

EL43/1992 Melba Flats
Annual Report 2022

Owned by Allegiance Mining Pty Ltd (Receivers and
Managers Appointed) (Subject to Deed of Company
Arrangement) (“Allegiance”)
Operated by Avebury (Operating) Pty Ltd (“Avebury
Operating”)

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EXECUTIVE SUMMARY

During the tenement year, four diamond drillholes were completed on EL43/1992 for a total of 250.4m to test a historic self-potential (SP) anomaly for nickel mineralisation near the old Melba Flats Scout Camp. All 4 holes intersected pyritic-graphitic black shales and massive greywackes of the Crimson Creek Formation; however, no gabbro or nickel mineralisation was intersected. The pyritic black shales, which occur close to the surface, are considered the source of the SP anomalies in this area. The expenditure for the year was \$112,511 (exc. GST).

Receivers and Managers were appointed to Allegiance on 26 November 2021. The Receivers and Managers have taken control of all operations and remain supported by the secured creditor whilst assisting to effectuate a Deed of Company Arrangement (DOCA) proposed and executed for Allegiance.

As part of the DOCA requirements, Avebury Operating was appointed as mine operator of the Avebury Nickel Mine on 1 April 2022. MRT was notified of this change through lodgement of forms across the various exploration/mining licences held.

Mallee Resources Limited will ultimately obtain control of Allegiance and Avebury Operating upon effectuation of the DOCA, which is scheduled to complete on 30 June 2022.

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DIGITAL APPENDIX

Appendix 1. MF112, MF113, MF114, MF115 core photos.

To be submitted as a USB to MRT.

FILE LISTING

| Exploration Work Type | Filename | File format |
|----------------------------------|---|-------------|
| Report (this file) | EL431992_202204_01_Report.pdf | pdf |
| Drilling | EL431992_202204_02_SL_1.xls | xls |
| | EL431992_202204_03_DS_1.xls | xls |
| | EL431992_202204_04_DL_1.xls | xls |
| | EL431992_202204_05_Lithologycodes.xls | xls |
| | EL431992_202204_06_Magneticsusceptibility.xls | xls |
| Surface sampling | eg. EL102000_YYYYMM_07_SG_1.xls | xls |
| | eg. EL102000_YYYYMM_08_QAQC_1.xls | xls |
| File Verification Listing | eg. EL431992_202204_FileListing.xls | xls |

1 INTRODUCTION

1.1 EXPLORATION RATIONALE

The primary objective of Dundas Mining Pty Ltd (as primary operant of Allegiance Mining Pty Ltd's tenements) is to add to their nickel inventories as part of the Avebury Nickel Mine re-start project.

1.2 LOCATION AND ACCESS

EL 43/1992 covers 6 square kilometres and is located approximately 6km to the northeast of Zeehan. The license area can be accessed by the Murchison Highway immediately to the east, and by a series of gravel roads and forestry tracks within the tenement.

