Orior Capital
HONG KONG

KEFI Gold and Copper, KEFI.L

Ready for take-off

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Executive summary

KEFI Gold and Copper (KEFI) is exploring and developing mining assets in Ethiopia and Saudi Arabia, part of the vast and highly prospective Arabian-Nubian Shield. KEFI's most advanced project is Tulu Kapi in Ethiopia which has planned production of 200,000 oz gold pa, and in which the company is expected to own an 80% stake after financing. KEFI also owns 30% stakes in the Jibal Qutman gold project, and the Hawiah VMS project, both in Saudi Arabia, through its joint venture Gold and Minerals, which it operates. The company has a large database and has assembled large exploration areas in both Ethiopia and Saudi Arabia over the past 14 years.

KEFI looks incredibly undervalued: Valuing Tulu Kapi as a development stage asset at US$1,000/oz of attributable planned production, and Jibal Qutman and Hawiah on attributable resources at US$60/oz gold or gold-equivalent (AuEq), both in line with peers, suggests **a current valuation for KEFI of 4.5p/share. This is 6x the current share price.**

As companies enter production, project development risks dissipate, cash flow becomes positive, and companies tend to get re-rated. Portfolios of gold producers tend to trade around US$3,000/oz of production, about 3x the level of project developers. **By early-2027, all three of KEFI's current projects are expected to be in production.** Tulu Kapi is expected to start-up in early-2025, followed by Jibal Qutman in mid-2025, and Hawiah, which is now expected to be developed after Jibal Qutman, in 2027. Allowing for some resource growth in the Saudi Arabian projects, valuing anticipated production in line with peers, and accounting for the expected share dilution from the various Tulu Kapi funding instruments **could underpin a valuation four years from now of 7.9p/share.** This is 10x the current share price. It implies an average return of 79% pa over the next four years.

Further valuation upside could be driven by expanding the underground resource at Tulu Kapi, adding additional resources at Jibal Qutman and Hawiah, and developing additional projects. Gold and Minerals has recently been awarded a number of new exploration licence areas in Saudi Arabia.

KEFI has an estimated NPV of 10.1p/share, based on the attributable values of the three projects, and a gold price of US$1,830/oz. As a general rule of thumb, African focused gold developers have tended to trade at between 0.4x and 0.8x NPV over the past several years. Valuing KEFI in line with peers would suggest a valuation of 4.0p/share to 8.1p/share. **The market is currently KEFI at just 8% of NPV.**

Tulu Kapi development nears: In January 2023, KEFI reported that detailed financial terms and conditions with the financing syndicate had been agreed and that signing now hinges on the Ethiopian Government clarifying a few remaining regulatory steps and ensuring security and community arrangements are in order. The finance syndicate is 'on standby' for document signing. Management hopes to formally launch the project in early-2023. Tulu Kapi is expected to come on stream in early-2025.

Valuations are based on production of 1.3 Moz gold over an 8-year mine life, assuming a processing rate of 2.3Mtpa which includes a conservative amount from underground production. Production is expected to reach 162,100 oz in the first year of production (to March 2026) and ultimately, about 200,000 oz pa. At US$1,830/oz gold, Tulu Kapi is expected to generate average annual operating cash flow of US$167m in the first seven years.

Management believes there is potential to triple the size of the underground resource of 330,000 oz gold at 6.26 g/t (PEA, 2016).The resource is open down plunge to the north; the northern most drill hole included in resources, TKBH_293, returned 90m at 2.8 g/t gold. Expanding the underground resource would increase the blended grade being processed, leading to greater output, lower unit costs, greater profitability, and a longer mine life.

Expert funding consortium: It is unusual for a company the size of KEFI to assemble a funding consortium of such expertise. The consortium includes the Ethiopian division of a global industrial company, and a leading global commodities trader with investments in Africa. The Government of Ethiopia, which is supplying key infrastructure, will own 20% of the project. Two large African banks are the planned Senior Lenders; East African Trade and Development Bank and African Finance Corporation. Mining investment specialist RAB Capital owns 7.1% of the London-listed parent, KEFI. The management team owns 12%. The financing means that KEFI is now expected to own 80% of Tulu Kapi, up from 45% expected previously.

Ethiopian exploration area highly prospective: The areas reserved for KEFI via three exploration licences covered a vast 1,120 km^2 that host two NNE-trending structures, parallel to the Tulu Kapi trend. Management's target is to identify some 300,000 oz to 500,000 oz of oxide material grading 1.5 g/t gold or better from within the areas reserved that could either supplement ore feed to the plant at Tulu Kapi, or be developed as separate heap leach operations. **This could enable production of an initial 50,000 oz pa that would benefit from low strip ratios, low costs, and high gold recoveries.** This is not factored into the current or 4-year valuations. The recently stood down Minister for Mines had publicised that these areas were to be transferred to a third party but KEFI has taken administrative action to preserve these areas.

Jibal Qutman set for increased production: After being on hold while Saudi Arabia introduced its new mining law, Gold and Minerals has recently been awarded two new exploration along strike of, and contiguous to, Jibal Qutman. A DFS based on a larger production of 500,000 oz gold over ten years is expected to be released in 2023. The higher production level is likely to underpin a higher NPV, and valuation. Management aims to start construction at the end of 2023, with production targeted for mid-2025.

Hawiah is already a significant VMS deposit: It ranks as one of the three largest base metals projects in Saudi Arabia, is a Top 100 VMS deposit globally by tonnage, and is larger than Tulu Kapi in terms of contained metal value, despite only having been discovered recently. KEFI announced an upgraded resource in January 2023 and plans to release a PFS for Hawiah in mid-2023. Based on the 2022 resource, the project already boasts a post-tax NPV_8 of US$578m. There remains excellent exploration upside potential. Both the Camp Lode and Crossroads Lode remain open at depth. Management also aims to identify near-surface oxide mineralisation at nearby Al Godeyer for inclusion in the early stages of a mine plan.

Saudi Arabia funding: Saudi Arabia is keen to develop its rich mineral endowment, to boost local employment and to help steer the economy away from its reliance on oil. In 2019, the Saudi Industrial Development Fund (SIDF) said it would provide loans for up to 75% of mining project costs, including for resource delineation. Given KEFI's 30% stake in Gold and Minerals, KEFI's equity stake in project capex could be as little as 7.5%.

Substantial increase in exploration licence areas: Saudi Arabia's regulatory overhaul has led to a number of new exploration licences being awarded. In fact, Gold and Minerals has been granted 14 new licences in the past 12 months across what can be classified as six of

highly prospective gold and polymetallic mineral project areas. While early stage, all these areas have been mapped or sampled by Gold and Minerals, or by groups such as BRGM or USGS. The new licence areas include the Abu Salal South, Abu Salal North and Umm Al Khabath licences situated within the Wadi Bidah Mineral Belt, and located south of Hawiah, two new licences situated to the north and south of the Jibal Qutman project, as well as licences covering four new project areas. These new licences represent a number of new frontiers for KEFI. Altogether, Gold and Minerals now holds some 1,035km^2 of tenements in Saudi Arabia covering some of the most highly prospective areas for gold and polymetallic VMS mineralisation in the Kingdom.

Strong partner in Saudi Arabia: KEFI has been operating in Saudi Arabia since 2008. Its JV partner is Abdul Rahman Saad Al Rashid and Sons Company Limited ("ARTAR"), a leading industrial group. ARTAR's principal activities are in construction, real-estate, agriculture and health care.

With tremendous geological potential: The Arabian-Nubian Shield hosts the largest known Neoproterozoic gold resource on Earth. The combination of the subduction-related origin of the Shield, widespread shearing, and metamorphism associated with late Neoproterozoic orogeny are highly favourable for the development of a variety of gold deposit types. Yet, despite this favourable geological setting, and its rich history, the region remains relatively unexplored in modern times. As a result, opportunities abound. Tulu Kapi will be the first modern gold mine in Ethiopia. In Saudi Arabia, Ma'aden has discovered some 8 Moz gold in the Central Arabian Gold region in the past 20 years. The Wadi Bidah Mineral District, which hosts the Hawiah deposit, is probably the only VMS belt in the world that outcrops as much, remains as underexplored, and is as highly prospective. **KEFI has a phenomenal opportunity to explore and ultimately, to exploit, these resources.**

Strong management team: To drive these projects forward, KEFI has assembled a first-class operational leadership team with vast experience in mining, mine planning, strategy and development. Mr Eddy Solbrandt is Chief Operating Officer. He has built a successful global consultancy focused on systems and people in mining, including for companies such as Anglo Gold. He now oversees Ethiopia as the focus shifts to development and where the headcount is expected to grow from 50 to 1,000. Mr Brian Hosking, Managing Director Saudi Arabia, is a geologist by training and an organisation builder in the mining sector over the past decades. Brian is leading the transformation of the Gold and Minerals JV from an exploration team into a broad-based organisation preparing to develop its first two mines. Mr Norman Green will oversee project construction. He has managed large mining and refining construction projects from concept to completion for more than 30 years and has experience across Africa and was the founder and leader of Green Team International.

Share price catalysts: A number of factors are expected to drive KEFI's share price over the next year or so including financial close and start of construction at Tulu Kapi, results from diamond drilling at the Tulu Kapi underground, the release of an updated DFS at Jibal Qutman and the award of a mining licence, further resource increases at Hawiah and Al Godeyer, and developments at any of the new projects recently awarded to Gold and Minerals.

KEFI's shares have been hampered by years of setbacks and delays in both countries. Now, with Tulu Kapi awaiting final Ethiopian Government administrative details and field actions, and Saudi Arabia having taken the brakes off and looking to accelerate sector development, KEFI shares look incredibly cheap. That's an opportunity for investors.

Simon Francis January 2023

Key financial data

Figure 1: Shareholding structure

LSE code		KEFI.L
Share price, 20 January 2023	pence/share	0.775
Shares on issue	Millions	3,939
Options and warrants	Millions	1,102
Fully diluted shares	Millions	5,041
Market capitalisation.	£ millions	30.5
Net cash, estimated	£ millions	1.0
Enterprise value	£ millions	29.5

Source: KEFI

Key Management:

Harry Anagnostaras-Adams, Executive Chairman, B. Comm, MBA: Mr Anagnostaras-Adams was founder or co-founder of Citicorp Capital Investors Australia, investment company Pilatus Capital, Australian Gold Council, Atalaya Resources, KEFI Gold and Copper and Cyprus-based Venus Minerals. He has overseen a number of start-ups principally through the roles of Chairman, Deputy Chairman or Managing Director. He is a qualified Chartered Accountant and a Fellow of Australian Institutes of Management & Company Directors.

John Leach, Finance Director, BA Ec, MBA, CA (Aust & Canada): Mr Leach has over 25 years' experience in senior executive positions in the mining industry internationally and is a former non-executive Chairman of Australian-listed Pancontinental Oil and Gas NL. He is a Chartered Accountant in Australia and Canada, and is a Fellow of the Australian Institute of Directors.

Eddy Solbrandt, Chief Operating Officer, Ethiopia, People & Systems: Mr Solbrandt began his career in the mining industry in 1986 and has since worked in open cut and underground metalliferous mines, as well as in coal, gold and mineral sands in Australia, New Zealand, USA, Canada, Mexico, UK, Ukraine, Russia, Kazakhstan, Indonesia, Thailand, South Africa, Mozambique and Namibia. He is founder of GPR Dehler, an international management consultancy which specialises in productivity improvement for mining companies worldwide, especially in the areas of human resources development and performance improvement. Mr Solbrandt is adept at providing swift assessment, analysis and development of solutions and strategies for achieving strategic, operational and financial objectives integrating process, people and technology. He is a seasoned facilitator experienced in designing and conducting strategy workshops.

Brian Hosking, Saudi Arabia, Planning & Exploration: Mr Hosking began his career in geology and technical planning in a variety of mining operations. In 1990, he set up his own human resource consulting firm, then led its growth and integration into Transearch, a large global search firm. In 1999, he was elected to serve on the Transearch Board as Executive Director and COO. In 2003 Brian set up Meyer Hosking and focused on the mining sector developing this niche in London providing strategic services including remuneration advice, management assessment and executive search to a wide range of clients. Brian has established a strong international reputation as a consultant with an in-depth knowledge of the industry. In this capacity, he was regularly retained as a strategic advisor to executive management teams and boards in mining industry.

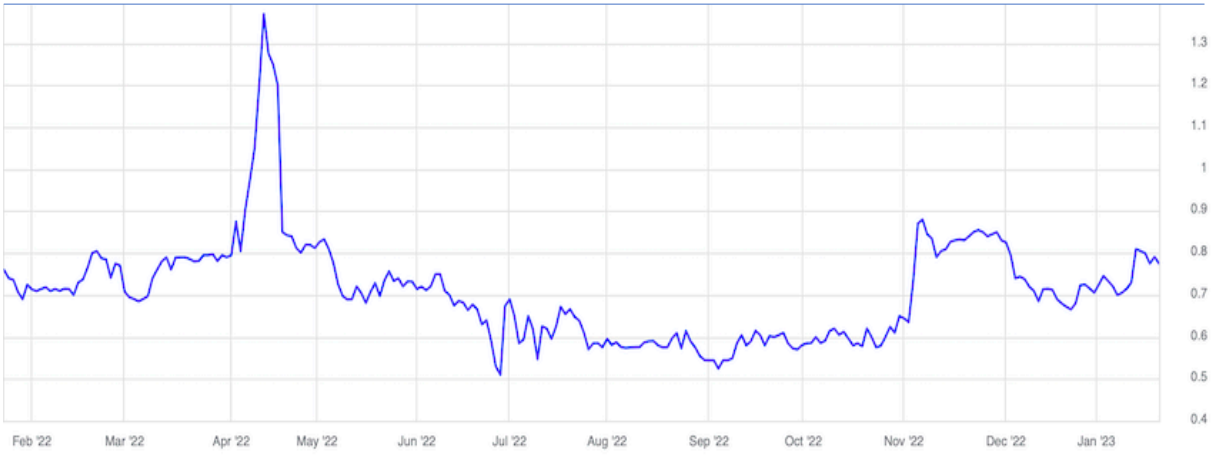
Norman Green, Development: Norman is a graduate mechanical and professional engineer with the key experience of having managed large mining and refining construction projects from concept to completion with more than 30 years' experience in this field. Major projects such as the Hillside Aluminium smelter, the Skorpion Zinc project, and the Husab Uranium mine are included in his handiwork, as well as a number of pure deep level underground mines.

He founded and built Green Team International (GTI) into a successful project engineering firm providing or supporting construction implementation and other engineering support to mainly African mines. Projects studied or handled by GTI as the Project Implementation Team or "Owner's Team" included major gold, uranium, copper, nickel, iron ore and platinum projects in Namibia, South Africa, DRC, Peru and Madagascar. Norman now conducts projects of special interest with his long-standing associates.

Theron Brand, Managing Director, TKGM: A Namibian national with a career in African mining including 20 years as Financial and Personnel Manager at Navachab Gold Mine, Namibia and Chief Mine Administrator Northern Areas, Namdeb Diamond Corporation

Abera Mamo, Country Manager, TKGM: An Ethiopian national with a career in senior management in the Ethiopian private and public sectors including as CEO at manufacturing company Techno Style plc, General Manager at Sher, Africa's largest flower farm, and as Deputy CEO at Ethiopian Sugar Corp. He was also Deputy Head of the Oromia State President's Office.

Figure 2: KEFI Gold and Copper share price chart



Source: LSE

Three key projects in development

- Tulu Kapi detailed financial terms and conditions have been agreed; final steps have been requested from the Ethiopian government
- In Saudi Arabia, economic studies are expected at Hawiah and Jibal Qutman in 2023 and Gold and Minerals has been awarded new exploration licences
- KEFI has interests in three development projects, all of which are expected to come on stream in 2025-2027.

Tulu Kapi, Ethiopia

In January 2023, KEFI reported that detailed financial terms and conditions with the financing syndicate had been agreed and that signing now hinges on the Ethiopian Government clarifying a few remaining regulatory steps. These are essentially Ethiopian Ministry of Finance and National Bank of Ethiopia (the central bank) confirmations that the finance agreement details provide the same protections for both banks and comply with international practice for mining project finance, and Ethiopian Ministry of Mines endorsement of historical investment, as well as confirmation of tenure for production and exploration. The Government has started and must complete actions in the field to ensure safety on implementing community resettlement and start-up.

KEFI has assembled an incredibly experienced syndicate to finance what is the first industrial scale mine development in Ethiopia for more than 30 years.

Figure 3: Tulu Kapi lead syndicate

Area of expertise	Parties involved
Process plant construction	Lycopodium
Mining services	PW Mining
Electricity supply and maintenance	Ethiopian Electric Power Company
New access road	Ethiopian Roads Authority
Debt Finance (US$190m)	East African Trade and Development Bank, and African Finance Corp
Equity Finance (US$130m) (in addition to US$80m historical investment)	Subscribers to new shares in Tulu Kapi Gold Mines (TKGM) including the Ethiopian Ministry of Finance, the Oromia Regional Government, the Ethiopian Evangelical Church of Mekane Yseus (which helps align corporate and community interests), KEFI Minerals (Ethiopia), the primary sponsor which provided all historical investment and assembled the development finance, and regional private equity financiers in KME and subscribers to KME loan instruments.

Source: KEFI

Management hopes to formally launch the project in early-2023. Construction and commissioning are expected to take 24 months. The open-pit operation is expected to start-up from early-2025.

The decline for the underground mine is expected to start 6 months after the open-pit operation commences, scheduled to be in early-2025. Initial contribution from the underground mine could start in late-2025. Some of the material removed during the construction of the decline is likely to be ore that can blended with material from the open-pit.

Figure 4: KEFI projects in Ethiopia and Saudi Arabia

Country, project	NPV, £m	Comments
Ethiopia		
Tulu Kapi	226	Attributable to KEFI (80%) and based on US$1,830/oz
		Reserves of 1.06 Moz at 3.25 g/t gold are based on US$1,098/oz suggesting scope to bring additional material into reserves
		Resources of 1.72 Moz at 2.65 g/t gold; the underground portion only includes mineralisation directly below the open-pit
		Updated DFS completed in 2017 and Mine Plans in 2018 and 2020
		Construction expected to start early-2023 with first production in early 2025
Tulu Kapi proximal areas		Exploration licence applications covering some 1,120 km^2 the priorities within which are being reviewed
		Reconnaissance exploration has demonstrated the potential to develop a number of open pits that would be amenable to heap leaching; management is targeting resources of 300,000 to 500,000 oz gold
Saudi Arabia		All projects are operated through Gold and Minerals, in which KEFI owns 30% KEFI's 70% JV partner is Abdul Rahman Saad Al Rashid & Sons
Hawiah	140	Attributable to KEFI (30%), and based on mining 2Mt pa for 10.5 years
		Expected to generate EBITDA of US$1.6bn over the project life
		An important discovery and hosted in a VMS belt offering significant potential
		Resources of 29.0Mt at 0.89% Cu, 0.94% Zn, 0.67 g/t Au and 10.1 g/t Ag, representing 509,000 t CuEq or 2.47 Moz AuEq at current metals prices
		PFS incorporating the 2022 exploration results expected in 1Q23, to be followed by a mining licence application. DFS expected by mid-2024
Al Godeyer and Al Godeyer East		Two Exploration Licences, located immediately southwest of Hawiah
		System analogous to Hawiah based on trench work and geophysical surveys
		The focus is on identifying mineralisation that can be incorporated into the early years of a combined Hawiah-Al Godeyer mine plan
Jibal Qutman	31	Attributable to KEFI (30%), and based on mining just the oxide resources which amount to less than one-third of the total resource
		Resource of 733,000 oz gold at 0.8 g/t, remains open at depth
		A DFS targeting production of 500,000oz over ten years, and superseding the 2015 PEA, is planned for 2023
Jibal Qutman North and Jibal Qutman Southeast		Gold and Minerals recently awarded two new exploration licences contiguous to Jibal Qutman that host artisanal mine workings and which have returned solid results in grab samples; there is excellent scope for resource expansion
Other exploration licences		Gold and Minerals holds a huge exploration licence portfolio including some very highly prospective areas for gold and polymetallic VMS mineralisation:
		The Abu Salal South, Abu Salal North and Umm Al Khabath licences in the Wadi Bidah Mineral Belt, south of Hawiah
		The Wadi Na'afa and Al Awja licences situated in the Lorelon Mineral Belt
		The Jabal Selm licence about midway between Hawiah and Jibal Qutman
		The Jadib al Qahtanah licence in the central part of the Arabian Shield
		The Jabal Hillit and Qunnah exploration licences in the eastern part of the Arabian Shield
		Gold and Minerals has applied for other exploration licences which include Umm Ash Shalaheeb, located to the southeast of Jabal Hillit and Qunnah
Total	**397**	

Note: NPVs are post-tax NPV$_8$ attributable to KEFI. Tulu Kapi open-pit is based on the DFS and subsequent project contracts. Tulu Kapi underground is based on the PEA. The NPVs for Hawiah and Jibal Qutman are based on preliminary mine modelling as described herein.

