

# Metals and Mining

## GoldStone Resources

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### Stock Data

Ticker (AIM)	GRL LN
Share Price	13.7p
Market Cap	£44.6m

### Price Chart



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# Mining Note

## GoldStone Resources\*

**BUY**

### GRL LN

## Ghana's Next Gold Mine

- GoldStone Resources is an AIM-listed gold development Company focused on a two former mines in the Ashanti region of Southwest Ghana, currently progressing production at its fully-permitted Homase Mine and imminently expecting its first-gold pour.
- The Homase Mine is made up of five proposed shallow, open pits on the highly prospective Birimian Greenstone belt, home to a number of world-class operations including the Obuasi Mine- just 12km to the South-west and along strike from Homase with a c.70Moz of historic and current gold resource.
- We forecast an initial 5-year life for the Homase Mine, with the mine expanding to a depth of 80m from the 30m initially proposed, along with a rapid scale up in production to eventually yield 73,800ozpa.
- The first two cells of the Heap Leach Facility have been commissioned, enabling ore stacking and development of subsequent leach pads.
- Cash flow from the start of operations at Homase should enable GoldStone to further define and then fast-track additional pits along the Homase Trend into production, with further pits situated along the Homase gold trend and likely to present further upside for the company.

- Management recently took the strategic decision to scale up the initial operation at Homase, taking advantage of the current strong gold price environment and to accelerate the Company's ambition to bring on multiple proposed pits including the Homase mine into production. This will also allow GoldStone to undertake exploration at its Akrokeri underground mine, which produced 75,000oz of gold at 24g/t between 1904 and 1909.
- Adjusting for the faster production ramp up and additional capex associated with an updated operating rate, we estimate the Company should generate ~\$88mpa in EBITDA and ~\$56mpa in FCF once full capacity is reached at the initial Homase South operation.
- Throughput rates are expected to increase to 745kt and 2.0mt in 2021 and 2022 producing 26.9koz and 73.8koz at c.\$613/oz TCC and C.\$651/oz AISC, with sales expected to cover development/exploration capex, interest, and debt repayments.
- Emma Priestley, ceo, has worked extensively with mining companies in Africa, with consultants and in financial services. Emma is a graduate of Camborne School of Mines and Chartered Mineral Surveyor. Non-Executive Chairman, Bill Trew, brings with him 40 years' experience in the mining and finance sectors and in addition is chairman of MAED Engineering- a world leader in mine project management and engineering design.
- Ghana is Africa's largest gold producer by some margin, with a pro-mining government and population who appreciate the industry's contribution to the country's macroeconomic progress. Ghana is also considered a less-risky jurisdiction than many of its peers, ranking 2<sup>nd</sup> in West Africa in the Fraser Institute's Economic Freedom Index.
- **NPV:** Based on the initial Homase Mine production profile, we estimate post-tax **NPV of £139m (90% attributable interest) equivalent to 24.4p per share**, assuming full dilution of warrants at a 10% discount rate.

## Overview

GoldStone Resources is an AIM listed gold development company focused on a portfolio of former mines in the Ashanti region of Southwestern Ghana. The Company wholly owns both the Homase pits and Akrokeri former underground mine- two assets upon the highly-prospective Ashanti Gold Belt. The Company commenced mining operations in April 2021, with the mining rate and the growth in the primary and secondary run-of-mine stockpiles performing at or above the initial targeted levels. Moreover, GoldStone has constructed an initial two cells of its heap leach facility to enable stacking, while looking to scale up to seven cells with a combined area of approximately 73,000m<sup>2</sup>.

The recently revised production schedule has reaffirmed to the market the Board's intentions of transforming GoldStone into a low cost, high margin, gold producer. The Company have surpassed initial expectations, forecasting to produce over 25,000oz Au in the first eight months of production- exceeding their initial guidance of 14,400ozpa

GoldStone has been issued with a 10-year mining lease over the Homase South, North and Central pits and land for the plant and process operation by the Ghanaian Ministry of Lands and Natural Resources (MLNR). Looking ahead, an application has been made by the company to expand the Environmental Permit to cover the Company's expanded mining lease to include initially labelled Homase North and Central Pits- which are now set to be components of the overall Homase Mine.

GoldStone is bringing its asset along the Homase trend into production at a time of elevated gold prices, which we expect to remain elevated in the near-term as macroeconomic drivers remain prevalent. While the company embarks on its initial operation at Homase, it also aims to target the numerous exploration targets within the permit areas to evaluate their resource potential. The company expects that this will lead to the fast-tracking of the additional pits into production, given their location adjacent to the producing South pit and the highly favorable underlying geology.

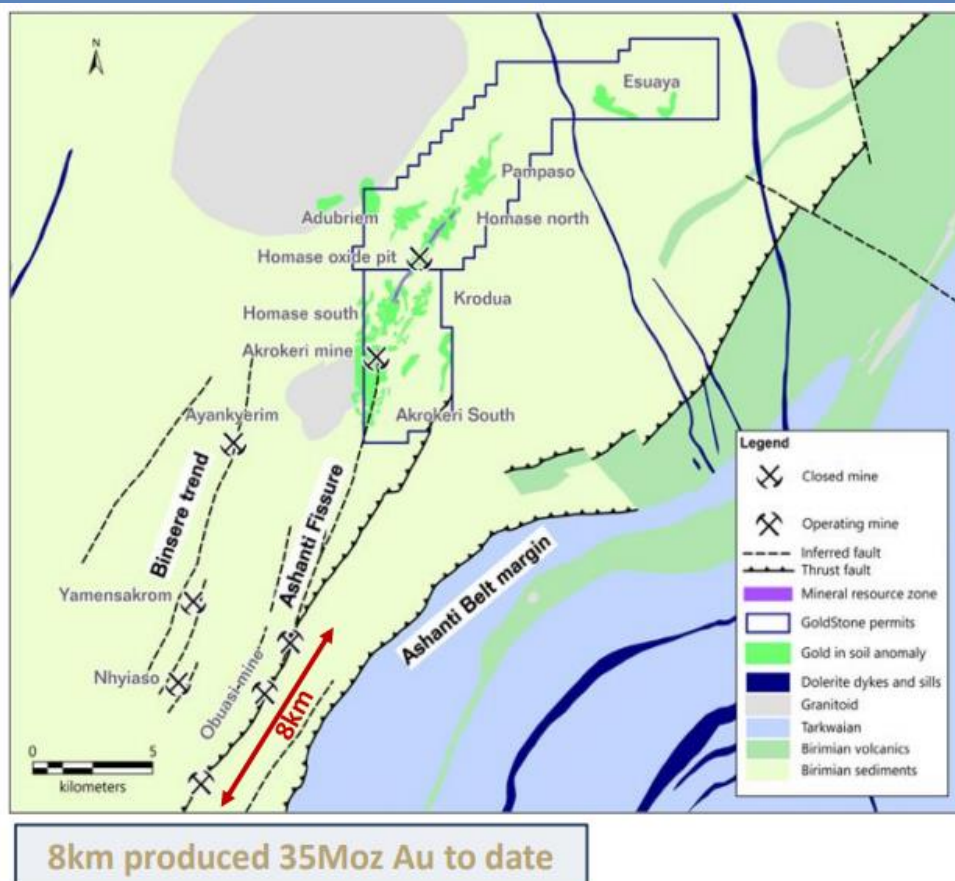
Alongside bringing the Homase Mine into production, GoldStone's exploration team intend to drill the Homase Mineralized Trend along strike in order to extend the resource. Meanwhile, infill drilling will add ounces in the immediate project area. The board's active approach to exploration is expected to add to the original 5-year mine life. The 2016, 2017 and 2020 drilling campaigns are not included in the JORC resource, and the company expects to add ounces to the previously estimated JORC resource in the updated DEP.

