

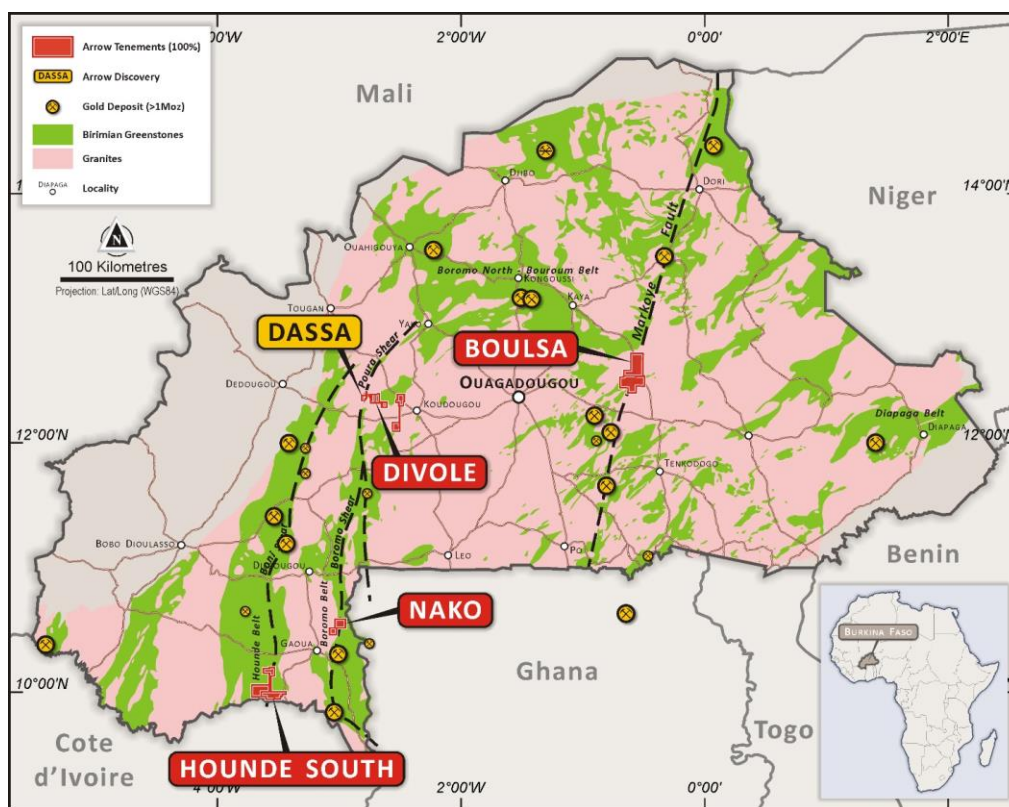
## QUARTERLY ACTIVITIES REPORT FOR THE PERIOD ENDED 31 DECEMBER 2019

### DECEMBER QUARTER HIGHLIGHTS:

- Gold discovery at Dassa on Divole West permit – grades up to 43 g/t Au; Drilling continues
- Arrow sells infrastructure access to Macarthur Minerals for infrastructure related to its Moonshine Magnetite Project

### DASSA DISCOVERY (Divole West Project, AMD 100%)

During the quarter Arrow Minerals Limited (**Arrow** or the **Company**) (ASX: **AMD**) undertook the maiden 4,214m reverse circulation (RC) drilling programme at the Divole West exploration permit in western Burkina Faso (**Figure 1**). The drilling, completed in January 2020, resulted in the Dassa gold discovery, including a large mineralised zone that appears to extend over a 3km strike length and remain open in multiple directions and at depth (**Figure 2**).



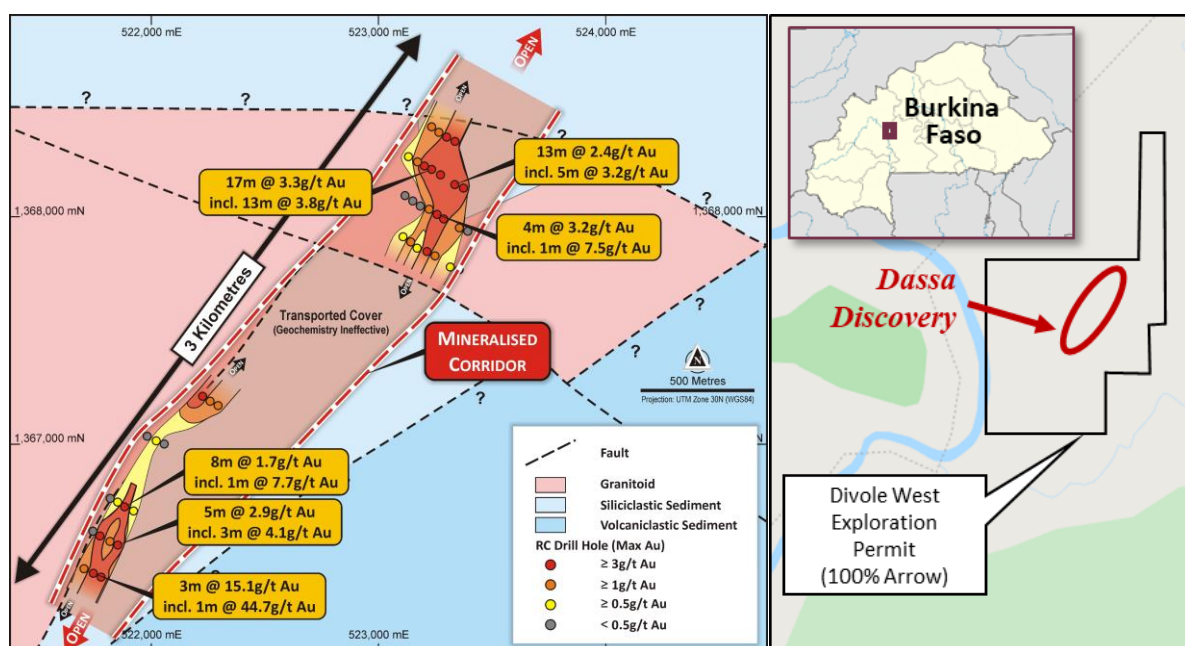
**Figure 1: Arrow's Burkina Faso gold exploration projects – location map**

### Capital Structure

ASX Code:	AMD
Shares on issue:	907.4m
Unlisted options:	167.6m
Performance rights:	139.4m

### Board and Management

Dr Frazer Tabeart	Non-Executive Chairman
Tommy McKeith	Non-Executive Director
Morgan Ball	Non-Executive Director
Steven Michael	Executive Director
Howard Golden	Chief Executive Officer



**Figure 2: Divole West drilling showing mineralised drilling intercepts at the Dassa discovery**

The drilling targeted an unexplored part of the Birimian Shield of Burkina Faso and has confirmed the Dassa gold discovery, comprising mineralised zones with gold grades up to 45g/t Au. The discovery remains open laterally and at depth.