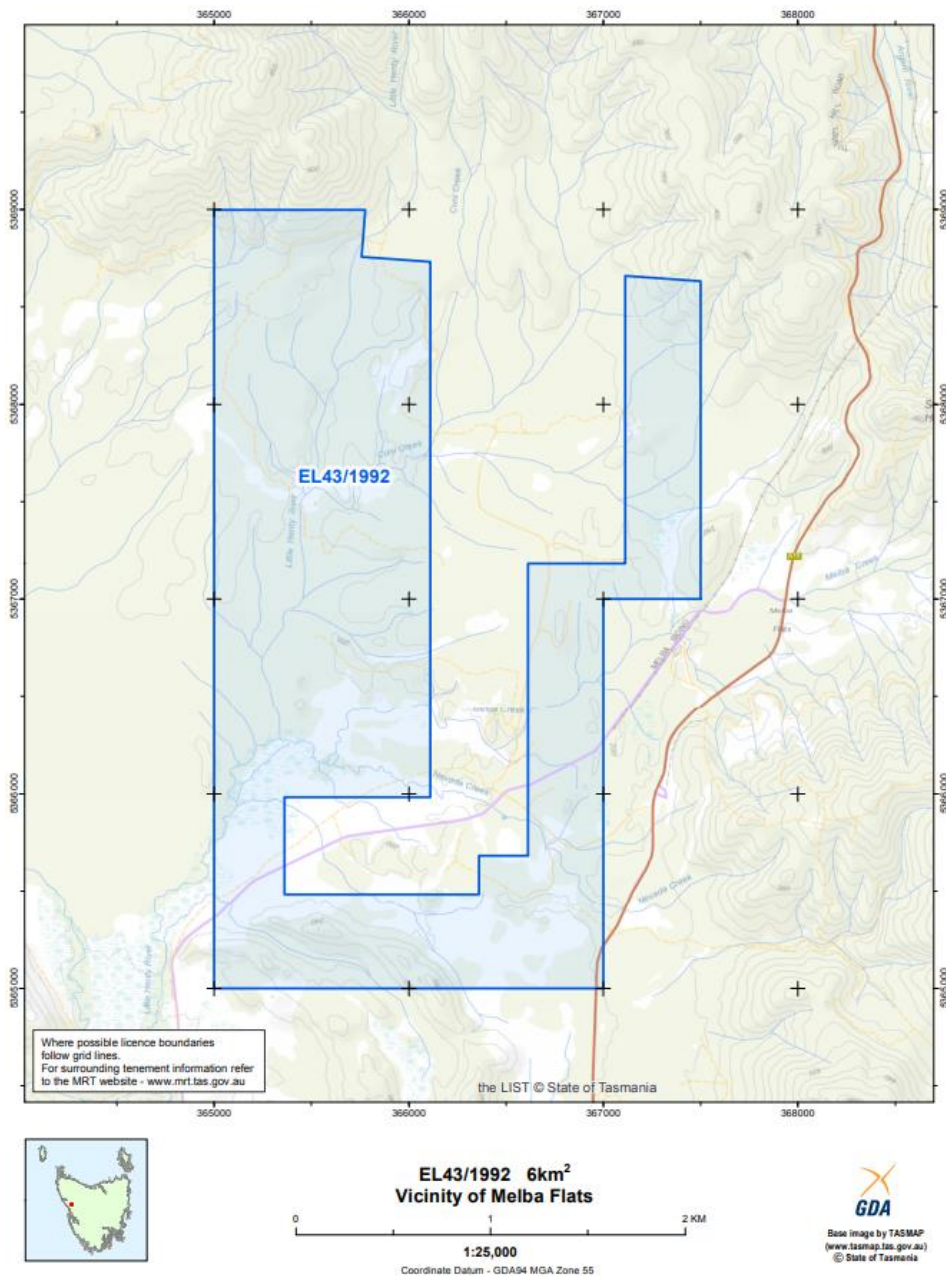


Figure 1. EL43/1992 tenement boundary map.

1.3 LAND STATUS AND USAGE

Land usage within the tenement area is classified as Permanent Timber Production Land Zone managed by Sustainable Timber Tasmania.

1.4 TENURE

EL43/1992 is a category 1 exploration licence, held by Allegiance Mining Pty Ltd and managed by Dundas Mining Pty Ltd (receivers and managers appointed). The tenement was originally granted to CRA Exploration in 1992 and was acquired by Allegiance Mining Pty Ltd in 1997. In 2008, Zinifex Ltd acquired the tenement through the take-over of Allegiance, and later that year merged with Oxiana to become OZ

Minerals, who in turn sold the tenement to MMG Limited in 2009. Dundas Mining Pty Ltd acquired the tenement in 2018.

2 PREVIOUS WORK

Complete examinations and summaries of historic work carried out on the tenement area have been outlined in previous reports. A summary table of activities carried out in the area is below.