Meanwhile, the Company plans to assess the reopening historic Akrokeri mine and run a drill programme to define a resource. The Akrokeri underground mine was operated by Akrokeri Ashanti Mines Limited from 1904 to 1909 and produced 75,000oz at a recovered average grade of approximately 24g/t. The Homase Pit was mined more recently, producing 52,500oz at 2.5g/t between 2002 and 2003.

GoldStone's Ghanaian assets lie 12km along strike from AngloGold Ashanti's Obuasi Mine, which was suspended in 2014 although has since been under a process of redevelopment. AngloGold Ashanti have committed to spend >\$500m in order to access Obuasi's 30Moz resource over the next 20 years. The location of the Company's Ghanaian assets speaks for itself, situated on one of the most prospective gold belts in the world which also hosts major producer's historic and current assets.



## GoldStone Resources portfolio of gold projects Ghana, West Africa (marked in blue)



Source: Company

## Valuation of Homase South

We are using a discounted cash flow model as our primary valuation tool for the Homase Mine, with most of production and cost estimates derived from the company's updated production plan, along with discussions with the company. Production and cost estimates consider the rapid and substantial scale up in output as per GoldStone's intentions reported on the 12<sup>th</sup> of November 2020. We forecast an initial 5-year life of mine for the Homase Mine, with the pit expanding to a depth of 80m from the initial 30m outlined in the Definitive Economic Plan (June 2019). We expect GoldStone to substantially increase initial production estimates in the updated DEP which is currently work-in-progress to eventually yield 73,800oz per annum. We have made the assumption that the Company may potentially spend another \$10m on exploration and development of the mine, and the Company may choose to raise funds either through debt or equity.

Based on the initial **Homase Mine** production profile, we estimate post-tax **NPV of £139m** (90% attributable interest) equivalent to **24.4p per share**, assuming full dilution of warrants at a 10% discount rate.

Production and earnings projections		2021E	2022E	2023E	2024E	2025E
Gold price	\$/oz	1,800	1,800	1,800	1,800	1,800
Throughput	kt	745	2000	2000	2000	2000
Grade	g/t	1.37	1.40	1.40	1.40	1.40
Gold Sales	koz	26.9	73.8	73.8	73.8	73.8
C1 Cash Costs	\$/oz	504	517	517	517	517
TCC	\$/oz	600	613	613	613	613
AISC	\$/oz	704	651	651	651	651
Net Revenue	\$m	46.0	126.2	126.2	126.2	126.2
EBITDA	\$m	32.3	87.6	87.6	87.6	87.6
FCF	\$m	18.7	54.6	54.6	54.6	54.6

#### NAV sensitivity to changes in Discount Rate and Gold Price (£m)

		1,500	1,600	1,700	1,800	1,900	2,000
DR	8%	106.2	120.2	134.1	148.1	162.1	176.0
	10%	99.4	112.6	125.8	138.9	152.1	165.3
	12%	93.1	105.6	118.0	130.5	143.0	155.4

Source: SP Angel, Company

A recovery rate of 82% has been used as per the initial DEP, despite recent metallurgical testing showing that 60% of samples returned encouraging recoveries of 84% to 94% and the remaining 40% of the samples gave recoveries between 61% to 78% for a 72-hour leach time. GoldStone has committed to undertake further work as the pit depth increases in order to identify the optimum parameters required to consistently deliver around 90% recoveries by heap-leaching.

### West Africa – A bright spot in M&A

A healthy flow of merger and acquisition activity continues to sweep the gold sector amid record high gold prices. The number of gold-focused transactions rose to 50 in 2020 compared to 39 the year prior, despite a sluggish first half of the year as a result of Covid-19. Gold transactions accounted for 77% of the total value of mergers and acquisitions in the mining sector (according to S&P), with African and Brazilian deposits high on the list of targets. Positive momentum in commodity prices tends to drive M&A activity, and high prices have left many major gold miners with spare capital ready to expand through acquisitions. Producers are expected to buy more exploration and development companies to secure future supply, with more deals expected now that travel restrictions associated with Covid-19 are eased.

The landscape of West African gold projects is diverse including established operating mines, development projects as well as late and early-stage exportation assets. The recent rally in the price of gold has resulted in an influx of capital into the sector to fund exploration and development works. Mining Journal's West Africa 2020 review shows more than \$3.7bn of new mine and expansion projects are currently in a construction mode, approved or awaiting final development and financing decisions.

Overall deal activity in the Middle East and African metals and mining industry increased by nearly 17% in Q2 2020, according to GlobalData. Twenty-eight deals worth \$1.44bn were announced for the region during Q2, against the last four-quarter average of 24 deals. The size of M&A deals in West Africa in 2020 has ranged from Endeavor combining with SEMAFO in a \$690m deal to Perseus Mining acquiring Exore Resources for \$36m.

The Endeavor-SEMAFO deal is an example of promising projects being acquired by local operators with regional expertise, a common theme in West Africa. Conversely, global players use acquisitions to establish a presence in the area such as B2Gold acquiring Papillon in 2014 for \$570m. A recent flurry of M&A deals by Chinese gold firms in response to rising

gold prices is notable, with Shandong Gold buying Canadian mining company TMAC Resources for \$149m in May, who now have their sights set on Ghana-focused Cardinal Resources in a deal thought to be worth \$408m.

GoldStone is focused on bringing the Homase Mine into full production, utilizing the skills of both the board and strategic investors, with a proven track record of commissioning gold projects in the region. In the meantime, healthy deal flow in the West African precious metals space reflects strong interest from investors and corporates alike offering a viable source of development capital for potential expansions.

The table below shows selected M&A deals in West Africa, highlighting the diverse nature of acquired companies ranging from exploration to production.

Acquirer	Target	Location	Stage	Year	Price, \$m	PP, moz	PP, g/t	MII, moz	MII, g/t	EV/PP	EV/MII
Shandong	Cardinal Resources	Ghana	Dev. (FS)	2020	408	5.1	1.1	7.0	1.1	53	58
Perseus Mining	Exore Resources	Cote d'Ivoire	Exploration	2020	36	-	-	0.5	2.5	-	68
Teranga Gold	Massawa	Senegal	Production	2019	380	2.6	3.9	3.6	3.8	146	105
Resolute	Toro Gold	Senegal	Production	2019	260	0.9	2.1	1.2	1.9	280	209
Gold Fields	50% Asanko	Ghana	Production	2018	185	5.1	1.6	6.8	1.5	72	27
Endeavour	Kalana (Avnel)	Mali	Dev. (FS)	2017	122	2.0	2.8	3.3	4.2	62	37
Endeavour	Karma (True Gold)	Burkina Faso	Construction	2016	180	0.9	0.9	5.0	1.1	190	36