The mineralised zones are hosted predominantly by siliciclastic sediments, with localised quartz veining. Mineralisation is at very shallow depth, mainly within the oxidised zone, and is underlain by granitic intrusive rocks that are also altered and contain sporadic elevated gold concentrations.

Over 60% of the drill holes intersected mineralisation of at least 1g/t Au, with some of the most significant intersections shown in **Table 1**. Representative sections from the drilling programme are shown in **Figures 3-7**. Refer to ASX announcement dated 13 January 2020 for further details.

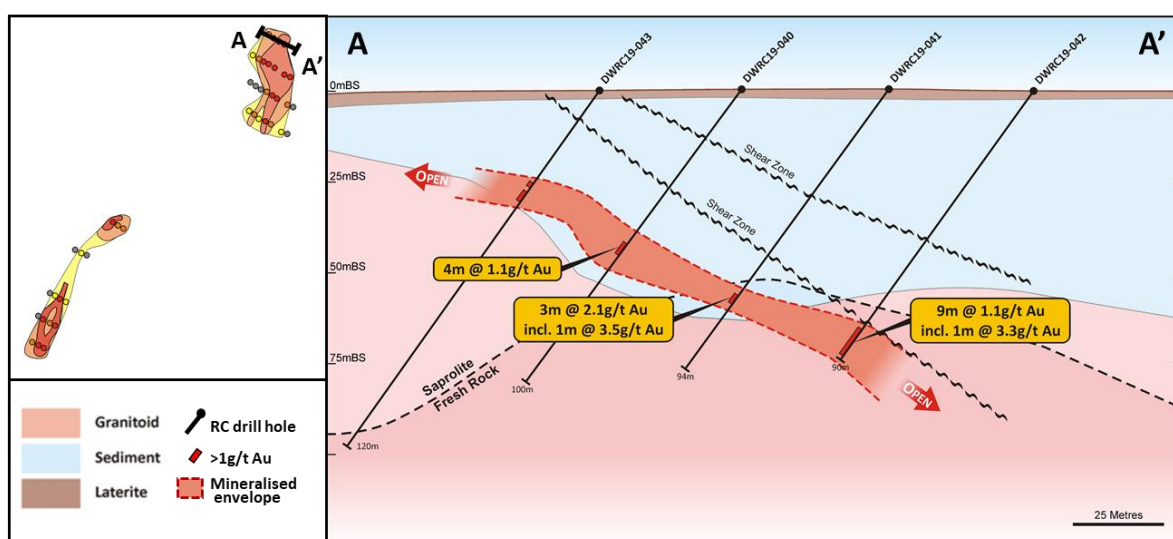
**Table 1: Selected gold intersections**

Hole ID	From	Intersection	Including
DW-RC-19-001	21m	33m @ 1.9g/t	9m @ 4.3g/t
DW-RC-19-002	2m	17m @ 3.3g/t	13m @ 3.8g/t
DW-RC-19-003	10m	8m @ 2.0g/t	3m @ 4.9g/t
DW-RC-19-006	22m	23m @ 1.0g/t	3m @ 3.2g/t
DW-RC-19-007	2m	4m @ 3.2g/t	1m @ 7.5g/t
DW-RC-19-025	68m	8m @ 1.7g/t	2m @ 4.3g/t
DW-RC-19-030	79m	5m @ 2.9g/t	3m @ 4.1g/t
DW-RC-19-032	53m	3m @ 15.1g/t	1m @ 44.7g/t
DW-RC-19-034	31m	13m @ 2.4g/t	5m @ 3.2g/t
DW-RC-19-035	47m	8m @ 2.4g/t	5m @ 3.1g/t

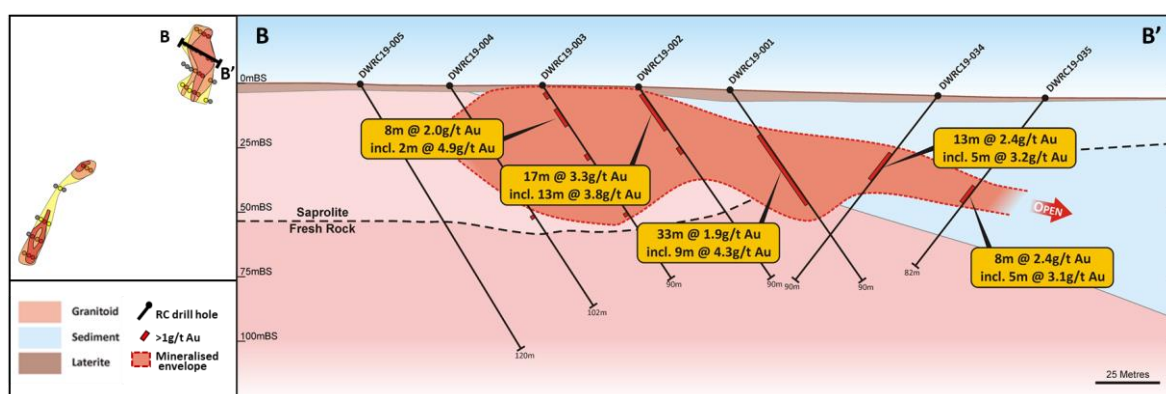
The Dassa discovery was drilled with a focus on two zones where previous auger sampling was particularly effective, leaving open the area in between that is currently being drilled, with an eye toward confirming a >3km mineralised structure.

Arrow owns 100% of 1,077 km<sup>2</sup> of exploration licenses in central and western Burkina Faso. These positive results confirm a new gold discovery at Dassa on the Divole West permit and set the stage for more exploration at Dassa to rapidly define the extent of mineralisation. Arrow plans to also advance other targets that have been defined using the same methodology.