Source: KEFI, Orior Capital

Jibal Qutman, Saudi Arabia

KEFI's joint venture, Gold and Minerals, now expects to complete a DFS and financing, and to commence construction by the end of 2023. Assuming 18 months to commissioning, the Jibal Qutman project should start-up by mid-2025.

Hawiah, Saudi Arabia

With the updated resource announced this month, management expects to provide a preliminary feasibility study (PFS) for Hawiah in 1Q23. There is further opportunity to add resources at Hawiah, where the Crossroads and Camp Lodes remain open at depth, and at Al Godeyer, where the focus is on identifying oxide resources that could contribute to the early years of a combined Hawiah-Al Godeyer open-pit operation. A DFS is expected by mid-2024. Assuming management takes the risk-averse route of waiting until Jibal Qutman is commissioned before commencing construction at Hawiah, then construction could start mid-2025, with project commissioning in early 2027.

Saudi Arabia financing

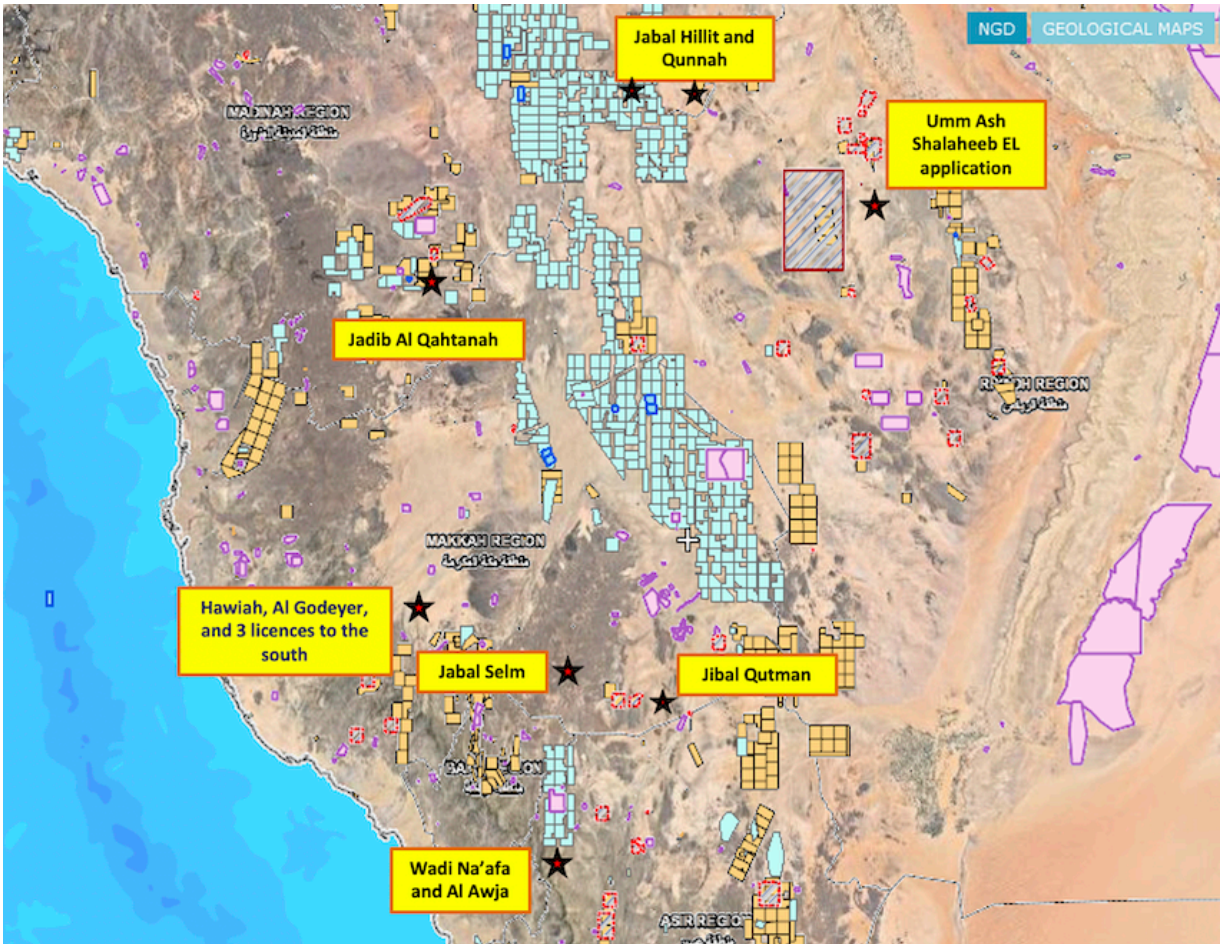
The Saudi Industrial Development Fund (SIDF) is a sovereign wealth fund of the Saudi Arabian government. It was founded in 1974 to provide mid- and long-term financing to private industrial companies. In 2019, SIDF announced it would commence lending to the mining sector in order to better align itself with Saudi Arabia's economic development goals set out in Vision 2030. The fund has said it will provide loans for up to 75% of project costs, including for resource delineation activities, and for mining service companies. Given KEFI's 30% stake in Gold and Minerals, KEFI's equity stake in project capex is likely to be as little as 7.5%. The combined capex for Hawiah and Jibal Qutman is estimated at US$250-300m, for which KEFI would be expected to fund £15-19m between 2025 and 2027 from a combination of off-take-linked finance and equity.

Regional Exploration

In addition to these projects, Gold and Minerals has secured a number of exploration licences that may enable KEFI to build a pipeline of projects that can be developed over the following few years.

KEFI has 3 projects expected to come on stream in the next four years, starting with Tulu Kapi in mid-2025.

Figure 5: Gold and Minerals' project areas in Saudi Arabia



Source: KEFI

KEFI looks incredibly undervalued

- Valuing Tulu Kapi as a development asset and the Saudi Arabian projects on resources, suggests a valuation of 4.5p/share, 6x the current share price
- Bringing all three projects into production over the next 4 years could underpin a valuation of 7.9p/share, 10x the current share price
- Further valuation upside could be driven by developments at the underground mine and satellite deposits at Tulu Kapi, and by new projects in Saudi Arabia

There are a number of gold companies operating in Africa, from early stage explorers to established producers. Portfolios of African gold developers typically trade at EVs of around US$1,000/oz of planned production. As companies enter production, development risks dissipate, cash flow becomes positive, and companies tend to get re-rated. Portfolios of gold producers tend to trade around US$3,000/oz of production. Actual valuations depend on various factors including which companies are included in the sample, the stage of development or the time to expected cashflow, planned production, expected all-in sustaining costs, jurisdiction, earnings guidance (and adherence to it), the perceived outlook for gold, and other factors. Earlier stage assets with resources, but no feasibility study currently trade at a weighted average of ~US$60/oz of total resource.

Current valuation 4.5p/share

Applying these valuation metrics to KEFI suggests a current valuation of 4.5p/share. This is based on valuing Tulu Kapi as a development stage asset (US$1,000/oz of attributable planned production), and Hawiah and Jibal Qutman on attributable resources (US$60/oz gold or gold-equivalent). **The market is valuing KEFI at an 83% discount to this valuation.** Alternatively, the market is valuing the Tulu Kapi project at just US$255/oz of planned production, and ascribing no value at all to the projects in Saudi Arabia. After years of setbacks in KEFI's frontier markets**, the market is not yet recognising the apparent turnaround in both Ethiopia and Saudi Arabia. On this basis, KEFI looks unjustifiably cheap.**

Figure 6: Valuation framework and potential outcomes

Timeframe	Valuation pence/share	Comments
Current	4.5p	Tulu Kapi valued at US$1,000/oz planned output, typical for African gold developers
		Tulu Kapi financial close targeted for early 2023, project start-up expected 1Q25
		Hawiah, Jibal Qutman valued at US$60/oz Au or AuEq resource, in line with peers
Early-2027 4 years	7.9p	Projects valued at US$3,000/oz production, a typical valuation for African gold producers
		Tulu Kapi based on 200,000 oz pa, with no further upside from underground or potential satellite deposits factored in
		Jibal Qutman based on 75,000 oz pa being a 50% increase on the average annual production level expected in the upcoming DFS
		Hawiah based on production of 265,000 oz pa representing a doubling in the resource and expected production from the January 2022 level
		An increase in shares outstanding, including to reflect the conversion of instruments to fund Tulu Kapi, to 6.5bn shares
		Upside potential exists from other projects not yet factored in

Source: Orior Capital

4-year valuation 7.9p/share

Over the next 4 years, all three of KEFI's current projects are expected to enter production. Tulu Kapi is expected to start-up in early-2025, followed by Jibal Qutman in mid-2025 and Hawiah in 2027. The 4-year valuation factors in production of 200,000 oz pa at Tulu Kapi (80% KEFI), valued at US$3,000/oz production in line with peers. KEFI has said that the Jibal Qutman DFS will be based on production of 500,000 oz over ten years. Given the potential for further resource growth, particularly with the award of the Jibal Qutman North and Jibal Qutman Southeast exploration licences along strike, the assumption is that production increases by a further 50% to 75,000 oz pa. Hawiah remains open at depth, and there is good opportunity to add additional oxide resources at Al Godeyer. The assumption herein is that resources and production levels double from the January 2022 resource estimates.

Figure 7: KEFI valuations

Exchange rate, £:US$1.24		
Current valuation		**£ m**
Tulu Kapi	200,000 oz Au pa at US$1,000/oz, 80% stake	129.0
Hawiah	29.0Mt at 2.65 g/t AuEq, 2,466 koz AuEq at US$60/oz, 30% stake	35.8
Jibal Qutman	733,000 oz Au, at US$60/oz resource, 30% stake	10.6
Asset value		**175.5**
Shares outstanding		3,939
Valuation, pence per share		**4.5**
4 years valuation		
Tulu Kapi	200,000 oz Au pa at US$3,000/oz, 80% stake	387.1
Hawiah	265,000 oz AuEq pa at US$3,000/oz, 30% stake	192.3
Jibal Qutman	75,000 oz Au pa at US$3,000/oz, 30% stake	54.8
Asset value		**633.9**
Debt	Tulu Kapi funding, US$190m, 80% stake	122.6
Net asset value		**511.3**
Shares outstanding	Assumed conversion of funding instruments, and new equity	6,473
Valuation, pence per share		**7.9**

Source: Orior Capital

Share conversions

The 4-year valuation factors in an assumption around the conversion of the convertible instruments issued to fund Tulu Kapi into production as well as additional equity. Over the next four years, the number of shares in issue is expected to increase by approximately 65% to 6.5bn shares outstanding.

What's not factored in?

Additional mineralisation at Tulu Kapi underground: Management estimates there is potential to triple the underground resource to about 1.0 Moz. This would be expected to be at a similar grade to the existing underground resource which is 5.69 g/t gold. The current underground mine modelling is based on mining 230,000 oz of gold that lies directly beneath the open-pit mine over a period of four years. The current mine plan ignores other zones of mineralisation that would be accessible from the underground mine and which were included in an earlier 2014 mineral resource estimate.

Notably, the underground resource is based on a cut-off grade of 3.5 g/t gold. Given the increase in

gold prices since the PEA was prepared in 2016, **there may be scope to lower the cut-off grade and bring additional material into the mine plan.**

Tulu Kapi proximal areas: The area around Tulu Kapi hosts two NNE-trending structures that are similar to, and run parallel to, the Tulu Kapi trend. KEFI has already identified a number of targets and has the stated aim of identifying 300,000 oz to 500,000 oz of gold grading ~1.5 g/t in oxide material that could boost production by an initial 50,000 oz gold pa.

Jibal Qutman potential expansion: KEFI has already stated that the Jibal Qutman DFS will be based on production of 500,000 oz gold over ten years. The recent award of exploration licence areas to the north and southeast of, and along strike of, the current project area suggests scope for further resource upgrades and ultimately, the potential for greater production.

Hawiah and Al Godeyer resource expansion: According to USGS, many VMS systems occur in clusters of a dozen or so deposits. As Gold and Minerals explores the wider Hawiah-Al Godeyer region, other deposits may be discovered, and ultimately, mined.

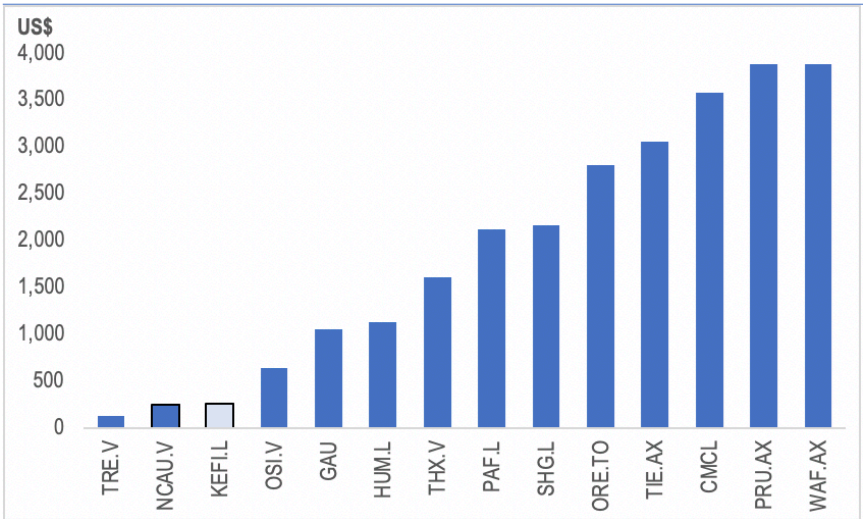
Additional projects: Gold and Minerals has been awarded 14 exploration licences in the past year, some of which have hosted historical production.

Factoring in further project development would be expected to underpin higher valuations.

Big appetite for assets

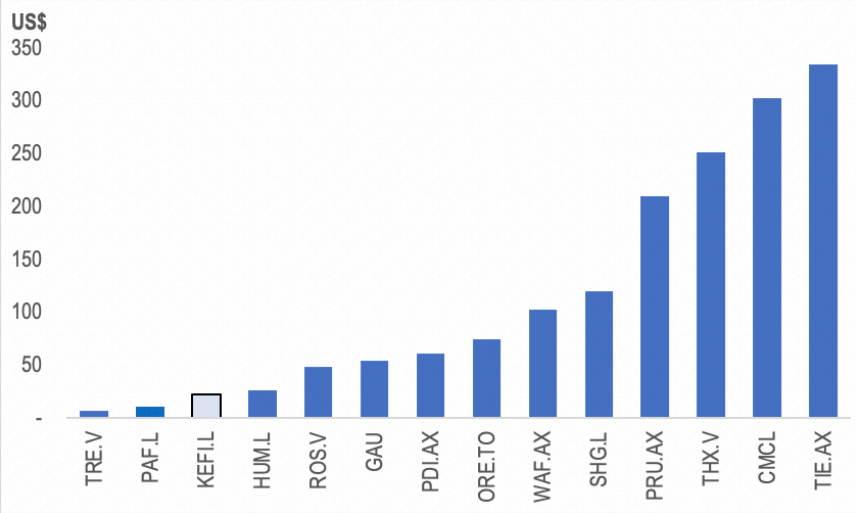
Another factor expected to drive valuations is continued appetite for gold assets, both by financial interests and by larger gold companies. There have been a number of transactions involving African assets over the past couple of years. Endeavour acquired both Semafo (Burkina Faso) and Terranga Gold (Senegal, Burkina Faso and Ivory Coast) in 2020. Azumah Resources (Ghana) was acquired by private equity fund Ibaera Capital in 2020. Cardinal (Ghana) was acquired by Shandong Gold in 2021. Golden Star (Ghana) was acquired by Chifeng Jilong in a deal that was completed in January 2022. Also in 2022, Perseus acquired the shares in Orca Gold (Sudan) that it did not already own, and Robex Resources (Mali) announced a business combination with privately-held Sycamore Mining (Guinea and Swaziland).

Figure 8: African gold companies EV per oz of production, planned or 2022 guidance



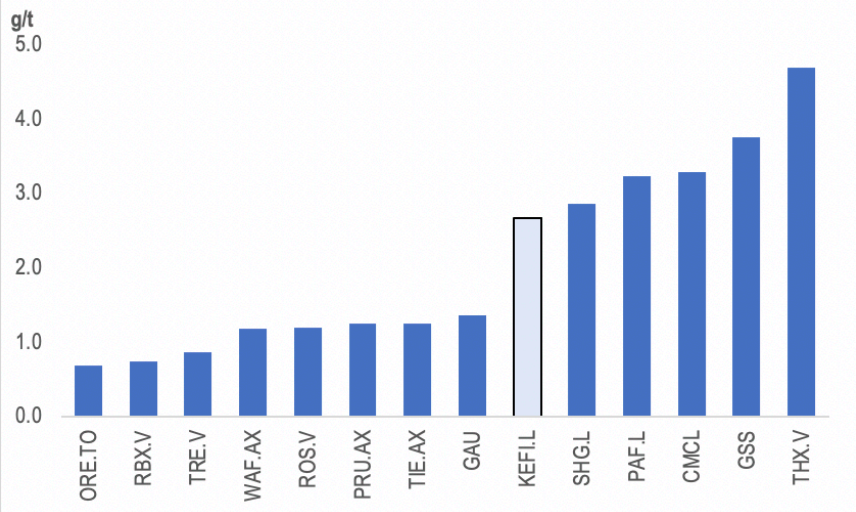
Source: Company data, Orior Capital

Figure 9: African gold companies EV per oz of measured and indicated resource



Source: Company data, Orior Capital

Figure 10: African gold companies, M&I resource grade, g/t gold



Source: Company data, Orior Capital

NPV valuations

As a general rule of thumb, African focused gold developers have tended to trade at between 0.4x and 0.8x NPV over the past several years. Some larger, multi-asset companies have traded at 1.0x NPV. The multiple of NPV at which a company trades depends on numerous factors including, but not limited to, the stage of development of the project and published study (PEA, PFS, DFS), the assumed gold price, the discount rate applied, the jurisdiction, the expected production level, and the time to first production.