Table 1. Summary of all previous mining and exploration in the Melba Flats area.

| Year | Company | Tenement | Activities |
|---------|--|-------------------------|----------------------------------|
| 1893 | | | Discovery |
| 1894 | | | Nickel Reward Workings |
| 1912 | Dundas-Cuni Mining Company | | North Cuni Workings begun |
| | Copper-Nickel Syndicate Prospecting | | Vaudeau workings begun |
| 1914 | Dundas-Cuni Mining Company | | North Cuni Workings closed |
| | | | South Cuni Workings closed |
| | Copper-Nickel Syndicate Prospecting | | Blowfly workings closed |
| | | | Mosquito workings closed |
| | | Vaudeau workings closed | |
| 1926 | Department of Mines & Explosives | | Investigating prospectivity |
| 1929 | | | Genet's working opened |
| | Copper-Nickel Mining Company | | North Cuni workings re-opened |
| 1930 | | | Drilling |
| | Government Department | | Drilling Recommendations |
| 1931 | Copper-Nickel Mining Company | | Genet's workings closed |
| 1932 | | | North Cuni works closed |
| 1933 | Government Department | | Summary Report |
| | | | Work Proposal |
| | | | Economic Evaluation |
| 1938 | Australian Nickel N.L. | | Vaudeau workings re-opened |
| 1940 | Gold Mines of Australia | | Drilling |
| 1948 | Lead Nickel Mining Company | | Vaudeau workings closed |
| 1951 | Bureau of Mineral Resources | | Geophysical Surveys |
| 1952 | Government Department | | Summary Report |
| | Eagle Metals N.L. | | Nickel revival |
| 1953 | | | Drilling |
| 1955(?) | Montana Silver-Lead Company N.L. | | Flotation Tests |
| 1956 | Government Department | | Drilling Report |
| 1956(?) | Montana Silver-Lead Company N.L. | | Flotation Tests |
| 1957 | Bureau of Mineral Resources | | Geophysical Surveys |
| | Government Department | | Geological & Thin Section Report |
| | | | Core Logging Report |
| | | | Core Logging Report |

| | | | |
|---------|----------------------------------|-----------|---|
| | | | Core Logging Report |
| | Montana Silver-Lead Company N.L. | | Drilling |
| 1957(?) | Montana Silver-Lead Company N.L. | | Ore Investigation |
| 1958(?) | | | Drilling Review |
| 1960 | Rio Tinto | | Magnetometer Survey |
| | | | Aerial mag |
| | | | Soil Sampling |
| 1965 | EZ | EL2/1965 | Magnetometer Survey |
| | | | Magnetic Susceptibility Tests |
| | | | Drilling |
| 1966 | | | Drilling |
| 1967 | | | Magnetometer Survey |
| | | | Drilling |
| 1968 | | | Magnetometer Survey |
| | | | Geochemical Surveys |
| 1969 | | | Petrology & Mineralogy |
| 1970 | | | IP-Resistivity Survey |
| 1971 | | | Detailed Geological Mapping |
| | | | Geochemical Soil Sampling |
| | | | Turam Electromagnetic Surveys |
| | | | Magnetometer Surveys |
| 1972 | | | Diamond Drilling |
| | Geochemical Survey | | |
| 1973 | Soil Survey | | |
| | Magnetometer Survey | | |
| 1975 | | SPL127 | Review of Cuni Deposits |
| 1977 | CSR | EL15/1976 | Mineralogical/Geochemical Appraisal |
| | | | Drainage Sampling |
| 1978 | | | Mineralogical Examination and Petrographic survey |
| | | | Bedrock sampling (Auger) |
| 1979 | | | Soil Sampling |
| | | | Drainage Sampling |
| | | | Diamond Drilling |
| 1980 | | | Petrology |
| | | | Soil Sampling (Auger) |
| 1982 | | | Magnetics |
| | | | VLF-EM |
| | | | Infil aeromagnetics |
| 1983 | | | Soil Sampling |
| | Drainage Sampling | | |
| | Magnetics | | |
| | VLF-EM | | |
| | DIGHEM | | |