As announced 29 January 2020, a further RC drilling programme is underway at Dassa to define extensions of the gold mineralisation laterally and at depth. The drilling comprises about 2,700m and expected to be completed in February.



**Figure 3: Cross section (A - A') showing significant gold intersections ( $\geq 1\text{g/t Au}$ )**



**Figure 4: Cross section (B - B') showing significant gold intersections ( $\geq 1\text{g/t Au}$ )**

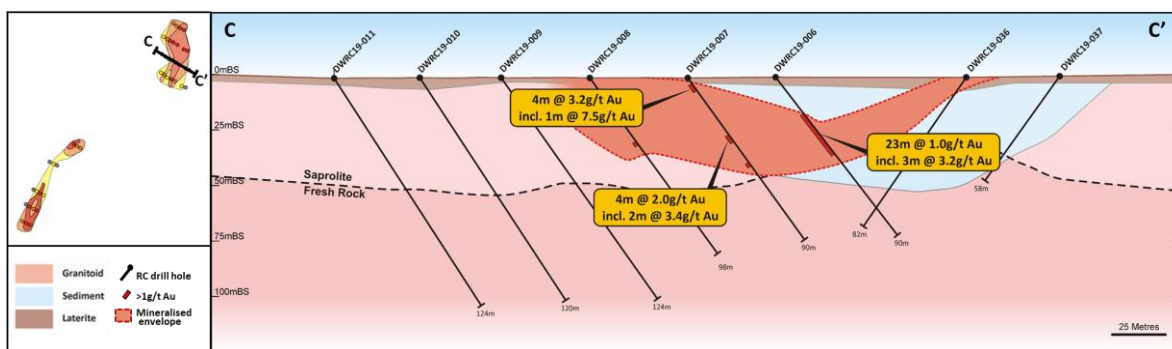


Figure 5: Cross section (C - C') showing significant gold intersections ( $\geq 1\text{g/t Au}$ )

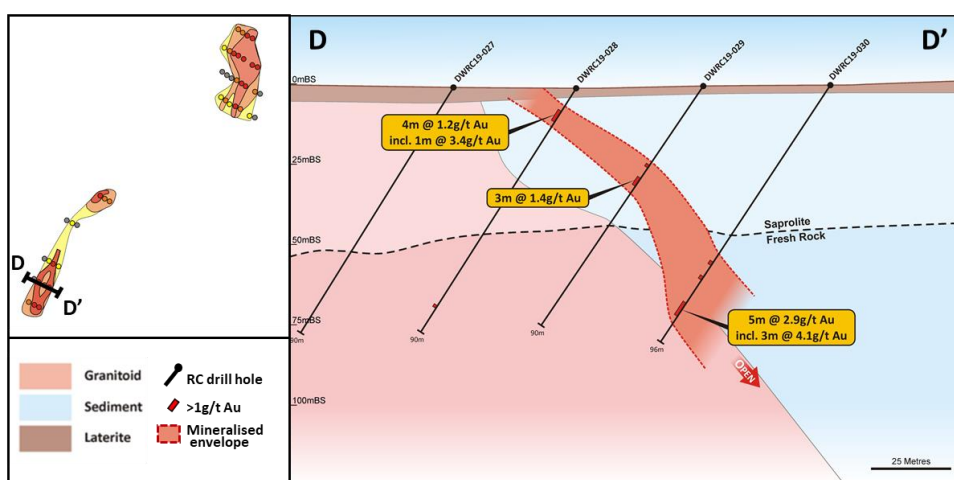


Figure 6: Cross section (D - D') showing significant gold intersections ( $\geq 1\text{g/t Au}$ )

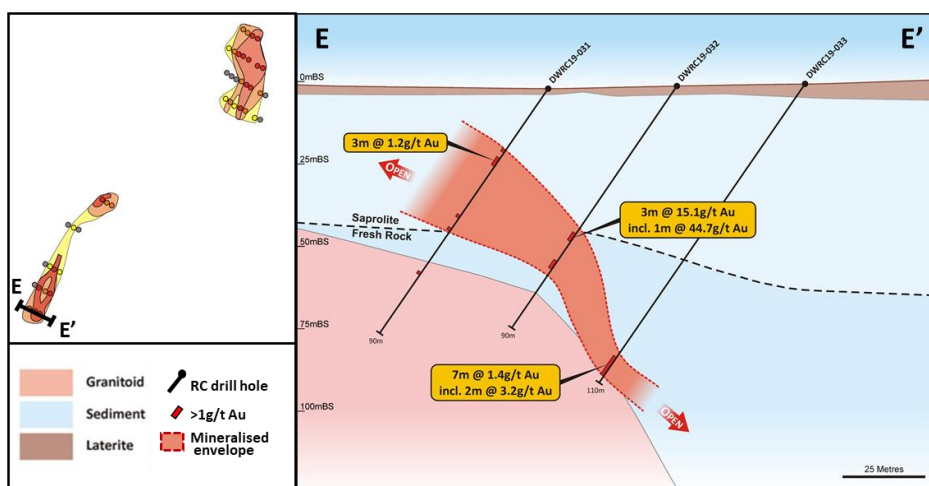


Figure 7: Cross section (E - E') showing significant gold intersections ( $\geq 1\text{g/t Au}$ )



