



2019 - 2020 Annual Review

for the

# **Annual Review**

# for the

# **Dargues Gold Mine**

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#### ANNUAL REVIEW TITLE BLOCK

_	
Name of operation	Dargues Gold Mine
Name of operator	PYBAR Mining Services Pty Ltd
Development consent / project approval #	SSD-3871-MOD-4
Name of holder of development consent / project	
approval	Big Island Mining Pty Ltd
Mining lease #	ML1675
Name of holder of mining lease	Big Island Mining Pty Ltd
Water licence #	10WA119513 and WAL39281
	10WA119515 and WAL39282
	10WA119519 and WAL39287
	10WA119517 and WAL39292
Name of holder of water licence	Dargues Gold Mine Pty Ltd
MOP/RMP start date	20/05/2017
MOP/RMP end date	31/03/2021
Annual Review start date	1/07/2019
Annual Review end date	30/06/2020

I, Chase Dingle, certify that this audit report is a true and accurate record of the compliance status of the Dargues Gold Mine for the period 1 July 2019 to 30 June 2020 and that I am authorised to make this statement on behalf of Big Island Mining Pty Ltd.

#### Note.

- a) The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.
- b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).

Name of authorised reporting officer	Chase Dingle
Title of authorised reporting officer	Sustainability Manager
Signature of authorised reporting officer	if
Date	30/09/2020

# **Annual Review**Document No. DGM – AER – 008

### **BIG ISLAND MINING LIMITED**

#### 1 STATEMENT OF COMPLIANCE

The Dargues Gold Mine (the Mine) continued to construct the Underground Mine, Process Plant, Tailings Storage Facility (TSF) and other site support infrastructure between 1 July 2019 and 30 June 2020 (the Reporting Period), with the Mine commencing production in late May 2020.

Given the amount of construction activity that has occurred and the resulting changes to the Mine Site, Big Island Mining Pty Ltd (the Company) contends that there has been a strong compliance with both State Significant Development 3871 Modification 4 (SSD-3871-MOD-4 or the Project Approval) and Mining Lease 1675 (ML1675) conditions. **Table 1.1**, however, notes that there were three (3) non-compliances with the Project Approval, which were identified as part of the Independent Audit (**Section 10**). **Table 1.3** provides a summary of the potential non-compliances, while **Section 10** provides a detailed response from the Company.

**Table 1.1 Statement of Compliance** 

Were all conditions of the relevant approvals complied with?	
ML1675	Yes
SSD-3871-MOD-4	No
EPL 20095	No

**Table 1.3** provides a summary of the non-compliances with the Project Approval, while **Table 1.2** provides the key for compliance status.

It is noted that, at the time of preparation of the Annual Review (the AR), there were a number of matters under investigation with the Department of Planning, Industry and Environment (the DPIE) and that these matters had not been determined. Further information is provided in the following sections.

Further to the above, there were two (2) compliance actions taken against the Company during the Reporting Period. Both actions were as a result of the discharge of sediment laden water to Spring Creek, with the Company being regulated under Section 120 of the *Protection of the Environment Operations Act 1997* (the POEO Act) for the first discharge. Further information regarding the two events is provided below:

• Sediment laden water was observed discharging from the downstream embankment toe of the Tailings Storage Facility (TSF) bulk earthworks during a routine inspection at 7:25 am on 17 September 2019. The root cause of the event was determined to be as a result of water pooling on the crest of the TSF embankment during a rainfall event exceeding the capacity of the bund that had been constructed on the downstream edge of the TSF embankment crest. Exceedance of the bund capacity allowed water to flow down the downstream embankment face and pass through a diversion structure that was not designed to divert that volume of water.

Dargues Gold Mine

The Company was fined \$15,000 for an alleged contravention of Section 120 of the POEO Act.

• Sediment laden water was observed discharging from a disconnected Plasson compression fitting on the Tailings Storage Facility (TSF) water diversion pumping system during a routine inspection at 10:00 am on 10 March 2020.

**Table 1.2 Compliance Status Key** 

Risk Level	Colour Code	Description
High	Non-Compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence.
Medium	Non-Compliant	Non-compliance with:  • potential for serious environmental consequences, but is unlikely to occur; or  • potential for moderate environmental consequences but is likely to occur.
Low	Non-Compliant	Non-compliance with:  • potential for moderate environmental consequences, but is unlikely to occur; or  • potential for low environmental consequences, but is likely to occur
Administrative Non-Compliance	Non-Compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

**Table 1.3 Non-compliances** 

Relevant Approval	Condition #	Condition Description (summary)	Compliance Status	Comment	Where addressed in Annual Review
SSD-3871-MOD-4	Schedule 2, Condition 11	Within 12 months of the date of this approval, unless otherwise agreed by the Secretary, the Proponent shall enter into a planning agreement with Council in accordance with Division 6 of Part 4 of the EP&A Act, that provide for contributions to Council for:  • upgrades of Council's road infrastructure affected by the project; and  • general community enhancement to address social amenity and community infrastructure requirements arising from the project.  The contributions shall be consistent with the terms of the offer made in the Proponent's letter dated 24 September 2010, and summarised in Appendix 6.	Non-Compliant	The non-compliances with Schedule 2, Condition 11 are principally as a result of the delay in execution of the Mine, resulting in the Company not being able to meet the requirements of the Condition within the required timeframe.  The delay in implementing the agreement was by mutual agreement with QPRC and the timeframe for implementing the revised agreement is now largely dependent on the review and approval process of QPRC.	Section 10.1

SSD-3871-MOD-4	Schedule 5,	Prior to the commencement of construction on	Non-Compliant	The Company has committed	Section 10.2
	Condition 10	site, the Proponent shall:		significant resources to ensuring	
		(a) make copies of the following publicly available		compliance with this condition.	
		on its website:  the documents referred to in Condition 2		The implementation of the live	
		of Schedule 2;		data feed to the Mine's website for water flow monitoring is an	
		<ul> <li>all current statutory approvals for the project;</li> <li>all approved strategies, plans and programs required under the conditions of this approval;</li> <li>the monitoring results of the project,</li> </ul>		example of the Company's commitment to continuous improvement in providing access to monitoring data at the Mine. Although, this resulted in a temporary delay in providing the data to the public, the new system	
		reported in accordance with the		represents a huge improvement in	
		specifications in any conditions of this approval, or any approved plans and programs;		the provision and accuracy of the data provided.	
		a complaints register, updated on a monthly basis;			
		<ul> <li>minutes of CCC meetings;</li> </ul>			
		the annual reviews of the project;			
		<ul> <li>any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit;</li> </ul>			
		<ul> <li>any other matter required by the Secretary;</li> </ul>			
		<ul> <li>any incident report referred to in Condition 6 of Schedule 5;</li> </ul>			
		<ul> <li>a certificate of currency of public liability insurance held by the Proponent as in force from time to time; and</li> </ul>			
		(b) keep this information up-to-date, within a reasonable period, and in any event no later			

		than 28 days after the above information becomes available, to the satisfaction of the Secretary.			
SSD-3871-MOD-4	Appendix 5, Commitment 6.4d and 6.4e	<ul> <li>6.4e – Undertake, in consultation with NOW, a pump test to confirm the assumed hydrological parameters used in the groundwater model. The pump test should be in the vicinity of the mine where the fracture density and hydraulic conductivity is likely to be high.</li> <li>6.4d – Undertake a review of the numerical groundwater model, including: <ul> <li>further detailed baseline data inputs, as required by the conditions of the approval;</li> <li>a statistical comparison of the Braidwood and Majors Creek rainfall data to determine the significance of choice of input;</li> <li>rain fall data from the weather station within the project site (if determined to be relevant):</li> <li>pumping tests of relevant bores;</li> <li>a comprehensive sensitivity and uncertainty analysis of groundwater model outputs;</li> <li>measurement of baseflow in Majors and Spring Creeks; and</li> <li>investigation of the water quality arising from the mine backfilling including modelling of dissolution associated with changes in hydrology,</li> </ul> </li> </ul>	Non-Compliant	The non-compliances with Commitment 6.4d are principally as a result of the delay in execution of the Mine, resulting in the Company not being able to meet the requirements of the Condition and Commitment within the required timeframe.	Section 10.3

		groundwater flow and the nature of the aquifer matrix.  In the event that the actual impacts are significantly greater than those presented in AGE (2010), then the Proponent would consult with NOW in relation the revised modelling results and would develop appropriate management and mitigation measures to address those impacts			
EPL 20095	L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with Section 120 of the Protection of the Environment Operations Act 1997.	Medium	The Company recognises the importance of deploying rigorous water management controls so as to mitigate discharge events and has committed significant resources to the prevention of such events.	Section 10.4

#### 2 INTRODUCTION

The Mine is located approximately 60km's southeast of Canberra, immediately to the north of Majors Creek and approximately 13km's south of Braidwood (Figure 2.1). Modified Project Approval for State Significant Development 10\_0054 Modification 4 (SSD-3871-MOD-4 or the Project Approval) and Mining Lease 1675 (ML1675) are held by Big Island Mining Pty Ltd (BIM), a wholly owned subsidiary of Dargues Gold Mine Limited (the Company), which is itself a wholly owned subsidiary of Unity Mining Limited (Unity), with the ultimate parent company being Diversified Minerals Pty Ltd (Diversified Minerals). The Operator of the Mine is Pybar Mining Services Pty Ltd (PYBAR), which is an associated company of Diversified Minerals.