Source: SP Angel

## Akrokeri-Homase Project, Southwest Ghana

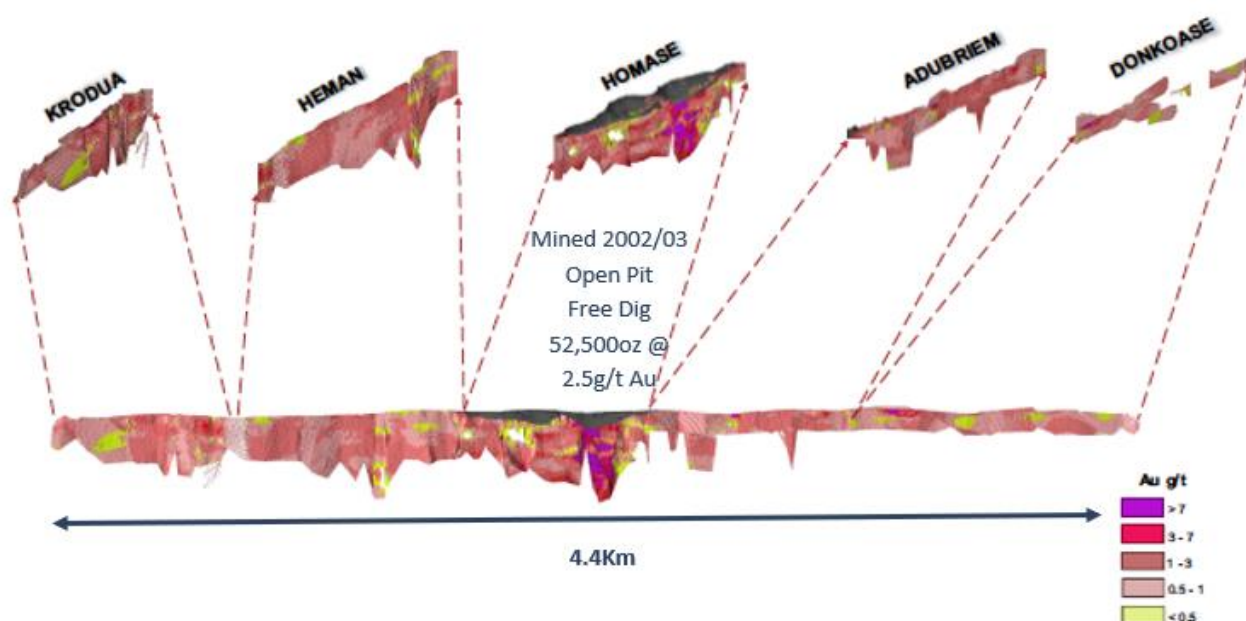
### Homase Pits

#### Location

GoldStone's Homase pits lie in the central part of the Company's license area, 3km Northeast from the Akrokeri Mine. The five pits at Homase span 4.4km along the strike of the JORC resource which sits within the 8km mineralized Homase Trend.

The property is located c.220km North West of the capital Accra and 15km North East of the major settlement of Obuasi, which has a population of over 175,000 people. The municipality of Obuasi lies 39km South of Ashanti's capital city of Kumasi and sits on a railway line in addition to the Obuasi-Kumasi Highway. The town also has Ghana's second largest airport with a modern terminal and offices.

#### GoldStone's five proposed pits along the JORC resource at Homase making up the Homase Mine



Source: Company

### Geology

The property is underlain by the Ashanti gold belt, one of the world's most significant Proterozoic gold belts discovered to date. The belt is the most prominent of the five Birimian Supergroup gold belts found in Ghana and is predominantly comprised of sedimentary and mafic volcanic rocks. The Birimian terranes in the southern part of the West African craton are several different volcano-sedimentary formations including metamorphosed volcanic, sedimentary and plutonic rocks and low-grade metavolcanics and metasediments. Two types of granite are present, one is more resistant to weathering than the other, with the less-resistant granite containing gold mineralization.

Mineralized shears are found close to the contact with harder metamorphosed and metasomatically altered geology forming the Upper Birimian volcanics. Two main ore types are present at AKHM hosted within quartz veins and sulphide ores. Subsurface investigation within the mineralized trend undertaken by Ashanti Goldfields revealed a wide zone of shear about 800m long, 14m wide between 255m and 70mRL elevation. Shear mineralized zone metasediments dip sub-vertical or steeply to the NW and strike NNE.

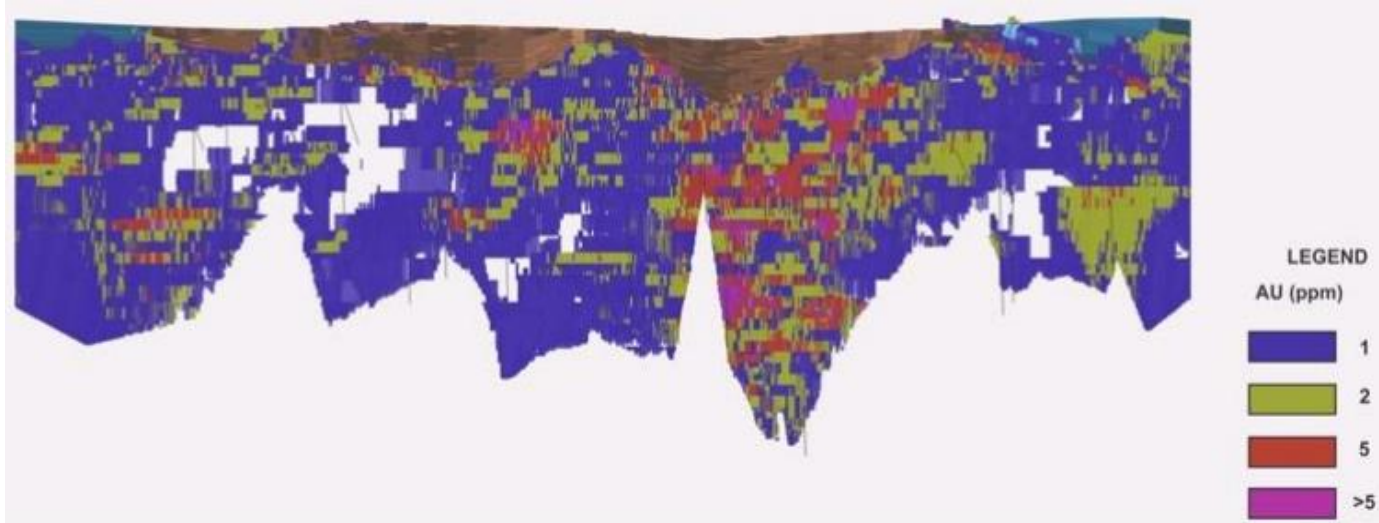
Comparable features of Birimian mesothermal gold mineralization between Obuasi and AKHM include quartz veins and mineralization in graphitic shear zones, along with visible

gold occurring in fractures within a quartz veins. Most of the gold is contained between these graphite-rich shears and thin quartz-chlorite units within sheared metasediments.

GoldStone has previously undertaken geochemical soil sampling at Akrokeri-Homase, which has established a >8km gold-in-soil anomaly running from the historic Akrokeri Mine to the north of the Homase pit. The 602Koz JORC resource for Homase only accounts for 4km of this trend, indicating that the favorable underlying geology is likely to increase the quantity of gold at the Akrokeri-Homase.