## PLUMRIDGE NICKEL PROJECT (AMD 10%, IGO Limited 90%)

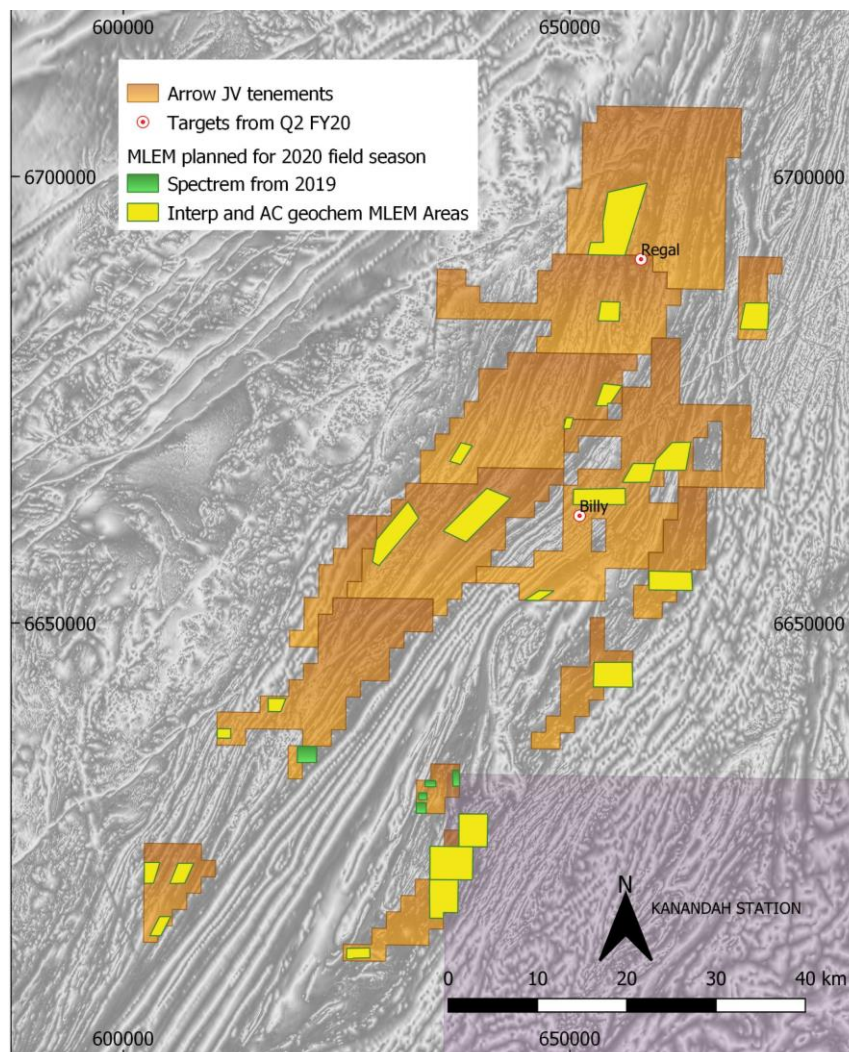
During the quarter, Arrow's joint venture partner in the Plumridge Nickel Project (**Plumridge**), IGO Limited (ASX: IGO) (IGO), completed diamond drill holes on two bedrock targets that were identified using the aircore drilling, AEM and MLEM datasets (**Figure 8**). Following are summaries of the work completed during the quarter:

### Regal

- Hole 19AFDD1004 at Regal intersected brecciated sulphides from 369-376m.
- DHEM interpretation completed at Regal:
  - Off-hole conductor at ~345m depth:
  - 400m x 200m 5000S plate.

### Perle

- Hole 19AFDD1005 at Perle intersected a broad anomalous VHMS geochemical trend in graphitic gneiss – this prospect is being assessed for follow up in 2020.
- DHEM confirmed that a conductive plate was tested –no off-hole conductors.



**Figure 8: Localities interpreted during the quarter at Plumridge**

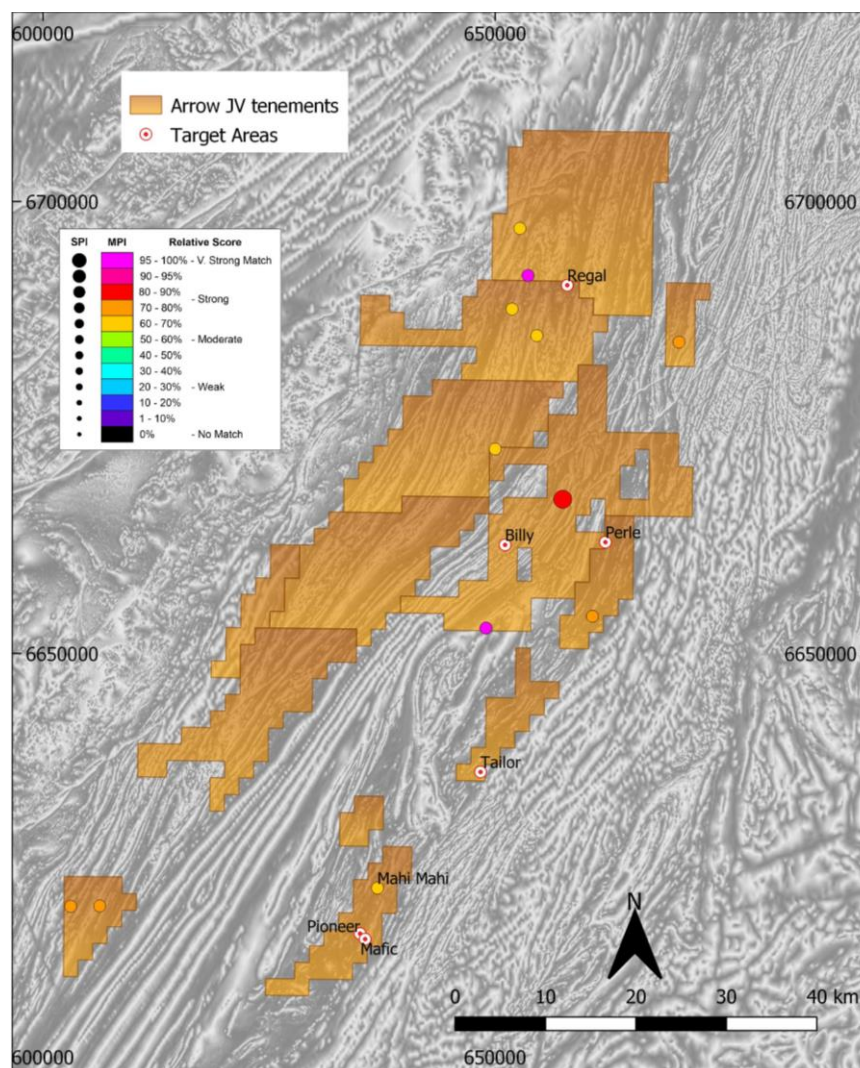
### Other Exploration

In exploration away from established targets, the quarter's work returned the following results:

- MLEM on E39/1731 identified a new target to drill test in 2020.
- The 'Billy' target is a conductive plate (600m x 200m, 1600S) in favourable structural setting within the Snowy's Dam Formation.
- 5 planned MLEM surveys are outstanding - postponed to 2020 field season.