This Annual Review has been prepared in accordance with the *Annual Review Guideline Post-Approval Requirements for State Significant Mining Developments October 2015* as published by the then Department of Planning and Environment NSW. This Annual Review is submitted in compliance with:

- Condition 5(3) of SSD-3871-MOD-4; and
- Condition 3(f) of Mining Lease 1675.

Plans of the Mine showing the regional context and Mine infrastructure are shown in **Figures 2.1** and **2.2**.

Contact details of key personnel who are responsible for the environmental management of the operation are provided in **Table 2.1**.

Name	Position	Phone	Email
Shannon Green	General Manager	0477 418 492	Shannon.Green@divminerals.com.au
Chase Dingle	Sustainability Manager	0467 963 379	Chase.Dingle@divminerals.com.au
DGM Information Line		1800 732 002	DGM.Community@divminerals.com.au

**Table 2.1 Key Contact Details** 

The Company recognises and respects the importance of stakeholders and considers positive relationships important to aid in continual improvement of its environmental management practice. This report is therefore provided to the following stakeholders:

- Department of Planning, Industry and Environment (DPIE);
- Department of Primary Industries Water;
- Eurobodalla Shire Council (ESC);
- Queanbeyan Palerang Regional Council (QPRC);
- NSW Office of Environment and Heritage (OEH);

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- NSW Environment Protection Agency (EPA);
- Dargues Community Consultative Committee; and
- General public (available at <a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>).

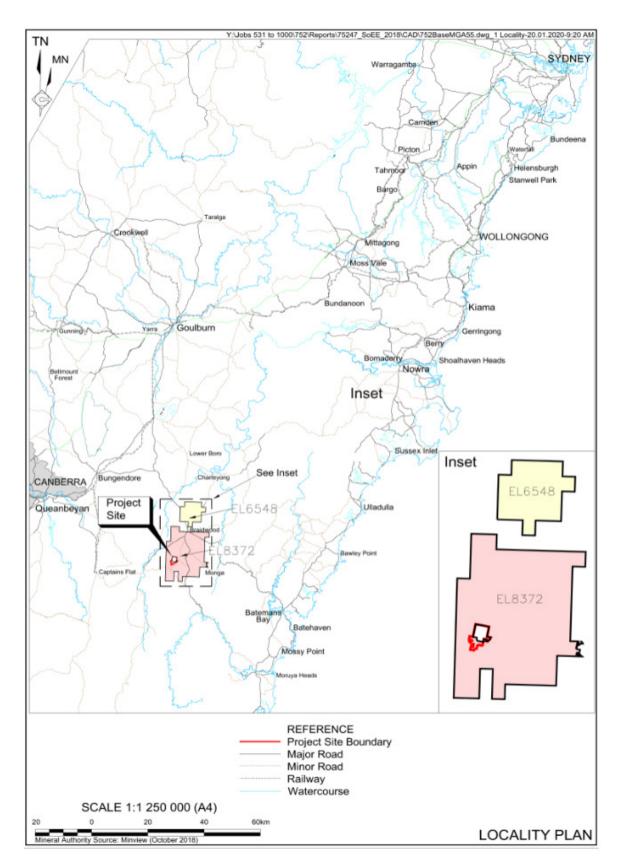


Figure 2.1 Locality Plan - Dargues Gold Mine

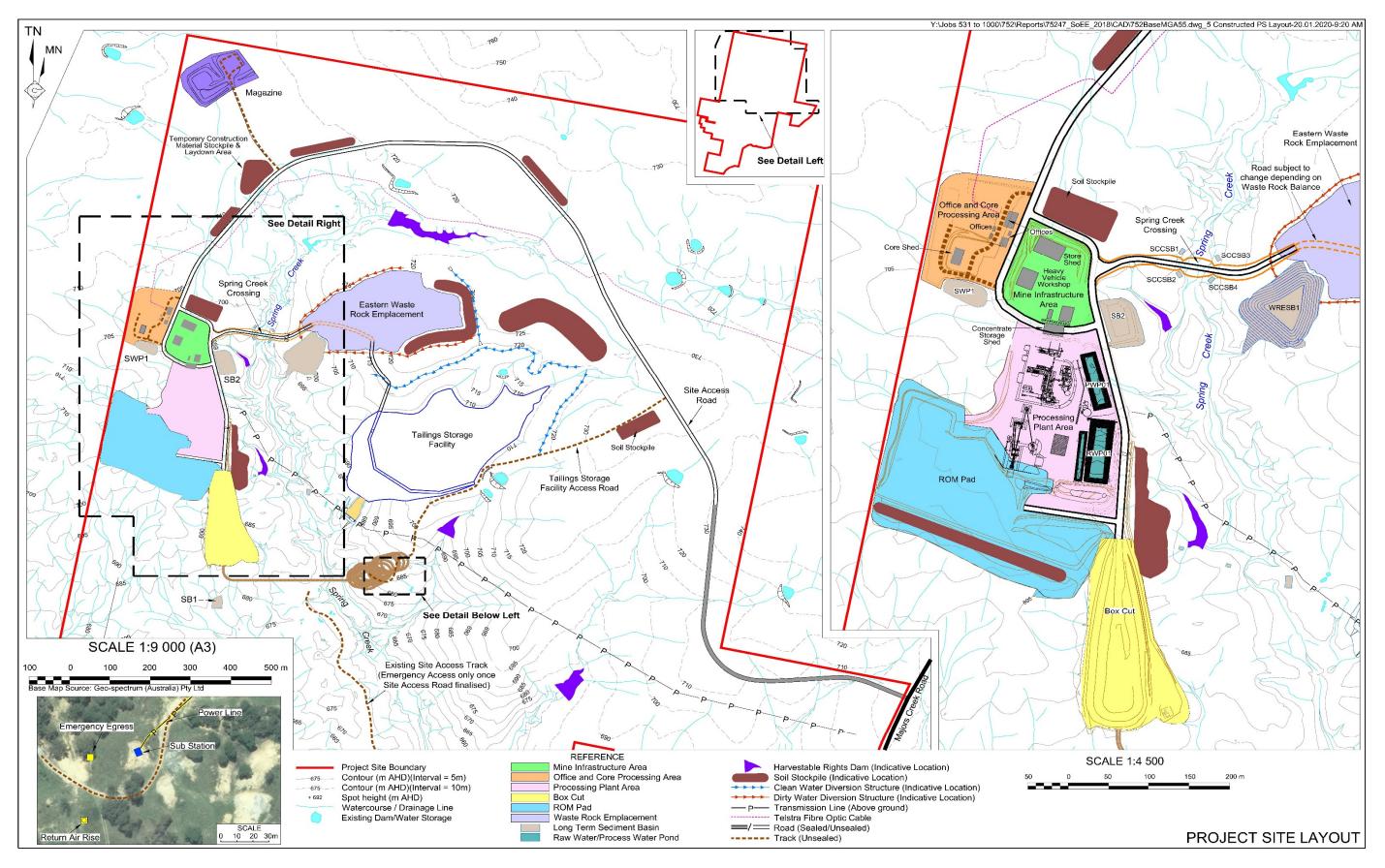


Figure 2.2 Mine Infrastructure August 2020

# 3 APPROVALS

#### 3.1 INTRODUCTION

The following subsection provides an overview of the various approvals, leases and licences that the Mine operates under (**Table 3.1**).

**Table 3.1 Consents, Leases and Licences** 

Number / Identifier	Issue Date	Expiry Date	Details / Comments
Consents			
PA10_0054 (NSW)	7 February 2012	13 August 2018	Original project approval as prescribed by the Land and Environment Court
MP10_0054 MOD 1	12 July 2012	13 August 2018	Modification of the Project Approval to allow the use of Paste Fill
MP10_0054 MOD 2	24 October 2013	13 August 2018	Modification to regularise changes to the site layout.
MP10_0054 MOD 3	10 August 2016	30 June 2025	Modification to allow the construction and use of the Eastern Waste Rock Emplacement, a crossing across Spring Creek, and an extension of mine life.
SSD-3871-MOD-4	23 May 2019	30 June 2025	Modification of Spring Creek Crossing and other minor administrative amendments.
EPBC 2010/5770	27 September 2011	30 September 2020	Approval under the Commonwealth Environment Protection and Biodiversity Act 1999
EPBC 2015/7539	February 2017	30 June 2025	Modification of the Project Approval to extend the end date of mining operations and for additional infrastructure.
Leases (Mineral Author	ities)		
ML1675	12 April 2012	12 April 2045	
EL6548	5 April 2006	5 April 2020	Renewal of this EL has been sought
EL8372	21 May 2015	20 May 2021	
EL6012	22 October 2002	22 October 2020	
EL8243	7 March 2014	7 March 2023	
EL8244	7 March 2014	7 March 2023	
EL8373	20 May 2015	20 May 2020	Renewal of this EL has been sought
Licences			
Environment Protection Licence 20095	18 May 2012	-	Issued by NSW Environment Protection Authority
WAL39281	29 March 2017	-	Extraction of up to 320ML/y of groundwater from the Dargues Gold Mine
WAL39282	19 October 2017	-	Extraction of up to 39ML/y of groundwater from the Snobs workings
WAL39287	29 March 2017	-	Extraction of up to 16ML/y of groundwater from the Steward and Merton's workings
WAL39292	29 March 2017	-	Extraction of up to 24ML/y of groundwater from the United Miners workings
Explosives Storage Licence XSTR200092	16 July 2018	23 April 2023	Licence holder is authorised to possess and store the following Class of Explosives 1.1.B, 1.1D and 1.4B.
Radiation Licence 5089849	28 June 2019	27 June 2021	Sell, possess, store or give away regulated material (including radiation apparatus, radioactive substances or items containing radioactive substances) for 1 year. Requires annual renewal.
Wastewater Treatment Plant LGA.2018.255	06 February 2019	6 February 2024	Approval for install and use of wastewater treatment plant.