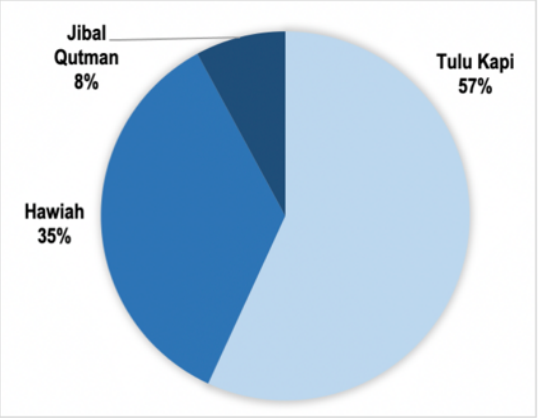
KEFI's three projects currently have a total NPV attributable to KEFI of £397m, or 10.1p per share. **Valuing KEFI in line with typical valuations of African gold developers of 0.4-0.8x NPV would suggest a valuation of 4.0 pence/share to 8.1 pence per share. KEFI is trading at just 7% of NPV.**

Figure 11: KEFI NPV valuations, £:US$1.24

Ethiopia	**US$ m**	**£ m**
Tulu Kapi	350	
KEFI, 80% stake	280	226
Saudi Arabia		
Hawiah	578	
KEFI 30% stake	173	140
Jibal Qutman	130	
KEFI 30% stake	39	31
KEFI, total attributable	**492**	**397**
Shares in issue		3,939
NPV, pence/share		**10.1**

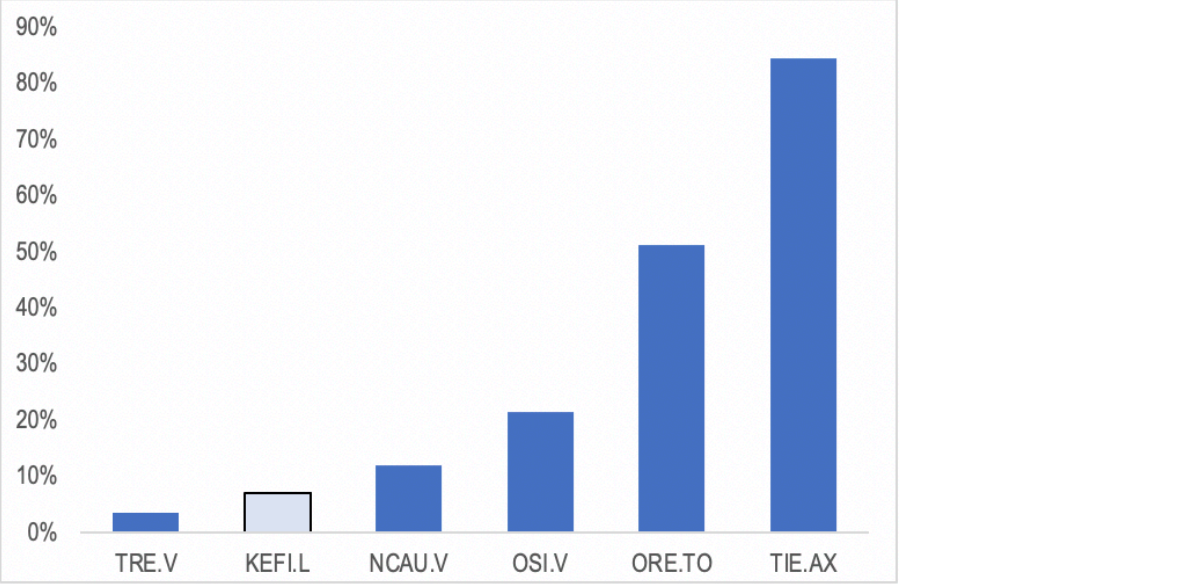
Source: KEFI, Orior Capital

Figure 12: Breakdown of attributable NPV by asset



Source: KEFI, Orior Capital

Figure 13: EV/NPV, selected African gold companies



Source: Company data, Orior Capital

Tulu Kapi ready for take-off

- Tulu Kapi financial completion is now targeted for early-2023; first open-pit production is expected in 2025
- The underground mine is expected to start up in year 3 of the open-pit; there is potential to triple the underground resource, further boosting project economics
- Management also targets resources of 300,000 oz to 500,000 oz gold in satellite pits that could underpin an initial 50,000 oz pa heap leach operation

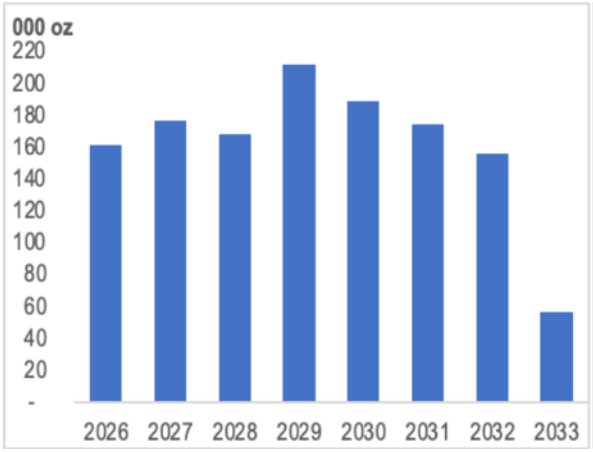
Tulu Kapi is located in Western Ethiopia in the Oromia Region, some 360km due west of the capital, Addis Ababa. KEFI acquired a 75% stake in the project in 2013, and the remaining 25% in 2014. A DFS was completed in June 2015, and an updated version in June 2017. In 2018, KEFI released a Mine Plan for the open-pit mine that increased plant capacity and accelerated cash flows. That plan now forms the basis of the current 2020 Mine Plan. Ultimately, once all detailed and regulatory approved documentation are closed, KEFI is expected to own an 80% stake in Tulu Kapi.

The estimates herein are based on production of 1.3 Moz gold over an 8-year mine life, assuming a processing rate of 2.3Mtpa and including the integration of some 200,000 oz gold production from the underground mine. Production is expected to reach 162,100 oz in the first year of production (to March 2026) and to average 177,100 oz pa in the first seven years of the project. This is conservative; management expects to be able to extract some 600,000 oz from the underground mine. The underground mine is expected to commence operations in year 3 of the open-pit mine, lifting output to almost 200,000 oz pa. The project has simple metallurgy, will employ standard equipment, and is expected to ramp up quickly as there is negligible overburden. Tulu Kapi is expected to be the first modern mine to be built in Ethiopia for more than 30 years.

Highly cash generative

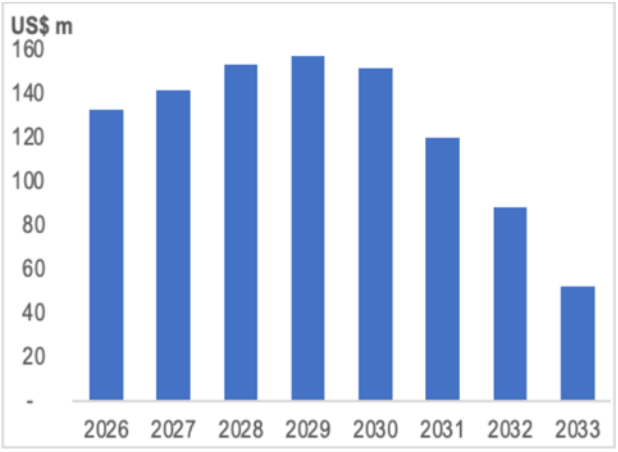
At US$1,830/oz gold, Tulu Kapi is expected to generate average annual operating cash flow of US$167m in the first seven years. Average life-of-project all-in sustaining costs are estimated at US$945/oz, suggesting a margin over AISC of US$885/oz.

Figure 14: Gold production, YE March



Source: KEFI

Figure 15: Operating cashflows, YE March



Source: KEFI

Figure 16: Tulu Kapi key operating parameters

YE March		2026	2027	2028	2029	2030	2031	2032
Key operating metrics								
Ore Mined	Mt	3.9	3.0	2.1	3.0	2.6	2.2	1.1
Waste Mined	Mt	18.3	19.2	20.3	19.4	18.3	11.4	5.0
Total Material Mined	Mt	22.2	22.2	22.4	22.4	21.0	13.6	6.1
Ore Grade	g/t	1.7	2.0	2.2	2.4	2.2	2.3	3.2
Contained Gold	koz	217.7	193.4	151.1	228.5	189.9	160.7	113.6
Ore Processed	Mt	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Head Grade	g/t	2.6	2.6	2.5	3.1	2.8	2.6	2.3
Contained Gold	koz	186.7	188.5	179.5	226.3	201.6	185.9	166.6
Recoveries	%	87%	94%	94%	94%	94%	94%	94%
Gold Recovered	**koz**	**162.1**	**176.9**	**168.4**	**212.5**	**189.3**	**174.5**	**156.2**
Offsite Costs	US$ m	1	2	1	2	2	2	1
Mining Costs	US$ m	92	99	109	114	106	75	43
Processing Costs	US$ m	28	30	32	32	34	34	35
General and admin	US$ m	11	11	11	10	10	9	9
Operating Costs	**US$ m**	**133**	**142**	**153**	**157**	**152**	**120**	**89**
Royalties	US$ m	13	25	21	27	24	23	21
Sustaining Capital	US$ m	17	14	8	8	4	3	3
Closure	US$ m	2	2	2	2	2	2	2
All in Sustaining Costs	**US$ m**	**165**	**183**	**184**	**195**	**182**	**148**	**115**
All in Sustaining Costs	**US$/oz**	**1,019**	**1,037**	**1,090**	**915**	**963**	**848**	**735**
Financials								
Revenue	**US$ m**	**297**	**324**	**308**	**389**	**346**	**319**	**286**
Operating costs	US$ m	146	167	174	184	176	143	110
Operating cashflow	**US$ m**	**150**	**157**	**134**	**205**	**170**	**176**	**176**

Source: KEFI

The upside, underground

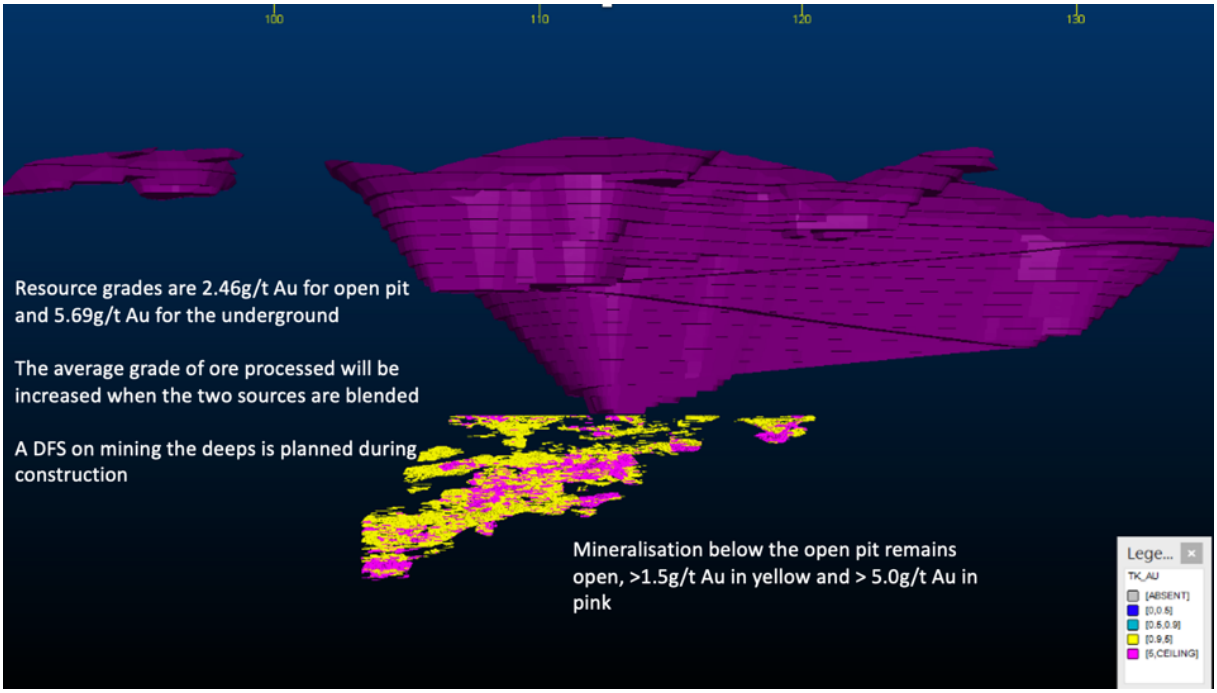
In the 2016 PEA, modelling of mineable stopes resulted in a 76% conversion rate and a reserve of 1.3Mt at 5.17 g/t. Management hopes to further enhance the underground resource with additional drilling and to complete a PFS during the construction of the open pit project. The underground decline would be started around the time the open pit starts up, with further resource drilling conducted from underground. **Ultimately, the plan would be to supplement the open pit operation with some higher-grade underground material to achieve say, a 12-year mine life, at higher-grade and better economics than the current planned open pit.**

Assuming the open pit starts up in 1H25, first production from the underground mine would be targeted for late-2026 or early-2027. Assuming US$1,830/oz gold, **the post-tax NPV_8 of the underground project is estimated at US$111m.** This only includes the first 4 years of production.

Management believes there is potential to triple the underground resource to ~1.0 Moz at a similar grade to the existing resource. Mineralisation increases in grade and thickness with depth, and it remains open both at depth, and an estimated 600-800m along strike to the north. Drill hole **TKBH_293**, the northern most hole drilled into the underground resource intercepted 90m at 2.8 g/t gold. Drill hole **TKBH_125** intersected mineralisation 140m down plunge, and is interpreted to be east of the main underground shoot.

Another factor is that the current resource, prepared in 2016 when gold prices were lower, is based on a cut-off grade of 3.5 g/t. (The PEA was based on a gold price of US$1,250/oz gold). Given the high current gold price there is probably scope to lower this cut-off grade allowing additional material to be brought into the mine plan. The appropriate cut-off grade will be considered during underground mine planning once the open pit operation is underway.

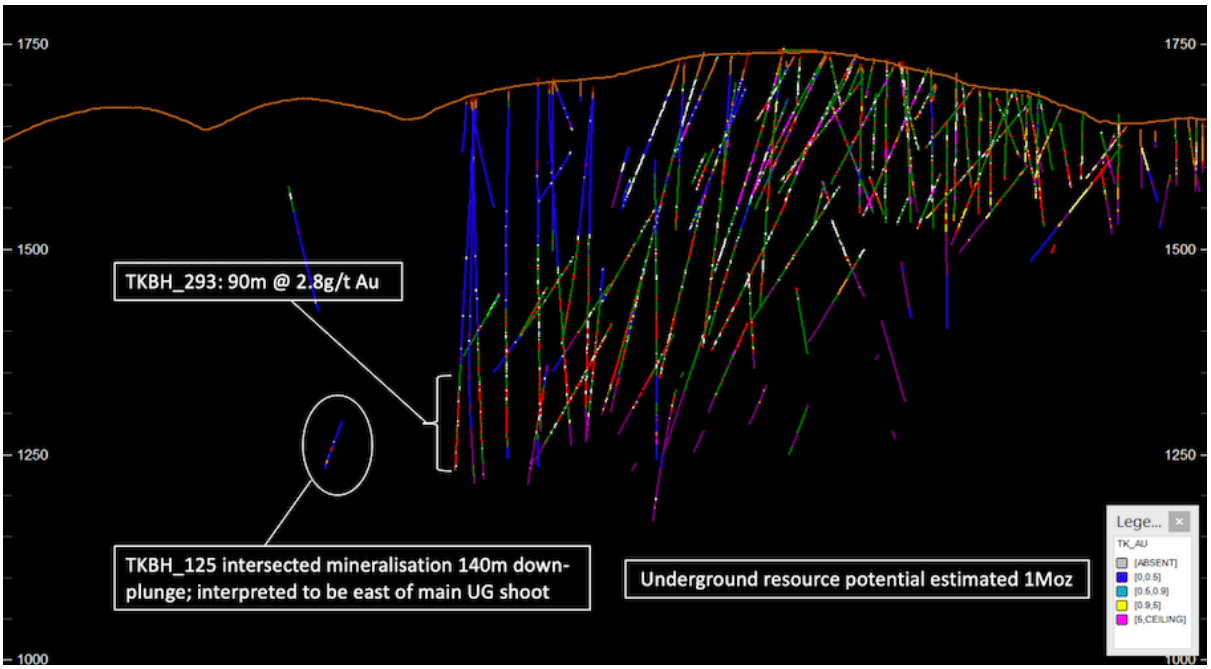
Figure 17: Tulu Kapi existing underground resource below the open pit at 1,400mL



Source: KEFI, Orior Capital

Drilling and assays are likely to cost ~US$1m based on six drill holes, each 700m deep, and at a cost of US$200/m including assays. **Just considering the grade, one would think the underground project would be highly profitable,** especially given current gold prices, though KEFI will probably aim to expand the underground resource to about 500,000 oz or more to justify development.

Figure 18: Tulu Kapi drill intersections showing TKBH_293 and TKBH_125



Source: KEFI, Orior Capital

Resources and reserves

The Tulu Kapi project hosts a current resource estimate of 1.72 Moz at an average grade of 2.65 g/t gold. The mineral resource has been split above and below the 1,400m RL to reflect the portions of the resource that may be mined in the open pit operation and using underground mining. Of the total resource, some 1.50 Moz lies above 1,400m RL and is included in the mine plan for the open pit operation. This was based on a cut-off grade of 0.45 g/t gold. Resources below the 1,400m RL amount to 220,000 oz gold at an average grade of 5.69 g/t. Resources below the 1,400m RL are based on a cut-off grade of 2.5 g/t gold.

Notably, the 2016 PEA for the underground mine was based on the June 2014 JORC-compliant reported indicated and inferred mineral resource of 330,000 oz gold at an average grade of 6.26 g/t, and a cut-off grade of 3.5 g/t. The subsequent 2015 resource update only focused on zones of mineralisation directly below the open pit; other drilled zones of mineralisation accessible from underground which were included in the 2014 reported resource were ignored.

The project has current mineral reserves of 1.06 Moz gold at an average grade of 3.25 g/t. This reserve estimate was based on a gold price of US$1,098/oz, suggesting there maybe scope to bring additional material into the mine plan.

Figure 19: Tulu Kapi Resources

Category	Tonnes Million	Gold Grade g/t	Contained Gold Moz
Above 1,400m RL	**19.0**	**2.56**	**1.50**
Indicated	17.7	2.49	1.42
Inferred	1.3	2.05	0.08
Below 1,400m RL	**1.2**	**5.69**	**0.22**
Indicated	1.1	5.63	0.20
Inferred	0.1	6.25	0.02
Overall	**20.2**	**2.65**	**1.72**
Indicated	18.8	2.67	1.62
Inferred	1.4	2.40	0.10

Source: KEFI

Figure 20: Tulu Kapi Reserves

Category	Tonnes Million	Gold Grade g/t	Contained Gold Moz
Probable, cut-off 0.9 g/t	12.0	2.52	0.98
Probable, cut-off 0.5-0.9 g/t	3.3	0.73	0.08
Total probable reserves	**15.3**	**3.25**	**1.06**

Source: KEFI

Exploration areas highly prospective

In addition to the tenements at Tulu Kapi, KEFI has applied for three exploration licences that cover some 1,120 km^2 and which lie immediately west and north of the Tulu Kapi mining licence.

Management's stated target is to identify 300,000 oz to 500,000 oz of gold grading ~1.5 g/t in oxide material in a series of shallow (40m) open pits along the Komto-Guji Belt, immediately west of the Tulu Kapi trend. This material could be processed in two ways. Being within trucking distance of the Tulu Kapi plant, it could provide additional ore feed to the plant. The Tulu Kapi plant has potential for higher throughput rates for softer oxide ores. It could also be developed as standalone heap leach operations. Preliminary metallurgical work using cyanide bottle roll tests returned 94% gold recovery on the trench samples at Komto II. **This could enable production of an initial 50,000 oz pa that would benefit from low stripping ratios, low costs, and high gold recoveries.** Combined with the Tulu Kapi operations, KEFI's production could then reach ~240,000 oz pa. The company is taking administrative action to preserve its exploration rights to this area after some challenges by the previous (now replaced) Minster for Mines and Head of Licencing.

Guji Trend

The Guji shear zone lies 3-5 km west of the Tulu Kapi trend. It includes Guji, to the northwest of Tulu Kapi, and has a mapped strike length of more than 9km from Komto in the south to Kobera in the north. It is open along strike in both directions. In 2014-2015, drilling and trenching by KEFI in the Guji area returned a number of compelling results including 44m at 1.7 g/t gold (drill hole **GRC_067**), 6m at 3.98 g/t gold (**GRC_070**) and 19.3m at 4.4 g/t gold (trench **GTR_01**).

At the Komto 1 and Komto 2 prospects, mineralisation is hosted in a ferruginous (containing iron oxides) stockwork in metasandstone. Management noted in 2015 that the mineralisation style has the potential to host a bulk tonnage open cut resource. One drill hole, **UNBH_16**, drilled at the

Komto 1 prospect in the 1970s, returned 10.5m at 1.5 g/t gold. There are also encouraging trenching results at Komto 1 and Komto 2. Trench **K1Tr_03** returned 7m at 7.27 g/t gold. Trench **K2Tr_12** returned 13m at 1.07 g/t gold. Trench **K2Tr_13** returned 6m at 1.24 g/t gold and 5m at 1.07 g/t gold. So far, only limited drilling has tested this trend.