| | | | |
|------|---------------|---------------|---|
| 1984 | | | Reduction of Licence area |
| | | | Ground Magnetic Survey |
| | | | CSAMT |
| | | | VLF-EM Resistivity |
| | | | Geochemistry |
| 1985 | | | Fixed Wing Magnetic Survey |
| | | | Ground Magnetic Survey |
| | | | Diamond Drilling |
| | | | Soil Sampling |
| | | | IP Survey |
| 1986 | | | Licence renewed |
| 1987 | | | Relinquished Licence |
| | | | Minor thin section work |
| 1988 | Tas Dep Mines | SR1987 No 216 | Gravity Survey |
| 1993 | | | Fixed Wing Airborne TEM (QUESTEM) Survey |
| | | | Review of Tasmanian Mines Department Gravity Data |
| | | | Soil Sampling |
| | | | Rock Chip Sampling |
| | | | Petrology |
| 1994 | CRAE | | Diamond Drilling |
| | | | Petrology |
| | | | Whole Rock Geochem (Dolerite) |
| | | | Rock Chip Sampling |
| | | | Soil and Bedrock sampling (Auger) |
| | | | Bedrock sampling (Wacker) |
| | | | Ground PROTEM Survey |
| | | | Ground Magnetic Survey |
| | | | IP-Resistivity Survey |
| | | | Heliborne magnetic and Radiometric Survey |
| 1995 | | EL43/1992 | Drilling review |
| | | | Diamond Drilling |
| | | | Soil Sampling |
| | | | Honours Project (Phil Greenhill) |
| | | | Heliborne magnetic Survey |
| 1997 | Rio Tinto | | Application for partial Licence surrender |
| | | | Joint Venture agreement with Allegiance |
| 1998 | MRT | | Archaeological Survey |
| 1999 | | | |
| 2000 | Allegiance | | Diamond Drilling |
| | | | Downhole Geophysics |
| | | | Geophysics |
| | | | Geophysics Interpretation Report |
| | | | Petrology |
| | | | Aerial Photography |

| | | | |
|------|-----------|------------------------|--|
| | | | Photogrammetric Plans |
| 2001 | | | Diamond Drilling |
| | | | Gradient Array IP Survey |
| | | | Grid Establishment |
| 2002 | | | Diamond Drilling |
| | | | Trenching |
| | | | Sampling |
| | | | Outcrop Mapping |
| 2003 | | | |
| 2004 | | | Diamond Drilling |
| 2005 | | | Resource Estimation |
| | | | Petrology |
| | | | Drill Hole Collar Surveys |
| 2006 | | | Gradient Array IP Survey |
| | | | Evaluation of Geophysical Data |
| | | | Data Review |
| 2007 | | | Diamond Drilling |
| 2007 | | | Mining Lease Application |
| 2008 | | EL43/1992, ML2/2007 | Diamond Drilling |
| | | | Trenching |
| | | | Aerial Photography |
| 2009 | OZ | | Diamond Drilling |
| 2010 | MMG | RL5/2009 | Geochemical Investigation |
| | | EL43/1992 | 3D Magnetic data Inversion |
| | CRH | EL20/2002 | Soil Survey ("Melba Flats" South), Airborne EM |
| 2011 | GHD (MMG) | EL43/1992, RL5/2009 | Botanical survey and fauna habitat assessment |
| | | RL5/2009 | Aerial LIDAR |
| 2012 | MMG | EL43/1992, RL5/2009 | Aerial LIDAR |
| | | EL43/1992 | Minor geochemical work |
| 2014 | | EL43/1992, RL5/2009 | Aerial LIDAR |
| | | | Photogrammetric Survey |
| 2015 | | | Masters Project Completion |

3 EXPLORATION COMPETED DURING THE REPORTING PERIOD

In the 1950s the Bureau of Mineral Resources (BMR) carried out an SP geophysical survey across the Melba Flats area (Horvath and O'Connors, 1958). SP anomalies were coincident with nickel sulfide mineralisation at the known Nickel Reward and Cuni workings, and therefore further investigation of new anomalies was warranted. Most of the testing completed by BMR by trenching and diamond drilling revealed the anomalies to be caused by graphitic black shale, however of testing of all anomalies was recommended due to the anomalous responses from known workings.