D	Dam Safety Committee					
	Confirmation of Design	9 December 2016	-	The NSW Dam Safety Committee has reviewed the TSF design report by Knight Piésold and has advised that the overall design conforms to the Committee's requirements		

#### 3.2 STATE APPROVAL

The Mine was assessed under Part 3A of the EP&A Act. Prior to approval of the Mine, Part 3A of the EP&A Act was repealed and responsibility for assessment of the Mine was passed to the Planning Assessment Commission (PAC) from the Department of Planning and Infrastructure. The PAC undertook further assessment and review of the Mine before approving the Mine on the 2 September 2011. Following two appeals to the Land and Environment Court, the Court subsequently granted project approval on 7 February 2012.

Following the repeal of Part 3A of the EP&A Act, the Mine is considered a "transitional Part 3A project", as defined in schedule 6A of the EP&A Act. As a result, modifications 1, 2 and 3 to the Mine's approval were subject to Section 75W of the EP&A Act, however, prior to submission of Modification 4, transitional Part 3A project status's expired and the Mine was transitioned to being a State Significant Development (SSD). As a result, Modification 4 was assessed under Part 4 of the EP&A Act.

The four Modifications to the Mine's approval are briefly described below:

- Modification 1 (MP10\_0054 MOD1) for the use of paste fill at the Mine was approved on 12 July 2012.
- Modification 2 (MP10\_0054 MOD2) to regularise changes to the layout of the Mine was approved on 24 October 2013.
- Modification 3 (MP10\_0054 MOD3) for additional infrastructure and extension of the mine life was approved on 10 August 2016.
- Modification 4 (SSD-3871-MOD-4) for additional infrastructure and extension of the mine life was approved on 23 May 2019.

#### 3.2.1 DAM SAFETY COMMITTEE

The Tailings Storage Facility (TSF) at the Site is a prescribed dam under the *Dams Safety Act* 1978. This Act is administered by the Dams Safety Committee (DSC), a NSW government statutory authority.

The Dargues Gold Mine Tailings Storage Facility – Final Design Update Rev 1 was submitted to the DSC on 8 November 2016 for assessment by the DSC Surveillance Sub-Committee on 29 November 2016. A preliminary review by the DSC indicated that external independent review of the report was required and the Company engaged Mr Norman Himsley to undertake that review. The review recommended only minor amendments to the TSF design, all of which were accepted by the Company. Confirmation of the TSF design was received from the DSC on 9 December 2016.

#### 3.3 LEASES

#### 3.3.1 MINING LEASE

Mining Lease 1675 (ML1675 or the Mining Lease) was granted under the Mining Act 1992 (the Mining Act), by the NSW's Government, on 12 April 2012, and covers an area of 317 Ha. The Mining Lease allows for the extraction of Gold, Silver and Copper until 12 April 2045, subject to an approval under the EP&A Act being in force.

#### 3.3.2 EXPLORATION LEASE

The Project is located within Mining Lease 1675 (ML1675) and part of Exploration Lease 8372 (EL8372). To the north of EL8372 is Exploration Lease 6548 (EL6548). A number of other Exploration Leases are held by Big Island Mining Pty Ltd in other parts of NSW, however, are not discussed further here.

#### 3.4 LICENCES

#### 3.4.1 ENVIRONMENT PROTECTION LICENCE

Environment Protection Licence 20095 (the EPL) for the Mine was amended on 9 December 2019 to reflect the ramp up of activities at the Project to full operation and then again on 12 March 2020 to include the Tailings Storage Facility (the TSF) monitoring bores on the EPL.

All licencing information related to the EPL can be accessed from the EPA website (<a href="https://app.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=20095&id=20095&option=licence">https://app.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=20095&id=20095&option=licence</a> &searchrange=licence&range=POEO%20licence&prp=no&status=Issued).

#### 3.4.2 WATER LICENCES

Water licences for the Mine have been issued by the Department of Primary Industries – Water (DPI – Water). Details of the licences are provided below in **Table 3.2**. During the Reporting Period, the Snobs bore was constructed and extraction commenced. Stewart and Mertons, and United Miners bores are expected to be installed during the next reporting period.

**Table 3.2 Water Licences** 

Location	Licence Number	Water Access Licence	Extraction allowance
	(Water Act 1912)	(Water Act 2000)	
Dargues Gold Mine	10BL6050106	WAL39281	320 mega litres
Snobs	10BL6050107	WAL39282	39 mega litres
Stewart and Merton's	10BL6050108	WAL39287	16 mega litres
United Miners	10BL6050109	WAL39292	24 mega litres
Dargues Production Bores	10BL605110	WAL37848	1 mega litre
Total			400 mega litres

During operation of the Mine, water will be primarily sourced from the Mine and existing harvestable rights dams, while makeup water will be sourced from Snobs, Stewart and Merton's, and United Miners bores, to supplement supply from the Underground Mine as required.

It is noted that, during the Reporting Period, trucking of water to the Site was undertaken in order to supplement on site water sources. This was required due to:

- The ongoing drought within the region limiting the amount of rainwater and surface water that could be captured;
- The construction status of the Tailings Storage Facility, Harvestable Right Dam's and other water management infrastructure not allowing what rainfall was received at the Site to be fully captured and utilised; and
- Underperformance of the groundwater bores, including inflow into the Mine.

Water management is discussed further in **Section 7**.

#### 3.4.3 EXPLOSIVES STORAGE LICENCE

An application for an Explosives Storage licence at the Mine was submitted in mid - 2013 in conjunction with the establishment of the explosive's storage magazines at the Mine. However, following the placement of the Mine into care and maintenance in December 2013 that application was withdrawn at the request of the then Division of Resources and Energy (DRE).

The original application was sought for the storage and use of emulsion, however, the Mine now uses ANFO at the Site. As a result, the application was reviewed and varied, with approval for the storage and use of the explosive quantities included in **Table 3.3**, which was granted on 16 July 2018.

Storage Facility ID	Storage Facility Type	UN Number	Class/Divisio n	Proper Shipping Name	Typical Quantity	Maximum Storage Capacity (kg/L/No)
MAG3	Magazine	0042	1.1D	Boosters without detonators	200Kg	
MAG3	Magazine	0065	1.1D	Cord, Detonating, flexible	200Kg	
MAG2	Magazine	0082	1.1D	Explosive, blasting, Type B	14000Kg	14000Kg
MAG3	Magazine	0082	1.1D	Explosive, blasting, Type B	3000Kg	7000Kg
MAG3	Magazine	0241	1.1D	Explosive, blasting, Type B	3500Kg	
MAG1	Magazine	0255	1.4B	Detonators, Electric for blasting	500No	

Table 3.3 Explosives Storage Capacity's

During the next reporting period, it is anticipated that an application to increase the storage capacity of explosives will be made. The application is being considered in order to:

- reduce the number of deliveries of explosives to the site; and
- reduce the Company's exposure to supply chain issues.

#### 3.4.4 RADIATION LICENCE

A radiation licence to sell, possess, store or give away regulated material (including radiation apparatus, radioactive substances or items containing radioactive substances) was issued on 28 June 2019 and requires annual renewal. The radiation licence covers seven (7) sealed source fixed radiation gauges located within the Processing Plant. These radiation gauges are used to measure the density of various slurry streams.

#### 3.4.5 WASTEWATER TREATMENT PLANT

The Dargues Gold Mine operates a Fuji Clean integrated multistage wastewater treatment plant to treat water from the ablutions, showers and sinks at the Mine. This unit is approved and inspected by Queanbeyan Palerang Regional Council under approval number LGA.2018.255.

The approval to operate is valid from 6 February 2019 to 6 February 2024.

#### 4 OPERATIONS SUMMARY

#### 4.1 PRODUCTION STATISTICS

A summary of production figures for the Reporting Period is provided in **Table 4.1**. Also shown are the predicted production figures for the 2021 reporting period.

