



ACN 124 780 276

ARGENT MINERALS LIMITED

Level 2, 66 Hunter Street,

Sydney, NSW 2000

Australia

EXPLORATION LICENCE 9/2016
QUEENSBURY, TAS

THIRD ANNUAL REPORT
TO: 16 JANUARY 2020

Report by:

Matthew Robertson

1:250,000 Map Sheets

Geology of Southwest Tasmania, 2011

Keywords: Queensbury, Mt. Read Volcanic Belt, Volcanic Hosted Massive Sulphide, base metals

Report Type: Queensbury Project Annual Report 2020

Authority Number: Exploration Licence EL9/2016

Authority Holder: Argent Minerals Limited

Grant/Expiry Dates: 16 January 2017 / 16 January 2022

Project Operator: Argent Minerals Limited

Project Name/Location: Queensbury/Queenstown, Tasmania

Reporting Period: 17 January 2019 to 16 January 2020

Report Date: 13 January 2020

Author(s): Matthew Robertson

Contact Details: Argent Minerals Limited
Level 2, 66 Hunter Street, Sydney, NSW 2000, Australia
Phone: (02) 9300 3390
Email: matthew.robertson@argentminerals.com.au

Verification Signatures:



[Matthew Robertson]

TABLE OF CONTENTS

LIST OF TABLES.....	iii
LIST OF FIGURES.....	iii
LIST OF APPENDICES	iii
LIST OF DIGITAL FILES.....	iii
EXECUTIVE SUMMARY	4
1 BACKGROUND.....	4
1.1 Location and access	4
1.2 Regional geology.....	4
1.3 Local geology.....	4
1.4 Authority history and previous exploration	6
1.5 Exploration rationale	6
1.6 Exploration philosophy and objectives	6
2 EXPLORATION COMPLETED IN REPORTING PERIOD	8
2.1 Continued review of historical data and previous exploration.....	8
2.2 Mapping, stream and soil sampling	8
2.3 Activities environmental impact.....	8
2.4 Expenditure during the reporting period.....	8
3 RESULTS AND DISCUSSION.....	9
3.1 Continued review of historical data and previous exploration.....	9
3.2 Mapping, stream and soil sampling	9
3.3 Activities environmental impact.....	9
3.4 Expenditure during the reporting period.....	9
4 RECOMMENDATIONS AND FUTURE EXPLORATION WORK	9
5 ENVIROMENTAL MANAGEMENT	9
6 REFERENCES.....	10

LIST OF TABLES

Table 1. Summary of authority history and previous exploration 6

LIST OF FIGURES

Figure 1. EL 9/2016 Tenement of the 1:100,000 WTRMP Mount MRV Geological Map (Corbet, 2002) 5
Figure 2. EL9/2016 tenement location / areas of activity on the NW coast of Tasmania..... 7

LIST OF APPENDICIES

Appendix 1. Annual rental return

LIST OF DIGITAL FILES

EL092016_202001_01_Report.pdf

EL092016_202001_02_Appendix1.pdf

EXECUTIVE SUMMARY

The Queensberry Exploration Licence (EL) 9/2016 is located 15km northeast of Queenstown, Tasmania.

The exploration strategy applied by Argent Minerals Limited at EL 9/2016 is primarily focused on the targeting of volcanic hosted massive sulphide (VHMS) mineral systems within the Mount Read Volcanics (MRV) belt of western Tasmania.

During the reporting period 17 January 2019 to 16 January 2020, Argent Minerals Limited conducted several exploration activities totaling \$12,479.65, which included:

- Continued review of historical data and previous exploration.

Results have proven promising and the Company commits for the future 2020 reporting period:

- Commencement of deferred 1:10,000 geological and structural field mapping
- Commencement of deferred stream sampling campaign and analysis.
- Commencement of deferred soil sampling campaign and analysis.

1 BACKGROUND

1.1 Location and access

The Queensbury Project is located approximately 15km northeast of Queenstown, Western Tasmania and positioned within the Mt Dundas Regional Reserve which is open to exploration under the Mineral Resources Development Act 1995.