Prior to this drilling program the Scout Camp anomalies had not been tested, however 3 diamond drillholes were drilled nearby (MF90, 91 and 92), and intersected gabbro to the west associated with the Nickel Reward workings. Highly weathered sulfide bearing gabbro was intersected from 5.0m to 7.5m in MF91m, however was not assayed.

Three holes were designed to test the anomalies directly at depth (one on the eastern anomaly and two on the western anomaly). The fourth hole was designed as a stab hole to test for any gabbro related to that intersected in MF91 up the stratigraphy. A total of 250.4m was completed, with the overall core recovery at 95%.

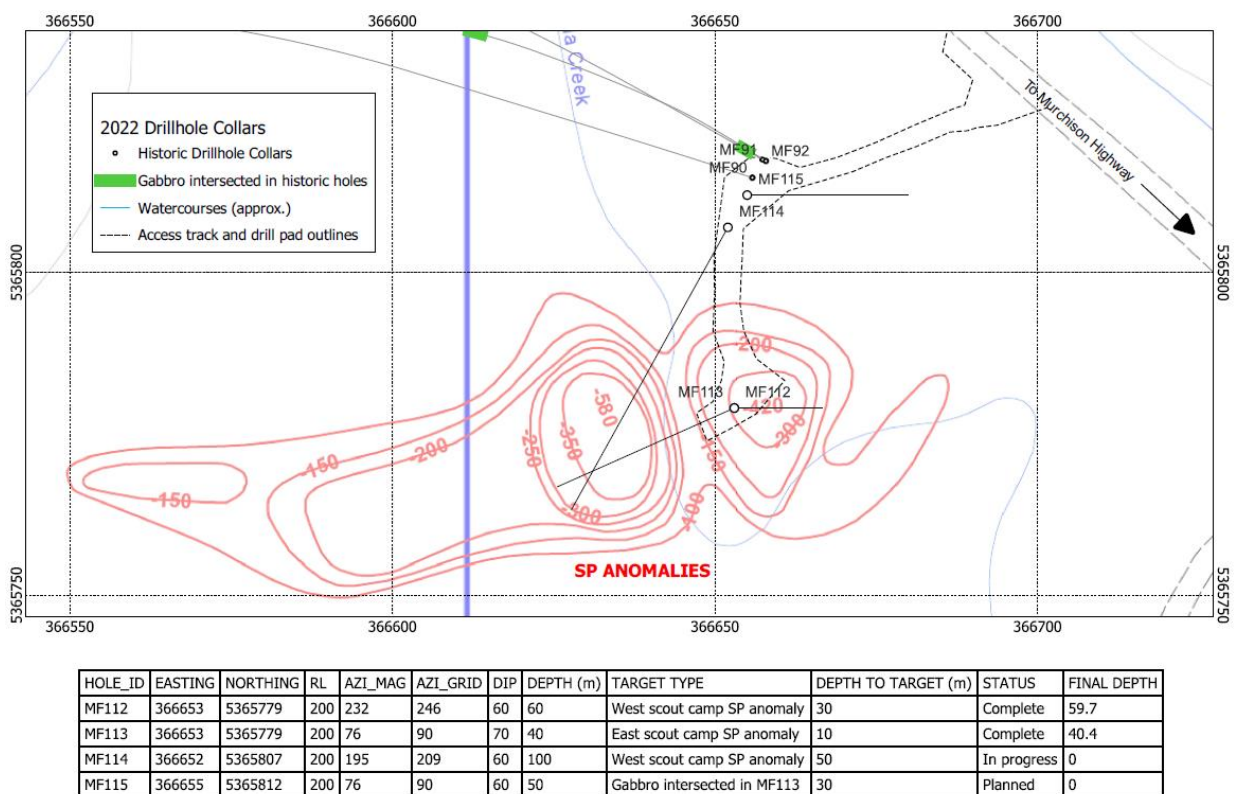


Figure 2. Diamond drillhole plan for the Scout Camp SP anomalies.