**Table 4.1 Production and Waste Rock Summary** 

Material	Approved Limit	2019 Reporting Period	This Reporting Period	2021 Reporting Period (forecast)
Waste Rock/Overburden	N/A	130,708	158,146	247,785
Ore Mined (t)	N/A	773	120,472	292,509
Ore Processed (t)	355,000	-	26,162	330,216
Fine Reject (tailings) (t)	N/A	-	24,444	307,868
Saleable Product (wmt)	N/A	-	3,981	24,558

Mining operations within the Reporting Period remained below the limits specified in SSD-3871-MOD-4. Specific conditions from Schedule 2 of SSD-3871-MOD-4 are presented in **Table 4.2** with responses on the compliance of each also provided.

**Table 4.2 Compliance with SSD-3871 Conditions** 

		Project Approval Condition No. and Description	Compliance Response
5.	The I	Proponent may carry out mining operations on site until 30 June 2025.	Compliant
6.	The I	Proponent must not:	
	(a)	Process more than 355,000 tonnes of ore at site in a calendar year;	
	(b)	Process more than 1.6 million tonnes of ore at site over the life of the Project;	Compliant, see Table 4.1.
	(c)	Use any cyanide or mercury on site to process or extract gold from the Project; or	
	(d)	Process or smelt any ore other than that extracted from the site.	
7.		Proponent shall only store ore concentrate on the site within a covered, concrete-sealed bunded area within the processing plant.	Compliant, all concentrate is stored with the designated concentrate shed.

#### 4.2 MINING OPERATIONS

Mining operations are presented in detail in Section 2.4 of the *Environmental Assessment for the Dargues Reef Gold Project, September 2010* (the EA). In summary, underground development commenced with development of the decline. Underground mining of ore is then undertaken using a sublevel open stoping mining method.

During mining operations, a number of development drives will be established at intervals within the ore zone. A series of holes would then be drilled from each drive and sequentially loaded with explosives prior to the ore being blasted. The ore would then be removed from the stope or open void using an underground loader, operated remotely where required, and loaded into haul trucks for transportation to the ROM pad. Between stopes, pillars (vertical) and sills (horizontal) unmined material is left to provide support and prevent ground collapse.

In order to ensure stability of sections of the Mine once mining operations have been completed in those sections, mined-out stopes would be backfilled using waste rock material sourced preferentially from concurrent underground development, with additional waste rock material transported from the temporary waste rock emplacement on surface, as required, or hydraulic backfill from the batch plant in the Processing Plant.

#### 4.3 PROCESSING OPERATIONS

Processing operations are described in detail in Section 2.6 of the EA. In summary, ore material will be processed within the Processing Plant to produce a gold and silver bearing sulphide concentrate and tailings material.

Ore material will be fed into a three-stage crushing and screening circuit. Product screen undersize material (nominal <12 mm) will be transferred to an enclosed fine ore bin. Material from the fine ore bin will be reclaimed using one or more feeders. Reclaimed material will be directed to a primary ball mill for grinding.

The ground ore will be directed to a rougher flotation circuit where rougher flotation concentrate and tail streams are separated by the addition of flotation reagents and low pressure air. The rougher concentrate will be directed to the re-grind circuit whilst the rougher tail will be dewatered via a thickener prior to transfer to the Tailings Storage Facility (TSF).

Rougher concentrate will be ground within a re-grind ball milling circuit. Re-ground rougher concentrate will be transferred to the cleaner flotation circuit where further flotation will produce the final concentrate. The tail from the cleaner flotation circuit will be transferred back to the rougher circuit feed stream.

Concentrate will be dewatered prior to being stacked within an enclosed shed with a bunded concrete floor, prior to being trucked offsite for further processing.

#### 4.4 TAILINGS OPERATIONS

At the completion of processing of the ground ore (from which the gold and associated sulphides have been removed), the remaining material, namely tailings, is transferred to a thickener to recover process water for reuse within the Processing Plant. The thickened tailings slurry is then pumped to the TSF or used as hydraulic back fill underground.

#### 4.5 EXPLORATION OPERATIONS

No exploration activities were undertaken on ML1675 during the Reporting Period. No non-compliances have been noted within the mining leases related to exploration or evaluation activities.

#### 4.6 OTHER OPERATIONS

General, activities within the Lease Area have been consistent with the rural nature of the wider area and consist mainly of:

- agriculture related activities, including the grazing of cattle;
- maintenance of existing earthworks;
- water management; and
- environmental monitoring.

Construction activities during the Reporting Period included the following (Figure 2.1):

- Tailings Storage Facility Stage 1;
- Processing Plant and associated infrastructure;
- Completion of upgrades to office and mine infrastructure;
- Mine Return Air Rise and Emergency Egress; and
- Electricity upgrades, including upgrades to the Captains Flat Zone substation and local essential energy network as well as power quality and control systems within the Mine infrastructure area.

#### 4.7 NEXT REPORTING PERIOD

The major capital works to be undertaken during the next reporting period are:

- Tailings Storage Facility Stage 2; and
- Installation of United Miners and Stewart and Merton's production bores.

# 5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

No actions were required from the previous annual review.

Table 5.1 Actions Required from the Previous Annual Review

Action required from previous Annual Review	Requested by	Action taken by the Operator	Where discussed in Annual Review
-	-	-	-

#### 6 ENVIRONMENTAL PERFORMANCE

#### 6.1 INTRODUCTION

The Company has an Environment Policy committed to pollution prevention and continual improvement of environmental management activities. To support the intent of this Policy, environmental management is undertaken by the onsite environmental team, which forms part of the Sustainability Department.

The HSE policy is a part of the developed and implemented environment management strategy for the Mine. This is prepared in accordance with ISO14001 and audited on an annual basis. The EMS:

- Outlines all relevant statutory leases, licences and approvals that apply to the Mine;
- Details key plans, procedures, management plans and other documents that will be implemented to ensure compliance with all relevant leases, licences and approvals;
- Describes the key processes that will be implemented to:
  - Communicate with community and government stakeholders;
  - Manage community complaints;
  - Resolve disputes; and
  - Respond to non-compliance incidents and emergencies.
- Outlines monitoring, reporting and auditing requirements;
- Outlines relevant roles, responsibilities and accountabilities relevant to environmental management for all employees and contractors.

The following subsections provide an overview of the environmental performance of the Mine over the Reporting Period. Further information and the detailed monitoring reports prepared as part of the monitoring program are provided as appendices.

#### 6.2 NOISE

Third-party attended noise measurements are undertaken at the Mine on a quarterly basis, with the exception of the December 2019 monitoring event, where serious safety concerns, as a result of bushfires over the summer period, prevented all monitoring from being completed.

Third-party attended noise monitoring was conducted on four (4) occasions over the Reporting Period. The monitoring results are available via the Company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>).

Noise monitoring conducted in August 2019 indicated that the Mine may be in breach of the noise assessment criteria included in the EPL, however, the monitoring was not conclusive as background noise contributions impacted the monitoring. As a result, follow up noise monitoring was conducted in September 2019. As part of this monitoring, frequency analysis was completed to separate noise related to the mine from background noise. This monitoring confirmed that the Mine was complying with the noise assessment criteria.

Further monitoring was completed in March and June 2020, with the results from that monitoring demonstrating that the Mine continued to comply with the requirements of the EPL with regards to noise. A traffic noise assessment was also completed as part of the June 2020 noise monitoring program which showed that traffic noise related to the Mine was in compliance with the SSD-3871-MOD-4.

It is noted that, during the Reporting Period, 280 noise related complaints were received by the Mine. The EPA and DPIE, in response to the complaints received, undertook noise monitoring at a number of locations independent of the Mine. The Company understands that this monitoring did not indicate any non-compliances with the noise assessment criteria included in the EPL and the Project Approval. No compliance action has been received by the Company with regards to noise during the Reporting Period.

Noise levels assessed as part of the monitoring program were within all operational noise criteria. They were also lower than the noise levels predicted in the EA (Corkery, 2010), and did not exceed the sleep disturbance limit at night.

#### 6.3 BLASTING

During the Reporting Period, blasting ramped up to operational levels, with stope blasting being undertaken in conjunction with development of the decline and other accesses.

Blast monitoring is undertaken at three locations surrounding the Mine. The monitoring systems are managed by Saros with data web-hosted online via the Envirohub system that has the ability to allocate recorded data with manually entered blast times.

No exceedances of blasting limits were recorded during the Reporting Period (**Table 6.2**). The monitoring results are available via the Company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>) and summarised below.

**Table 6.1 Blast Monitoring Data Summary** 

Values	BM-1	BM-2	BM-3
Min of PVS (mm/s)	0.06	0.10	0.12
Max of PVS (mm/s)	1.73	1.23	0.51
Average of PVS (mm/s)	0.26	0.22	0.28

Blasting levels assessed as part of the monitoring program were within all operational blasting criteria. They were also lower than the levels predicted in the EA (Corkery, 2010).

It is noted that, during the next reporting period, the Company will be seeking to discontinue blast monitoring at the Mine Site, as the blast monitoring data collected to date shows that all blasts have been significantly below the limits specified in the EPL and the Project Approval Conditions, and that the largest blasts (stope blasting) at the Mine have been completed.