Main access on to the EL9/2016 tenement is via the Zeehan-Strahan link, Henty Road (B27), highlighted in figure 1. There is a 9km long gated track (Queensbury Mine Track) which finishes at the historic Queensbury Mine workings in the approximate centre of the tenement. The gate key is held by Parks and Wildlife Ulverstone Office and the track is characterised by a steep rise onto the Professor Plateau with deeply incised gutters, well-constructed gravel roads across the open button grass plains, and variable soft marshy to hard gravel sections through the temperate rainforest descents/ascents into Queensberry site.

Datum used in this report is GDA 94.

1.2 Regional geology

The geological history of Tasmania has had four major economic mineralisation episodes; Iron and magnesium during the Proterozoic ("Wichham" Orogeny); Basemetals/gold/PGE during the Cambrian (Tyennan Orogeny); Gold/base metal during the Devonian (Tabberabberan Orogeny) (McNeill, 2012) and; Triassic/Tertiary coal (Seymour, Green and Galver, 2006). The VHMS Cambrian and Devonian mineralisation episodes are the focus of Argent Minerals exploration activities and will be summarised in more detail in Section 1.3.

In brief, Western Tasmania's geological basement is made up of Precambrian low-grade (up to greenschist facies) meta-sediments and with minor high-grade (up to eclogite facies) of mafic meta-igneous metamorphic assemblages. These basement units are overlain by volcanic and sedimentary rocks of the early Cambrian Crimson creek formation and late Cambrian Mt Read Volcanics.

Structurally, the Cambrian period's Tyennan Orogeny is comprised of three dominate phases; an Early Cambrian syn-collision convergence; a Mid Cambrian MRV N-S compression, E-W extension and graben formation; and Late syn-collisional Cambrian E-W compression and basin inversion (McNeill 2012).

1.3 Local geology

Structurally, the Queenberry region and tenement is structurally dominated by the Firewood Siding Fault

(FSF) system which is estimated to extend from Queenstown to Trial Harbour. The FSF typically trends E-W and is offset by several NW and NNE faults (McNeill 2002). In reference to the FSF, EL 9/2016 can be separated into three lithological domains; Devonian Bell Shale, an Ordovician sedimentary sequence correlated to the Denison Group and the Cambrian Tyndall Group (McNeill 2002).

South of the FSF: The Devonian Bell Shale shelf-facies shale unit consist of interbedded quartz sandstone and mudstones, with minor limestone (Seymour, Green and Calver, 2006).

North of the FSF: Ordovician fossils have been found within the marine sedimentary sequences of quartzose conglomerate-sandstone-siltstones and have been shown to have an age that correlates with the Denison Group (ASUD 2017, McNeill 2002).

East of the FSF: The Tyndall Group lithologies are composed of volcanoclastic breccia, conglomerates and sandstones with minor andesitic lavas and intrusions (White & McPhie, 1996). This dominantly submarine, volcano-sedimentary sequence occurs in the upper part of the Mt Read Volcanics (MRV) and is the most important metallogenic event in Tasmania (Seymour, Green and Calver, 2006) and as such highly prospective for VHMS deposits. The Tyndall Group is divided into two formations; the underlying Comstock Formation encompassing resedimented crystal-rich volcanoclastic sandstone and breccia, rhyolite lava dome complexes and related pyroclastics; and the covering Zig Zag Hill Formation containing polymict volcanoclastic conglomerates, graded-bedded sandstone and infrequent laminated mudstones (ASUD 2017). These MRV rocks are highly mineralised and host major polymetallic VHMS deposits such as Hellyer and Rosebery, and volcanogenic copper-gold deposits such as Mt Lyell, and the structurally controlled high-grade Henty gold mine.