All holes were oriented, and geology, structural, basic geotechnical and magnetic susceptibility logging was completed.

3.1 Diamond Drilling Results

All diamond drill intersected variably deformed (both soft sediment and tectonic) shales, siltstones (Figure 3) and massive to graded volcanoclastic greywackes (Figure 4) of the Crimson Creek Formation. No gabbro or other igneous rocks were intersected. However, spotted siltstone (hornfels) was present in MF115, potentially indicating a gabbro dyke nearby. Summary logs for all four holes are shown in Tables 2 to 5 and the drillholes overlain with logged geology in Figure 5.



Figure 3. Example of laminated, strongly deformed graphitic and pyritic black shale. This example also shows the dolomitic clasts (light patches) which react to acid. Includes quartz-carbonate veining (MF112).



Figure 4. Example of massive to graded greywacke with minor shale. Includes minor quartz-carbonate veining (MF114).

Table 2. MF112 summary log.

| From | To | Lithology |
|------|------|--|
| 0 | 14.9 | Strongly weathered, graphitic black shale with minor greywacke. Minor disseminated pyrite. |
| 14.9 | 17.8 | Intercalated shale, greywacke, and siltstone. |
| 17.8 | 26.9 | Strongly deformed black shale with abundant dolomitic (react to acid) clasts to 4cm. |
| 26.9 | 59.7 | Massive to graded greywacke with very minor shale. |

Table 3. MF113 summary log.

| From | To | Lithology |
|-------|-------|---|
| 0 | 12.7 | Strongly deformed graphitic black shale with greywacke/dolomite clasts. Minor greywacke. |
| 12.7 | 30.6 | Intercalated greywacke and graphitic/pyritic black shale. |
| 30.6 | 36.55 | Very coarse grained (<3mm) strongly altered Greywacke (igneous appearance) with heavy fracturing (black fracture fill) Strong quartz-carbonate veining in places. |
| 36.55 | 40.2 | Intercalated greywacke and graphitic/pyritic black shale. |

Table 4.MF 114 summary log.

| From | To | Lithology |
|-------------|-----------|--|
| 0 | 14.5 | Heavily weathered shale with minor pyrite and minor greywacke. |
| 14.5 | 79.3 | Intercalated siltstone, shale, and greywacke. |
| 79.3 | 101.5 | Dominantly massive to graded greywacke with minor siltstone and shale. |

Table 5. MF115 summary log.

| From | To | Lithology |
|-------------|-----------|--|
| 0 | 12.7 | Dark grey to black, strongly weathered (crushed), moderately pyritic and graphitic shale. |
| 12.7 | 23.2 | Intercalated shale, siltstone and greywacke |
| 23.2 | 25.4 | Spotted hornfels |
| 25.4 | 28.9 | Faulted zone (abundant clay) in greywacke and shale |
| 28.9 | 44.2 | Dominantly greywacke with lesser shale and siltstone. |
| 44.2 | 45.7 | Strongly brecciated greywacke with calcite-dolomite-siderite infill. Very minor sulfide content. |
| 45.7 | 50.3 | Laminated siltstone and greywacke. |