#### 6.4 WATER

The following section provides a brief overview of water quality and levels within the Site during the Reporting Period.

#### 6.4.1 WATER QUALITY

The surface water and groundwater quality monitoring program continued during the Reporting Period.

Surface water quality monitoring results remained consistent with historical monitoring, with changes in water quality primarily being driven by rainfall, surface water runoff and seasonal influences. No significant trends or changes in water quality were detected as a result of operations at the Site.

Groundwater quality remained consistent with historical sampling and, as for surface water, no quality changes as a result of the mining operations were detected.

All monitoring results were predominantly in line with or below historical data and representative of the regional freshwater quality characteristics. The monitoring results are available via the Company's website (http://www.divminerals.com.au/).

It is noted that, a review of the water quality monitoring program will occur during the next reporting period with the objective of refining the analytes, frequency and location of the monitoring that is being undertaken.

#### 6.4.2 GROUNDWATER LEVELS

Groundwater levels (**Figure 6.1**) within the Mine Site remained steady, with the exception of the following:

- DRWB10 is hydraulically connected to the old workings within the underground mine which have been dewatered to reduce the risk of inundation and inrush.
- DRWB09 is a production bore and is subject to occasional pumping which impacts on water levels.
- DRWB11 is located near the site access road intersection with Majors Creek Road. The
  reason for the declining water level is not known, however, given its location, it is not
  thought to be as a result of mining activities.
- DRWB02, 03 and 04 have shown a slight decline which is thought to be consistent with the depletion of the regolith and granodiorite aquifers following the extended drought.

Those bores associated with the alluvial aquifers remained steady.

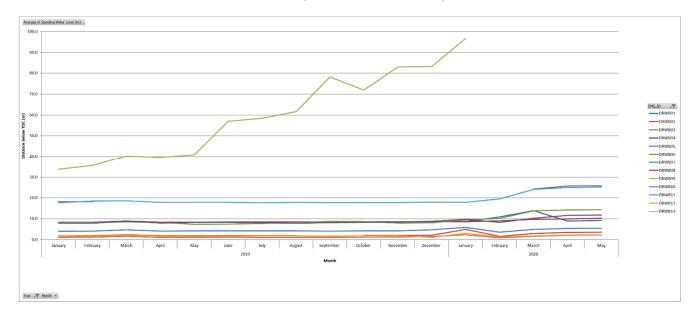


Figure 6.1 Groundwater Levels

#### 6.4.3 STREAM FLOW

During the Reporting Period, real time monitoring was installed in Spring Creek and Majors Creek to monitor streamflow. This real time data has been made publicly available on the Company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>) and is summarised in Figure 6.2.

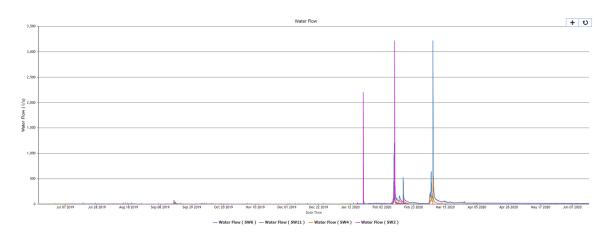


Figure 6.2 Stream Flow in Spring Creek and Majors Creek.

As a result of continued drought throughout extended periods of the Reporting Period, flows in both Spring Creek and Majors Creek did cease for periods until significant rainfall was received.

#### 6.4.4 COMPENSATORY FLOW

During the Reporting Period, no compensatory flow was discharged to Majors Creek or was required. It is noted that, both Spring Creek and Majors Creek ceased flowing due to the long period of drought that the area experienced, however, no impacts from mining have been detected to the baseflow of Spring Creek or Majors Creek.

The Company has identified that there are lower than anticipated inflows to the underground mine workings and is currently reviewing the groundwater model to determine the extent of the impact to the environment and mining operations. Further, only the Snobs production bore has been installed, with limited pumping of approximately 1.8 mega litres occurring during the Reporting Period.

Given the reduced inflows and limited pumping that has occurred, the negligible impact on the baseflow in Spring Creek and Majors Creek was expected.

#### 6.5 WASTE

During the Reporting Period, waste produced at the Site was disposed of via a licenced waste contractor. The waste streams disposed of included general waste, hydrocarbon contaminated materials, steel, plastic and chemical drums. Where possible, waste materials are recycled or reused. For example, chemical containers are, where possible, returned to the supplier to be refilled, while steel and plastics are separated and sent for recycling.

No hydraulic backfill was placed during the Reporting Period.

#### 6.6 AIR QUALITY

# 6.6.1 DEPOSITED DUST

Deposited dust monitoring was undertaken throughout the Reporting Period at monitoring locations DD1, DD2, DD3, DD4 and DD5. The monitoring results are available via the Company's website (http://www.divminerals.com.au/).

**Table 6.3** and **Figure 6.3** present the results of that program. During the Reporting Period, no exceedances of the deposited dust assessment criteria were recorded, that were attributable to the Mine. Exceedances during the Reporting Period were determined to be as a result of sample contamination, with the primary contamination mechanism being bushfires over the summer period. Those results where contamination has occurred have been excluded as outliers.

Table 6.2 Deposited Dust – Insoluble Solids (g/m²/month)

Row Labels	DD-1	DD-2	DD-3	DD-4	DD-5	
Average of Insoluble (g/m²/month)						
2013 - 2014	1.87	1.29	0.76	0.73	0.99	
2014 - 2015	1.34	0.59	0.99	1.04	0.36	
2015 - 2016	1.52	0.51	1.89	1.07	0.69	
2016 - 2017	1.22	0.75	1.63	2.06	1.41	
2017 - 2018	0.91	0.66	0.47	0.76	1.45	

2018 - 2019	1.07	0.98	0.64	1.12	0.93				
2019 - 2020	1.13	1.10	1.04	0.98	1.28				
Min of Insoluble (g/m²/month)									
2013 - 2014	1.1	0.3	0.1	0.1	0.1				
2014 - 2015	0.4	0.2	0.1	0.3	0.2				
2015 - 2016	0.7	0.2	0.2	0.5	0.2				
2016 - 2017	0.2	0.2	0.3	0.3	0.2				
2017 - 2018	0.2	0.2	0.2	0.3	0.2				
2018 - 2019	0	0	0	0	0				
2019 - 2020	0	0	0	0	0				
Max of Insoluble (g/m²/month)									
2013 - 2014	3.1	3.2	3	3.2	2.4				
2014 - 2015	2.8	1.2	2.2	2.5	0.6				
2015 - 2016	3.2	0.9	3.3	3.1	2.1				
2016 - 2017	2.7	2.1	3.5	3.5	3.5				
2017 - 2018	2.6	1.1	1.4	1.7	3.4				
2018 - 2019	2.7	3.3	2.2	4	3.3				
2019 - 2020	2.6	3.5	3.2	3.6	3.3				

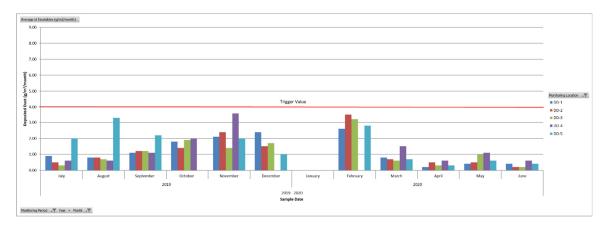


Figure 6.3 Deposited Dust Data - July 2019 to June 2020

# 6.6.2 HIGH VOLUME DUST PM10

PM10 dust monitoring continued during the Reporting Period at monitoring location HV1. The monitoring results are available via the Company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>).

**Table 6.4** and **Figure 6.4** present the results of that program. No exceedances of the PM10 assessment criteria were recorded during the Reporting Period that are attributable to the Mine. The primary source of exceedances during the Reporting Period was from bushfires surrounding the Site during the summer of 2019 - 2020.

Table 6.3 PM10 – Insoluble Solids (ug/m³)

Summary data	HV-1
Average	20.59
Minimum	1.00
Maximum	207.00

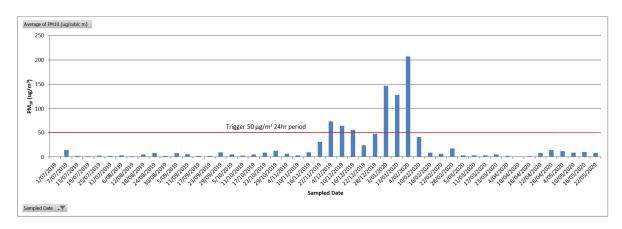


Figure 6.4 Deposited Dust Data - July 2019 to June 2020

# 6.7 BIODIVERSITY

#### 6.7.1 TERRESTRIAL FLORA AND FAUNA MONITORING PROGRAM

Terrestrial flora monitoring results do not indicate any substantial changes in species composition or abundance since operations began at the Site. The on-site open forest remains in moderate condition, with a relatively low cover of exotic species. However, as noted in previous reports, the limited rate and extent of natural regeneration indicates that active restoration (e.g. planting) may be required to meet the need for reducing fragmentation of this community, as stated in the Biodiversity Management Plan.