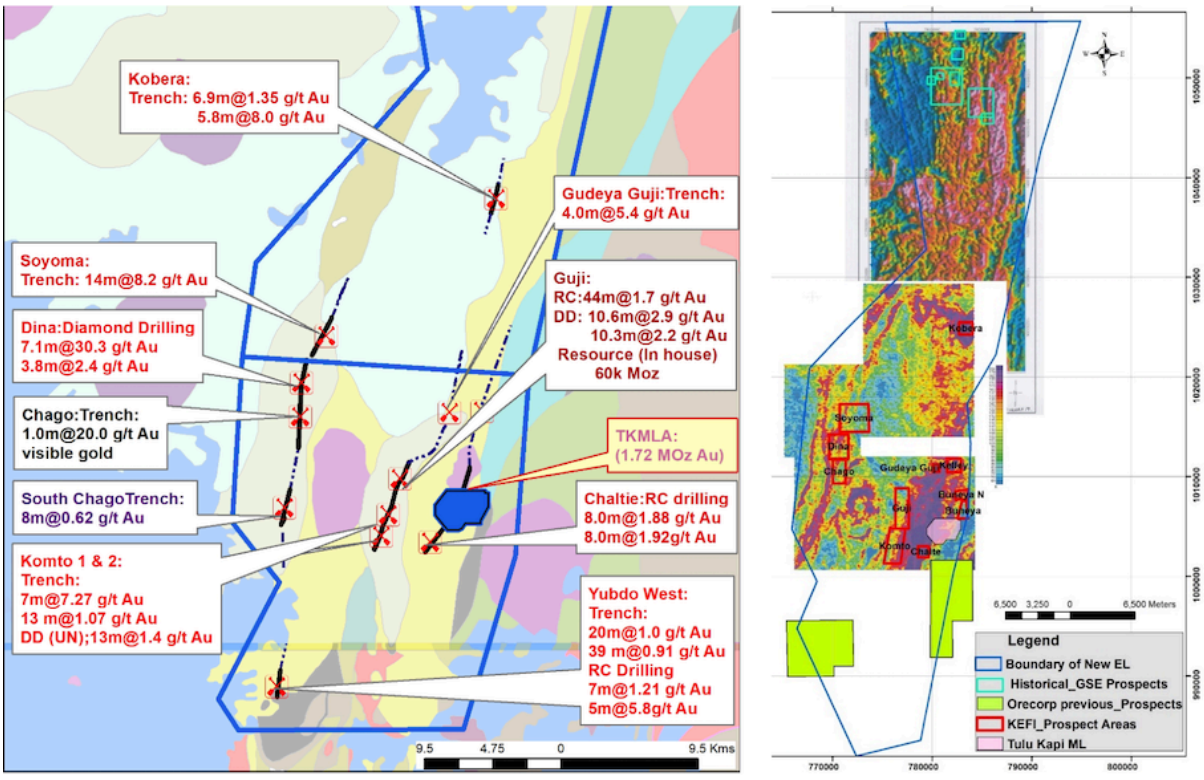
Dina Trend

The Dina Trend is a NNE-SSW trending shear zone lying some 10km to the west of the Guji Trend. It hosts a number of historical workings. Geochemical surveys to date have shown mineralisation over some 15km. Diamond drilling at the central Dina prospect by Nyoto returned a best result of 7.1m at 30.3 g/t gold from a depth of 69.6m. **Dina has the potential to host a very high-grade deposit.**

The Soyoma prospect lies north along trend from Dina, about 15km northwest of Tulu Kapi. Gold mineralisation is hosted in quartz veins. Historical trenching work returned good results including 14.2m at 8.2 g/t gold. In 2015, gravel excavations revealed two historical trenches and a series of flat lying stacked quartz veins. Channel sampling of these veins returned best results of 3m at 4.2 g/t gold, 2m at 2.75 g/t gold and 1m at 2.65 g/t gold. Altogether the vein zone and historic workings have been mapped over a 2km strike length. **Soyoma is another outstanding geological prospect.**

So far, **KEFI has identified Komto I and II, Guji and Soyoma as the best targets for bulk tonnage open-pit operations.** These targets are all within easy trucking distance of the Tulu Kapi processing plant.

Figure 21: Exploration potential in the areas around Tulu Kapi, and aeromagnetic survey results



Source: KEFI

Jibal Qutman: plans for increased production

- Jibal Qutman represents an excellent opportunity to develop a low capex, low cost, high margin gold operation in the near-term
- Higher gold prices have justified an increase in planned production to 500,000 oz over ten years; a DFS for the expanded operation is expected in 2023
- Gold and Minerals' three exploration licences cover 270 km^2, and a significant part of the Nabitah-Tathlith gold belt; there is excellent scope to grow resources

Jibal Qutman is located in the southern portion of the north-south trending Nabitah-Tathlith Fault Zone, a shield wide, 300km long structure, that hosts more than 40 ancient gold mines and known occurrences, including the major Ad Duwayhi and Mansourah-Massarah gold mines. The project is situated in a remote and uninhabited area some 110km east-northeast of Bisha City. Apart from ancient mines and occasional artisanal workings, the area has not been previously exploited.

The United States Geological Survey (USGS) undertook the first field-reconnaissance of the area on behalf of the then Directorate General of Mineral Resources (DGMR) in 1979. Subsequent mapping by Gold and Minerals defined additional unmapped workings and parallel gold-bearing veins, and extended the previously known strike of quartz vein sets from 400m to 2.9km. In May 2015, Gold and Minerals published a mineral resource of 28.4Mt at a grade of 0.8 g/t gold, for a gold resource of 733,045 oz gold that was based on 430 RC holes and 77 diamond holes.

In September and October 2022, KEFI announced the exploration licence at Jibal Qutman had been renewed and two additional and contiguous licences situated along strike had been awarded.

DFS to target greater production

KEFI announced, September 2022, that the DFS for Jibal Qutman would be focused on an initial 2.0Mtpa carbon-in-leach (CIL) operation **targeting production of 500,000 oz gold over a ten year period**. Field programs including confirmatory drilling, environmental baseline studies, and geotechnical and metallurgical drilling, commenced in October 2022. **KEFI is targeting the completion of the DFS by 2023,** and then expects to file a Mining Licence application. **Mine construction is expected to commence at the end of the year.**

Gold and Minerals has already commenced discussions with Saudi Investment Development Fund (SIDF) around project funding, to be finalised once the mining licence is issued.

This new plan represents a substantial increase in planned production compared to the initial PEA which targeted output of 200,000 oz gold, and which was modelled on a gold price of US$1,200/oz.

Current valuation

KEFI's most recent estimate of attributable NPV, included in the valuations herein, is based on an update of the 2015 PEA. This assumed an initial open-pit, heap leach operation that predominantly targeted the oxide material in the resource. It did not take into account the potential to mine the sulphide material once the oxide-hosted resources are depleted. In fact, the operation only targeted

production of 209,000 oz gold, which is less than one-third of the maiden resource.

Post-tax NPV_8 attributable to KEFI of £30m was based on an initial 7 year operation, annual production of 35,000 oz gold and 41,000 oz silver in years 1-6, recoveries of 80% of the gold and 45% of the silver, and prices of US$1,830/oz gold and US$21/oz silver. Start-up costs were estimated to be low at just US$39m and Gold and Minerals indicated that as much as 75% of this could be financed locally with debt. Under these assumptions, the start-up heap leach operation would be low capex, low operating cost, and could generate EBITDA of US$276m in the first 7 years.

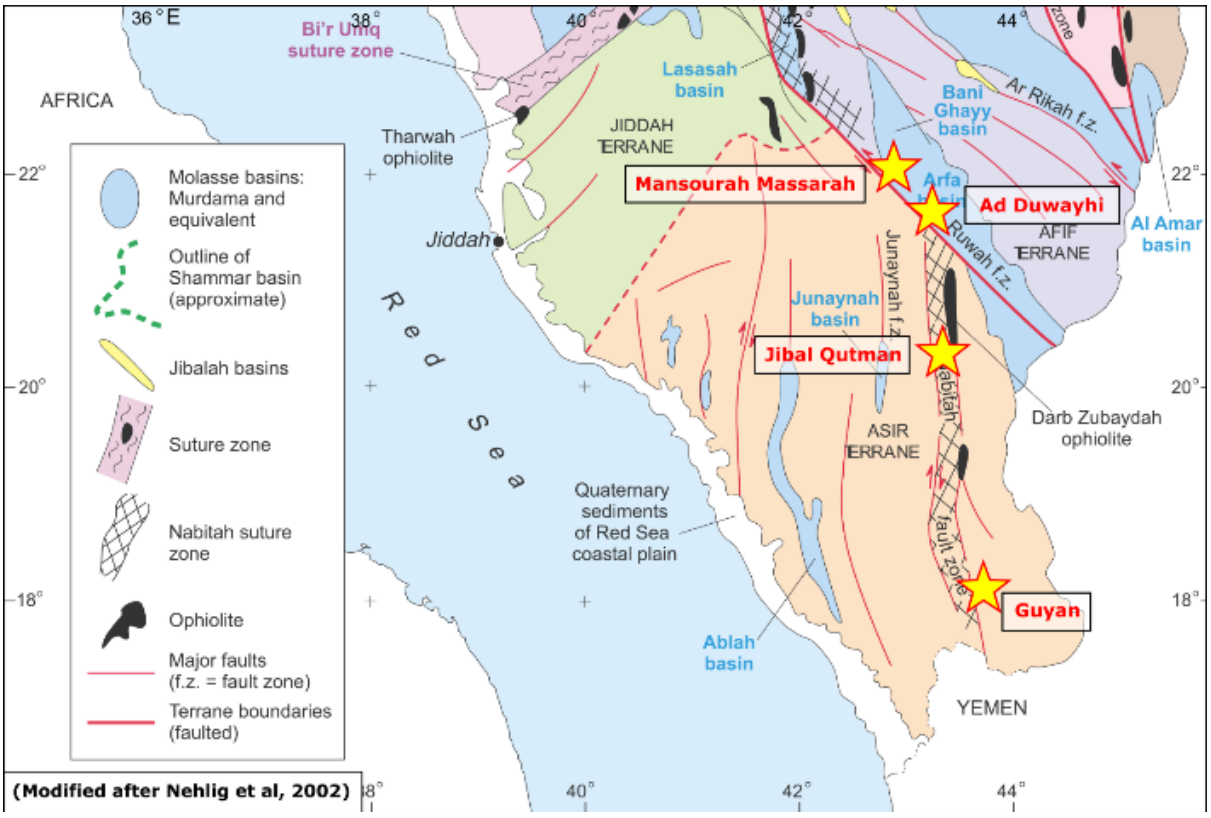
The Jibal Qutman DFS is expected in 2023 at which time these valuations will be updated.

Figure 22: Jibal Qutman key parameters, average years 1-6

Capital expenditure	US$ m	39
Ore mined	tpa	1,500,000
Waste mined	tpa	5,250,000
Strip ratio		3.5
Gold grade	g/t	0.95
Silver grade	g/t	2.00
Gold production	oz pa	35,000
Silver production	oz pa	41,000
Gold price	US$/oz	1,830
Silver price	US$/oz	21
Cash operating costs	US$/oz gold	672
EBITDA	US$ m pa	42
NPV_8, post-tax	US$ m	130
NPV_8, post-tax, attrib. to KEFI (30%)	US$ m	39

Source: KEFI

Figure 23: Jibal Qutman summary of local geology



Source: KEFI

Geology and mineralisation

Jibal Qutman is a mesothermal or orogenic-style quartz-vein-hosted gold deposit comprising a weathered oxide cap and lower un-weathered ore body that is located in the central southern region of the Arabian-Nubian Shield. The project currently comprises separate areas of mineralisation and is open along strike, down dip and at locations peripheral to the known mineralization.

So far, KEFI has discovered seven mineralised gold zones within a 5km long (north-south) by 1 km wide (east to west) area. The main zone of the orebody is a 900m long vein system, with a single high-angle vein up to 4m thick that splits into multiple veins along strike. The ore consists of pyrite and minor tetrahedrite, galena and sphalerite with coarse gold.

The mineralised zones are interpreted as quartz vein and shear-zone related gold mineralization, hosted by folded Upper Proterozoic volcanic and sedimentary units. The shear zones occur along the Nabitah-Tathlith fault zone, and range in thickness from tens to hundreds of metres. According to KEFI, gold mineralisation is associated with the shears in three predominant styles:

- Quartz veins and surrounding stockwork within a carbonatized and albitized alteration envelope, with gold accompanied by disseminated pyrite and minor copper sulphides and oxides
- Sub-horizontal unsheared carbonatized and albitized volcanic bodies, with gold accompanied by large quantities of pyrite and very minor amounts of other sulphides
- A strongly sheared and folded carbonaceous meta-sedimentary unit, strongly sericitised and containing a significant quantity of pyrite. This mineralisation style accounts for only a small part of the resource

Mineralization extends some 7km along strike, in several discrete zones which outcrop at surface. The width of the near surface mineralization is 500m at the widest zone, and comprises a closely stacked series of discreet mineralized zones varying in width from 1m to 15m and extending to a depth of ~150m.

Figure 24: Jibal Qutman mineral resource

	Category	Tonnes millions	Gold g/t	Contained koz
Oxide	Indicated	8.3	0.86	229
	Inferred	2.8	0.64	58
	Sub-total	**11.1**	**0.80**	**287**
Sulphide	Indicated	9.7	0.86	269
	Inferred	7.6	0.72	176
	Sub-total	**17.3**	**0.80**	**446**
Oxide and sulphide	Indicated	18.0	0.86	498
	Inferred	10.4	0.70	235
	Total	**28.4**	**0.80**	**733**

Source: KEFI

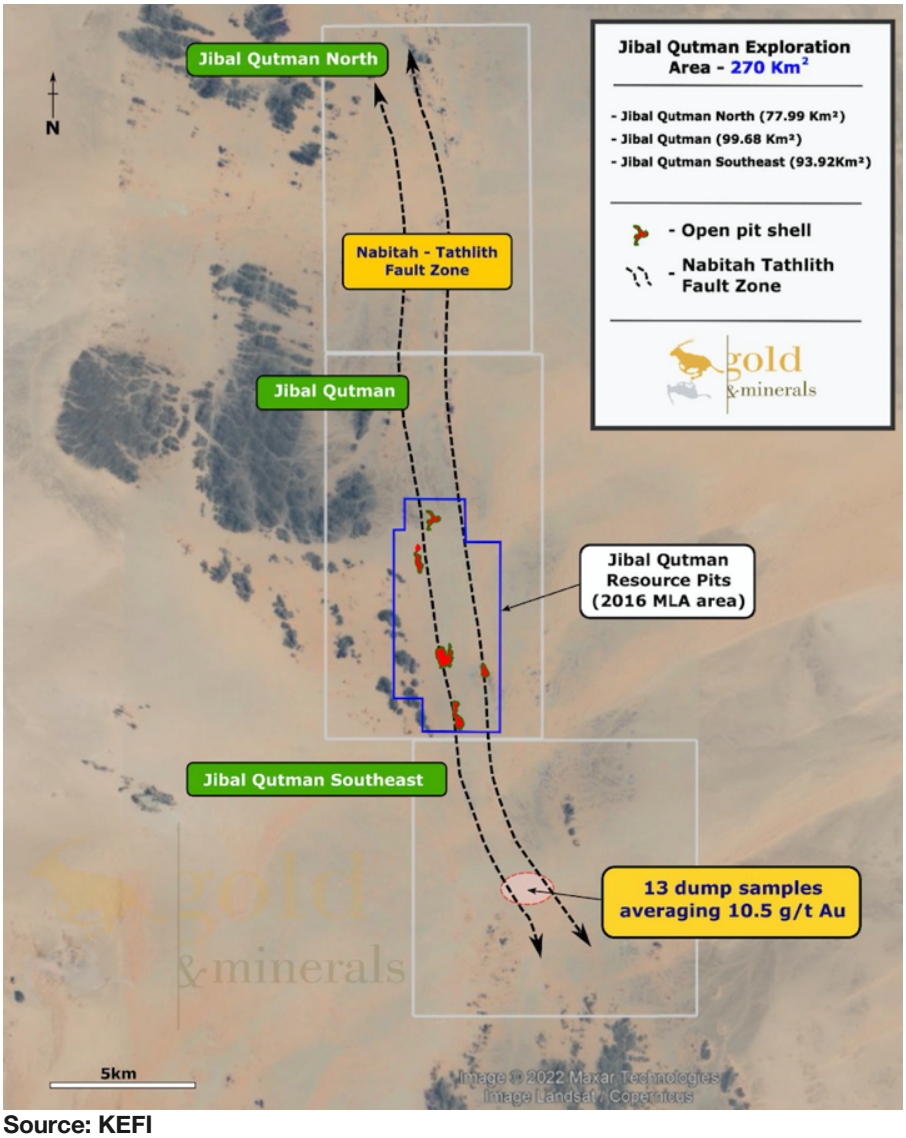
Jibal Qutman North and Southeast exploration areas

Gold and Minerals was awarded, September 2022, exploration licences at Jibal Qutman North and Jibal Qutman Southeast. The two new licences cover the north and south strike extensions of the Jibal Qutman gold system. Also, the original Jibal Qutman licence in what is now the central portion of the area was renewed in October 2022. Taken together, the three contiguous licences over an area of 270 km^2 and cover a significant part of the Nabitah-Tathlith gold belt.

Artisanal mine workings, both ancient and more modern, are prevalent within the new licence areas suggesting a good opportunity to expand the existing Jibal Qutman resource. Management believes the quantity of dump material and the extent of more recent artisanal workings are encouraging signs of significant, sub-cropping continuation of the gold system. Work by Gold and Minerals at the Jibal Qutman Southeast licence area in 2014 returned grades of up to 66.5 g/t gold in grab samples, and an average grade of 10.5 g/t across all 13 samples taken. Grab samples from the Jibal Qutman North licence area have returned grades of up to 4.1 g/t gold.

Exploration work on the central licence area conducted prior to 2016 was focused on the main trend, which presents as quartz veins hosted in deformed volcanics and sediments. Towards the end of this phase of exploration, a second mineralised structure was identified that is hosted within ultramafics on the eastern part of the licence area. Regional mapping has identified this structure in the adjoining Jibal Qutman North and Southeast tenement areas. The structure is yet to be fully explored.

Figure 25: Jibal Qutman exploration licence area



Source: KEFI

Hawiah: a Top 100 VMS deposit globally

- Hawiah is already a Top 100 VMS deposit globally and remains open at depth
- Management expects to publish a PFS in mid-2023, and to commence mine construction in 2025
- The Wadi Bidah Mineral District is probably the only VMS belt in the world that outcrops as much, remains as underexplored, and is as highly prospective

The Hawiah and Al Godeyer licence areas are located in the Wadi Bidah Mineral District in the southwestern part of the Arabian shield in Saudi Arabia. The district comprises a 120km long belt that hosts more than 20 known VMS deposits and historical workings. The project is owned by KEFI's 30% held joint venture company, Gold and Minerals, which operates the exploration licence for Hawiah covering 95 km^2, and two exploration licences at Al Godeyer covering a total of 35 km^2.

The Hawiah deposit forms a prominent north-south trending ridgeline that is exposed over 4,500m with a thickness varying from 1m to 20m. The ridge is interpreted to be the modern-day expression of the original VMS palaeo-horizon. The deposit hosts gossanous ex-massive sulphides, chert breccias, banded ironstones and intermediate volcanic breccias. Supergene alteration has resulted from groundwater interactions. The deposit comprises three main alteration zones; an oxide zone that typically shows supergene gold enrichment; a transition zone with copper enrichment; and a fresh mineralised zone that appears to be a predominantly pyritic stratiform massive sulphide body.

In December 2021, Gold and Minerals was awarded two exploration licences at Al Godeyer, located immediately west of the Hawiah discovery. The Al Godeyer area exhibits outcropping gossans over a strike length of 2km. These are located about 12km southwest of, and are considered analogous to, those at Hawiah. The Al Godeyer gossans are the first satellite deposits around Hawiah to be explored by Gold and Minerals.

In January 2023, KEFI said that Gold and Minerals had been awarded three further exploration licences, located to the south of Hawiah at Abu Salal and Umm al Khabath, further expanding Gold and Minerals' licences along the Wadi Bidah Mineral Belt. **The Wadi Bidah Mineral District is probably the only VMS belt in the world that outcrops as much, remains as underexplored, and is as highly prospective**. KEFI has a phenomenal opportunity to develop a substantial operation.

