

## **ANGLO ASIAN MINING PLC**

### **GEOLOGY AND EXPLORATION REPORT 2018 AND Q1 2019**

**18 June 2019**

#### **INTRODUCTION AND OVERVIEW**

Significant milestones have been achieved over the past 18 months, including the first standalone exploration report for the Ordubad Contract Area and the successful completion of a helicopter-flown geophysical survey over the Gedabek Contract Area, a first not only for the Company, but also for Azerbaijan.

Reporting of Mineral Resources and Ore Reserves for each operation has been completed and published in accordance with the JORC Code (2012) [1]. This code, amongst other advantages, allows for transparency and clear understanding with respect to classification of tonnage and grade estimates of the operations and increases investor confidence. Additionally, preparation of the documentation required by the JORC (2012) Code ensures controlled data management and provides the technical team a benchmark on which to continually improve. Furthermore, reporting of exploration data and results are now also being completed in accordance with the JORC Code to follow this trend.

Anglo Asian has a proven track record in the development of projects from grassroots exploration into producing mines; both the Ugur open pit and Gadir underground mines were discovered by the Company's geologists and are success stories for the Company. Importantly, neither of these deposits had been previously identified during the Soviet period, when extensive exploration was conducted over the region by Soviet geologists. Following the preparation of the Ugur Open Pit Mineral Resources Report [2] and the Ugur Open Pit Ore Reserves Report [3], Ugur was developed into a fully operational mine in under one year.

The introduction last year of a rolling three-year exploration programme enables the Company to budget far enough in advance to ensure that target evaluation is feasible and that it is considered separate to development-stage projects (i.e. those that are undergoing maiden resource estimations, prior to development into producing assets). It also permits longer-term exploration and development planning to be conducted, so that drill rig movement and other exploration activities can be 'locked in', minimising downtime and maximising efficiency. Planned shutdowns (e.g. servicing and maintenance) can be established in advance so that contingencies can be implemented. The exploration plan is further elaborated below (see '2018 – Exploration Overview').

The acquisition, translation and review of primary geology, exploration and technology reports, compiled during the Soviet era, is an important aid to the further exploration of the region and Anglo Asian is working closely with the Government of Azerbaijan to gain access to these reports.

Consideration of the current life-of-mine (“LOM”) of the Anglo Asian deposits, together with the exploration potential of the Contract Areas and the Company’s demonstrated ability to fast-track projects into production, provides confidence in predicting that the LOM will be extended well beyond 2025. In addition to the development of exploration assets within the Contract Areas, analysis and planning is required for the possible retreatment of both the spent heap leach pads and the current tailings dam. Both these assets are known to contain gold and copper that may be economically recoverable in the future. Work to assess the viability of these retreatment projects will be carried out in due course.

### **Gedabek**

At the Gedabek Contract Area, the completion of the airborne geophysics survey has yielded 31 favourable targets for follow-up, along with the prospects already identified in-house by the geology team. These newly identified anomalies are currently being ranked and assimilated into the current exploration plan, so that study can commence on these whilst focus is not detracted from existing prospects. The new targets were categorised into three groups by Geotech Limited (the company contracted to collect and interpret the survey data), namely, shallow (20 targets: 300 metres or less in depth), deep (5 targets: 301 to 500 metres in depth) and porphyry anomalies (6 targets: at various depths). These potentially enable the Company to have a mixed portfolio of exploitable oxide and sulphide assets, consistent with the mixed ores currently being mined and processed (thereby no major reconfiguration of the processing facilities would be required).

### **Gosha**

It is known that the Gosha Contract Area is significantly under-explored, but its future potential has recently been assured by the discovery of the Asrikchay prospect. This is a polymetallic find, 7 kilometres from the Gosha underground operation and proven by a drill hole showing high mineral grades (see ‘Gedabek and Gosha FY18 Exploration’ report [6]). Follow-up has been rapid, with a ground-based geophysics survey completed over the site, the results of which will assist in optimising the diamond drill pattern for resource evaluation. Outcrop sampling programmes are also being carried out over other parts of the Gosha Contract Area, with the aim of finding favourable geology and alteration styles.