The scheduled summer fauna monitoring program was abandoned following concerns for individuals safety as a result of extensive regional bushfires.

The Annual Ecology Monitoring report is available via the Company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>).

# 6.7.2 AQUATIC ECOLOGY MONITORING PROGRAM

Results from the autumn 2020 aquatic ecology monitoring program showed some changes from the previous monitoring seasons. These were in the form of small changes in vegetation growth, with macrophytes being flattened during the flood events, variations in channel structures including sediment scouring and accumulation. Overall, sites remained in relatively good condition. There was a change in fish and macroinvertebrate densities and location, with large declines in fish and macroinvertebrates at sites AE3 and AE4 and increases or similar results seen at other sites. Coxs Gudgeon was captured again downstream in Majors Creek. This is likely the result of flood and fish barriers up and downstream of these sites. RCE and physiochemistry remained similar across sites and comparative to previous survey years, despite the flood event.

No longitudinal trends in degradation were observed and as such, current mining operations do not appear to have had a significant impact on the aquatic environment in autumn 2020. Changes are likely the result of broader catchment issues and the flood events which occurred in February and March 2020.

Aquatic

Ecology report is available via the Company's website

#### 6.7.3 STYGOFAUNA MONITORING PROGRAM

(http://www.divminerals.com.au/).

Bores 1, 4, 6, and 8 were sampled for stygofauna during autumn. There were nine Oligochaeta individuals in DRWB04. While these may be stygofauna, they are more likely to be members of the soil community. Soil-dwelling oligochaetes are often collected from groundwater monitoring bores. No stygofauna were collected from the other three bores.

# 6.8 HERITAGE

The

No new heritage items were discovered and no heritage items were relocated during the Reporting Period. To date only Aboriginal sites GT OS1 and GT OS2 have had items resumed and relocated. This was performed under the guidance of archaeologists Veronica Norman and Michael Lever (Artefact Heritage) on 27 April 2017 with the participation of the following stakeholders:

- Buru Ngunawal Aboriginal Corporation Traditional Carer Group
- Batemans Bay LALC
- Little Gudgenby River Tribal Council

There are no future disturbances planned for previously identified aboriginal artefact sites.

# WATER MANAGEMENT

# 7.1 INTRODUCTION

During the Reporting Period, the Mine undertook the following water management activities, which are detailed further in the following subsections:

- established the Snobs groundwater abstraction bore, which sources water from the old workings of the Snobs Mine;
- completed construction of Harvestable Rights Dam D (HRD-D);
- commenced processing of ore within the Site requiring the management of a range of different water types; and
- sourced water from external sources due to the ongoing drought.

# 7.2 GROUNDWATER

The Mine has four licenced groundwater extraction points (Table 7.1) that supply raw water for use on the Site. During the Reporting Period, the Snobs bore was installed and commissioned, while the bore at Stewart and Mertons and United Miners were yet to be constructed, however, are planned to be installed in the next reporting period.

Description **Source ID** Extraction Quantity (m<sup>3</sup>) Type **Details / Comments** 

**Table 7.1 Licenced Water Bores** 

WAL39281	LWB06	320,000	Raw	Dargues Gold Mine
WAL39282	LWB07	39,000	Raw	Snobs
WAL39287	LWB08	16,000	Raw	Stewart and Merton's
WAL39292	LWB09	24,000	Raw	United Miners

Extraction quantities for the licenced water bores is provide in **Table 7.2**.

**Table 7.2 Water Abstracted During the Reporting Period** 

Water Licence	Source details	Entitlement	Passive intake / inflows	Active pumping	Total
WAL39281	Dargues Gold mine	320ML/y	63	-	63
WAL39282	Snobs	39ML/y	0	1.8	1.8
WAL39287	Stewart and Merton's	16ML/y	0	0	0
WAL39292	United Miners	24ML/y	0	0	0
		Total	63	1.8	64.8

It is noted that, during the Reporting Period, the quantity of groundwater that could be extracted from the Snobs bore and the amount of groundwater that was reporting to the Mine, was materially less than expected. As a result, the Company has engaged Australasian Groundwater and Environmental Consultants (AGE) to update the groundwater model, taking into account the larger data set that is now available and the observed groundwater inflows to the Snobs bore and the Mine. This report is expected to be available in October 2020 and will be provided to the relevant agencies at this time.

# 7.3 SURFACE WATER

During the Reporting Period, Harvestable Right Dam - D (HRD-D) was constructed within the Site (**Section 7.3.1**) and planning for construction of Harvestable Right Dam - A (HRD-A) was completed. Harvestable Right Dam - H (HRD-H) was well advanced, with construction due to commence in the second half of 2020.

# 7.3.1 HARVESTABLE RIGHT DAM - D

Harvestable Right Dam – D (HRD-D) (**Plate 7.1**) was completed during the Reporting Period. HRD-D has a design capacity of  $8,400\text{m}^3$  and has been constructed using a compacted earth wall. Water from HRD-D will be used for compensatory flow, mining and processing.



Plate 7.1 Harvestable Right Dam - D

# 7.3.2 HARVESTABLE RIGHT DAM - A

Harvestable Right Dam – A (HRD-A) was designed and constructed immediately following the Reporting Period. For completeness, information regarding HRD-A has been included in this Reporting Period.

HRD-A has a design capacity of 13,000m<sup>3</sup> and was constructed using a compacted earth embankment (**Figure 7.1**). Construction commenced in July 2020 and took approximately 14 days. The dam has now been commissioned and following significant rainfall in the week proceeding construction is now at full capacity.

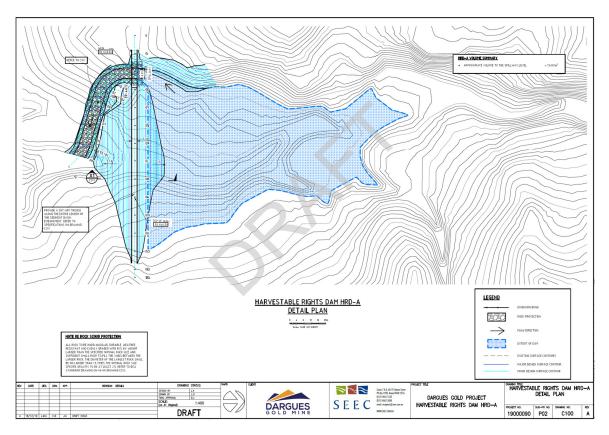


Figure 7.1 HRD-A Design (Draft)

# 7.3.3 HARVESTABLE RIGHT DAM - H

Harvestable Right Dam – H (HRD-H) has been designed and construction is expected to commence in October 2020, assuming a suitable weather window is available.

HRD-H has been designed as a compacted earth embankment and is expected to have a storage capacity of approximately 5,300m<sup>3</sup>.

# 8 REHABILITATION DURING THE REPORTING PERIOD

#### 8.1 REHABILITATION OF DISTURBED LAND

During the Reporting Period, the Mine was under construction and subsequently commenced operation. As a result, the Mine was disturbing land for use during operation and consequently no disturbed land required rehabilitation. **Table 8.1** and **8.2** provide a breakdown of the rehabilitated land and management areas.

#### 8.2 PLANNED REHABILITATION ACTIVITIES

There are no rehabilitation activities planned for the next reporting period. The Mine has recently completed construction and, as such, the Mine footprint is now at its maximum extent and being fully utilised, as a result, no rehabilitation is required at this time.

#### 8.3 OTHER INFRASTRUCTURE

No other infrastructure was rehabilitated during this Reporting Period.

#### 8.4 REHABILITATION TRIALS AND RESEARCH

During the Reporting Period no further rehabilitation trials or research was conducted within the Lease Area. This is primarily as a result of the construction program, which meant that the focus was on management of the construction activities and minimisation of impacts to the environment.

As the Mine is now in operation, the Company expects that further rehabilitation trials and research will be conducted in the next reporting period, in particular to support the development of the final rehabilitation plan. These trials and research will likely include:

- Maintaining topsoil stockpiles in a stable and healthy state;
- Slope stabilisation through the addition of natural rock products to assist with management of erosion.;
- Seed collection and seedling production; and
- Rehabilitation of some historical exploration sites.

#### 8.5 FURTHER DEVELOPMENT OF THE FINAL REHABILITATION PLAN

The Mine Operations Plan (the MOP) is due to expire on 31 March 2021. The next revision of the MOP is expected to cover the period to completion of mining and processing at the Mine and include the rehabilitation of the Site.

The Mine has commenced revision of the MOP and anticipates that a revised version of the MOP, including the final rehabilitation plan, will be submitted to the relevant agencies in January 2021 for their review and comment. The Mine anticipates that the final rehabilitation plan will be approved as part of the MOP and will be in place from 1 April 2021.