Following on from the 2023 resource upgrade, management plans to release a preliminary feasibility study (PFS) by mid-2023. A definitive feasibility study (DFS) incorporating underground mine plans should be completed by mid-2024. Mine development is likely to start once Jibal Qutman is commissioned, in 2025.

At current metals prices, **the resource represents 509,000 tonnes of copper equivalent (CuEq) resources at a grade of 1.75% CuEq, or a gold equivalent (AuEq) resource of 2.5 Moz at a grade of 2.65 g/t AuEq.**

Hawiah resource upgrade

In January 2023, KEFI announced its second upgrade to the resource at Hawiah. The resource now stands at 29.0Mt grading 0.89% copper, 0.94% zinc, 0.67 g/t gold and 10.1 g/t silver. The upgraded resource represents a 16% increase in resource tonnage compared with the resource estimate of a year ago, as well as higher grades in zinc, gold and silver. In terms of contained metal, the resource now stands at 258,000 tonnes of copper (up 16% from the January 2022 resource estimate), 272,000 tonnes of zinc, (up 30%), 620,000 oz gold (up 25%) and 9.4 Moz silver (up 20%).

Figure 26: Hawiah Resource Estimate

Class	Mining Type	Material	Tonnes	Grade				Metal content			
			Mt	Cu %	Zn %	Au g/t	Ag g/t	Cu kt	Zn kt	Au koz	Ag koz
Indicated	**Open-pit**	**Total**	**9.2**	**0.88**	**0.7**	**0.84**	**9.9**	**81**	**65**	**249**	**2,950**
		Oxide	1.2	-	-	2.1	7.6	0	0	80	286
		Transition	2.2	1.29	0.76	0.72	11.7	28	17	51	828
		Fresh	5.9	0.9	0.82	0.62	9.7	53	48	118	1,836
	Underground	**Total**	**3.2**	**0.82**	**1.07**	**0.59**	**9.5**	**26**	**34**	**60**	**969**
		Fresh	3.2	0.82	1.07	0.59	9.5	26	34	60	969
Inferred	**Open-pit**	**Total**	**1.8**	**0.99**	**1.02**	**0.67**	**12.4**	**18**	**19**	**40**	**735**
		Oxide	0.01	-	-	0.96	8.4	0	0	0.2	1.8
		Transition	0.4	1.06	0.62	0.77	14.9	5	3	11	204
		Fresh	1.4	0.97	1.14	0.64	11.7	14	16	29	529
	Underground	**Total**	**14.7**	**0.9**	**1.05**	**0.58**	**10.1**	**132**	**155**	**272**	**4,754**
		Fresh	14.7	0.9	1.05	0.58	10.1	132	155	272	4,754
Total Resource	**Total**		**29.0**	**0.89**	**0.94**	**0.67**	**10.1**	**258**	**272**	**620**	**9,408**
	Open-pit		11.1	0.9	0.75	0.81	10.3	100	83	288	3,685
	Underground		17.9	0.88	1.06	0.58	10	158	189	332	5,723

Source: KEFI

The Indicated Resource has increased to 12.4Mt (up 14%), and this now includes 1.2Mt of oxide material that contains an estimated 80,000 oz gold. Total Indicated and Inferred material reporting to the Open-Pit Scenario has increased to 11.1Mt (up 32%). This provides further confidence in the potential for an initial lower capex cost open-pit operation. The Open-Pit Scenario will be fully evaluated during the Hawiah DFS, and which is expected to include both the upgraded oxide resource and results from the 2023 drilling program.

Drilling in 2023 will be aimed at further increasing the size of the resource and bringing more material into the Indicated category for use in the upcoming DFS.

The increase in resource tonnage has been driven by:

- Increased density in the oxide zone from 1.7 tonnes/m^3 to 2.32 tonnes/m^3
- Expansion of the Crossroads Extension Lode at depth
- Inclusion of additional material across all domains given the increased drill density and increased confidence in the resource

The increase in the oxide zone resources to 1.2Mt, and the associated increase in estimated contained gold from 35,000 oz to 80,000 oz reflects increased drill density and improved recoveries gained primarily by switching to reverse circulation drilling. Together with a deep trenching program, this has enabled a greater understanding of the density characteristics of the domain. Also, the average gold grade in the oxide zone has increase from 1.4 g/t to 2.1 g/t.

The Crossroads Extension portion of the orebody exhibits higher average zinc and gold grades. Drilling in 2022 enabled more of this material to be included in the updated mineral resource. The last hole, and the deepest drilled into this area (HWD 201) intersected 8.8m (estimated true width of 6.2m) at 2.9% zinc and 0.79 g/t gold; **the high-grade area of Hawiah remains open at depth.** Drilling in 2023 will target greater depths at Crossroads Extension.

According to KEFI, the upgraded resource is based on some 213 diamond drillholes (49,593m), 144 reverse circulation drillholes (4,845m), and 57 trenches (1,649m). The company has defined three copper-zinc-gold-silver massive sulphide lodes all of which remain open at depth:

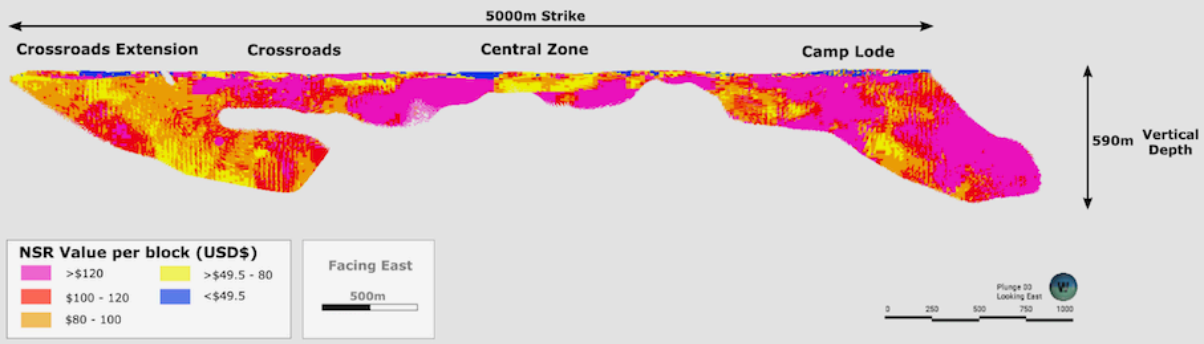
Camp Lode in the south is 1.2km long and has an average true width of 7m. The deepest massive sulphide intersection at Camp Lode to date was at a vertical depth of 590m and a true width of 4.4m. The widest intersection of 20m occurs at a depth of about 90m.

Crossroads Lode to the north is 1.1km in length and has a true width of 5m. It has only been drilled to ~170m depth. Drill hole HWD_018 returned 8.0m of 3.77% CuEq from 73m. Drill hole HWD_022 intersected 7.0m of 4.3% CuEq from 23m.

Crossroads Extension Lode to the farthest north is 700m long at surface. It has a total plunging mineralised strike length of 1.3km from surface and an average true width of 4.2m. The widest intersection to date demonstrated a true width of 13m. The Crossroads Extension Lode exhibits lower copper grades, though higher gold and zinc grades, than at Camp Lode and Crossroads Lode. Crossroads Extension has been explored to a maximum vertical depth of 500m, where 6.2m of massive sulphide was intersected at 2.9% zinc and 0.79 g/t gold.

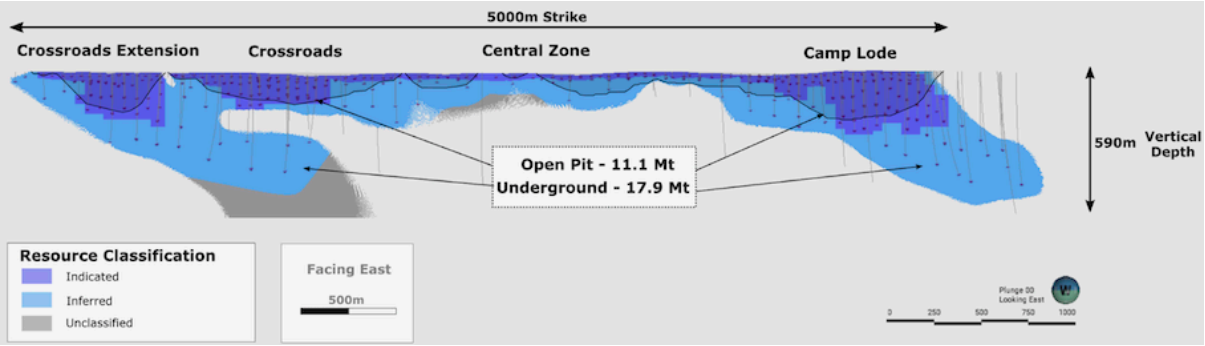
Drilling at Hawiah has covered a total strike length of 5km. Drill spacing at the Camp and Crossroads Lodes is ~40-60m in areas reporting to the Indicated category, and 120-140m in areas reporting to Inferred. Drilling in the Central Area has been focused on the near surface oxide and transition zone, with limited drilling at depth.

Figure 27: Hawiah long section of the 2022 block model displaying NSR values



Source: KEFI

Figure 28: Hawiah long section showing resource classification and open pit locations



Source: KEFI

Financially compelling

The current financial modelling of Hawiah is based on the January 2022 resource. It does not factor in the January 2023 resource update nor any further exploration upside at Hawiah or any potential resources at Al Godeyer or other exploration licence areas to the south. **Financial models including valuations should be updated once the Hawiah PFS is released.**

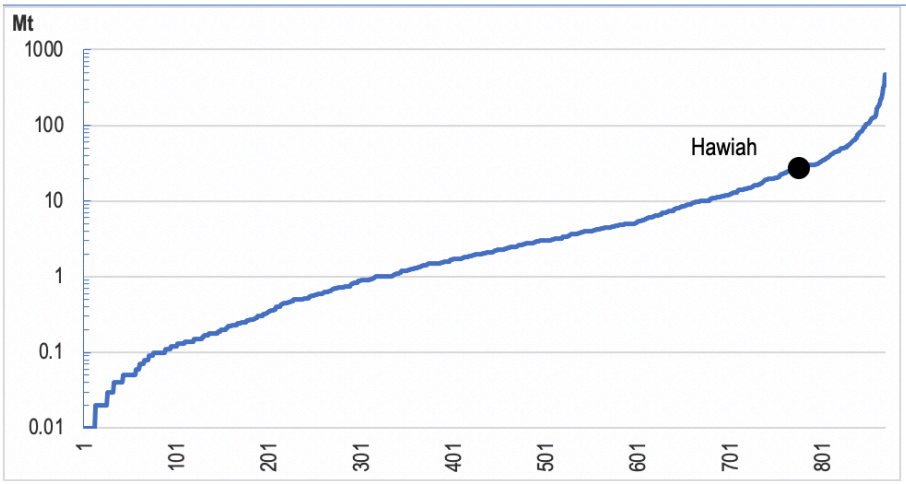
Based on an initial operation to mine 21.5Mt over 11 years (2Mt pa in years 1-10), net smelter returns and recoveries as described in the 2022 resource statement, and metals prices of US$9,250/t copper, US$3,000/t zinc, US$1,830/oz gold and US$25/oz silver, **the project has a post-tax, leveraged NPV_8 of US$578m.** The project is expected to generate total EBITDA of US$1.6bn. Initial modelling is based on capital expenditure of US$291m. Assuming this is 75% financed with borrowings from Saudi Arabia, KEFI's 30% portion of the equity would amount to around £18m.

The open-pit resource at Hawiah includes oxide, transition and fresh material, and is reported within an optimised open-pit shell based on a net smelter return (NSR) of US$12/t for oxides and US$20/t for transition and fresh material. Underground resources are constrained to the transition and fresh material, reported based on underground stope optimisation, and a NSR cut-off, which includes mining, processing, administration costs and 15% total dilution, of US$54/t. Metallurgical recoveries are assumed to be 75% for gold, and 15% for silver in the oxide material, and 2% for copper, 71% for zinc, 74% for gold, and 84% for silver for transition and fresh (sulphide) material.

World-class deposit in the making

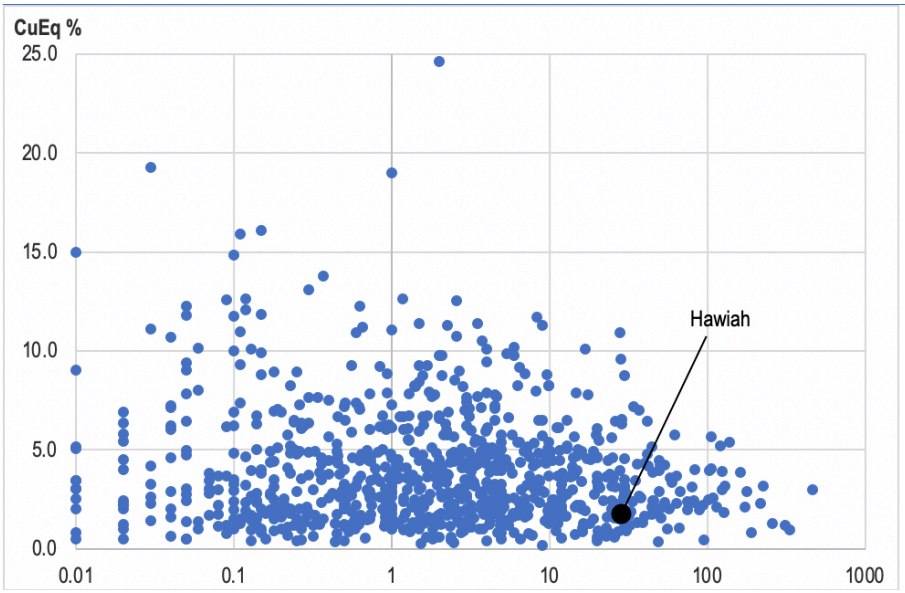
The US Geological Society (USGS) 2009 paper, Volcanogenic Massive Sulfide Deposits of the World – Database and Grade and Tonnage Models, contains data on 868 VMS deposits around the world. Many of these deposits are relatively small. The average size is 12.0Mt, but the median is just 2.1Mt. Of the 868 deposits in the database, 668 (77%) are smaller than 10Mt, and 742 (85%) are smaller than 20Mt. There are only 22 deposits larger than 100Mt. **Hawiah currently ranks as the 87th largest deposit.** The median CuEq grade is 3.0% based on current metals prices.

Figure 29: VMS deposit size



Source: Volcanogenic massive sulfide deposits of the world, USGS, 2009, Orior Capital

Figure 30: VMS deposit size versus CuEq grade at current metals prices



Source: Volcanogenic massive sulfide deposits of the world, USGS, 2009, Orior Capital

Mosier, D.L., Berger, V.I., and Singer, D.A., 2009, Volcanogenic massive sulfide deposits of the world; database and grade and tonnage models: U.S. Geological Survey Open-File Report 2009-1034 [https://pubs.usgs.gov/of/2009/1034/].

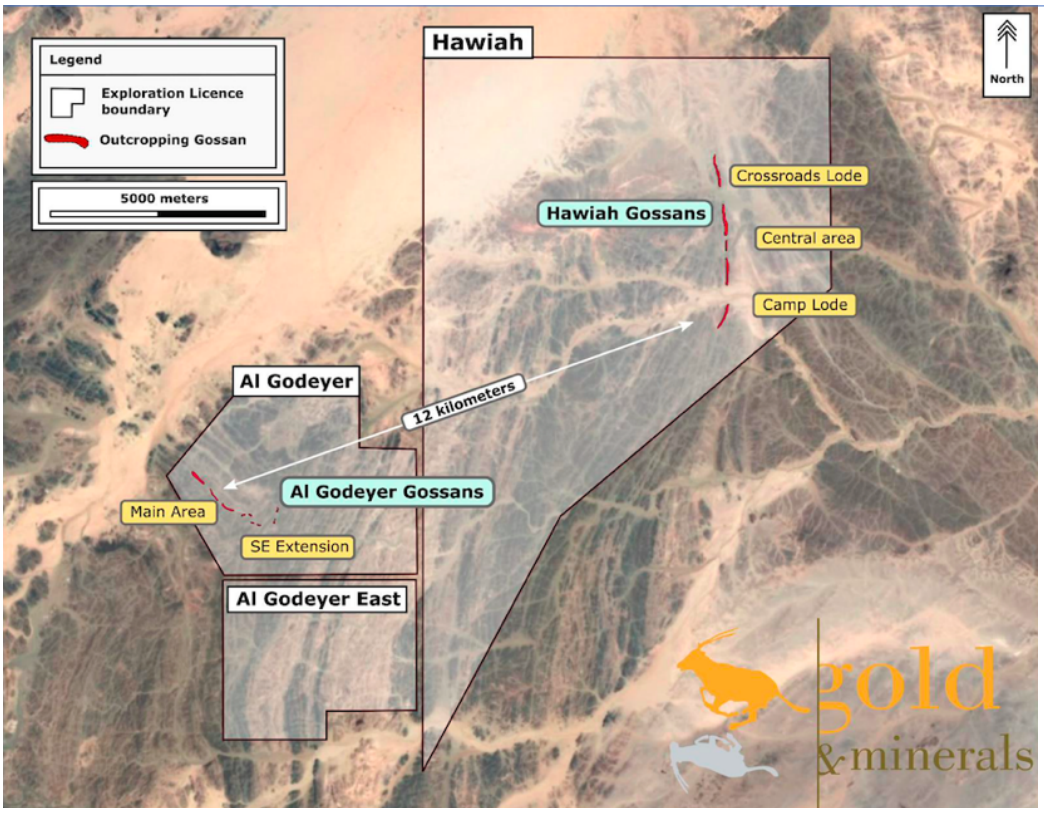
Al Godeyer

The Al Godeyer area contains both historically recognised and newly identified outcropping gossans over a strike length of 2km, that are hosted in a felsic-intermediate volcanic package, consistent with a back-arc paleo-environmental setting. **These gossans are believed to be the surface expression of a VMS deposit, and a geological analogue of the deposit at Hawiah.** Mineralisation at Al Godeyer appears consistent with that at Hawiah, with similar gold values in the core of the gossan and copper mineralisation as malachite ($Cu_2CO_3(OH)_2$) on the flanks that is believed to be related to ground water interactions with, and remobilisation of, the underlying ore body. Early work undertaken by Gold and Minerals has been very encouraging.

Mapping and trenching by the French Government Geological Department, Bureau de Recherches Géologiques et Minières (BRGM), in the 1980's identified NW-SE striking gossans over some 800m, with widths of up to 6m. Trench mapping and grab sampling by Gold and Minerals, operating under a Reconnaissance Licence, returned gold grades of up to 7.2 g/t and copper grades of up to 1.8% within the gossan, and extended the gossanous strike length to more than 2km.

Management's initial target is to identify additional oxide material that could be included in the early years of a combined Hawiah-Al Godeyer open-pit mine plan, thereby boosting cash flows in the early years.