### 2019 Aircore Infill Drilling

- 2,534 assays were received from surface to end of hole.
- One new target (Mahi-Mahi) in ultramafic rock was intersected:
  - Hole 19AFAC10779: 46m @ 0.167 % Ni and 0.1% Cr from 26m to EOH (**Figure 9 and Table 1**)
  - This occurs on license E28/2266, along a NE-SW trend that hosts other targets including Pioneer, Mafic and Tailor



**Figure 9: Location map with prospectivity indices from aircore drilling at Plumridge**

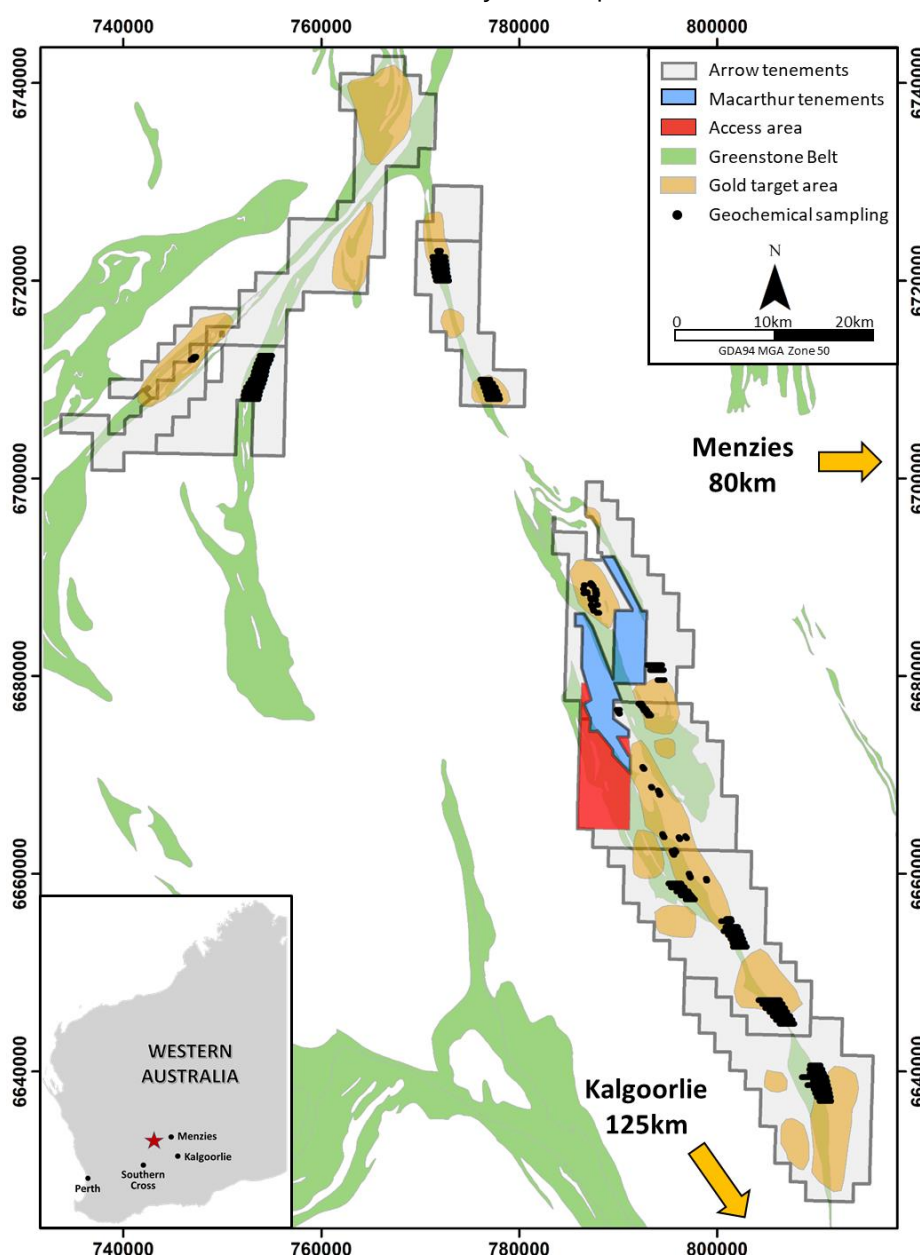
**Table 2: Plumridge significant intersections**

HOLEID	EAST	NORTH	RL	TENEMENT	FROM	TO	LENGTH (m)	Ni_ppm BEST	Cr_ppm BEST	Co_ppm BEST
19AFAC10779	636992	6624034	206.0015	E28/2266	26	72	46	1669	1008.7	105.48

### STRICKLAND PROJECT (AMD 100%)

Arrow entered into an agreement for Macarthur Minerals Limited (ASX: MIO, TSX-V: MMS) (Macarthur) to gain access to a small portion of the Strickland Gold Project necessary for infrastructure related to its Moonshine Magnetite Project (Figure 1) during the quarter.

In consideration for entering into the agreement, Macarthur paid Arrow \$500,000, being \$250,000 in cash, to be paid immediately, and issue \$250,000 worth of Macarthur shares in six months. The shares will be issued at a 20% discount to the 5-day VWAP prior to the issue.



**Figure 10: Strickland Gold Project tenement map showing Macarthur tenements and access area**



Arrow has completed a review of the extensive data acquired over the Strickland Gold Project. As a result of the review, several areas are currently being sampled in an effort to confirm gold anomalism encountered where the previous sampling may have been ineffective. This sampling programme, including soil sampling and shallow auger drilling (**Figure 10**), will enable follow-up field work over prospective areas during 2020. The ongoing sampling programme will conclude in January 2020 and any further work deemed appropriate will be scheduled for later in 2020.

## **CORPORATE AND FINANCIAL**

### **Financial Position**

Arrow remains in a strong financial position with \$886,000 in cash and \$445,000 in prepayments for drilling services in Burkina Faso.

### **Annual General Meeting**

The Company held its annual general meeting (**AGM**) on 15 November 2019 where all resolutions put shareholders were passed.

### **Company Secretary Appointment and Resignation**

Mr Matthew Foy resigned as Company Secretary of Arrow effective 10 December 2019. Ms Melissa Chapman was appointed as Company Secretary effective 10 December 2019. Together, Ms Melissa Chapman and Ms Catherine Grant-Edwards (previously appointed 26 August 2019) perform the role of Joint Company Secretary.