### **Ordubad**

Exploration activity over the Ordubad Contract Area was sustained throughout 2018 and is certainly going to increase over the coming years, with a budget of \$1.84 million for FY2019 approved. As part of this budget package, it is planned that WorldView-3® remote sensing imagery will be captured between July-September, when climatic and agricultural conditions are most favourable for detailed imagery. The Natural History Museum (“NHM”) of London will continue to work closely with the Anglo Asian geology team, as part of the ‘From Arc Magmas to

Ores' ("FAMOS") international research project, encompassing further extensive mapping, drill core interpretation and field sampling.

## REPORTING AND EXPLORATION IN 2018

### Gedabek Open Pit Mineral Resources and Reserves

In Q3 2018, Mineral Resources and Ore Reserves were released for the Gedabek open pit, reported in accordance with the JORC Code. The estimations were carried out by Datamine International Limited for Anglo Asian, and they supplemented previous geological studies and estimates carried out by various other consultancy companies. The summary Mineral Resources and Ore Reserves are presented below in Table 1 and Table 2 respectively. The accompanying reports were released during Q1 2019 and the reader is directed to these for further details (see references [4] & [5]).

**Table 1 – Gedabek Mineral Resources Summary, 2018**

<b>Gold (+ Copper) Mineral Resources (cut-off grade <math>\geq 0.3</math> g/t gold)</b>							
Mineral Resources	Tonnage	Gold Grade	Copper Grade	Silver Grade	Gold	Copper	Silver
	(Mt)	(g/t)	(%)	(g/t)	(koz)	(kt)	(koz)
Measured	18.0	0.9	0.2	8.3	532	38.0	4,800
Indicated	11.1	0.7	0.1	5.6	264	15.7	2,011
<b>Measured+Indicated</b>	<b>29.1</b>	<b>0.9</b>	<b>0.2</b>	<b>7.3</b>	<b>796</b>	<b>53.7</b>	<b>6,811</b>
Inferred	8.5	0.7	0.1	5.0	189	9.7	1,361
<b>Total</b>	<b>37.6</b>	<b>0.8</b>	<b>0.2</b>	<b>6.8</b>	<b>986</b>	<b>63.4</b>	<b>8,172</b>
<b>Copper Mineral Resource (Additional to Gold Mineral Resource) (cut-off grade copper <math>\geq 0.3\%</math> and gold <math>&lt; 0.3</math> g/t)</b>							
Mineral Resources	Tonnage	Gold Grade	Copper Grade	Silver Grade	Gold	Copper	Silver
	(Mt)	(g/t)	(%)	(g/t)	(koz)	(kt)	(koz)
Measured	5.3	0.1	0.5	2.1	21	26.3	356
Indicated	0.9	0.1	0.5	1.6	3	4.4	48
<b>Measured+Indicated</b>	<b>6.2</b>	<b>0.1</b>	<b>0.5</b>	<b>2.0</b>	<b>24</b>	<b>30.7</b>	<b>404</b>
Inferred	0.5	0.1	0.4	1.5	1	1.9	23
<b>Total</b>	<b>6.7</b>	<b>0.1</b>	<b>0.5</b>	<b>2.0</b>	<b>25</b>	<b>32.6</b>	<b>426</b>

*Note that due to rounding, numbers presented may not add up precisely to totals*

**Table 2 – Gedabek Ore Reserves Summary, 2018**

Ore Reserves	Tonnage	Gold Grade	Copper Grade	Silver Grade	Gold	Copper	Silver
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	(Mt)	(g/t)	(%)	(g/t)	(koz)	(kt)	(koz)
Proved	10.9	0.89	0.29	8.83	311	31.9	3,084
Probable	1.2	0.82	0.34	9.52	32	4.1	373
<b>Proved and Probable</b>	<b>12.1</b>	<b>0.88</b>	<b>0.30</b>	<b>8.90</b>	<b>343</b>	<b>36.0</b>	<b>3,457</b>

*Note that due to rounding, numbers presented may not add up precisely to totals*

The 'Proved and Probable' Ore Reserves estimate is based on the portion of the 'Measured and Indicated' Mineral Resource of the deposit within the scheduled mine designs that may be economically extracted, considering all modifying factors in accordance with the JORC Code [1].