Figure 31: Location map of Hawiah, Al Godeyer and Al Godeyer East ELs, and mapped gossan horizon



Source: KEFI

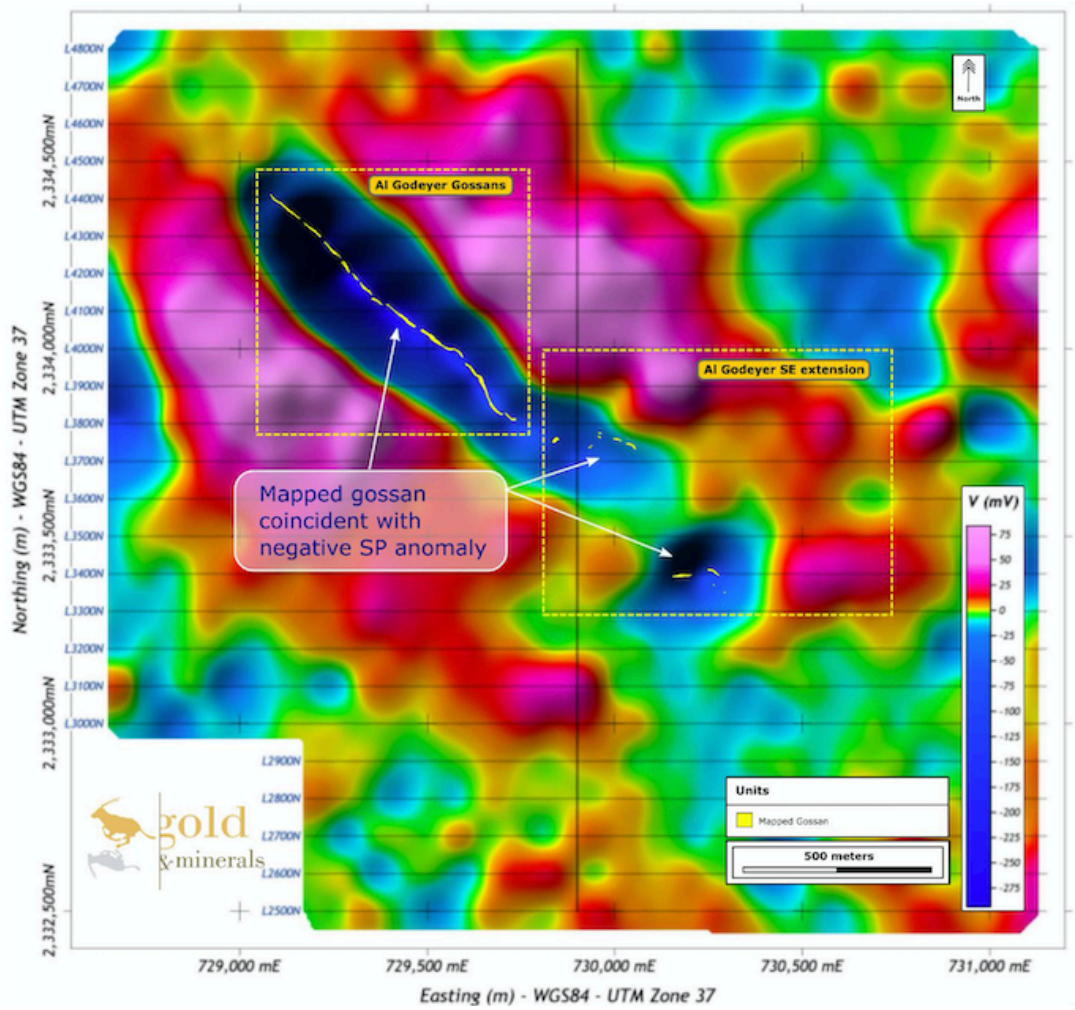
Figure 32: Early, rock chip sampling results from Al Godeyer

Sample ID	Rock type	Au g/t	Ag g/t	Cu %	Zn %
GSR1021	Foliated gossan	7.2	0.8	0.1	0.1
GSR1001	Massive gossan	3.6	0.7	0.7	0.2
GSR1070	Massive gossan	3.2	2.7	0.5	0.0
GSR1015	Brecciated gossan	2.5	0.4	0.4	0.0
GSR999	Massive gossan	2.2	0.5	1.8	0.4
GSR259	Massive gossan	2.1	0.1	0.1	0.0
GSR1055	Massive gossan	2.0	0.3	0.1	0.0
GSR1054	Massive gossan	2.0	0.3	0.1	0.1
GSR1000	Massive gossan	2.0	0.0	0.7	0.3
GSR1056	Massive and foliated gossan	1.9	3.3	0.6	0.1
GSR1019	Massive gossan	1.9	1.1	0.3	0.0
GSR257	Massive gossan	1.8	0.9	0.1	0.0
GSR1052	Massive gossan	1.8	1.8	0.2	0.0
GSR1072	Massive gossan	1.8	0.8	0.2	0.0
GSR1074	Massive gossan	1.7	1.5	0.1	0.0

Source: KEFI

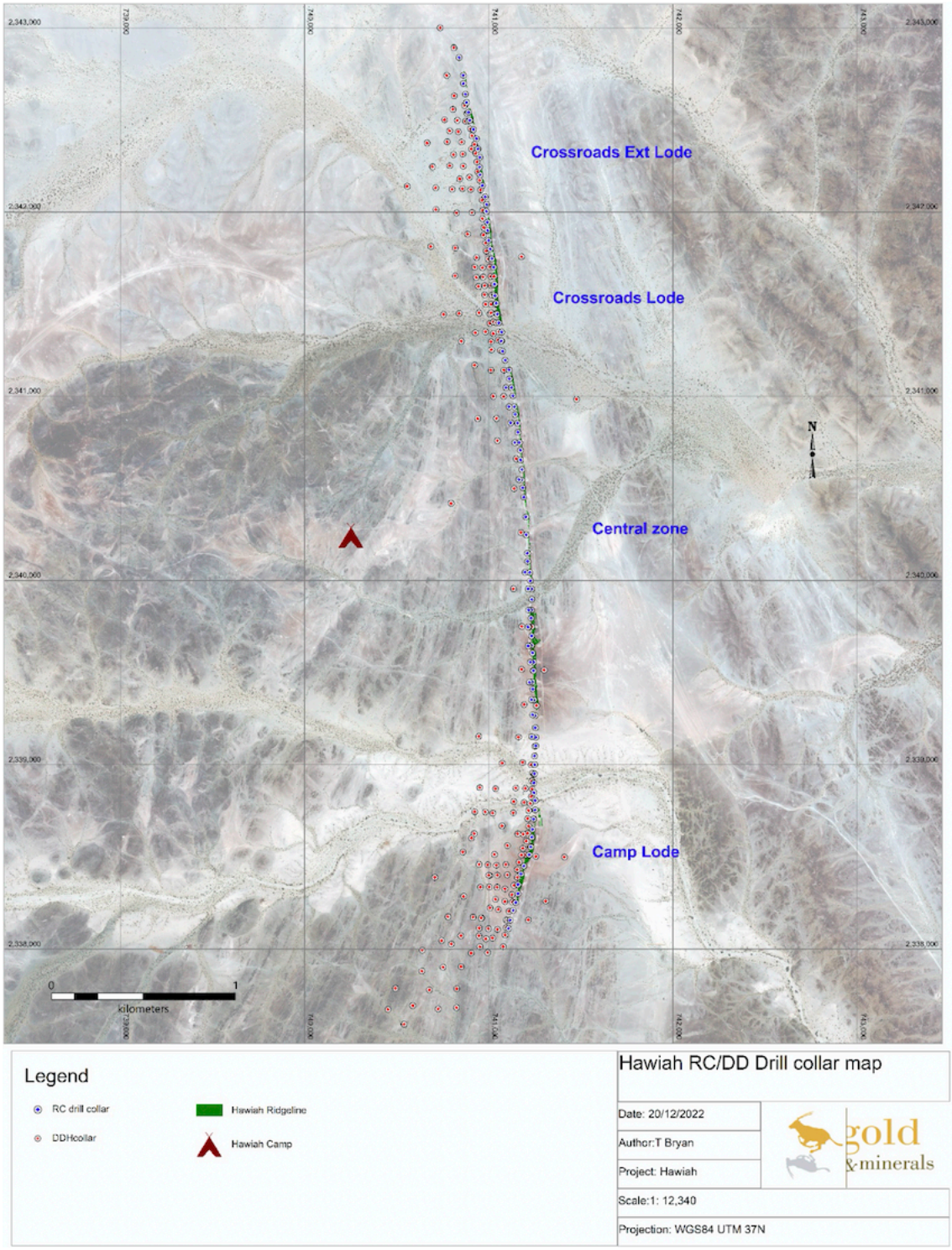
A self-potential (SP) geophysical survey undertaken at Al Godeyer in 1Q22 defined a continuous anomaly striking over 1.3km, and another shorter anomaly, located along strike to the southeast. Both anomalies correlate well with the mapped NW-SE striking gossans. According to management, the SP responses display similar intensities as those recorded at Hawiah.

Figure 33: Self-Potential geophysical survey results with mapped gossanous horizon overlain.



Source: KEFI

Figure 34: Collar locations of diamond and RC drilling across the Hawiah project.



Source: KEFI

A much expanded exploration portfolio

- Saudi Arabia's regulatory overhaul and desire to diversify the economy has led to a flurry of activity in new exploration licences being awarded
- Gold and Minerals has been granted 14 new licences in the past year across a number of highly prospective gold and polymetallic mineral areas
- While early stage, all these areas have been mapped or sampled by Gold and Minerals or by groups such as BRGM or USGS

Over the past year, KEFI's 30% held JV Gold and Minerals has been awarded 14 new exploration licences including:

- The Abu Salal South, Abu Salal North and Umm Al Khabath licences situated within the Wadi Bidah Mineral Belt, and located south of Gold and Minerals' Hawiah project
- Two new licences situated to the north and south of the Jibal Qutman project (see above)
- The Wadi Na'afa and Al Awja licences situated in the Lorelon Mineral Belt, and within the Asir terrane in a part of the western Arabian Shield which has only recently become easily accessible
- The Jabal Selm exploration licence located roughly midway between Hawiah and Jibal Qutman
- The Jadib al Qahtanah exploration licence in the central part of the Arabian Shield
- The Jabal Hillit and Qunnah exploration licences situated in the eastern part of the Arabia Shield

These new licences represent a number of new frontiers for KEFI. Altogether, Gold and Minerals now holds some 1,035km^2 of tenements in Saudi Arabia covering some of the most highly prospective areas for gold and polymetallic VMS mineralisation in the Kingdom.

Abu Salal

KEFI announced the award of the Abu Salal South exploration licence area in August 2022, and that of Abu Salal North in January 2023. The licences are located some 50km south of the Hawiah deposit, and within the same Wadi Bidah Mineral Belt. An exploration licence was also awarded at Umm Al Khabath in January 2023.

At Abu Salal South, exploration work has been focused on a gossan horizon that Gold and Minerals has identified as being akin to the Hawiah style of VMS deposit. The area was subjected to limited work by French group Bureau de Recherches Géologiques et Minières (BRGM) in the late-1980s.

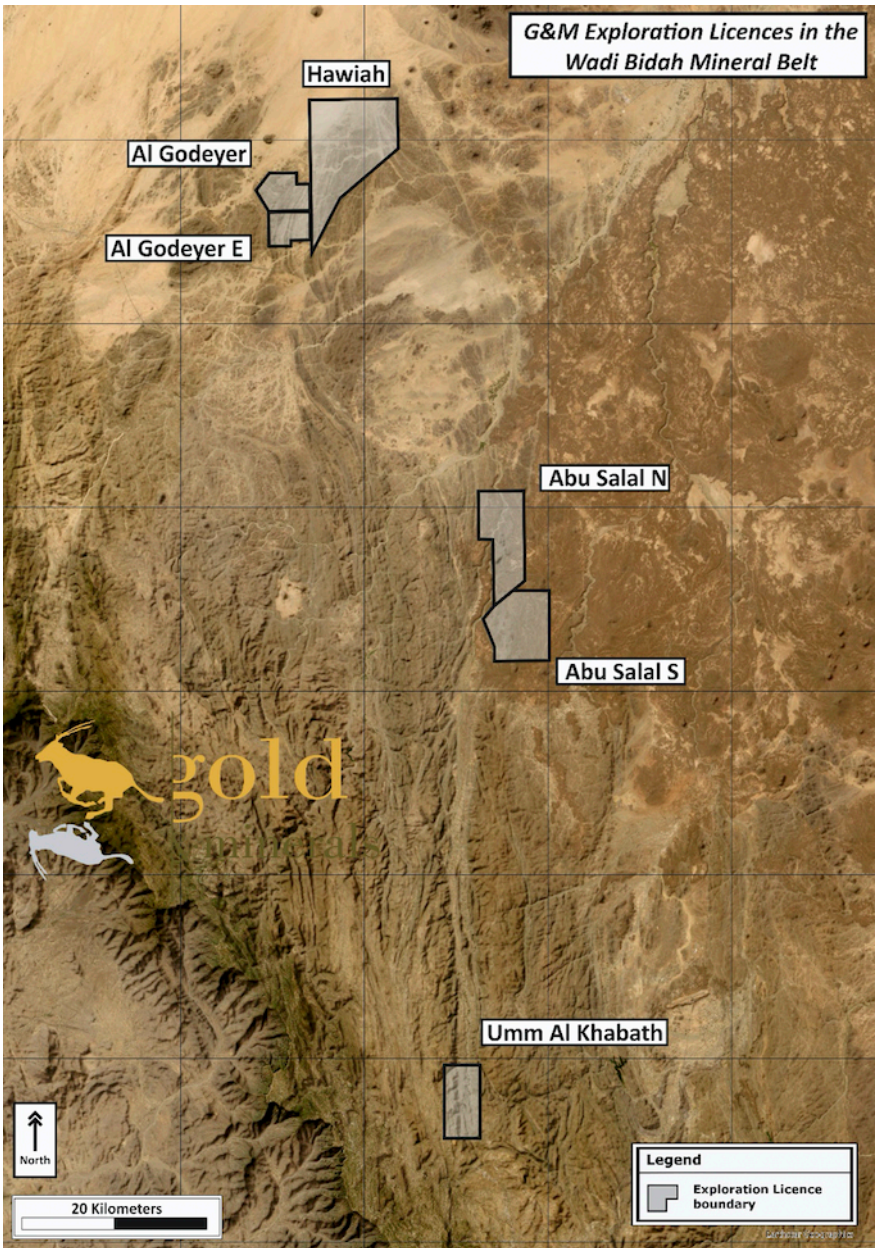
Initial mapping work conducted under the previous reconnaissance licence established a number of gossan areas that outcrop along a currently discontinuous strike length of about 2km. Gold mineralisation has been confirmed along strike with grades in the gossan of up to 4.0 g/t. Copper carbonates have been noted along the flanks, suggesting copper mineralisation at depth. Channel sampling at the widest gossan, located towards the southern end of the current horizon, returned an interval of 38m at 0.75 g/t gold.

Gold and Minerals is now focused on mapping the extent of the horizon using mapping, sampling and self-potential surveying, which has proven highly effective at Hawiah and Al Godeyer.

The Abu Salal North licence area is located immediately north of Abu Salal South, and hosts a continuation of the same mineralised VMS system. According to management, mineralisation at surface presents as an oxidized Au-Ag-Cu-Zn bearing VMS horizon that is comparable to that at Hawiah. The gossan represents an 850m strike extension of the Abu Salal South prospect. The horizon continues beneath a more recent flood-basalt 'Harat' related to Red Sea rifting.

Umm Al Khabath is located some 50km south of Abu Salal North and about 100km south of Hawiah. The area hosts the 820m by 22m sub-vertically dipping ferruginous chert horizon of Jabal Isan, which historically was documented to host mineralisation within quartz and haematitic gossan of up to 8.8 g/t. The limited exploration conducted to date demonstrates characteristics associated with a distal mafic VMS facies.

Figure 35: Gold and Minerals held exploration licences along the Wadi Bidah Mineral Belt



Source: KEFI

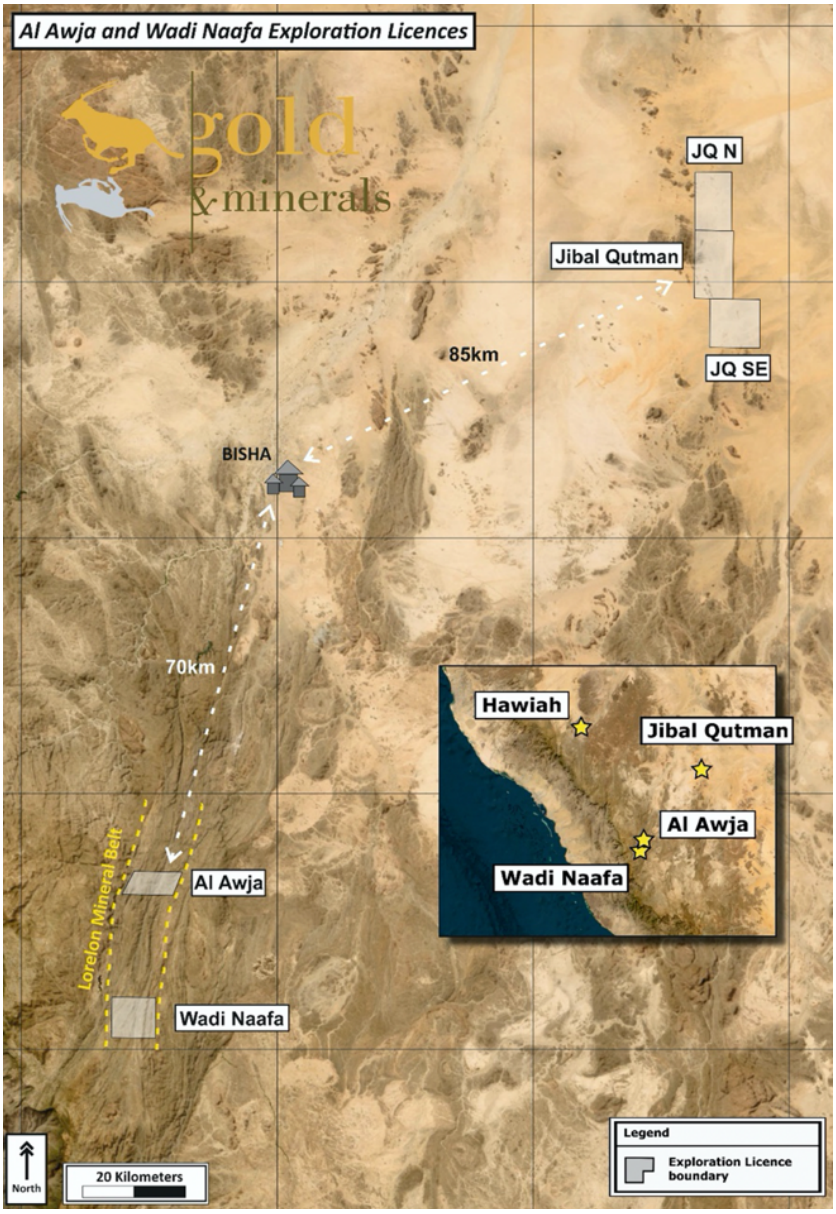
Wadi Na'afa and Al Awja exploration licences

In January 2023, KEFI announced the award of two licence areas in the Lorelon Mineral Belt, some 70km south of Bisha and within the Asir terrane in the western part of the Arabian Shield. Previously accessible only on foot or by helicopter, recently completed roads have made access simple. Both areas represent enticing gold exploration targets. The two licences, located about 20km apart, cover a combined area of ~113 km^2.

The areas host the same arc volcanics as the known Muhaddad VMS deposit that is situated some 50km to the north-east. There are underexplored alteration zones extending as much as 3.5km with grades of up to 11.65 g/t Au demonstrated in Gold and Minerals' rock chip samples.

Mineralisation in the area presents at surface as north trending, Au-Ag-Cu bearing, structurally controlled quartz veins and stockwork. The only modern exploration to have taken place over the sites was conducted by Riofinex in the 1980s.