Metallurgical testing has shown that the mineable resource at Homase South can be effectively recovered using heap leaching. Column leach testing yielded a recovery rate of 82% for the ore used in the initial DEP, although subsequent testing has yielded higher recoveries of up to 94%. Recoveries demonstrate that the fresh ore is highly leachable and is non-refractory.

#### Gold mineralisation at the Main Pit at Homase, mined 2002-2003



Source: Company

## Stage of the development

GoldStone is now well into the development stage of the Homase Gold Project, with the company's latest announcement reporting a successful start stacking and processing, following the pre-stripping of the Homase mine site. The first two cells 13,000 m<sup>2</sup>, of the Heap Leach Pad comprising roughly 73,000m<sup>2</sup> have been commissioned enabling stacking to continue ramping up to 200 tph, while a surface ore stockpile of 80kt – equating to approximately one month of production at the full 3ktpd capacity has accumulated. The company aims to mine the 602,000oz JORC compliant resource while simultaneously increasing the Heap Leach capacity in order to unlock the superior value at Homase. Meanwhile, the board intend to update the February 2020 Definitive Economic Plan to underpin value for shareholders.

Homase Pits	Ore, mt	Grade g/t	Au, koz
Measured & Indicated (MI)	6.0	1.9	361
Inferred (I)	4.6	1.6	241
MII	10.6	1.8	602

GoldStone's current JORC resource at Homase is within the 4.4km Homase Trend above a depth of 240m and open at depth. The 2016, 2017 and 2020 drilling campaigns are not included in the JORC Resource, and the company expects to add ounces to the previously



estimated JORC Resource in the updated DEP. GoldStone's initial JORC Resource was capable to the 2012 standard, however new stringent parameters mean that data derived from previous drill programs and future drill campaigns within the immediate project area could significantly increase the size of the resource at Homase.

GoldStone raised \$4.3m in March 2020 in order to commence production, through the issuance of twenty-six 14% unsecured bond notes of US\$50,000 each, along with a loan of \$3.0m before expenses to Asian Investment Management Services. With respect to future financing and processing, GoldStone commented on the 13<sup>th</sup> of May 2021: *"The Company continues to review the options available for extracting saleable gold from the loaded carbon it is producing, including toll treatment or expanding its own processing facility to include an elution plant and gold room. In this regard, Goldstone expects to make a decision shortly depending on the terms offered by existing third party processing facilities and any financing options that may be available, however notes that additional funding may be required in the coming months depending on the timing and cost associated with such arrangements."*

**The DEP highlighted the following key aspects of the project:**

- Proposals for a shallow, free dig mining of ore zones at three satellite open pits, lying along the known Homase Trend either side of the previously mined Homase pit.
- Minimizing project development costs engaging contractors for open pit mining operations.
- Establishing low capital intensity cyanide heap leach processing facilities.

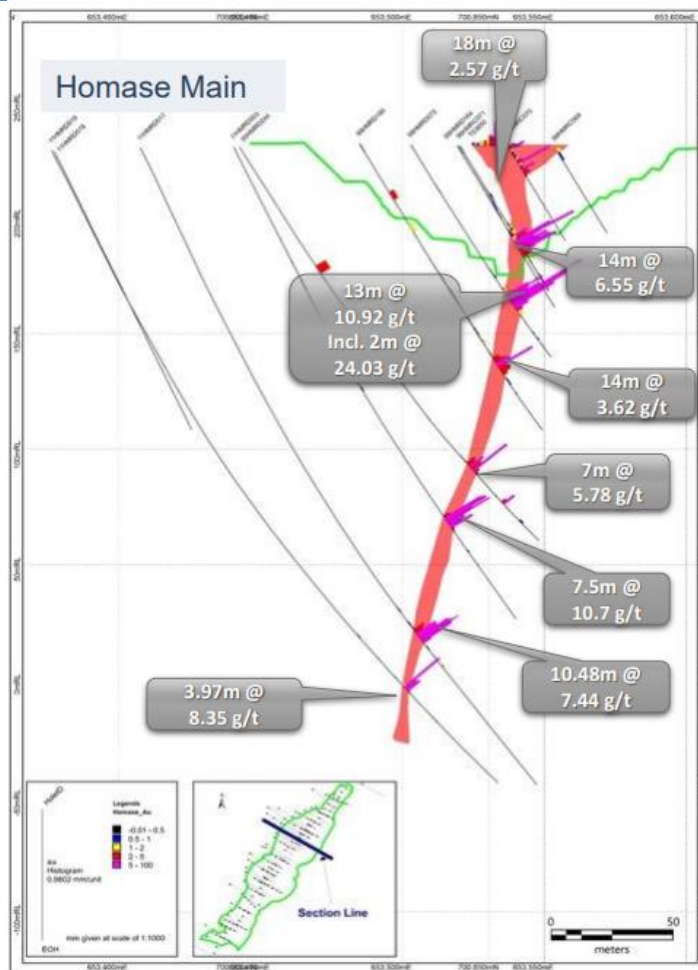
The company will be treating the oxides from the Homase Mine on the heap leach processing facility and retreating the tailings from the former Akrokeri Mine that closed in 1909, with results from an auger drilling showing three blocks of viable mineralized zones to a depth of three meters with an average grade of 2.27g/t and estimated tonnages of 91,000t. Metallurgical testwork indicated tailings are amenable to the cyanide heap leach process with an overall recovery of 73%. GoldStone expect to recover up to 5,000oz from these tailings over the life of mine.

Looking ahead, a drilling programme completed in November 2020 allowed the Company to further define and extend the mineable resource down-dip at Homase South to a vertical depth of approximately 60m. The program aims to build on the Company's existing JORC resource proved up from a comprehensive drilling program in 2011-2012. GoldStone is well placed to grow the size of the resource through the drill-bit, with notable drill intercepts at Homase include but are not limited to:

- 13m @ 10.92g/t Au, including 10m @ 24g/t
- 10.48m @ 7.44g/t Au
- 31m @ 2.17g/t Au
- 13m @ 2.93 g/t

Results of the 2020 RC drilling programme used to increase the mineable resource of the Homase South Pit can be found in the *appendix* section of this note. These results further support the need for the company to update the JORC Resource.

### Gold mineralisation present along strike and down dip at Homase Main Pit



Source: Company

### Next steps

Bringing the Homase Mine into production in line with the Company's current timeline is vital to unlocking the vast potential of all five proposed pits within the Homase Mine, on the Homase Trend as well as the high-grade Akrokeri underground mine.