**Table 8.1 Rehabilitated Areas** 

		Area Affected/Rehabilitated (hectares)				
		To Date	Last Report	Next Report (estimate)		
A: Mine Lease Area						
A1	Mining Lease Area	316				
B: D	isturbed Areas					
B1	Infrastructure Area	17.5	17.5	17.5		
B2	Active Mining Area	2.1	2.1	2.1		
В3	Waste Emplacements	7.7	7.7	7.7		
В4	Tailings Emplacements	13.4	0	13.4		
B5	Shaped Waste Emplacement	0	0	0		
All C	Disturbed Areas	40.7	27.3	40.7		
C: R	ehabilitation					
C1	Total Rehabilitated Area	3.1	3.1	3.1		
D: R	ehabilitation on Slopes					
D1	10 to 18 degrees	0	-	0		
D2	Greater than 18 degrees	3.1	-	3.1		
E: Surface of Rehabilitated Land						
E1	Pasture and grasses	3.1	3.1	3.1		
E2	Native forest/ecosystems	0	-	0		
E3	Plantations and crops	0	-	0		
E4	Other	0	-	0		

# **Table 8.2 Area Treated**

	Area Treated (ha)			
	Report Period	Next Period	Comment/Control Strategies/Treatment Details	
Additional Erosion Control Works	0	0	All erosion controls for operation of the site are now in place.	
Re-Covering	0	0	No further re-covering work is planned for the next Reporting Period.	
Treatment/Management	200	200	Grazing by cattle to control grass and potential fire risk.	
Re-Seeding/Replanting	0	0	No re-seeding or planting is planned for the next Reporting Period.	
Adversely Affected by Weeds	43	43	The area treated, and planned to be treated, is subject to maintenance spraying for weeds including Broome and Blackberry.	
Feral Animal Control	43	43	Control of pigs is to be continued during the next reporting period. No other feral animal control is planned to occur.	

# 9 COMMUNITY RELATIONS

#### 9.1 COMPLAINTS

The Company operates a 24-hour, 7 day a week, information line (1800 732 002) and email address (<u>DGM.Community@Divminerals.com.au</u>) which may be used by the public or other stakeholders to make enquires in relation to the Mine or to lodge a complaint.

The Mine has implemented a complaints handling and response management system, with the principal aim being, to respond promptly and comprehensively to each complaint received by the Mine. Further to this, during the Reporting Period the Company implemented a dynamic Complaints Register using Microsoft PowerBI, which can be accessed on the Company's website (<a href="http://www.divminerals.com.au/dargues-gold-mine/community/complaints-register/">http://www.divminerals.com.au/dargues-gold-mine/community/complaints-register/</a>). This new reporting format has been very well received by the community and provides ready access to a wide range of information about complaints received by the Mine.



Figure 9.1 Complaints Register – PowerBI

During the Reporting Period, a total of 289 complaints were received by the mine (**Further information** regarding noise, traffic and visual amenity is provided in **Section 6**.

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Table 9.1), with over 60% of the complaints being received from five (5) complainants. The majority of complaints were related to noise (97%), with traffic and visual amenity making up the remaining complaints.

Further information regarding noise, traffic and visual amenity is provided in **Section 6**.

**Table 9.1 Nature of Complaints Received during Reporting Period** 

Pollution Complaint Category	Complaints
Air	0
Water	0
Noise	280
Waste	0
Visual Amenity	4
Traffic	4
Other	1
Total complaints recorded by the licensee during the reporting period	289

#### 9.2 COMMUNITY CONSULTATIVE COMMITTEE

Four meetings of the Dargues Gold Mine Community Consultative Committee (CCC) were held during the Reporting Period, namely:

- 30 September 2019;
- 16 December 2019;
- 16 March 2020; and
- 22 June 2020.

Minutes from each of the DRCCC meetings are presented on the Diversified Minerals website (<a href="http://divminerals.com.au/dargues-gold-mine/community/community-consultative-committee/">http://divminerals.com.au/dargues-gold-mine/community/community-consultative-committee/</a>).

#### 9.3 COMMUNITY MEETINGS

One community information meeting was held on 18 November 2019. The information session was held to update interested members of the community on the current status of the Dargues Gold Mine, milestones achieved and planned future activities over the preceding 12 months as the Mine transitioned from construction to production.

No other community meetings were held during the Reporting Period due to bushfires over the later part of 2019 and the emergence of Covid19 in early 2020. The Company is evaluating options for undertaking community meetings in other formats, including:

- Online question and answer sessions;
- Video and photo journals of the Mine's operations; and
- Regular updates via the Mine's Facebook page and website.

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Given the currently identified timeframes for community gatherings provided by the State and Federal Governments, the Company does not expect that any in person community meetings will be held during the next reporting period.

# 9.4 COMMUNITY GRANTS PROGRAM

During the Reporting Period, a Community Grants Program was implemented by the Mine. The Community Grants Program aims to assist community groups to undertake a wide range of activities that contribute to the social, educational, recreational, environmental and community development aspects of the local communities. Grants of up to \$3,000 are available to eligible applicants. The aim of these grants is to support organisations that provide specific sustainable outcomes which have long lasting benefit/s to the wider community.

Grants awarded during the Reporting Period included:

- Braidwood Mens Shed (Concrete slab);
- Braidwood Scout Group (Printer & Sporting goods); and
- Majors Creeks Recreational Ground (Erection of BBQ Shelter & BBQ Unit).

The Community Grants Program is run on a six (6) monthly basis, with grants awarded in July and February each year.

# 9.5 QUARTERLY NEWSLETTER

The Mine publishes a quarterly newsletter to keep the community and other local stakeholders informed about what is happening at the Mine, what is planned to occur in the next quarter and educate readers about various aspects of the Mine. All community newsletters can be accessed via the company's website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>).

# 10 INDEPENDENT AUDIT

An independent audit was completed by Senversa Pty Ltd (Senversa) on 4 February 2020, titled Dargues Gold Mine – Independent Environmental Audit of Project Approval Conditions 10\_0054 MOD4 (the Independent Audit), which is provided on the Company's Website (<a href="http://www.divminerals.com.au/">http://www.divminerals.com.au/</a>). The following subsections provide the Company's response to each of the areas of potential non-compliance with the Project's Approval Conditions that were identified by the Independent Audit.

# 10.1 SCHEDULE 2, CONDITION 11

Within 12 months of the date of this approval, unless otherwise agreed by the Secretary, the Proponent shall enter into a planning agreement with Council in accordance with Division 6 of Part 4 of the EP&A Act, that provide for contributions to Council for:

- upgrades of Council's road infrastructure affected by the project; and
- general community enhancement to address social amenity and community infrastructure requirements arising from the project.

The contributions shall be consistent with the terms of the offer made in the Proponent's letter dated 24 September 2010, and summarised in Appendix 6.

The Company has been in discussion with Queanbeyan Palerang Regional Council (QPRC) with regards to reviewing and updating Part 4 of the Planning Agreement (the Planning Agreement), which was executed in February 2013. Following extensive consultation, the Planning Agreement has been updated to reflect the following:

- The current status of the Mine, QPRC's proposed project and works already completed under the Planning Agreement;
- Changes in legislation since the Planning Agreement was originally agreed; and
- Payment amounts, consistent with the CPI, and dates for payments under the Planning Agreement.

The revised Planning Agreement is currently with QPRC, for consultation with council and ratepayers, with the finalised Planning Agreement expected to be executed in late 2020, following completion of this consultation.

Although this represents a technical non-compliance, it has been by mutual agreement, between the Company and QPRC, to review and update the Planning Agreement. Further, the terms of the Planning Agreement remain consistent with the Project Approval.

# 10.2 SCHEDULE 5, CONDITION 10

Prior to the commencement of construction on site, the Proponent shall:

- (a) make copies of the following publicly available on its website:
  - the documents referred to in Condition 2 of Schedule 2;
  - all current statutory approvals for the project;

- all approved strategies, plans and programs required under the conditions of this approval;
- the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;
- a complaints register, updated on a monthly basis;
- minutes of CCC meetings;
- the annual reviews of the project;
- any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit;
- any other matter required by the Secretary;
- any incident report referred to in Condition 6 of Schedule 5;
- a certificate of currency of public liability insurance held by the Proponent as in force from time to time; and
- (b) keep this information up-to-date, within a reasonable period, and in any event no later than 28 days after the above information becomes available,

to the satisfaction of the Secretary.

At the time of the audit, the Company was in the process of changing the loggers used to measure water levels at the four (4) flow monitoring locations, two (2) on Spring Creek and two (2) on Majors Creek, from loggers that required manual download and data processing to an automated system that allowed for live capture and publication of the flow monitoring data.

This new system has the following benefits:

- Live data publication to the Company's website;
- Improved data integrity, error checking and analysis tools; and
- Reduced data loss.

During the implementation of the new system, there was a large amount of data validation and development work required to ensure that the data presented to the public was both accurate and delivered in a timely manner. Unfortunately, during this time, it meant that data was not available on the Company's website. Now that the system has been fully implemented, data is again available from the Company's website (<a href="http://www.divminerals.com.au/dargues-gold-mine/environment/monitoring/water/">http://www.divminerals.com.au/dargues-gold-mine/environment/monitoring/water/</a>).