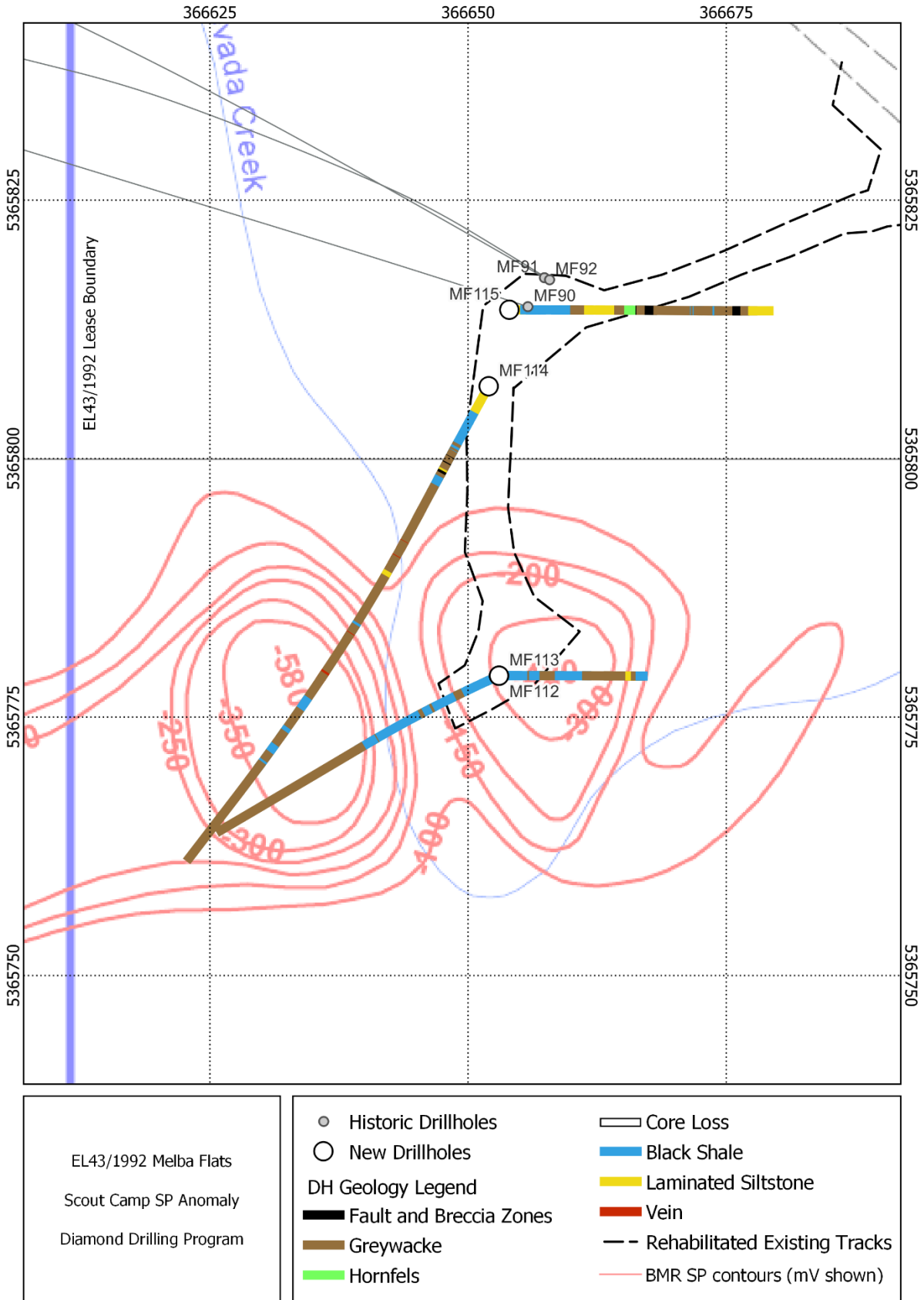


Figure 5. Scout Camp diamond drillholes coloured by lithology. Note the predominance of shale close to the surface over the eastern anomaly. Projected to surface (E dipping?) the shale in MF113 may outcrop where the western anomaly exists. MGA 94. Collars and surveys are grid bearings.

3 MINERALISATION

Several different vein types were present in all drillholes. By far the most common vein minerals were calcite and dolomite, with lesser quartz. In a small number of instances siderite was present, usually accompanied by galena and or sphalerite. Quartz dominant veins were rare, however were usually accompanied by varying amounts of the above minerals, and occasionally a dark fine-grained mineral which may be chlorite. Pyrite was present in trace amounts in both quartz and carbonate veins, however often formed thin pyrite-only veins which were abundant in some shales (commonly occurring along bedding). Some healed fault breccias were present, usually infilled with carbonate and pyrite (however in one instance in MF114, sphalerite but no galena). None of the above are considered a direct indication of nickel mineralisation, and the only potential indicator of a nearby gabbro is the spotted hornfels in MF115.