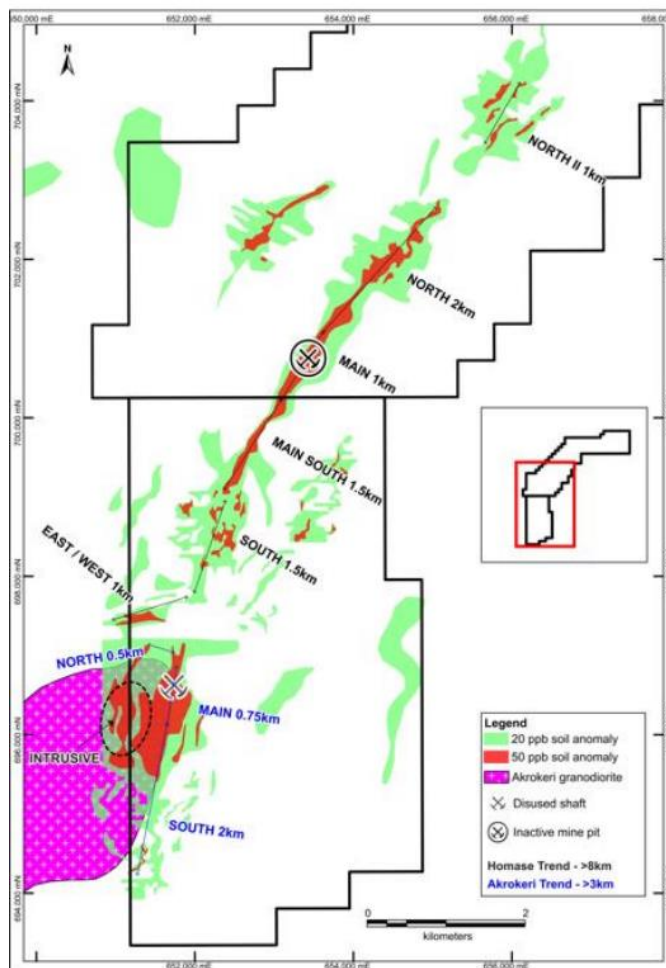
Implementing the skills of GoldStone's strategic investors is now key in bringing the mine into production. Non-Executive Chairman, Bill Trew, brings with him 40 years' experience in the mining and finance sectors and in addition is chairman of MAED Engineering. MAED are experts in taking mining projects from feasibility stage into production. To date, MAED have delivered 23 mines throughout Africa and Russia – all built under budget and on-time. Additionally, mining contractor BCM have a successful track record operating mines in Africa and Asia in the precious, bulk and energy minerals space.

## Akrokeri Mine

### Location

The Akrokeri Mine lies 12km North East from AngloGold Ashanti's 70Moz Obuasi Mine. The underground mine is close to the town of Akrokeri and was closed in 1909 after six years of production due to an inrush of water. The mine has not been reopened for 110 years.

### Gold mineralisation at the Akrokeri granodiorite, a major exploration target for the Company



Source: Company

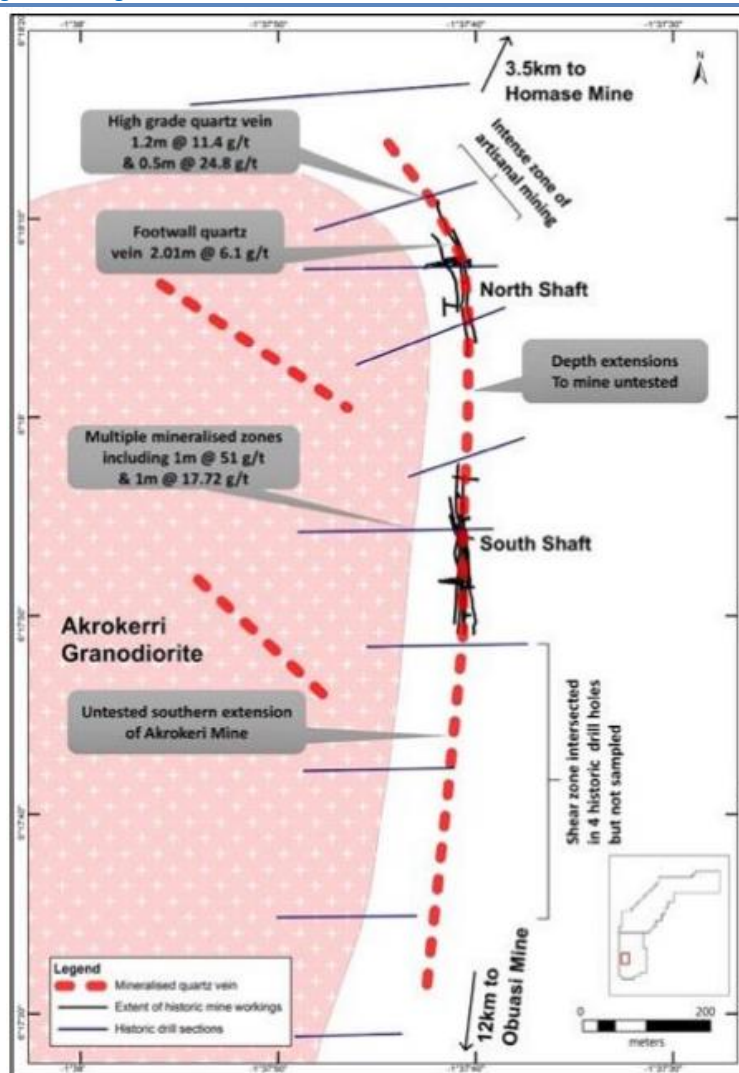
### Geology

Due to the close proximity to the Homase Pit, the underlying geology is similar at both projects, as highlighted above. However, the high-grade quartz veins, up to 1.5m wide and with grades of c.1oz/t are unique to Akrokeri. When the mine was in operation between 1904-1909, it produced 75,000oz at a recovered average grade of 24g/t, with drill results since showing even higher-grade mineralised intercepts including 1.0m at 51g/t Au.

Two drilling campaigns undertaken by Birim Goldfields in 1998 and Pan African Resources in 2008 located to the North and South of the town of Akrokeri amounted to 2,000m and 3,200m of drilling respectively. Historic data shows that the super high-grade gold at 51g/t was encountered in previously unknown narrow quartz veins within the granite, indicating the potential of an even higher-grade deposit compared to what was encountered in historic mining. Modelling of historic drilling has identified a continuous quartz vein to a depth of 12m from surface.

Records from the Ghana geological Survey show that the two vertical shafts sunk at Akrokeri are part of a package of sheared metasediments, which have been interpreted as the northern extension mapped in AngloGold Ashanti's Obuasi mine 12km to the south.

Schematic diagram showing mineralisation and drill results at Akrokeri



Source: Company

### Stage of the project

The very-high grades at Akrokeri seen when the mine was in operation along with GoldStone's own evaluation mean that the asset presents considerable exploration upside.

In order to finance exploration of GoldStone's higher-grade assets, the Company plans to use the cash flow from the Homase Mine to further develop and explore assets. Developing assets organically this way ensures that cash generated funds further exploration and development which increases the upside potential of the project. The prospecting license for Akrokeri is valid until the 23<sup>rd</sup> of May 2021, the Company has applied for the extension to this prospecting license to the Minerals Commission as usual and expect to receive confirmation shortly. Exploration potential at Akrokeri license remains significant since the current JORC mineral resource estimate is within the Homase Trend is limited to 250m from surface and covers only half of the 8km long structure, and does not include the Akrokeri underground mine.

### Next steps

Goldstone is currently focussed on optimising production at the Homase Mine, however the board's intention is to expediate exploration along the Homase trend and at the former Akrokeri underground mine.



GoldStone plan to kick off an exploration campaign once production is underway at Homase. The company has accessed the old workings at the former Akrokeri underground mine and plan to continue accessing the workings in conjunction with an exploration programme which will involve drilling.

## Risks

### Exploration risks

Exploration or assay risk include accurate identification of prospective targets, collection of geochemical, geophysical, drilling and other data as well as its interpretation. No assurances are provided that exploration activities will result in an economic mineral reserve. Due to GoldStone's Homase pit being a JORC-compliant resource, along with the experience of the board and the postcode of the assets we believe this particular risk to be effectively mitigated for the project.