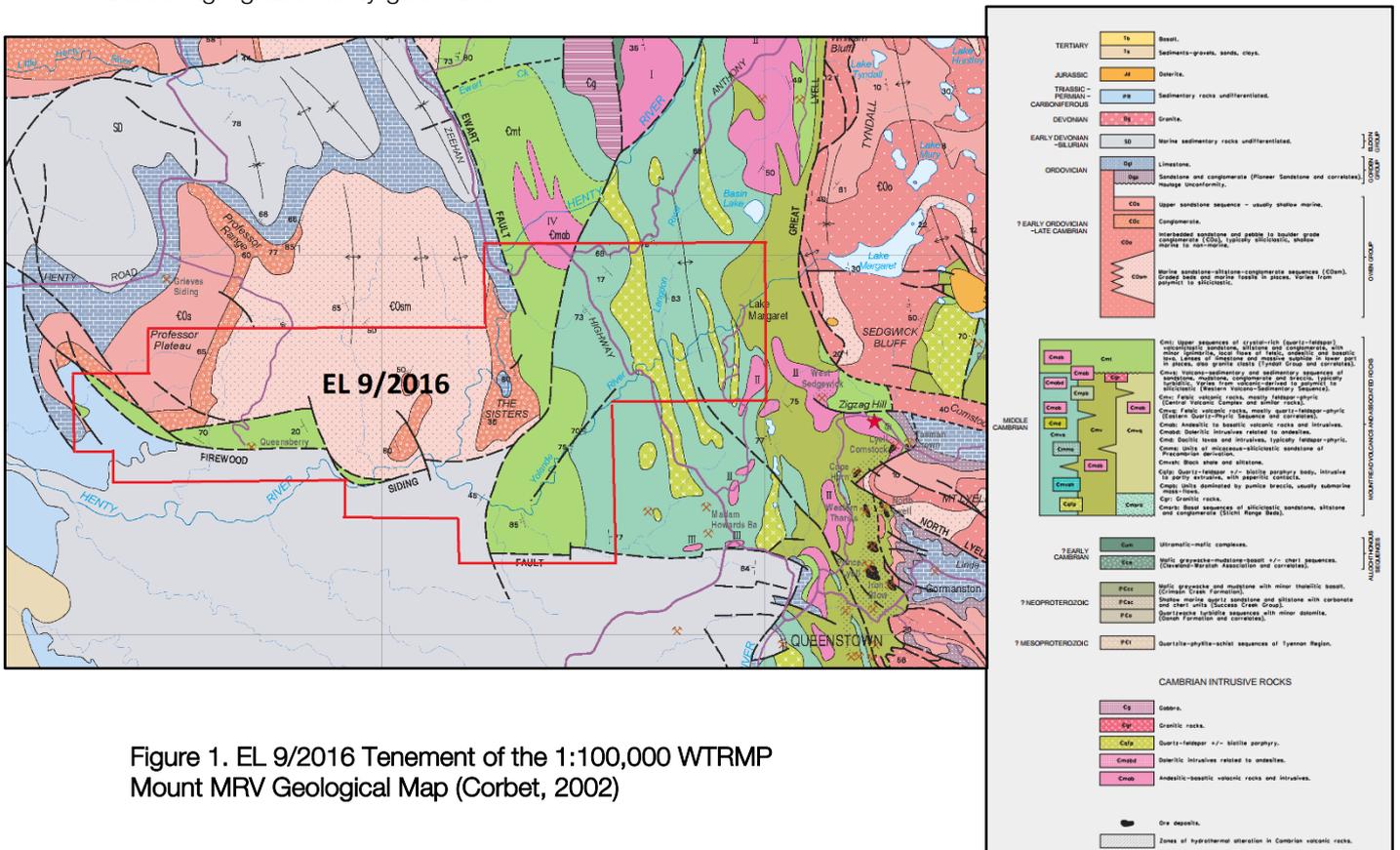


Figure 1. EL 9/2016 Tenement of the 1:100,000 WTRMP Mount MRV Geological Map (Corbet, 2002)

1.4 Authority history and previous exploration

EL9/2016 was granted to Argent Minerals on 16 January 2017, for a period of six years with a minimum expenditure of \$20,000 over the first two years.

The Queensbury Mine lodes were discovered during the early years of exploration of the Western Division, and extracted via shallow adits by R. McKimmie et al from 1891. The deposit consisted of 4 lodes with an additional lode located further east and all typically contained pyrite, arsenopyrite, sphalerite, chalcopyrite, galena, tetrahedrite and bournonite in a quartz-siderite gangue (McNeill 2002).