### **2018 Exploration Overview**

2018 marked the launch of the three-year rolling exploration programme initiative, encompassing near-mine, brownfield and greenfield areas over all three of the operating Contract Areas (Gedabek, Gosha and Ordubad). Conducting exploration in this way will enable the following aims to be achieved over the planning period:

- Replacement of mined ounces
- Extension of the current mine life to a planned 10-year minimum
- Increase of the Company's inventory of resources
- Discovery of new mineral deposits, similar to the Ugur open pit, which have the potential to be rapidly developed into operating mines

Significant exploration activities were completed over the Gedabek, Gosha and Ordubad Contract Areas ("CA") in FY 2018. During the year, 28,179 metres of core diamond drilling ("DD") was completed over the Gedabek CA, along with 11,927 metres of Reverse Circulation ("RC") drilling around the Gedabek open pit and regional sites. The existence of further mineable copper and gold extensions were confirmed through drilling at the northern and southern margins of the current Gedabek pit extents. This increased ore footprint will be captured in the 2019 Gedabek Mineral Resources and Ore Reserves update, which will be completed in accordance with the JORC Code. Additional mineable mineralisation was also confirmed beneath the Gedabek open pit and this will be the subject of further underground evaluation. Exploration around Gadir has increased the underground production profile following the completion of both underground and surface drilling, which has confirmed the continuity of the orebody down-dip and potentially along strike.

Table 3 summarises the planned drilling for FY2018 compared with the actual drilled metres. The totals broadly compare and highlight the flexibility that the availability of one reverse circulation and two diamond drill rigs offer the Company in terms of allocation of resources, as indicated by

the significant over-achievement of planned surface DD metres. The amount spent on geological exploration during FY18 was approximately \$4.5 million.

**Table 3 – FY18 exploration drill metres**

Prospect	Method	Drill metres	
		FY18 Plan	FY18 Actual
Gedabek OP	Surface DD	2,500	5,947.30
	Surface RC	7,500	11,340.00
Gedabek UG	Underground DD	5,750	654.00
Gadir UG	Surface DD	7,465	8,953.00
	Underground DD (HQ/NQ)	6,000	4,734.80
	Underground DD (BQ)	2,400	2,837.90
Ugur OP	Surface DD	4,000	3,874.75
	Surface RC	2,000	-
Gedabek Regional	Surface DD	2000	1,177.10
	Surface RC	1000	587.00
Gosha	Surface DD	3,000	2,737.10
Total	Surface RC	10,500	11,927.00
	Surface DD	18,965	22,689.25
	Underground DD	14,150	8,226.70
Grand Total	All Methods	43,615	42,842.95

A heliborne geophysics survey, the first of its kind for both the Company and for Azerbaijan, was also completed over the Gedabek CA and this highlighted 31 prospective mineral targets that require investigation (including 25 targets favourable for epithermal and porphyry mineralisation and an additional 6 targets consistent with porphyry systems). A report summarising the methodology and results of this survey was recently released [10].

Over the Gosha CA, nine DD holes were completed around the new polymetallic discovery named 'Asrikchay' and in the Gosha mine, totalling 2,737 metres. The Asrikchay valley is situated 7 kilometres north of the existing Gosha underground mine and a drill hole returned a polymetallic intersection with notable grades (4.30 metres dhw at 4.11 g/t Au, 112.23 g/t Ag, 3.07% Cu, 3.02% Zn). A ground-based geophysics programme, covering 1.4 square kilometres, was further completed over the valley to identify zone geometry and the results are expected to be delivered to Anglo Asian in the near future.

Further details relating to exploration activity during 2018 for the Gedabek and Gosha contract areas can be found in the Gedabek and Gosha FY 2018 Exploration report [6].

Substantial greenfield exploration activity and reconnaissance studies were completed over the Ordubad CA during 2018. The main exploration objective was to assess the extent of the copper,

gold and associated mineralisation potential of the region. A large geochemical sampling campaign covering 27 square kilometres, involving the collection of 5,504 samples, was completed over the Shakardara and Dirnis areas. Trench and stream sediment samples were also collected, as well as the completion of detailed geological mapping over Shakardara. A research team from the Natural History Museum in London visited Ordubad in November (Q4 2018) to determine the copper porphyry potential of the region. A total of 83 samples were collected by the NHM team and are currently being analysed, the results of which will be provided to Anglo Asian and be used as part of the 'From Arc Magmas to Ores' ("FAMOS") international research project. Further details relating to exploration activity during 2018 for the Ordubad Contract Areas can be found in the Ordubad FY18 Exploration report [7].