### Socio-economic risks

Dealing with local communities is an important socio-economic factor that requires careful management by the company, especially because numerous areas were found to be operated by artisanal miners in 2017. Local sentiment toward mining is positive given the employment opportunities and positive knock-on economic affects. Furthermore, the mining pedigree of the Ashanti region in general due to the presence of mines such as Obuasi has resulted in a supply of skilled workers.

### Permitting risks

Whilst we do not expect the Company to experience problems with renewals given previous positive track record, the Covid-19 pandemic has placed additional stress on the Ghana's Mineral Commission. This has created a backlog in the issuance of permits which resulted in delays in the company receiving its Environmental Permit, although this was resolved and subsequent permits arrived in a timely manner.

Broadly, Ghana's government and Minerals Commission are supportive of mining in the country and make every effort to ensure projects are not hindered by bureaucracy. The government were supportive of resumption of operations at Obuasi and granted all the relevant licenses and permits for the project. Ghana's Environmental Protection Agency issued 14 new mining leases in July 2020, reflecting both the backlog in operations and a willingness to cooperate with mining companies.

### Regulatory

Changes to the current mining code as well as fiscal regulations may considerably alter potential project economics including but not limited to government interest in mining assets, royalties and taxes.

### Commodity prices risk

Goldstone's assets include gold exploration licenses in West Africa meaning Company valuation is heavily exposed to fluctuations in gold prices which drive relative value and acquisition multiples in the industry. Low prevailing market prices may deem future projects uneconomic.

### Inflation risk

Goldstone like most other gold miners may be subject to price inflation in many areas of its operation. While the cost of operation is currently forecast to be relatively low, margins may be squeezed if gold prices fall and costs rise due to external factors such as rising oil and reagent prices.

### **Currency volatility risks**

The Company is exposed to the USD/GHC exchange rate with the Ghanaian Cedi being Goldstone's functional currency while the presentation currency for reporting purposes is US\$. The Bank of Ghana has re-denominated the cedi multiple times, most recently in 2007 as result of very high inflation. A \$918m loan from the IMF to the Bank of Ghana was given under the terms that government expenditure would be contained, financial discipline instilled, and budget transparency improved.

## Board and senior management

### Board of Directors

Emma Priestley	Chief Executive Officer	Emma has worked extensively in the mining space, in both financial services and with mining companies and consultants. Ms Priestley has worked for mining consultant IMC, investment bank CSFB and corporate advisors VSA Capital. Emma was most recently an executive director of Lonrho, the Africa-focused conglomerate which operated in multiple sectors in Africa mainly Agribusiness, infrastructure, and transport. Emma is a graduate of Camborne School of Mines, is a chartered Mining Engineer and Chartered Mineral Surveyor.
Bill Trew	Non-Executive Chairman	Bill has over 35 years' experience in the engineering and mining industry and has served on the board of a number of mining companies both public and private. Mr Trew's time as CEO of Oxus Gold saw him oversee the construction of three new gold mines. In 1986 he founded he founded MEAD Limited, a specialist project management and engineering design company which has designed and constructed 23 gold processing plants around the globe. Bill is currently chairman of MEAD and a director of Gold Mines of Uganda and Paracale Gold Limited.
Angela List	Non-Executive Director	Angela is Executive Director to the BCM group and is in charge of Finance and Administration. Prior to this, she was a member of the KPMG Ghana audit team where she carried out audits of major Ghanaian companies, multinational corporations, and International banks. At BCM, Angela has successfully expanded its activities into West and East Africa, along with Central Asia and is now one of Africa's largest private contract miners.
Richard Wilkins	Non-Executive Director	Richard has considerable experience in emerging markets and the natural resources sector, having been a founding director of the Zeravshan Gold Company in Tajikistan and co-founder of the Oxus Gold Group of which he was a director from 1996 to 2017. Oxus produced over 500,000oz of gold from the Amantaytau Goldfields Mine in Uzbekistan.
Orrie Fenn	Non-Executive Director	Orrie has considerable experience in mining and construction, having been CEO of the underground mining business of the world's leading underground mining contractors Murray and Roberts, from April 2013 to earlier this year. Prior to that, Dr Fenn was the COO of JSE-quoted PPC Limited, having previously held the role as business development manager at Debex, a subsidiary of De Beers Industrial Diamond Division.

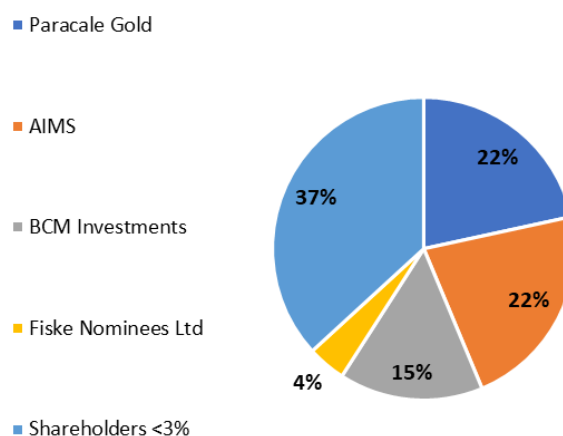
Source: Company

## Shareholders

The company has 325.6m shares in issue as of May 2021, with no options currently outstanding. As of May 2021, the company has 102m warrants outstanding at 3p and 40.4m at 1.2p.

Among major shareholders are Asian Investment Management Services (22.1%), Paracale Gold (21.6%) and BCM Investments (15.4%). AIMS and Paracale Gold is a gold mining investment company focused on late-stage exploration and mine development opportunities. Paracale also enjoys a close relationship with MAED, a leading gold mine design and construction company which has been involved in building several mines in Africa as well as further afield. BCM Investments are part of the BCM Group, Africa's largest private contract miner with over sixty years of project experience. BCM offer services including mine contracting, mine operations, mine planning and technical services.

Major shareholders (04/03/21)



## Location profile – Ghana

The Republic of Ghana is situated along the Gulf of Guinea and the Atlantic Ocean, in West Africa. According to the IMF, Ghana ranked 9/54 for Nominal GDP in Africa in 2019 with \$68.3bn. Ghana ranked 17/54 in Africa and 12/46 in Sub-Saharan Africa in terms of Nominal GDP per capita with \$2,263. In 2019, the IMF predicted Ghana to grow faster than any other economy at +8.8%, compared to Nigeria +2.1%, South Africa +1.2% and Angola +0.4%. English is the official language, although there are eleven additional languages that have the status of government-sponsored languages. Ghana has a population of over 30m, with 43% of people living in rural areas.