### **Capital Structure**

During the quarter, movements in securities were as follows:

- 62,682,290 shares were issued upon the conversion of 69,682,290 Class A performance rights;
- 10,000,000 unlisted options exercisable at 1.25c on or before 15/10/2022 were issued;
- 6,425,357 shares were cancelled pursuant to employee share scheme buy back;
- 120,872,133 listed options (ASX:AMDOA) exercisable at 10.0c expired on 31/12/2019; and
- 13,146,469 unlisted options exercisable at 7.0c expired on 31/12/2019.

The capital structure of Arrow at 31 December 2019 is set out below:

#### **Quoted Securities**

Ordinary shares on issue (ASX:AMD)	907,395,452
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#### **Unquoted Securities**

Unlisted options exercisable at 2.0¢ on or before 22/08/2022	120,150,000
Unlisted options exercisable at 1.25¢ on or before 15/10/2022	10,000,000
Unlisted options exercisable at 1.45¢ on or before 22/08/2023	37,500,000
Class B Performance Rights subject to performance conditions (ex. 26/08/2022)	69,682,290
Class C Performance Rights subject to performance conditions (ex. 26/08/2023)	69,682,300



Announcement authorised for release by Howard Golden, Chief Executive Officer of Arrow.

For further information visit [www.arrowminerals.com.au](http://www.arrowminerals.com.au) or contact:

**Arrow Minerals Limited**

Mr Howard Golden

*Chief Executive Officer*

E: [info@arrowminerals.com.au](mailto:info@arrowminerals.com.au)

**Competent Persons Statement**

The information in this report that relates to Exploration Results is based on information compiled by Mr Howard Golden who is a Member of the Australian Institute of Geoscientists. Mr Golden is a full-time employee of the Company and has more than five years' experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves". Mr Golden consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Additionally, Mr Golden confirms that the entity is not aware of any new information or data that materially affects the information contained in the ASX releases referred to in this report.

**Appendix A – Schedule of Western Australian Tenements as at 31 December 2019**

Tenement ID	Status	Interest at beginning of quarter	Interest acquired or disposed	Interest at end of quarter
<b>Strickland Gold Project</b>				
E16/495	Granted	100%	-	100%
E16/498	Granted	100%	-	100%
E30/503	Granted	100%	-	100%
E30/488	Granted	100%	-	100%
E30/493	Granted	100%	-	100%
E30/494	Granted	100%	-	100%
E77/2403	Granted	100%	-	100%
E77/2416	Granted	100%	-	100%
E77/2432	Granted	100%	-	100%
E77/2570	Granted	100%	-	100%
<b>Malinda Lithium Project</b>				
E09/1618	Granted	50% <sup>1</sup>	-	50%
E09/2169	Granted	100%	-	100%
E09/2170	Granted	100%	-	100%
E09/2197	Granted	100%	-	100%
E09/2198	Granted	100%	-	100%
E09/2283	Granted	100%	-	100%
<b>Plumridge Nickel Project</b>				
E28/1475	Granted	10%	-	10%
E28/2266	Granted	10%	-	10%
E28/2267	Granted	10%	-	10%
E28/2317	Granted	10%	-	10%
E39/1084	Granted	10%	-	10%
E39/1709	Granted	10%	-	10%
E39/1710	Granted	10%	-	10%
E39/1731	Granted	10%	-	10%
E39/2088	Granted	10%	-	10%
E28/2889	Application <sup>1</sup>	-	-	-
E28/2896	Application <sup>1</sup>	-	-	-
E28/2900	Application <sup>1</sup>	-	-	-
E28/2902	Application <sup>1</sup>	-	-	-

1. Applications are subject to a ballot.

**Appendix B – Schedule of Burkina Faso Tenements as at 31 December 2019**

Tenement ID	Status	Interest at beginning of quarter	Interest acquired or disposed	Interest at end of quarter
<b>Divole East &amp; West</b>				
17/046/MEMC/SG/DGCM	Granted	100%	-	100%
17/047/MEMC/SG/DGCM	Granted	100%	-	100%
19/047/MEMC/SG/DGCM	Granted	100%	-	100%
17/046/MEMC/SG/DGCM	Application	-	-	-
17/046/MEMC/SG/DGCM	Application	-	-	-
<b>Boulssa</b>				
18/152/MEMC/SG/DGCM	Granted	100%	-	100%
18/153/MEMC/SG/DGCM	Granted	100%	-	100%
17/046/MEMC/SG/DGCM	Application	-	-	-
<b>Hounde South &amp; Nako</b>				
16/226/MEMC/SG/DGCM	Granted	100%	-	100%
16/227/MEMC/SG/DGCM	Granted	100%	-	100%
16/228/MEMC/SG/DGCM	Granted	100%	-	100%
17/046/MEMC/SG/DGCM	Application	-	-	-
<b>Gourma</b>				
17/208/MEMC/SG/DGCM	Granted	100%	-	100%
17/219/MEMC/SG/DGCM	Granted	100%	-	100%
17/220/MEMC/SG/DGCM	Granted	100%	-	100%
17/221/MEMC/SG/DGCM	Granted	100%	-	100%