The authority history and previous exploration for EL9/2016 is summarised in Table 1.

Company	Licence No.	Period	Exploration activities completed
New Consolidated Gold Fields (a'sia) Pty. Ltd	ML 11/12M66	1968	Line cutting, mapping, rock-chip and soil + stream sediment sampling
New Consolidated Gold Fields (a'sia) Pty. Ltd	ML 11/12M66	1970	Trenching and side cutting, mapping, soil samples, drilling and met work
New Consolidated Gold Fields (a'sia) Pty. Ltd	ML 11/12M66	1981-82	Mapping, drilling, resource estimation
Amoco Minerals Australi	EL 4/78	1983-84	Stream sediment sampling and Aeromagnetic survey
Oceania Tasmania Pty. Ltd.	EL 10/85	1985-86	Mapping and track cutting
Amoco Minerals Australia Company, Electrolytic Zinc Company of Australasia Ltd	EL 4/78	1987-88	Data review and sampling
CRA Exploration Pty. Ltd & Allegiance Mining N.L	EL 34/88	1989-90	Gradient IP survey
Pasminco/Zinifex	EL 11/01	2001-05	Data review, Pb-Isotope analysis, gridding, mapping, soil and rock chip sampling
McDermott Mining Group	EL 4/07	2007-09	Soil and rock chip sampling
Australian Hualong Pty Ltd	EL 19/10	2010-13	aeromagnetic survey, drilling
Argent Minerals Limited	EL 09/2016	2016-present	Data review, site reconnaissance, hylogger

Table 1. Summary of authority history and previous exploration

1.5 Exploration rationale

The MRV is host to several major VHMS deposits (>1 million tonnes) such as Mt Lyell (Cu-Au) and Rosebery (Zn-Pb-Cu) as well as more than thirty sub-million ton VHMS prospects (Large, 1992).

EL 9/2016 Queensbury has the potential to host both Devonian Pb-Zn vein and Zn-Pb-Cu-Au VHMS mineralisation within the MRV. Queensbury will be explored using the blind VHMS concept model based on Pb dating data obtained from McNeill and Skirka (2006) achieving a near Cambrian type signature. Based on prior knowledge of Zeehan mineral field's Oceana Pb-Zn-Ag mine's Pb dating, a concept of exhalative mineralisation or VHMS type mineralisation will be test the area.

1.6 Exploration philosophy and objectives

Argent Minerals Limited is an ASX listed Company focused on creating shareholder wealth through the discovery, extraction and marketing of precious and base metal products within the highly productive Eastern Australian Palaeozoic VHMS geologic terrane (Large et al, 1998).

Argent's strategy to achieve this goal comprises of three key elements; exploration, capital efficiency and production, with exploration featuring as the key immediate driver of growth. The exploration strategy of Argent Minerals at EL 9/2016 is primarily focused on the targeting of VHMS Ag-Pb-Zn-Cu and Au mineraliation similar to what has been previously discovered at the historic Queensbury Mine.