Figure 36: Wadi Na'afa and Al Awja exploration licence areas



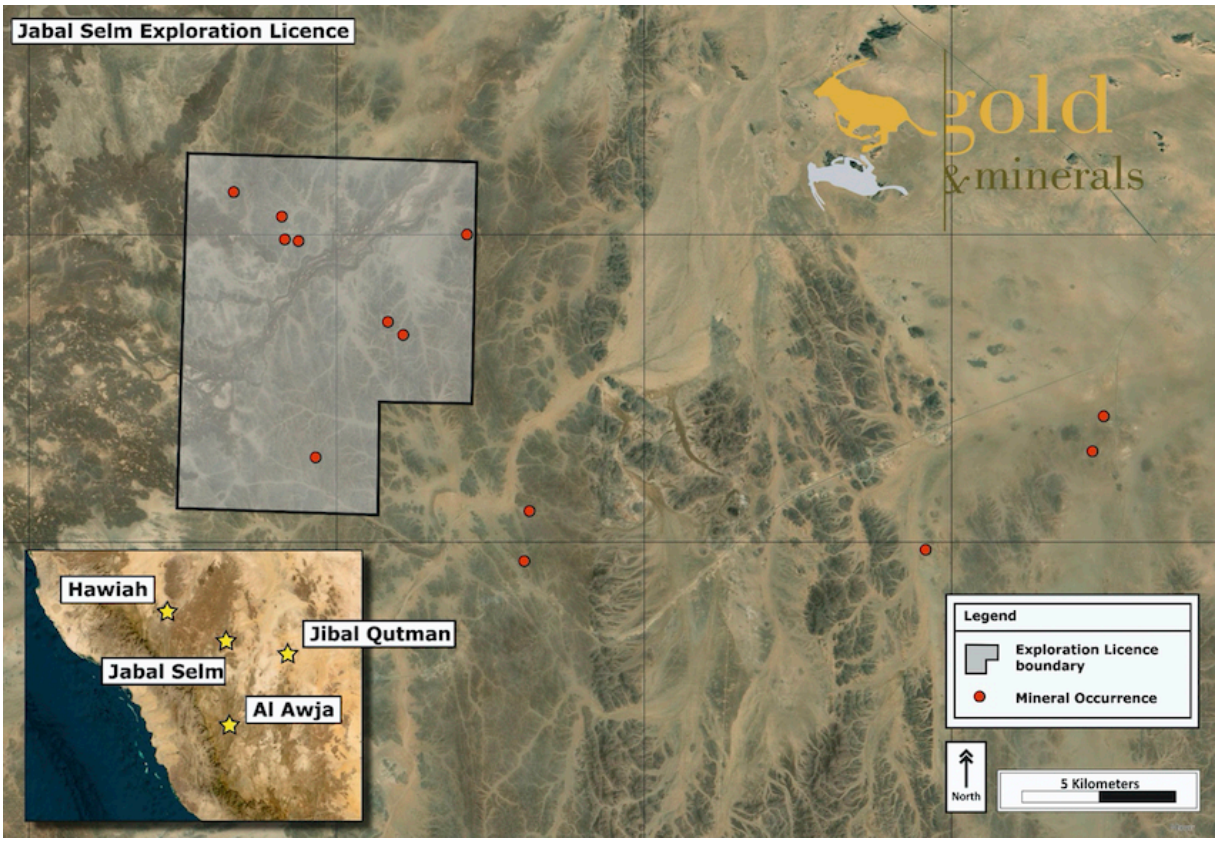
Source: KEFI

Al Awja is the more advanced of the two licences. It contains ancient mine workings and the ruins of an adjacent ancient mining village. Two iron-oxide anomalies, each about 1.5km by 50m have been identified. The Wadi Na'afa exploration licence area is located about 20km south of Al Awja. It also presents with Au-Ag-Cu bearing, structurally controlled, quartz veins. Similar to Al Awja, there is evidence of ancient mining and a 3.5km by 350m iron oxide anomaly. These surface signals are interpreted as indicating an Au-Ag-Cu source at depth.

Jabal Selm

In addition to the above, Gold and Minerals has also been awarded an exploration licence at Jabal Selm in the Al Miyah Mineral District. The licence area is located some 80km north of the town of Bisha in the Makkah District. The prospect hosts an iron oxide-quartz breccia that is exposed intermittently over a northwest trend of 2km with 8 documented gold occurrences. Work completed by USGS in 1982 identified grades as high as 89.2 g/t Au in samples collected from quartz vein and wall rock. Some silver enrichment, up to 8.7 ppm, and copper up to more than 2%, were also detected.

Figure 37: Overview of Jabal Selm exploration area



Source: KEFI

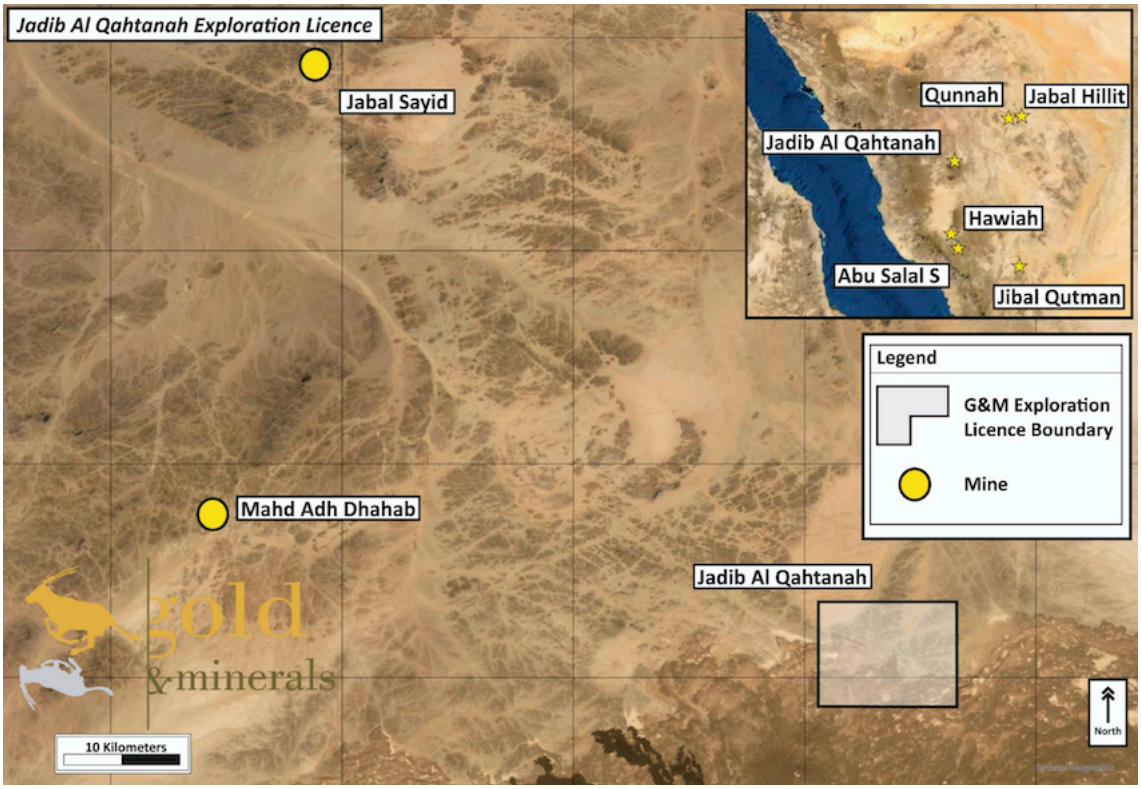
Jadib al Qahtanah

Jadib al Qahtanah is an early stage gold target located 45km from the Mahd Ad Dahab mine, the main gold and silver mine in Saudi Arabia, in the central part of the Arabian Shield. Gold mineralisation presents as quartz veins in a diorite host. In Gold and Minerals' early reconnaissance work, rock chip samples taken from ancient crush dumps returned grades as high as 52 g/t gold.

Large flood basalts related to Red Sea rifting, and which cover a large part of the exploration licence area appear to mask the main area of mineralisation. These flood basalts can be found across the Arabian Shield. They are called 'Harats' in Arabic. At Jadib al Qahtanah, the basalts are relatively thin, typically ranging from 2m to 20m.

The initial plan is to establish the structural framework of the area and the strike extents of the mineralisation particularly as it extends beneath the Harat with geophysics and drilling programs.

Figure 38: Jadib al Qahtanah exploration licence area



Source: KEFI

Jabal Hillit and Qunnah

In July 2022, KEFI announced that Gold and Minerals had been awarded two new exploration licences at Jabal Hillit and Qunnah on initial five year terms. The licence areas are situated about 30km apart and straddle the Ad Dawadimi and Afif terranes in the eastern portion of the Arabian Shield. Together they cover an area of some 184 km^2. Both areas are prospective for gold mineralisation. Some 23 known gold occurrences have been documented in the licence areas and there are significant ancient workings. Gold has been identified within shear-hosted quartz veins with grades of up to 15.3 g/t gold at Jabal Hillit and 46 g/t gold at Qunnah, as noted by BRGM and USGS. The areas represent an excellent opportunity for discoveries in an area that is both highly

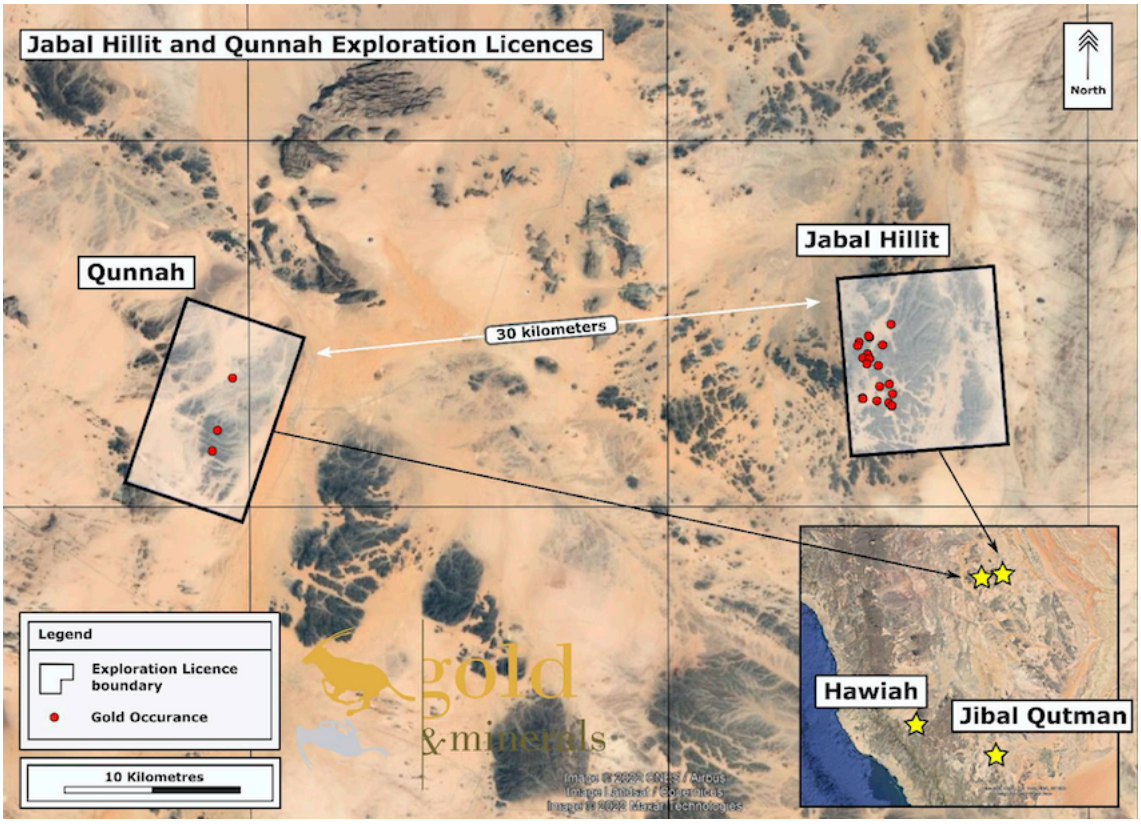
prospective and under-explored.

The mineralisation hosted in the licence areas comprises northwest trending gold bearing structurally controlled quartz veins. BRGM and USGS undertook basic mapping and rock chip sampling in the 1970s and 1980s that confirmed the presence of high-grade gold mineralisation and outlined what is now a key area of interest.

At Jabal Hillit, 20 gold occurrences have been mapped across 5 vein packages. These veins, hosted within meta-volcanics, strike discontinuously for 1,500m with widths of up to 2.5m. USGS rediscovered the ruins of the ancient Umm Adher gold mine, now an archaeological site. BRGM sampling of dump piles associated with the old mine returned grades of up to 15.3 g/t gold.

The Qunnah licence area, located 30km west of Jabal Hillit, also demonstrates gold-bearing structurally controlled quartz veins in three main areas. Large crush and dump piles from old workings are evident across the tenement. USGS sampling of this material returned a peak grade of 46 g/t gold.

Figure 39: Location map of the Jabal Hillit and Qunnah exploration areas

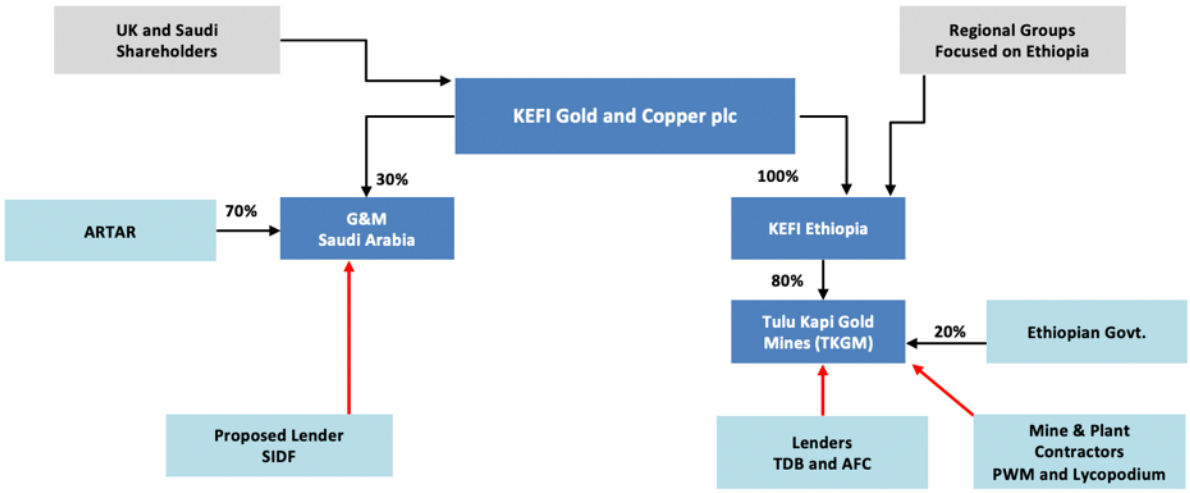


Source: KEFI

Appendix 1: Tulu Kapi, Ethiopia

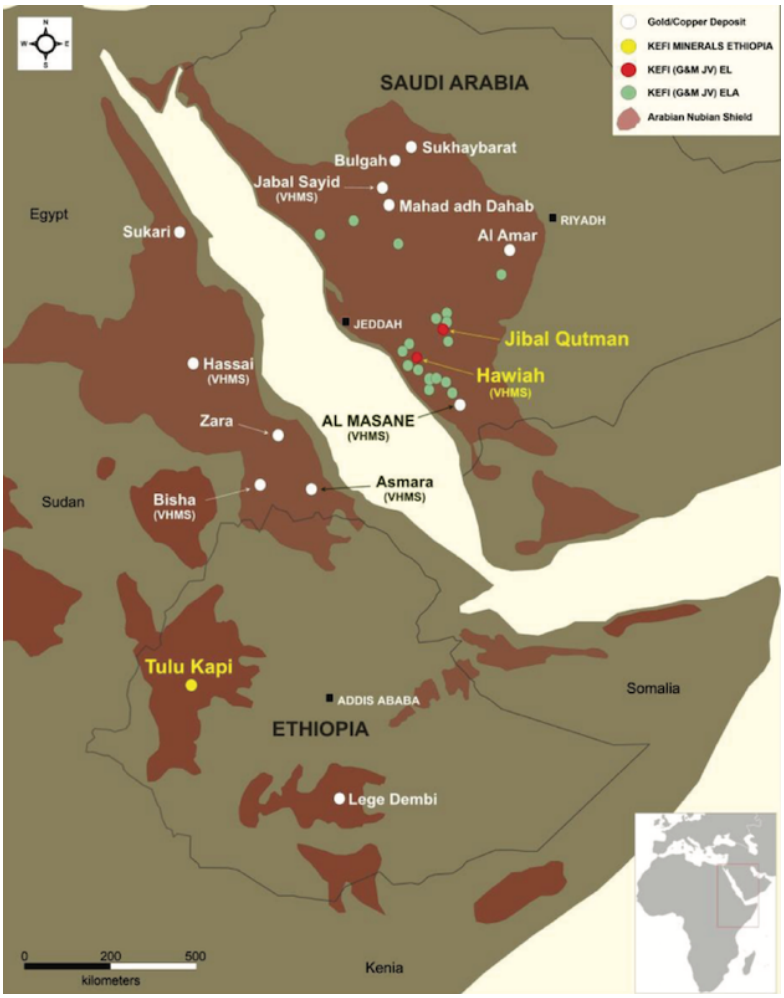
KEFI's expected stake in Tulu Kapi has risen from 45% a couple of years ago to 80% now.

Figure 40: Identified funding structure



Source: KEFI

Figure 41: KEFI project location map



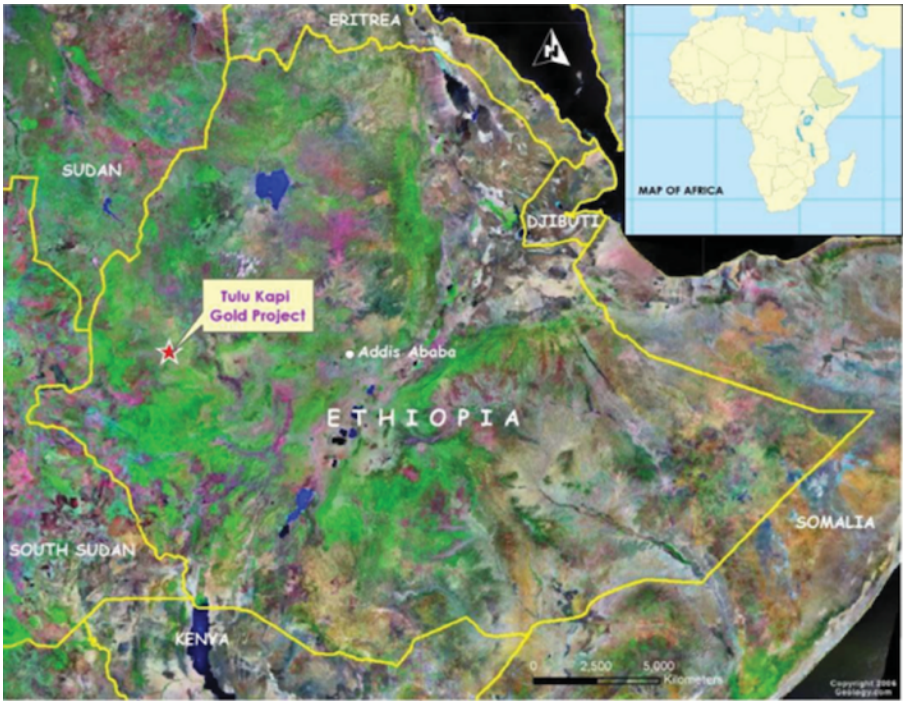
Source: KEFI

Location

The Tulu Kapi project is located in Western Ethiopia in the Oromia Region. It lies 360km due west from the capital, Addis Ababa. By road, the journey from the capital is 520km and takes about 10 hours. The project is also accessible by air. Ethiopian Airlines operates daily flights from Addis Ababa to Asosa, in western Ethiopia. Asosa is about a four-hour drive from Tulu Kapi. There is also an airstrip at Ayra Guliso, located 30km from the project site. Aircraft can be chartered from Addis Ababa. The road journey from Ayra Guliso by a mixture of gravel and dirt roads take about 2 hours.

The project area lies some 9km south of the village of Kelley. The small town of Ayra lies 20km to the west, and Gimbi, an important market town lies 32km to the east northeast. The larger regional centre of Nekemte is about 100km east of the project.

Figure 42: Tulu Kapi project location



Source: KEFI

Licensing and tenements

The project area is characterised by rounded hills, and deep incised valleys. Elevations vary from 1,550m to 1,770m. The project is situated on a ridge with water drainage to the north and south. Groundwater in the project area is situated in two aquifers. The mining license area is 7km^2.

Land use in the area is mainly for agriculture. Ridges are usually left to grass for cattle. Hill sides are terraced for seasonal crops including corn, maize, teff (an ancient grain from the Horn of Africa, most notably Ethiopia and Eritrea), and other staples. The valleys are typically forested, and provide good cover for coffee plantations. Rainfall is seasonal. There is a pronounced monsoon season from July to September. Daily temperatures range from 13°C to 32°C immediately ahead of the rainy season, and from 14°C to 24°C in July and August, which are typically the coldest months. Exploration activities can be maintained year-round, with activities somewhat reduced during the rainy season. Commercial scale mining activities will be maintained year-round.

Project history

Small-scale surface mining took place in the 1930s, though there is no evidence of sustained artisanal efforts. This probably reflects the fine nature of the gold mineralisation. The earliest modern exploration did not take place until the 1970s, when reconnaissance level work was undertaken under the guidance of the United Nations Development Program. The project was only drilled in earnest in 2005 to 2009 when Minerva drilled 34 holes. KEFI acquired the project in two stages in 2013 and 2014.