4 DISCUSSION

BMR identified 4 main SP anomalies during the 1950-58 geophysical surveys. Two of these were tested by bulldozer however were shown to be caused by graphitic shale. The other two (including the Scout Camp anomaly), were not tested, however testing was recommended (Horvath and O'Connors, 1958). The Scout Camp anomaly was of interest as it was the only anomaly to strike east-west, and while small, produced an intense anomaly at approximately 600mV.

All drillholes completed during the tenement year intersected weathered, graphitic and variably pyritic shales. This explains the SP anomalies targeted by MF112, MF113 and MF114, however it is not understood why the shale in the top section of MF115, which was similar in appearance to other shales, did not produce an SP anomaly.

Allegiance drilled 3 holes from the northern drill pad recently reused in the tenement year to intersect mineralised gabbro associated with the Nickel Reward workings at depth. MF91 intersected weathered gabbro between 5.0m and 7.5m (in the immediate vicinity of the recent drilling program however it was not assayed and was not intersected in any recent drilling.

MF115 did however intersect a small zone of spotted hornfels from 23.2 to 25.4m, indicating local contact metamorphism which may have been produced by a nearby gabbro dyke.

Based on the results of this drilling program, without geochemical support (e.g. a soil sampling program) it is difficult to justify further testing by diamond drilling of the BMR SP anomalies.

5 ENVIRONMENT

All drill sites were rehabilitated after the diamond drilling program was completed. An excavator was used to fill in sumps and cover the area with loose vegetation. Figures 6 and 7 show the southern drill pads before and after rehabilitation.



Figure 6. MF112/113 drill pad after drilling but before rehabilitation. Note sump on the left.



Figure 7. MF112/113 drill pad after rehabilitation with excavator. Loose vegetation has been used to cover the area to promote regeneration.

6 EXPENDITURE

A total of \$112,511 was spent predominantly on diamond drilling at the Scout Camp SP anomaly during the tenement year.

Table 6. Expenditure for the EL43/1992 2021-22 tenement year.

| EL43/1992 2021-22 Expenditure | |
|---|------------------|
| Diamond Drilling | |
| Drilling | \$52,175 |
| Site preparation and Rehabilitation | \$3,120 |
| Consumables | \$1,700 |
| Administration | |
| Drafting | \$2,874 |
| Personnel (Geologists and Field Assistants) | \$48,642 |
| Vehicles | \$4,000 |
| Total (Ex. GST) | \$112,511 |

7 CONCLUSION

A 250.4m diamond drilling program was completed to test two SP anomalies southeast of the old Scout Camp at Melba Flats, originally identified by BMR in the 1950s. All holes intersected shales, siltstones, and greywackes of the Crimson Creek Formation. No gabbro or nickel mineralisation was intersected. Graphitic and pyritic shales are considered the source of the SP anomalies. It is recommended that no further testing of the Melba SP anomalies using diamond drilling is completed unless backed up by geochemistry and/or other geophysical methods. The total expenditure for the year was \$112, 511.

8 RECOMMENDATIONS FOR THE FOLLOWING TENEMENT YEAR

- Assay of select sections of the recent diamond drilling program
- Structural interpretation of the recent diamond drilling program to aid targeting in the area and comparison with historical drilling
- Lease scale review of historic diamond drilling, geophysics and geochemistry for target definition (in conjunction with review of adjacent RL5/2009) with the focus on upgrading and extending known nickel resources in the area
- Reconnaissance mapping, rock chip sampling and potential soil sampling on the western side of the lease, at McKimmies mines, around the Lead Blocks gabbro area and to the south Deveraux.

An expenditure of \$60,000 is proposed for the following tenement year.

9 REFERENCES

Horvath and O'Connors, 1958. *Geophysical Investigation (1956-1957), Copper-Nickel Deposits, North Dundas Field, Tasmania*. Commonwealth of Australia, Department of National Development, Bureau of Mineral Resources (BMR), Geology and Geophysics, 1958, No. 15.