## FY19 Q1 RESULTS AND OUTLOOK

### Gadir Underground Mineral Resources and Reserves

During Q1 2019, Mineral Resources and Ore Reserves were released for the Gadir underground mine, reported in accordance with the JORC Code. The estimations were carried out by Datamine International Limited for Anglo Asian. The summary Mineral Resources and Ore Reserves are presented below in Table 4 and Table 5, respectively, and the reader is directed to the accompanying reports for further detail (see reference [8] & [9]).

**Table 4 – Gadir Mineral Resources Summary, 2019**

Mineral Resources <i>(cut-off grade ≥ 0.5 g/t gold)</i>	Tonnage	Gold		Silver		Copper		Zinc	
	kt	g/t	koz	g/t	koz	%	t	%	t
Measured	540	3.70	64.2	17.49	303.6	0.29	1,566	1.01	5,454
Indicated	1,235	2.04	81.0	10.89	432.4	0.14	1,729	0.73	9,016
<b>Measured+Indicated</b>	<b>1,775</b>	<b>2.54</b>	<b>145.2</b>	<b>12.90</b>	<b>736.1</b>	<b>0.21</b>	<b>3,295</b>	<b>0.84</b>	<b>14,470</b>
Inferred	571	1.48	27.2	5.68	104.4	0.10	571	0.52	2,972
<b>Total</b>	<b>2,347</b>	<b>2.29</b>	<b>172.4</b>	<b>11.14</b>	<b>840.4</b>	<b>0.19</b>	<b>3,866</b>	<b>0.78</b>	<b>17,442</b>

*Note that due to rounding, numbers presented may not add up precisely to totals*

**Table 5 – Gadir Ore Reserves Summary, 2019**

Ore Reserves	Tonnage	Gold		Silver		Copper	
	(kt)	(g/t)	(koz)	(g/t)	(koz)	(%)	(t)
Proved	222	2.81	25	14.13	101	0.24	535
Probable	575	2.41	45	10.99	203	0.15	852
<b>Proved and Probable</b>	<b>797</b>	<b>2.73</b>	<b>70</b>	<b>11.86</b>	<b>304</b>	<b>0.17</b>	<b>1,387</b>

*Note that due to rounding, numbers presented may not add up precisely to totals*

The 'Proved and Probable' Ore Reserves estimate is based on the portion of the 'Measured and Indicated' Mineral Resource of the deposit within the scheduled mine designs that may be economically extracted, considering all modifying factors in accordance with the JORC Code [1]. Zinc was not estimated as part of this reserve, but it is currently under study as a potential resource.

### **Exploration Overview and Plan**

2019 is the second year of the three-year rolling exploration programme, which is financed entirely by internal cash flow and is progressing well. Further work defining the ore at Gedabek underground is ongoing, as well as lateral and down-dip mineralisation definition at Gadir.

Analysis of the airborne geophysics results, provided by Geotech Limited, is underway – the 31 targets are currently being assessed and 'ranked' in terms of prospectivity, with various parameters being considered (for example, whether historic exploration work has been conducted over the target). Of the 31 targets, 25 have been classified as favourable for epithermal- and porphyry-style mineralisation, whilst the remaining 6 magnetic targets display signatures consistent with porphyry systems. Once ranking is complete, the favourable regions will initially be followed up with field visits to assess conditions for geochemical soil campaigns, ground geophysics, outcrop sampling and surface drilling. Further details of the survey methodology and results can be found via the link '*Airborne ZTEM/Magnetic Survey Highlights*' [10]. Preliminary targets have been identified over areas where the Company is aware of the presence of mineralisation, but importantly also other areas have been highlighted where there is no previous indication or exploration activity carried out. The data generated from the survey have provided information on the geometry and potential depths of mineralisation zones within a newly interpreted geological structural framework.