The Company undertook implementation of the new system in a timely manner, however, the publication of data was not able to occur within the timeframes required by Schedule 5, Condition 10, due to the development and data validation required. The new system represents a huge improvement in the availability and accuracy of the data to the public, and other stakeholders, and is consistent with the Company's goal of improving access to environmental monitoring data for the Site. All monitoring data from the period covered by the implementation period has now been published along with a live feed of data from the various monitoring locations.

#### 10.3 APPENDIX 5, COMMITMENT 6.4D AND 6.4E

- 6.4d Undertake, in consultation with NOW, a pump test to confirm the assumed hydrological parameters used in the groundwater model. The pump test should be in the vicinity of the mine where the fracture density and hydraulic conductivity is likely to be high.
- 6.4e Undertake a review of the numerical groundwater model, including:
  - further detailed baseline data inputs, as required by the conditions of the approval;
  - a statistical comparison of the Braidwood and Majors Creek rainfall data to determine the significance of choice of input;
  - rain fall data from the weather station within the project site (if determined to be relevant):
  - pumping tests of relevant bores;
  - a comprehensive sensitivity and uncertainty analysis of groundwater model outputs;
  - measurement of baseflow in Majors and Spring Creeks; and
  - investigation of the water quality arising from the mine backfilling including modelling of dissolution associated with changes in hydrology, groundwater flow and the nature of the aquifer matrix.

In the event that the actual impacts are significantly greater than those presented in AGE (2010), then the Proponent would consult with NOW in relation the revised modelling results and would develop appropriate management and mitigation measures to address those impacts

The Company engaged Australian Groundwater and Environmental Consultants Pty Ltd (AGE) to complete an update of the groundwater model for the Site. This is expected to be completed within the next reporting period. As part of the model update, all inputs to the model will be updated and revised, including a pump test should it be determined to be of benefit for the model.

It is noted that, underground mining is now extensive enough that sufficient data is available to warrant revision of the groundwater model. Up until recently, no additional data or revised inputs were available, that would have materially influenced the groundwater model. The Company contends that updating the groundwater model in March 2021 represents the first available opportunity to do so, and for the modelling to be of benefit to the Company and regulators.

# 10.4 SEPTEMBER 2019 AND MARCH 2020 DISCHARGE EVENTS

During the Reporting Period there were two (2) discharges of sediment laden water from the Tailings Storage Facility construction area which are discussed further in the following subsections.

# 10.4.1 SEPTEMBER 2019 - DISCHARGE EVENT

Discharge of sediment laden water was detected from the Tailings Storage Facility construction area on 17 September 2019. Immediately following detection of the discharge of sediment, the Company undertook to limit the volume of sediment laden water being discharged as well as determine the impact on the environment by:

- Constructing a diversion drain along the downstream edge of the TSF Embankment to assist with channelling water into the TSF Sediment Basin. This action was completed by 8:40 am on 17 September 2019 and was highly effective in directing sediment laden water into the TSF Sediment Basin.
- Completing targeted water sampling in Spring Creek upstream and downstream of the discharge location.
- Completing water sampling at all surface water sampling locations in Spring Creek, Majors
  Creek and Araluen Creek consistent with the Water Management Plan (the WMP). A
  second round of sampling was also completed on 19 September 2019.
- Standing down all bulk earthworks at the Site until the sediment discharge had been contained.

The Company has, at each stage of the Event, taken responsibility for its actions and has maintained an open and transparent dialogue with all stakeholders. The Company has maintained high standards of operation and a culture of approaching environmental obligations in a proactive manner. The discharge of sediment laden water was unintentional and occurred despite the best efforts of the Company, including:

- training all relevant employees in erosion and sediment control;
- regularly inspecting the Site for erosion and sediment control issues and promptly rectifying any issues that were identified;
- auditing the Site using an independent expert in erosion and sediment control, who has been approved by the Secretary of the DPIE; and
- ensuring that a competent contractor was engaged to complete the work under a contract that clearly defined the expectations of the company in regards to erosion and sediment control.

The actions taken by the Company clearly demonstrate its commitment to best practice sediment and erosion control at the Site and the significant resources that have been applied at each stage of the Mine's development. The Company has maintained an open and transparent dialogue with all relevant stakeholders, as demonstrated throughout this Event.

Given the extent to which the Company has taken steps to ensure that no sediment and erosion control incidents would occur at the Mine, the Company is extraordinarily disappointed that the

Event.

While clearly unacceptable, the Company is of the view that this particular incident should be viewed as an unintentional and isolated one-off occurrence, that fortunately had a relatively minor impact.

Event has occurred. The Company expresses genuine contrition and remorse in relation to the

# 10.4.2 MARCH 2020 - SEDIMENT DISCHARGE EVENT

Sediment laden water was observed discharging from a disconnected Plasson compression fitting on the Tailings Storage Facility water diversion pumping system during a routine inspection at 10:00 am on 10 March 2020. Following observation of the discharge, the site *Pollution Incident Response Management Plan* (PIRMP) was initiated.

Actions immediately implemented by the company following the detection of the event included:

- Relocation of pipe to within the TSF basin and shutdown of pump;
- Targeted water sampling upstream and downstream of discharge point in Spring Creek, with additional samples collected for analysis at SW3 and the junction of Spring Creek and Majors Creek;
- Cessation of all pumping from the TSF bulk earthworks until further integrity checks were completed on the water diversion pumping system; and
- Water sampling at all surface water sampling locations in Spring Creek, Majors Creek and Araluen Creek, consistent with the WMP, on 11 March 2020.

The Company has implemented several measures to prevent reoccurrence of a similar event, including:

- Integrity inspections of all onsite dewatering systems;
- Relocation of the failed pipe fitting to within the TSF basin;
- Replacement of the Plasson compression fitting; and
- Developing new site training and awareness package for dewatering activities.

In conclusion, the Company recognises the importance of deploying rigorous water management controls so as to mitigate events as mentioned above and undertook a substantial investigation of this discharge event.

#### 10.5 CONCLUSION AND SUMMARY

The Company notes that, the non-compliances with Schedule 2, Condition 11, and Commitment 6.4d are principally as a result of the delay in execution of the Mine, resulting in the Company not being able to meet the requirements of the Condition and Commitment within the required timeframe. Specifically, in relation to Schedule 2, Condition 11, the delay in implementing the agreement was by mutual agreement with QPRC and the timeframe for implementing the revised agreement is largely dependent on the review and approval process of QPRC.

In regard to, Schedule 5, Condition 10, the Company has committed significant resources to ensuring compliance with this condition. The implementation of the live data feed to the Mine's website for water flow monitoring is an example of the Company's commitment to continuous improvement in providing access to monitoring data at the Mine. Although, this resulted in a temporary delay in providing the data to the public, the new system represents a huge improvement in the provision and accuracy of the data provided.

Finally, water management at the Site is recognised as extremely important given the location of the Site and the downstream environment. The Company continues to apply significant resources to the management of water and strives to improve the management system on a continual basis.

# 11 ACTIVITIES TO BE COMPLETED DURING THE NEXT REPORTING PERIOD

#### 11.1 INTRODUCTION

During the next reporting period, the Mine will be in steady state operations and, as a result, activities to be completed are principally associated with underground mining and processing of ore, with the exception of Stage 2 construction of the Tailings Storage Facility.

Other activities proposed for the next reporting period include:

- Review and revision the Environmental Management Plans;
- A stakeholder engagement survey;
- Purchase an offsite biodiversity offset property as part of the biodiversity offset program included in the *Biodiversity Management Plan*;
- Remove blast monitoring from environmental monitoring program;
- Install production bores into Stewart and Merton's and United Miners;
- Review and update groundwater impact assessment. Based on the results of the revised model, update the site water balance; and
- Water monitoring assessment aimed to improve the efficiency of field monitoring and removing unnecessary monitoring sites from the monitoring schedule.

#### 11.2 TAILINGS STORAGE FACILITY - LIFT 2

The Tailings Storage Facility – Stage 2 will allow storage of up to 0.46Mt of tailings material and will have a life of approximately 24 months. Construction is expected to commence in October 2020, with commissioning to occur in January 2020.

The embankment is proposed to be raised as a downstream profile to a crest elevation of RL707.6 m and will comprise a multi-zoned embankment constructed of mine waste and selected local borrow. The embankment will have an upstream slope of 1V:3H, a downstream slope of 1V:2.5H and a crest width of 6 m.

The embankment upstream face will be lined with a 1.5 mm smooth HDPE geomembrane. In addition, the basin area will be fully lined with a composite compacted soil liner and 1.5 mm smooth HDPE geomembrane up to the nominal final stage elevation of RL712.0 m to reduce the risk of erosion of the basin subgrade.

The underdrainage and LCRS riser pipes will be extended to the nominal final stage elevation (RL712.0 m) using 450 mm diameter HDPE (SDR17) solid riser pipes. The Stage 1 decant causeway (Decant No. 1) will be removed and re-constructed to form an access causeway from the perimeter access road to the Stage 1 decant tower.

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The Stage 1 decant tower will become redundant later in the life of the TSF as the pond level rises and migrates further up the valley. A second causeway will be constructed further up the valley to a crest elevation of RL712.0 m to permit a floating decant pump to be installed. The second decant will operate for the remainder of the life of the TSF.