# JORC Code, 2012 Edition – Table 1 report template

## Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>The sampling techniques used at Fraser range have been air core drilling as detailed in the following subsections.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>Aircore holes have been drilled by six rigs owned and operated by Wallis Drilling Pty Ltd.</li> <li>Holes are NQ (50.6mm) diameter at a depth directed by IGO geologist and drilled using tungsten carbide air core bits.</li> <li>All holes are vertical.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery is not assessed and logged but noted if sample recovery is wet or dry to determine the potential sample smearing contamination</li> <li>Down hole depths are checked against drill rod counts.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Qualitative logging of chip and core included lithology, mineralogy, mineralisation, structural, weathering, colour and other features of the samples.</li> <li>The total lengths of all drill holes have been logged.</li> <li>The logging is considered adequate to support downstream exploration studies and follow-up drilling with RC or diamond core</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li><i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li><i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li><i>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>Sample piles representing one drilling metre are spear sampled to collect 4m composite samples, with ~ 3kg collected in pre-numbered calico bags.</li> <li>End of hole core plugs ranging from ~5-15cm are drilled where possible for bottom of hole analysis work.</li> <li>The nature of the drilling method means representation is indicative with sampling aimed at finding anomalous concentrations rather than absolute values for MRE work.</li> <li>The laboratory sample is by oven drying (4-6 hours at 95°C), coarse crushing in a jaw-crusher to 100% passing 10 mm, then pulverisation of the entire crushed sample in LM5 grinding robotic mills to a particle size distribution of 85% passing 75 µm and collection of a 200g sub-sample.</li> <li>Quality control procedures involve insertion of certified reference materials, blanks, and collection of duplicates at the pulverisation stage.</li> <li>The results of duplicate sampling are consistent with satisfactory sampling precision.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li><i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>No geophysical tools were used to determine any element concentrations.</li> <li>Bureau Veritas-Perth completed sample preparation checks for particle size distribution compliance as part of routine internal quality procedures to ensure the target particle size distribution of 85% passing 75 microns is achieved in the pulverisation stage.</li> <li>Field duplicates and CRMs were routinely inserted in the routine sample stream at a frequency of 1:20 samples.</li> <li>Blanks quality control samples are not used for exploration sampling.</li> <li>Laboratory quality control processes include the use of internal lab standards using certified reference materials (CRMs) and duplicates.</li> <li>CRMs used to monitor accuracy have expected values ranging from low to high grade, and the CRMs were inserted randomly into the routine sample stream to the laboratory.</li> <li>The results of the CRMs confirm that the laboratory sample assay values have good accuracy and results of blank assays indicate that any potential sample cross contamination has been minimised.</li> <li>Following sample preparation and milling, all core samples were analysed for a 63-element suite:</li> <li>Inductively coupled plasma mass spectroscopy (ICP-MS) for Ag, As, Au, B, Be, Bi, Cd, Ce, Co, Cr, Cs, Ga, Hg, La, Mo, Nb, Pb, Pd, Pt, Rb, Sb, Sc, Se, Sr, Te, Th, U, W, Y and Zn.</li> <li>Fire assay digestion and mass spectroscopy (FA-MS) for Au, Pd and Pt.</li> <li>Laser ablation and ICP-MS (LA-ICP-MS) for Ag, As, Be, Bi, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Ga, Gd, Ge, Hf, Ho, In, La, Lu, Mn, Mo, Nb, Nd, Pb, Pr, Rb, Sb, Sc, Se, Sm, Ta, Tb, Te, Th, Tl, Tm, U, Y, Yb and Zr</li> <li>Fusion digestion and X-ray fluorescence (XRF) analysis of powder fused with lithium borate flux including 5% NaNO<sub>3</sub> – Al, Ba, Ca, Fe, K, Mg, Na, Ni, P, S, Si, Sn, Sr, Ti, V, W and Zn</li> <li>The digestion methods can be considered near total for all elements</li> <li>Loss on ignition (LOI) was determined by robotic thermo gravimetric analysis at 1000°C.a.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections were checked by senior IGO geological personnel.</li> <li>No twinned holes were completed.</li> <li>The logging has been validated by an IGO on-site geologist and compiled onto the IGO acQuire SQL drill hole database by IGO's Geological Database Administrator.</li> <li>Assay data are imported directly from digital assay files from contract analytical company Bureau Veritas (Perth) and are merged in the Company acQuire SQL drill hole database by IGO's Geological Database Administrator.</li> <li>Data is backed up regularly in off-site secure servers.</li> <li>No geophysical or portable XRF results are used in exploration results reported.</li> <li>There have been no adjustments to the assay data.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>The hole collar locations of surface holes were recorded using a Garmin handheld GPS and averaging for 90 seconds. Expected accuracy is <math>\pm 6\text{m}</math> for easting and northing.</li> <li>Down hole surveys are not completed as holes are not used for MRE work.</li> <li>The grid system is GDA94 Zone 51.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Holes are drilled ~400m or 800m line spacing on east-west fences at a ~1.5lm to 3.0km fence spacing north south</li> <li>Samples have been composited using length-weighted intervals for public reporting.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling from surface is designed to test the regolith and basement below cover – the orientation in relation to geological structure is not always known.</li> <li>True-widths of the intervals are often uncertain as the drilling is aimed at finding anomalies not MRE definition.</li> <li>The possibility of bias in relation to orientation of geological structure is currently unknown.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The chain-of-sample custody is managed by the IGO staff.</li> <li>Samples were stored at the IGO's currently active mine site Nova Operation ("Nova") and sampled in the field by IGO staff and contractors, at the time of drilling.</li> <li>Samples were placed in pre-numbered calico bags and further secured in green plastic sample bags with cable ties. The samples are further secured in a bulk bag and delivered to the Bureau Veritas-Perth by contractor freight McMahon Burnette.</li> <li>A sample reconciliation advice is sent by the Bureau Veritas-Perth to IGO's Geological Database Administrator on receipt of the samples.</li> <li>Sample preparation and analysis is completed at the one the laboratory Bureau Veritas-Perth.</li> <li>The risk of deliberate or accidental loss or contamination of samples is considered very low.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No specific external audits or reviews have been undertaken.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary																																																											
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"><li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li><li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li></ul>	<ul style="list-style-type: none"><li>The Fraser Range significant intercepts are in 19 exploration licences. The table below is a summary of the expiration dates, management and JV arrangements relating to these tenements</li></ul>																																																											
		Exploration Licence	Expiry Date	Details Manager JV	E28/1475	16/11/2019	IGO/SEGUE (PLUMRIDGE) PTY LTD	E28/1630	1/10/2019	IGO/FRASERX PTY LTD	E28/2017	23/12/2018	IGO/TASEX GEOLOGICAL SERVICES PTY LTD	E28/2201	27/09/2022	IGO/BUXTON RESOURCES LTD	E28/2266	21/09/2022	IGO/INDEPENDENCE WINDWARD PTY LTD	E28/2301	24/07/2023	IGO/SEGUE (PLUMRIDGE) PTY LTD	E28/2366	17/08/2019	IGO/RUMBLE RESOURCES LIMITED	E28/2367	6/05/2020	IGO/KAMAX RESOURCES LTD	E28/2419	14/09/2021	IGO/INDEPENDENCE WINDWARD PTY LTD	E28/2459	2/11/2019	IGO/INDEPENDENCE WINDWARD PTY LTD	E28/2623	4/01/2022	IGO/INDEPENDENCE NEWSEARCH PTY LTD	E28/2625	5/01/2022	IGO/INDEPENDENCE NEWSEARCH PTY LTD	E39/1454	6/05/2022	IGO/ANGLOGOLD ASHANTI AUSTRALIA LIMITED	E39/1653	19/04/2022	IGO/GEOLOGICAL RESOURCES PTY LTD	E39/1654	22/04/2022	IGO/NBX PTY LTD	E39/1731	23/09/2023	IGO/SEGUE (PLUMRIDGE) PTY LTD	E39/1733	18/11/2023	IGO/CARAWINE RESOURCES LIMITED	E69/2989	3/04/2023	IGO/INDEPENDENCE WINDWARD PTY LTD	E69/3052	10/12/2022	IGO/CARAWINE RESOURCES LIMITED
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<b>Exploration done by other parties</b>	<ul style="list-style-type: none"><li>Acknowledgment and appraisal of exploration by other parties.</li></ul>	<ul style="list-style-type: none"><li>There has been historical regional explored for gold and base metals by Companies listed above. Previous work on the tenements consisted of aeromagnetic/radiometric and DTM Aeromagnetic / Radiometric / DTM surveys, soil sampling, geological mapping, ground EM survey.</li><li>There has not been any previous sporadic air core, RC and diamond drilling conducted.</li></ul>																																																											

