of these rocks can be correlated to units within the middle White Spur Formation.

The south-east portion of the tenement contains the *actual* rocks of the White Spur Formation. Drillhole WSP16 tested the WSF/CVC contact for a Rosebery-Hercules style VMS deposit. No mineralisation or significant alteration was intersected. The contact was erosional with units of the WSF missing and no host rock or black shales present at the top of the CVC. The disappointing geology and alteration combined with a deeper than expected depth to target downgrades this area of the WSF within the Williamsford EL.

Future work for the coming year will build on the research commenced by Baker (2013), this will include;

- Geochemistry (rock chip and drillcore)
- SWIR analysis (rock chip and drillcore)
- Geological mapping
- Re-logging of historic drillholes

The geochemistry and SWIR analysis will fit in with the on-going sampling that is occurring across the Rosebery Mine district.

6 ENVIRONMENT & REHABILITATION

There were no environmental disturbances during the reporting period. The drillsite and related impacts from drillhole WSP16 were wholly contained within EL 10/2011, please refer to the 2013 White Spur Creek Annual Report for more information.

7 EXPENDITURE

A total of \$231,866 was spent on the tenement between 02-06-2013 and 01-06-2014. A detailed expenditure statement is given below in Table 2.

Table 2: Expenditure for EL 48/2011 Williamsford Year 2

ITEM	\$ AUD
TOTAL COSTS	231,866.71
PERSONNEL	40,734.45
CONTRACT FIELD SUPPORT	
GEOSCIENCE CONSULTANTS	
TRACK CUTTING & GRIDDING	5,287.12
GEOCHEMICAL & ASSAYING	
DRILLING	173,923.12
GEOPHYSICS	
OTHER CONTRACTORS	
STORES & SUPPLIES	324.49
VEHICLES, PLANT & MAINTENANCE	
LAND & ENVIRONMENT	
EQUIPMENT HIRE	
DEPRECIATION, OFFICE & SUNDRY	11,597.53

Total expenditure on the tenement for the first 2 year period was \$263,999.

8 REFERENCES

Baker, W., 2013. Correlations and exploration significance of the Natone Volcanics, Rosebery Group, Western Tasmania. Unpub. BSc (Grad Dip) thesis, University of Tasmania, Hobart, 62p.

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