The initial ranking priority takes into consideration those targets that are nearer surface which could be evaluated and brought to production quicker than the deeper targets. Thus, the Company has worked to prioritise the shallow targets (300 metres or less depth) initially that could be potentially mined by open pit. The Company has also mobilised core drilling machines to the Gedabek site and plans to commence drilling work from June to test these targets. Although the various follow-up ground-based geological activities will not have been completed, the results of the drilling will allow the Company to correlate geophysical responses of conductivity-resistivity and magnetic signatures with the rock and mineralisation column from the resultant drill cores. Additional reporting of this ranking process, with preliminary results and initial fieldwork activity descriptions, will be released imminently

Interpretation of the data and preliminary modelling of the new Asrikchay discovery at the Gosha Contract Area will commence once results of the ground-based geophysics survey are received

by Anglo Asian. This will help target optimum drill collar locations and hole angles before the new drill programme begins.

Given the mineral potential of Ordubad, a programme of work has been developed to further understand the overall geology of the mineralisation and to commence follow-up study of the previously reported geology. The potential of this area was identified during Soviet era exploration, as reported in the Competent Persons Report (“CPR”); this CPR was included as Part IV in the 2005 Initial Public Offering (“IPO”) document of Anglo Asian [11]. Significant steps were taken in 2018 to prepare for the follow-up programme as documented in the first exploration report for the Ordubad Contract Area prepared in accordance with the JORC Code [7].

Reporting of the results from the independent assay laboratory of the extensive surface geochemical sampling programme has commenced and the first batches of data received. These data will be entered into the Ordubad Database and output to a geographic information system (GIS) programme used to represent graphically alteration hot spots and trends that may be consistent with porphyry style alteration. This information will be used to complement the forthcoming satellite data and assist with drill targeting.

A budget of \$1.84 million for FY2019 has been approved for this work programme. The main items budgeted for include:

- Acquisition, translation and review of primary historical geology, exploration and technology reports
- Regional remote sensing utilising the latest satellite technology
- Natural History Museum follow-up fieldwork to include mapping, drill core interpretation and further sampling
- Surface geological mapping and sampling, with student mapping projects in collaboration with Azerbaijani Universities
- Geological fieldwork targeting other commodities known to occur, for example cobalt, to assess their future production potential
- Core drilling at the Dirnis copper target, Keleki gold target and other copper targets, with a total of about 6,000 metres of drilling planned. Included in the budget is sample preparation, assaying and analysis. This drilling work has commenced following the installation of access roads and drill pads, with the locations based on surface mineralisation and alteration as mapped by the geology team.
- Investment in the required geological equipment and software to perform the work, including an XRD alteration analyser and a ground magnetometer with Very Low Frequency capabilities for magnetic and resistivity mapping

In addition to the potential within its current contract areas, the Company is continually assessing further opportunities for expansion both within Azerbaijan and external to the country.

In conclusion, the Company is at a transformational stage in its development. It has identified a significant number of exploration targets within its Contract Areas, many of which are considered very high potential and exciting. All geological reporting is now in accordance with the JORC code, thus providing all stakeholders with information on the operating assets and the exploration results. Current production has shown a steady increase and the stable operational conditions provide the financial platform on which to grow the exploration assets and convert them into future production.

## REFERENCES

[1] JORC, 2012. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) [online]. Available from: <http://www.jorc.org> (The Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia).

[2] Ugur Open Pit Mineral Resources report: {link to website}

[3] Ugur Open Pit Ore Reserves report: {link to website}

[4] Gedabek Open Pit Mineral Resources report: {link to website}

[5] Gedabek Open Pit Ore Reserves report\*: {link to website}

[6] Gedabek and Gosha FY18 Exploration report: {link to website **and link to RNS**}

[7] Ordubad FY18 Exploration report: {link to website **and link to RNS** }

[8] Gadir Underground Mineral Resources report: {link to website}

[9] Gadir Underground Ore Reserves report: {link to website}

[10] Airborne ZTEM/Magnetic Survey Highlights report: {link to website **and link to RNS** }

[11] Competent Persons Report (“CPR”) as included as Part IV in the 2005 Initial Public Offering (“IPO”) Placing and Admission document of Anglo Asian Mining to the AIM Market: {link to [www.angloasianmining.com/investors/shareholder\\_info/constitutional\\_documents](http://www.angloasianmining.com/investors/shareholder_info/constitutional_documents) **and link to RNS** }

*\*Please note that an error was identified in Table 6.1 on page 36 – this error has been amended and the updated report issued on the Anglo Asian Mining website.*