Criteria	JORC Code explanation	Commentary
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The project area is considered highly prospective for volcanogenic massive sulphide deposits, based on the recently identified mineralisation. Similar mineralisation style is also identified in adjacent tenements.</li> <li>The region is also considered by IGO and to have the potential to host mafic or ultramafic intrusion related Ni-Cu-Co deposits based on the discovery of Nova-Bollinger Ni-Cu-Co deposit and volcanic massive sulphide deposit based on IGO's Andromeda exploration prospect.</li> </ul>
<b>Drillhole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>Location details of significant intercept aircore holes are tabulated in the body of the ASX Public Report provided by IGO</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>Significant drill hole intercept results have been reported using a combined &gt;1000ppm cut-off for key elements with no internal dilution consideration</li> <li>No capping or top-cutting of high grades were undertaken.</li> <li>The intercepts are calculated on a length weighted basis.</li> <li>Holes included on maps and diagrams without significant values are not considered for follow up assessment</li> <li>Metal equivalent grades were not reported.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Only downhole intersection widths are provided due to the nature of the drilling – any relationships between width and intercept lengths are likely coincidental</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>A plan of significant intercepts and intercept table is included in the body of the ASX Public Report provided by IGO</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Results for &gt;4m with one or more Ni, Cu, Co and Zn values greater than 1,000ppm grade are listed in the main body of this Public Report</li> <li>The remainder of the results are considered low grade or barren. Drill hole locations of not reported drill holes are included in the maps in the main body of this Public Report,</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>Surface Moving Loop EM survey identified three dimensional geophysical targets that are included in the diagrams in the body of this ASX release.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Further drilling is underway to test the conductive plates generated from the Surface Moving Loop EM surveys.</li> </ul>

## Appendix 5B

# Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

### Name of entity

ARROW MINERALS LIMITED

### ABN

49 112 609 846

### Quarter ended ("current quarter")

31 DECEMBER 2019

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
<b>1. Cash flows from operating activities</b>		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(293)	(1,566) <sup>1</sup>
(b) development	-	-
(c) production	-	-
(d) staff costs	(135)	(717) <sup>2</sup>
(e) administration and corporate costs	(155)	(361)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	(3)	(22)
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (GST refund, diesel fuel rebate)	40	44
<b>1.9 Net cash from / (used in) operating activities</b>	<b>(546)</b>	<b>(2,622)</b>

1. Includes \$800,000 prepayment in August 2019 for drilling services in Burkina Faso.

2. Includes \$390,000 termination and redundancy payments resulting from the acquisition of Boromo Gold Limited in August 2019.

<b>2. Cash flows from investing activities</b>		
2.1 Payments to acquire:		
(a) property, plant and equipment	-	-
(b) tenements (see item 10)	-	-
(c) investments	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
	(d) other non-current assets	-	-
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	6	16
	(b) tenements (see item 10)	275	275
	(c) investments	1	407
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (costs associated with the acquisition of Boromo Gold Limited)	-	(57)
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>282</b>	<b>641</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of shares	-	2,125
3.2	Proceeds from issue of convertible notes	-	-
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	(10)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>2,115</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>		
4.1	Cash and cash equivalents at beginning of period	1,153	753
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(546)	(2,622)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	282	641
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	2,115

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
4.5	Effect of movement in exchange rates on cash held	(3)	(1)
4.6	<b>Cash and cash equivalents at end of period</b>	<b>886</b>	<b>886</b>

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	260	156
5.2	Call deposits	628	1
5.3	Bank overdrafts (credit card)	(2)	(4)
5.4	Other (Term deposit)	-	1,000
5.5	<b>Cash and cash equivalents at end of quarter (should equal item 4.6 above)</b>	<b>886</b>	<b>1,153</b>

**6. Payments to directors of the entity and their associates**

- 6.1 Aggregate amount of payments to these parties included in item 1.2
- 6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2

**Current quarter  
\$A'000**

52

-

Non-Executive Director's fees of \$31,000, Executive director's fees of \$21,000.

**7. Payments to related entities of the entity and their associates**

- 7.1 Aggregate amount of payments to these parties included in item 1.2
- 7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3
- 7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2

**Current quarter  
\$A'000**

13

-

Mitchell River Group Pty Ltd (related party of Dr. Frazer Tabeart) - \$4,950; GenGold Resource Capital Pty Ltd (related party of Tommy McKeith) - \$7,552.



**8. Financing facilities available**

*Add notes as necessary for an understanding of the position*

Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
-	-
-	-
-	-

8.1 Loan facilities

8.2 Credit standby arrangements

8.3 Other (please specify)

8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.

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**9. Estimated cash outflows for next quarter**

**\$A'000**

9.1 Exploration and evaluation

318

9.2 Development

-

9.3 Production

-

9.4 Staff costs

155

9.5 Administration and corporate costs

122

9.6 Other (provide details if material)

-

**9.7 Total estimated cash outflows**

**595**

10.	Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1	Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced				
10.2	Interests in mining tenements and petroleum tenements acquired or increased	E09/2283 YINNETHARRA E09/2088 GILES	Direct Direct	0% 0%	100% 100%

### Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Sign here: *lodged electronically*  
(~~Director~~/Company secretary)

Date: 31 January 2020

Print name: Catherine Grant-Edwards

### Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.