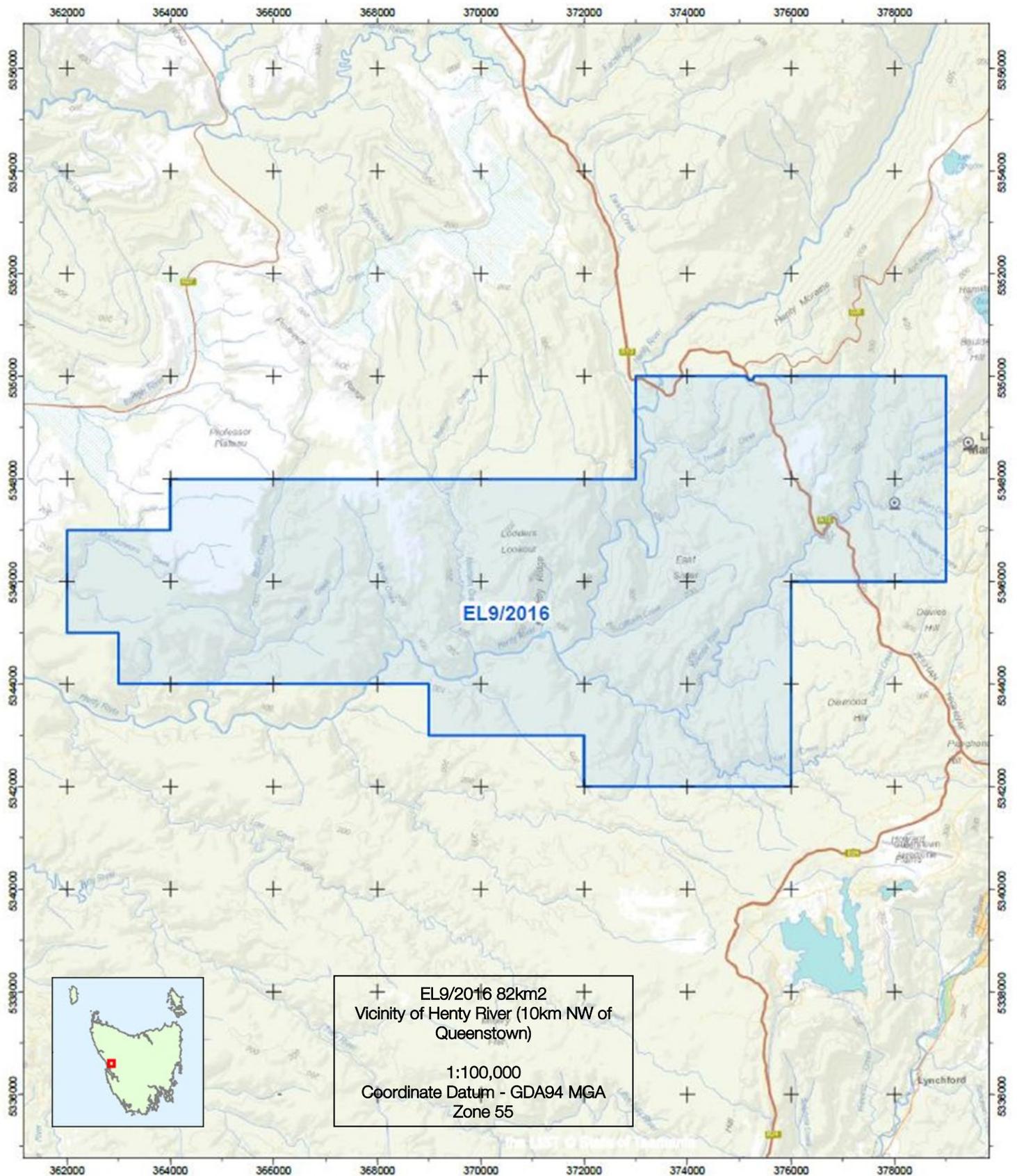


Figure 2. EL9/2016 tenement location / areas of activity on the NW coast of Tasmania

2 EXPLORATION COMPLETED IN REPORTING PERIOD

During the reporting period 17 January 2019 to 16 January 2020, Argent Minerals conducted the following exploration activities (figure 2):

1. Continued review of historical data and previous exploration

Proposed exploration not yet completed:

2. Soil and stream sampling
3. Detailed 1:10,000 geological and structural field mapping

2.1 Continued review of historical data and previous exploration

The titles previous mining efforts date back to the late 1800's where mining of historic Queensberry Mine commenced. More recent and better documented exploration activities have occurred from the 1960's and has now been all reviewed.

2.2 Mapping, stream and soil sampling

Due to a company-wide restructure and project review, mapping, stream and soil sampling have been postponed until 2020.

2.3 Activities environmental impact

All activities undertaken by the Company are designed with minimal environmental disturbance in mind. All disturbances that do occur are rectified with a high standard of rehabilitation as quickly as possible.

2.4 Expenditure during the reporting period

In accordance with s.26 of the Mineral Resources Development Act 1995, the minimum expenditure for the first two years of the licence has been determined to be \$20,000.

For current expenditures and expenditure breakdown, please see the Annual Rental Return (Appendix 1).