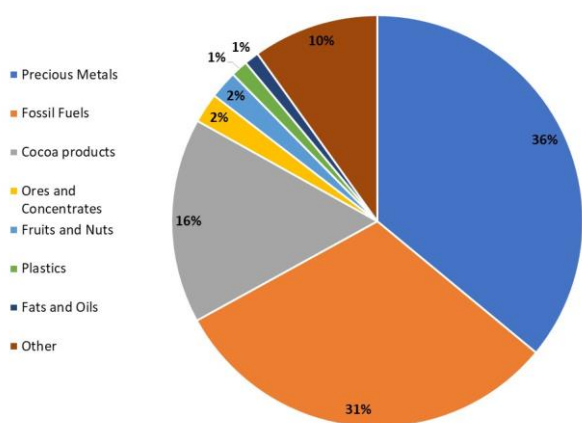
The national political system in Ghana is described as a unitary presidential constitutional democracy, and one of the more stable countries in West Africa since its transition to multi-party democracy in 1992. In the past 20 years there have been six free and fair elections and two peaceful transitions of power- enough to warrant its reputation as a politically favorable jurisdiction to invest. Human rights lawyer Nana Akufo-Addo won the presidential election in December 2016 with 53.8% of the vote. In 2020, Ghana's governing New Patriotic Party has picked incumbent Mr Akufo-Addo as its presidential candidate at Ghana's December elections. The NFP lost its majority in parliament although Mr Akufo-Addo was re-elected after securing a majority of the votes. Ghana is ranked as the 5<sup>th</sup> least fragile state in Africa and the 5<sup>th</sup> least corrupt and politically corrupt country in Africa out of 53 countries.



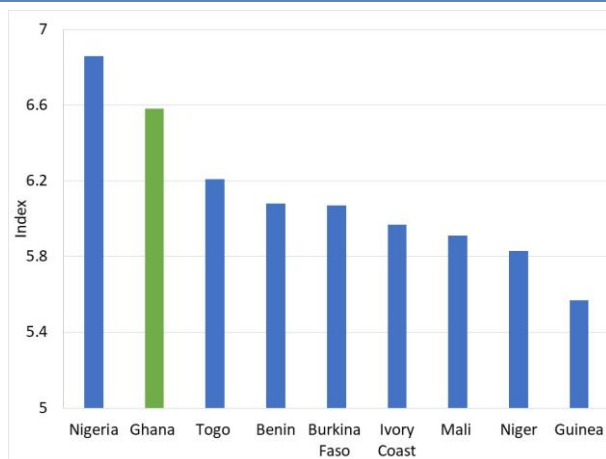
Gold and crude petroleum accounted for 72% of export earnings in 2018, with total exports amounting to \$21.5bn. Ghana is Africa’s largest gold producer and second-largest cocoa producer (after Ivory Coast). The government forecasts Ghana’s deficit to reach 11.4% of GDP in 2020, up from 4.7% in its initial budget- as a result of the drop in oil prices and the coronavirus pandemic. Prior to the onset of the global pandemic, Ghana was on track to keep its budget deficit below 5% for a third year. The virus has ended three years of GDP expansion of 6% or more, however the country looks poised to bounce back as gold prices hit record highs and the world takes control over the virus.

Ghana embarked on a re-denomination exercise of its currency in July 2007, from Cedi to the Ghana Cedi (GH¢). Loose economic policy was brought to a grinding halt in Ghana three years ago including: outlawing large deficits, a banking-sector overhaul that cut the number of lenders by a third to 23, along with lowering liquidity and credit risks. Foreign investors are finally waking up to the Ghana Cedi, as the Country’s Eurobond yield in February was said to have sold five times the amount on offer. At the first local-currency bond sale of the year on the 16<sup>th</sup> of January, foreign investors bought more than 80% of the 1.4 billion cedis (\$258.3 million) of securities, compared with average holdings of 37% over the past two years.

Ghana’s top exports by value, 2019



Fraser Institute Index of Economic Freedom, West Africa



Source: Trend Economy

As mentioned above, Ghana is the top gold producing nation in Africa- overtaking South Africa in 2018. Ghana produced 142.4 tonnes (5.0moz) in 2019, whilst South Africa produced 118.2 tonnes (4.2moz). Several established gold producers operate in the country, including Newmont, Gold Fields, Asanko Gold and AngloGold Ashanti. Authorities report 1000 tonnes (35.3moz) in estimated national gold reserves, although clearly there is scope to prove up much more than that.

In terms of corruption, Ghana ranks highly (less corrupt) compared to countries in close proximity- however Sub-Saharan Africa is the lowest scoring region on the Corruption Perceptions Index (CPI). In 2019, Ghana had a CPI of 41, above the average in the Sub-Saharan of 32- although the country has dropped seven points on the CPI since 2014 due to revelations of bribery in Ghana’s high court in 2015 and the murder of investigative journalist Ahmed Hussein-Suale in early 2019. Despite these developments, Transparency International believe that there is hope for change, and list the country as “one to watch” commenting: *“In 2017, the Office of Special Prosecutor was established, which has the power to investigate and prosecute cases of corruption. In 2019, a right to information bill was also passed. These efforts, combined with the enhanced performance of the Auditor General’s office, offer hope for improvement”.*

Ghana has responded well to the COVID-19 pandemic, as of February 2021 there have been 80,700 cases and 168 deaths. Cases have predominantly been located in the Great Accra Region, accounting for 57% of total cases in Ghana. The Ashanti region, where the AKHM project is situated, only accounts for 17% of the cases in Ghana. West African economies had time more time to prepare against coronavirus as scientists believe that the epidemic started later compared to other regions globally, primarily due to limited international air traffic. On the 21<sup>st</sup> of March, the President of Ghana ordered the closure of all the country's borders and on the 27<sup>th</sup> of March-imposed lockdowns on certain urbanised areas. Further measures such as social distancing followed, although mining continued as it was deemed an essential industry by government. February 2020 saw Ghana become the first country in the world to receive coronavirus vaccines under the WHO-backed Covax facility. Ghana will initially receive 600,000 doses of the Oxford/AstraZeneca jab from the Serum Institute of India.

The level and extend of infrastructure in economically significant areas is high, and therefore it is unsurprising the high level of existing infrastructure at AKHM given the world-class assets situated along the Ashanti belt. The mine is 1km away from a sealed road, with LV grid power on-site and 11km from HV grid power. Obusasi Mine coming back onstream is likely to be beneficial for Goldstone in terms of infrastructure, as a major mining operation needs a certain level of service, many of which can also be used by GoldStone. The site also benefits from mobile phone coverage and its own stable water source. Moreover, Ghana's Mining Ministry are fully supportive of a new mine coming on stream according to the GoldStone board and reflected in the issuance of permits and level of positive communication between all parties.

Under the Minerals and Mining Act (2006) Act 896, the Act treats income from mineral operations separately from other sources of income and imposes a mineral income tax at the rate of 35% on profits. Furthermore, royalties are payable at the rate of 5% of gross revenue.

## Timeline of main policy steps taken by the government of Ghana in relation to COVID-19

Green: Public health measures; Orange: health system response; Blue: socio-economic measures



Source: Brookings.edu

## Appendix 1 – Results used to increase mineable resource of Homase South Pit

Hole ID	Depth from (metres)	Depth to (metres)	Av. grade (g/t)	Width (metres)	True width approx. (metres)
<b>20HMRC001</b>					
including	54	68	0.77	14	8.4
including	115	121	1.15	5	3.6
<b>20HMRC002</b>					
including	56	65	0.92	9	5.5
including	88	90	1.3	2	1.2
<b>20HMRC003</b>					
including	42	56	0.52	14	8.4
including	78	83	1.03	5	3
<b>20HMRC004</b>					
including	25	47	0.67	22	13.2
including	54	57	0.56	3	1.8
<b>20HMRC005</b>					
including	25	27	0.63	2	1.2
including	31	33	1.77	2	1.2
including	36	38	0.55	2	1.2
<b>20HMRC006</b>					
including	11	14	0.75	3	1.8
including	19	32	1.01	13	7.8
<b>20HMRC007</b>					
including	17	30	2.93	13	7.8
<b>20AKRC001</b>					
including	1.6	114	2.08	8	4.8
<b>20AKRC002</b>					
including	67	78	0.99	11	6.6
<b>20AKRC003</b>					
including	65	72	2.18	7	4.2
<b>20AKRC004</b>					
including	64	86	0.96	22	13.2
<b>20AKRC005</b>					
including	62	77	0.81	15	9
including	83	94	0.77	11	6.6
<b>20AKRC007</b>					
including	30	41	0.81	11	6.6
including	30	41	0.81	11	6.6
<b>20AKRC008</b>					
including	24	26	0.57	2	1.2
<b>20AKRC009</b>					
including	63	67	2.37	4	2.4
including	82	97	2.2	15	9
including	104	116	0.61	12	7.2
including	135	138	2.26	3	1.8
<b>20AKRC010</b>					
including	47	51	1.26	4	2.4
including	73	82	1.7	9	5.4
including	87	106	1.06	19	11.4
including	117	121	0.86	4	2.4
including	136	139	0.82	3	1.8
<b>20AKRC011</b>					
including	64	81	2.53	17	10.2
<b>20AKRC012</b>					
including	0	10	0.54	10	6
including	30	48	2.09	18	10.8
including	57	76	1.09	19	11.4
<b>20AKRC014</b>					
including	34	36	0.82	2	1.2
including	38	43	1.05	5	3
<b>20AKRC015</b>					
including	63	66	1.85	3	1.8



## Appendix 2 – Balance Sheet

Balance Sheet	Dec-18	Jun-19	Dec-19	Jun-20
Cash	0.3	0.1	0.1	0.5
Trade & Receivables	0.2	0.2	0.2	3.4
<b>Current Assets</b>	<b>0.6</b>	<b>0.3</b>	<b>0.3</b>	<b>3.9</b>
Exploration	7.8	8.1	8.3	9.9
PPE	0.0	0.0	0.0	0.4
<b>non-current assets</b>	<b>7.8</b>	<b>8.1</b>	<b>8.3</b>	<b>10.3</b>
<b>Total assets</b>	<b>8.4</b>	<b>8.4</b>	<b>8.5</b>	<b>14.2</b>
Trade & other payables	0.5	0.4	0.5	0.7
ST Borrowings	0.0	0.0	0.0	1.3
<b>Current liabilities</b>	<b>0.5</b>	<b>0.4</b>	<b>0.5</b>	<b>2.0</b>
LT Borrowings	0.3	0.8	1.2	2.4
<b>Non-current liabilities</b>	<b>0.3</b>	<b>0.8</b>	<b>1.2</b>	<b>2.4</b>
<b>Total liabilities</b>	<b>0.8</b>	<b>1.1</b>	<b>1.6</b>	<b>4.3</b>
<b>Net assets</b>	<b>7.6</b>	<b>7.3</b>	<b>6.9</b>	<b>9.9</b>

## Appendix 3 – Summary of metallurgical results of the bottle roll test results from the 2020 drill programme

Sample ID	Hole ID	Hole Depth (m)	Au Recovery (%)	Grade (g/t)			
				Extracted	Tail	Calculated Head	Avg. Head
20A00003751	20AKRC004	66-67	0.91	4.69	0.45	5.14	3.94
20A00003752	20AKRC009	83-84	0.63	1.75	1.03	2.78	4.33
20A00003753	20AKRC009	86-87	0.76	4.56	1.41	5.97	4.63
20A00003754	20AKRC010	74-75	0.84	5.88	1.09	6.97	4.88
20A00003755	20AKRC010	97-98	0.78	8	2.23	10.23	7.66
20A00003756	20AKRC011	99-100	0.9	4.71	0.51	5.22	4.1
20A00003757	20AKRC011	69-70	0.89	3.98	0.49	4.47	4.2
20A00003758	20AKRC011	74-75	0.61	2.81	1.79	4.6	5.06
20A00003759	20AKRC011	75-76	0.91	7.12	0.67	7.79	8.3
20A00003760	20HMRC005	54-55	0.94	5.67	0.36	6.03	4.13

## Appendix 4 - SP Angel Gold Outlook 2021

Gold price hit record highs In August 2020, driven by macroeconomic factors as a result of the economic fallout and uncertainty of the Covid-19 pandemic. Unprecedented levels of financial stimulus implemented by governments via central banks has been unleashed in order to support the economy as governments introduced lockdown restrictions. This resulted in investors scrambling to increase their exposure to gold as a protection from currency debasement. Key vaccine breakthroughs have given global markets a renewed sense of optimism in 2021, although aggressive variants of the virus, vaccines supply bottlenecks and concerns of a ‘covid hangover’ recession once government support for businesses is curtailed is sustaining bullion prices, a theme we expect to continue in 2021. The price of gold closed year-end 2020 at \$1,898/oz with an average yearly price of \$1,771/oz- a 27% increase compared to the average annual gold price in 2019.

Total annual mined gold supply fell 4% YoY to 3,401t in 2020, the largest annual fall since 2013, primarily due to coronavirus-related disruption causing mine sites to close. Mine production in Q4 2020 fell 3% to the lowest level since Q4 2015, marking the seventh consecutive quarter of YoY declines. The WGC anticipate a recovery in mine production in 2021 as vaccines continue to be rolled out and companies adapt to working in Covid-safe environments to minimize further production interruptions.

Gold Price vs US Dollar



Source: Bloomberg

Gold Price vs S&P 500 Index



Source: Bloomberg

Investor demand for gold is demonstrated by significant flow of funds into gold-backed ETFs in 2020, taking ETF holdings to all-time highs of over 3,900t. Despite total holdings falling so far in 2021, investment demand for gold is expected to be well-supported, primarily by increasing inflationary pressures. Physical gold demand from China and India is also expected to partially offset the recent decline in ETF holdings.

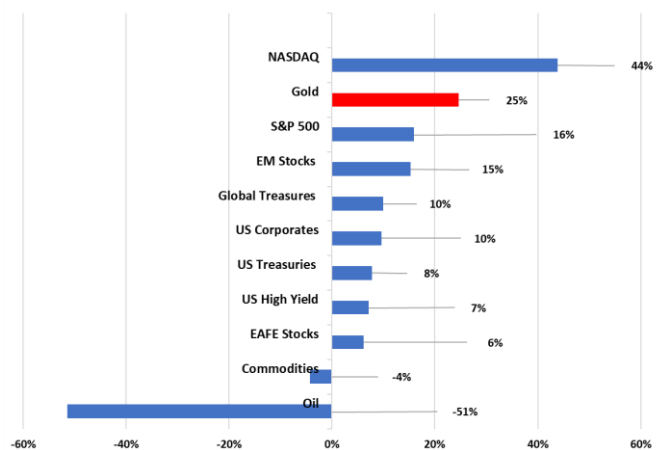
Central bank buying of gold is likely to remain elevated, a key theme over recent years with most banks buying citing reasons of “long-term store of value” and “performance during times of crisis”. According to the 2020 Central Bank Gold Reserves survey, 20% of central banks intend to increase their gold reserves over the next 12 months, compared to just 8% of respondents in the 2019 survey.

Gold Price vs Total Gold ETF Holdings Index



Source: Bloomberg

Performance of Major Assets in 2020, %



Source: WGC

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