3 RESULTS AND DISCUSSION

3.1 Continued review of historical data and previous exploration

The Company has reviewed all known existing data to maximise the Company's budget and the potential for discovery. Much of the past exploration activities were non-invasive geological activities such as mapping, soil sampling and geophysical surveys. From the late 1960's, less than 10 drillholes have been drilled within the tenement. Much of the data was in paper log form with some data sets such as structure or assays either not completed or missing. The data has helped bring insight to the project, however there are concerns with the lack of QAQC data which includes assay method and confidence of results as well as overall hole positioning.

3.2 Mapping, stream and soil sampling

Stream and soil sampling campaign are planned to commence in 2020 around the Queensberry tenement.

3.3 Activities environmental impact

All work undertaken during the reporting period by Argent Minerals was non-invasive and therefore little to no impact on the environment. However, it was noted during field work that remnant mining activities in the area have left an on-going environmental hazard of acid mine drainage and rubbish.

3.4 Expenditure during the reporting period

During the current reporting period of 17/01/2019 to 14/01/2020 (date of report generated) Argent Minerals had a total exploration expenditure of \$12,479.65. This tenements spending has exceeded the 2-year minimum expenditure requirements of \$20,000.00, currently The Company has spent more than \$60,000 in the three years since title granted.

4 RECOMMENDATIONS AND FUTURE EXPLORATION WORK

EL 9/2016 has known mineral deposits and limited exploration justifying further exploration by the Company in 2020. Planned exploration work will encompass:

- Commencement of the detailed 1:10,000 geological and structural field mapping to confirm previous authors observations and improve our understanding of the region.
- Commencement of the deferred stream sampling campaign and analysis.
- Commencement of the deferred soil sampling campaign and analysis.

5 ENVIROMENTAL MANAGEMENT

All exploration activities completed during the reporting period were of low disturbance with no notable environmental impact and therefore subsequently did not require rehabilitation. None-the-less, Argent Minerals endeavours to leave any tenement in its possession in the same condition or better.

6 REFERENCES

- Australian Government- Geoscience Australia, Australian Stratigraphic Units Database (ASUD 2017). Accessed 20/12/2018. http://dbforms.ga.gov.au/pls/www/geodx.strat_units.sch_full?wher=stratno=34165
- Baillie, P.W., and Corbett, K.D., et al., 1977. Strahan, Geological Atlas 1: 50,000 series, Sheet 7913N, Geological Survey of Tasmania, Department of Mines, Hobart.
- Baillie, P.W., Corbett, K.D., and Green G.R., 1985. Geological Survey Explanatory Report – Strahan, Geological Atlas 1: 50,000 series, Sheet 7913N, Geological Survey of Tasmania, Department of Mines, Hobart.
- Corbet, K.D, 2002, 1:100,000 Bedrock Geological Map of Mt Read Volcanic Belt and Adjacent Areas South Darwin Peak to Hellyer. <http://www.mrt.tas.gov.au>
- D. B. Seymour, G. R. Green and C. R. Calver, 2006 The Geology and Mineral Deposits of Tasmania: a summary. Geological Survey Bulletin 72.
- McNeill A. W. 2002. Annual report for the period ending 3rd July 2002, Queensbury (Henty River) EL11/2001. Pasminco Rosebery Mine unpublished report.
- McNeill A. W, 2012, An introduction to western Tasmanian geology and mineralization, MMG Inhouse presentation
- M. J. White & J. McPhie, 1996, Stratigraphy and palaeovolcanology of the Cambrian Tyndall group, Mt Read Volcanics, western Tasmania, Australian Journal of Earth Sciences Vol. 43, Issue. 2,
- Mineral Resources Tasmania (MRT), 2017 Hylogger spectral scanner interpretation. Unpublished report.
- Selley, D., and Meffre, S., 1997. Structure and sedimentology of Middle and Upper Cambrian strata adjacent to the Firewood Siding Fault. Final Report CODES/AMIRA project P291A Structure and mineralisation of western Tasmania, 77-102.
- Veska. L. 2014. Annual report for the period ending 8 November 2013, Lode Creek EL19/2010. Australian Hualong Pty Ltd unpublished report.