In April 2015, under KEFI's ownership, the former exploration licence was converted to a Mining Licence. This licence gives KEFI the right to build and operate a mine at Tulu Kapi. The company also has a Mining Agreement with the government of Ethiopia that sets out things like taxation and royalties. The licence and agreement are valid for 20 years. The mining licence can be renewed for periods of a further ten years. Since acquiring the project, KEFI has made a number of changes to the proposed mine plan.

Project history

Figure 43: Snapshot of the project history

Period	Entity	Activity
1930s	Artisanal miners	Small-scale surface mining focused on easily accessible gold-bearing saprolite There is no evidence of consistent artisanal activity in the area
1939	S.A.P.I.E., Italy	Reported reserves of ~37 koz gold in alluvial deposits, saprolite and quartz veins Exploration ceased in 1941
1968	Ethiopia	Formation of the Geological Survey of Ethiopia
1969-1972	UNDP	First 'modern' exploration comprising reconnaissance and detailed mapping Identified the Nejo-Yubdo mineralised belt including Tulu Kapi and satellite deposits Work included 3 diamond holes, 362m, immediately north of the planned open-pit; Best intercepts were 0.7m at 27 g/t gold and 26.2m at 2.8 g/t gold
1996-1998	Tan-Range Resources (Canada)	Acquired the Tulu Kapi-Ankori exploration licence (20 km^2) in 1996 Exploration included 5 diamond holes, with best intercept of 6m at 2.48 g/t gold
2005-2009	Minerva Resources	Conducted three phases of diamond drilling totalling 6,908m over 34 holes including the 'discovery hole' which returned 37m at 4.61 g/t gold. Minerva also undertook mapping, trenching and ground geophysics.
2009-2013	Nyota Minerals	Minerva was acquired by Nyota in 2009. Nyota announced a maiden inferred resource of 690 koz gold in 2009. Subsequent exploration including 189 diamond holes and 302 RC holes totalling 86,873m supported an updated resource of 1,872 koz in 2012 and a DFS. The decline in the gold price in 2013 meant Nyoto was unable to fund the project.
2013	KEFI	KEFI acquired 75% of the project in December 2013
2014	KEFI	KEFI acquired the remaining 25% for £750,000 plus 50m shares in June 2014
2015	KEFI	DFS released for Tulu Kapi
2017	KEFI	Updated DFS released for Tulu Kapi
2018	KEFI	KEFI announced plans to increase plant capacity to ~2m tpa
2020	KEFI	Announced conditional completion of consortium to fund the Tulu Kapi project

Source: KEFI, Orior Capital

In the June 2015 DFS, management recognised the benefits of focusing on a smaller scale selective open-pit mine, delivering 1.2m tpa ore to a conventional CIL plant and, adopting a simple crushing and grinding circuit. At the time, extensive metallurgical work demonstrated that an overall recovery of 91.5% was achievable. Planned gold production was 960,000 oz over 13 years, averaging ~75,000 oz pa. All-in sustaining costs were estimated to be US$780/oz.

Subsequent to the 2015 DFS, a number of further refinements were identified and incorporated into a revised DFS in June 2017. This included increasing the capacity of the process plant from 1.2m tpa to 1.5m tpa, replacing the SAG and ball mill with a larger SAG-only mill, increasing the target grind to 150 µm, relocating the tailings storage facility downstream to reduce capex, and a plan for mine operations to be undertaken by an experienced African mine contractor.

The original plan was for the mine to be owner operated. This would have entailed training a local workforce with little experience in mining to a level where it could achieve the high productivity rates associated with modern mining. While still achievable, management decided to use an experienced contract miner which reduces start-up and operating risks and also results in lower initial capex.

The increase in processing capacity in the 2017 DFS essentially involved the earlier processing of material that would otherwise have been stockpiled for later years of the mine life.

In May 2018, after discussions with the project funding consortium, KEFI published its 2018 Plan. Planned processing plant capacity was further increased to 1.9m tpa to 2.1m tpa, in a bid to accelerate project cash flows. This forms the basis of the 2020 Plan.

The 2023 Mine Plan integrates a conservative 200,000 oz of production from the underground mine. The forecasts herein are based on a processing rate of 2.3Mtpa. This is 12.5% above nameplate capacity and within KEFI's expected 10-15% above nameplate processing target.

Figure 44: Progression of KEFI feasibility studies and mine plans, Tulu Kapi

	2015 DFS	2017 DFS	2020 Plan	2023 Plan	2023 Orior
Life-of-mine, years	13	10	8	8	8
Mine operator	Owner	Contractor	Contractor	Contractor	Contractor
Waste to ore ratio	7.4:1.0	7.4:1.0	7.4:1.0	6.2	6.2
Processing rate, m tpa	1.2	1.5-1.7	1.9-2.1	2.0	2.3
Total ore processed	15.4	15.4	15.4	18.4	18.0
Average head grade, g/t	2.1	2.1	2.1	2.2	2.4
Gold recovery	91.5%	93.3%	93.3%	93.7%	93.8%
LOM gold production, oz	961,000	980,000	980,000	1,193,000	1,300,000
Average annual gold production, oz	95,000	115,000	140,000	157,400	177,100
All-in sustaining costs, US$/oz	724	801	856	949	875
All-in costs, inc initial capex, US$/oz		937	1,066		
Average annual net operating cash flow, US$ m	50	60	78	142	167
Payback period, years	3.5	3	3	2.8	2.4

Source: KEFI, Orior Capital

Geology and mineralisation

The primary mineralisation at Tulu Kapi is hosted in mafic syenite. Unaltered syenite is predominantly a medium to coarse-grained rock comprising 60-70% pink to white alkali feldspar, 20-25% plagioclase, and 10-15% ferromagnesian minerals, and minor interstitial quartz. Mineralisation is associated with shallow (30°) northwest dipping zones of dense quartz-veining, enveloped by an auriferous highly albitised, metasomatic alteration centred on the Bedele shear zone. The albitised zones are lensoid in nature and comprise discrete stacked bodies that pinch and swell both along strike and down dip. Large-scale fault structures trending northeast-southwest have been identified within the Tulu Kapi deposit, but the displacement of the mineralisation is minor.

Appendix 2: Saudi Arabia

The Saudi Arabian part of the Arabian-Nubian Shield is a vast area stretching some 1,500 km north to south, and 800 km east to west. The area has a long and rich history of gold mining dating back to around 3,000 BC. The Mahd adh Dhahab mine (مَـهـد الـذّهـب, literally 'Cradle of the Gold'), located mid-way between Mecca and Medina, is believed to be the fabled King Solomon's Gold Mine, and has been linked to the story of the Garden of Eden in the Book of Genesis. It has been estimated to have produced more than 6 Moz gold since antiquity. From the 1970s to the mid-1980s, USGS and its French counterpart, Bureau de Recherches Géologiques et Minières (BRGM) were commissioned to document and evaluate mineral occurrences in Saudi Arabia. More than 5,000 historic mines and occurrences were discovered.

Despite this rich history, Saudi Arabia remains relatively under-explored in modern times. Today, there are only a handful of operating mines including Mahd adh Dhahab (gold), Jabal Sayid (VMS), Al Masane (VMS), Al Amar (VMS), and Mansourah-Massarah (Gold). Opportunities abound; since 2000, state-owned mining company Ma'aden has discovered some 8 Moz gold in the Central Arabian Gold region.

The Jabal Sayid copper operation is a 50:50 joint venture between Barrick and Ma'aden located some 350km northeast of Jeddah. The mine hosts copper resources of ~1.64bn lbs copper at a grade of ~2.4% Cu. Commercial operations commenced in July 2016. According to Barrick, the mine produced 152m lbs copper in 2021 at an all-in sustaining cost of US$1.33/lb.

Patience pays off

This vast and relatively under-explored minerals wealth, combined with KEFI's experience in country offers something of an advantage. KEFI has been evaluating prospects in Saudi Arabia since 2008. KEFI's local partner, Abdul Rahman Saad Al Rashid and Sons Company Limited ("ARTAR") is a leading local industrial group owned by Sheikh Al Rashid and his family. The group has investments in construction, real-estate, agriculture, and health care in Saudi Arabia, and overseas. ARTAR owns a 70% stake in Gold and Minerals, with KEFI owning the remaining 30%. KEFI appoints the CEO and proposes all business plans for JV approval.

Gold and Minerals has built a substantial proprietary database; quiet persistence over the past decade, and a strong local partner, is now paying off in terms of projects being rapidly advanced and new exploration licences being awarded.

New mining code aims to attract investment

Saudi Arabia's new mining code came into effect in 2021. Its ambitious aim is ultimately to make the mining sector a third leg to the Saudi economy after oil and petrochemicals.

The Saudi economy has been heavily dependent on oil since the 1970s. According to the CIA, the Kingdom possesses ~16% of the world's proven petroleum reserves, and is the largest exporter of petroleum. The petroleum sector accounts for ~87% of budget revenues, some 42% of GDP, and about 90% of export earnings. Since Saudi Arabia's accession to the WTO in 2005, the government has pursued reforms aimed at diversifying the economy, attracting foreign investment and weening the country off its oil dependence. In April 2016, the government announced a broad set of socio-

economic reforms, known as Vision 2030. Low prices and high unemployment rates (in 2019, youth unemployment was ~28%) seem to have provided further impetus to these reforms. Saudi Arabia has a relatively young population, with about 40% of the populace under the age of 25. Saudi officials are particularly focused on employing its large youth population.

Saudi Arabia did introduce new mining regulations in 2004. The code allowed for companies to be 100% foreign owned, included a flat corporate tax of 20%, no royalties on minerals, had no restrictions on foreign exchange or capital repatriation, and included exemptions from import duties on capital items. On paper this provided for an attractive environment, though implementation was lacking. Recognising a need to do justice to the potential of the mining sector, and a desire to diversify the economy, Saudi Arabia's Ministry of Industry and Mineral Resources unwrapped its new mining law In June 2020.

The new law includes 63 articles that address a wide range of issues including financial consideration, sustainability, powers to grant licenses, sector governance and others. The numerous objectives of the new law include encouraging investment in the minerals and related downstream industries, streamlining the procedures for licence applications, and tightening the rules around sustainability.

Since the new mining code was introduced, Saudi Arabia has reportedly received more than 1,500 licensing requests. The Kingdom reportedly wants to attract as much as US$170bn in new mining investment by 2030.

In March 2022, Al Masane Al Kobra Mining Co (AMAK) listed on the Saudi Stock Exchange, raising US$333m at a price of SAR63/share, for a 30% stake. According to argaam.com the institutional offering was oversubscribed 73.6x.

In January 2023, several new initiatives were announced around the Futures Minerals Forum held in Riyadh. The Saudi Arabian sovereign wealth fund, Public Investment Fund (49%), and Ma'aden (51%) announced a new mining fund that may invest up to US$15bn in overseas assets, according to reports. In a model that looks similar to that of Japanese trading houses in Japan's post-war industrialisation, the plan seems to be to seek non-operating minority stakes in projects that would help Saudi Arabia secure resources. According to the Financial Times, the fund has already had discussions with Brazilian group Vale about taking a stake in its base metals unit which includes copper, nickel and cobalt.

Ma'aden has also agreed to establish a 50:50 joint venture with Ivanhoe Electric to explore a vast 48,500 km^2 area in Saudi Arabia, and will invest US$126m in Ivanhoe Electric for a 9.9% stake. The venture will have access to proprietary geophysical surveying technology aimed at detecting sulphide mineralisation.

Further, Ma'aden and Barrick Gold have signed two new joint venture agreements for exploration licences at Jabal Sayid South, adjacent to the existing Jabal Sayid mine, and at Umm Ad Damar.

Figure 45: Major amendments to the new mining law and expected impact

Broad area, and policy objectives	Expected impact
Financial consideration, and encouraging investment	Achieve equitable outcomes for all investors
Determine financial consideration for exploitation	Boost the Kingdom's revenues
Motivate investors to process raw materials within the Kingdom, by cutting consideration for such investments	Encourage downstream investment
	Provide local raw materials
	Clarifying regulatory requirements for potential investors
	Providing financial incentives to support sector
Sector governance	Boost the Kingdom's revenues
Provide modern technical and financial resources	Increase mining operations
Achieve financial commitment and optimise utilisation of resources	Ensure licence holders comply with best technical and environmental practice
Evaluate requirements for obtaining licences	Reduce violations, to raise investment attractiveness
	Increase monitoring efficiencies using modern technology
	Create jobs for local communities
Sustainability	Develop local communities and provide job opportunities
Obligate licence applicants to submit environmental studies and development plans	Increase local contribution to local development
	Protect rights of local communities and contribute to economic development of under-developed regions
Obligate exploitation licences holders finance rehabilitation and mine closure	Attract Saudi youth to work in the sector
Reduce violations by assessing causes, increasing fines	Ensure standards are in place to monitor environmental compliance, health, and safety
	Promote social licensing and make mining welcome in communities
Licenses regulations	Increase number of local developers and small investors
Allow issuance of licenses for small mines	Find financing channels for mining licenses
Relax requirements and loosen procedures for mining	Provide safe, attractive investment environment
Licences for small investors	Provide clarity, transparency for mining licences
	Increase geological and statistical information
	Increase exploration spending
Powers to grant licenses	Ensure stability of mining license over its validity
Facilitate process of issuing licenses, and reserve mining areas for investment	Increase transparency in Ministry's powers to enhance client confidence
Determine which lands are excluded from the law and which lands require approval for mining licences	Develop mineral deposit areas
	Reduce procedures period
	Eliminate duplication of local land regulations
	Have clear governance to determine land-use powers
	Reduce investors' risk, to encourage investment
Sustainable financing	Grant the Ministry a sustainable source of funding for long-term contracting and reducing program costs
Establish a mining fund at the Ministry	Assist with exploration and geological survey activities
	Support rehabilitation of abandoned mines
	Provide sustainable funds for Mining Services Co.
	Support development of mining sector personnel

Source: Argaam.com, Orior Capital

Appendix 3: The Arabian-Nubian Shield

The Arabian-Nubian Shield is an accretionary orogeny at the northern half of a great collision zone called the East Africa Orogeny. It evolved between about 870 Ma (million years ago) and 550 Ma, and represents one of the largest tracts of juvenile Neoproterozoic crust in the world. The Shield measures more than 3,500 km north to south, and at its widest, more than 1,500 km east to west. It underlies an area of ~2.7 million km^2. The Shield is exposed as part of the Sahara Desert and the Arabian Desert in the north, and in the Ethiopian Highlands, Asir Province in Saudi Arabia, and the Yemen Highlands to the south. It outcrops in nine countries; Jordan, Israel, Saudi Arabia, Egypt, Yemen, Sudan, Eritrea, Ethiopia and Kenya.

The region has a long history of geological activity, and was host to some of man's earliest mining efforts; ancient Egyptians mined gold from Egypt and northeast Sudan. The earliest preserved geological map, known as the Turin papyrus and showing gold deposits in eastern Egypt, dates back to 1,150 BC. Gold at Tulu Kapi is hosted in syenite. 'Syene' is the Greek name for Aswan, where the ancient Egyptian's mined granite. In Saudi Arabia, gold, silver, copper, zinc, tin and lead have been mined for at least 5,000 years.

Tectonic setting

The East Africa Orogeny collision zone formed towards the end of the Neoproterozoic period when East and West Gondwana collided, forming the 'supercontinent' Gondwana. This process commenced with the break-up of former supercontinent Rodinia, the formation of oceanic basins, such as the Mozambique Ocean, and the growth of the shield, around 870 Ma. Shield growth lasted for 300 million years. Subduction zones were shaped within these basins, forming oceanic volcanic arcs. According to Abu Alam et al, two types of suture zone formed in the Arabian-Nubian Shield during the collision of these volcanic arcs. Arc-arc sutures trend mostly NE-SW and represent the zones of closure of the Mozambican basins between volcanic arcs at ~800 Ma to 700 Ma. Following these arc-arc collisions, the Arabian-Nubian Shield collided with pre-Neoproterozoic continental blocks (the Sahara Metacraton) around 680 Ma to 630 Ma. These arc-continent sutures trend north-south. Final assembly of the Arabian-Nubian Shield occurred around 550 Ma.

Shear-zone hosted gold mineralisation of the Arabian-Nubian Shield: devolatilization processes across the greenschist-amphibolite-facies transition; Tamer Abu-Alam, Mohammad Abd El Monsef and Eugene Grosch

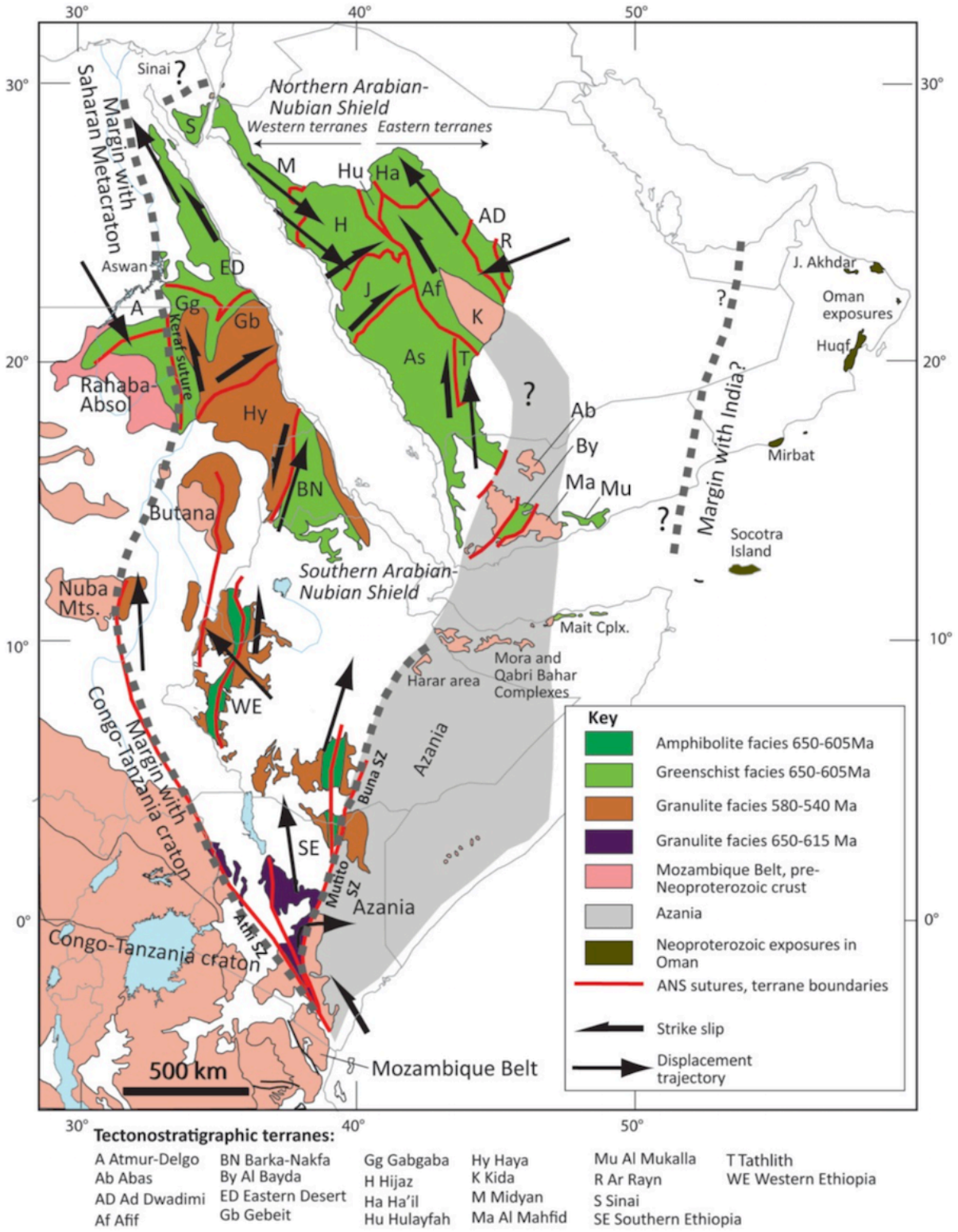
Late Cryogenian–Ediacaran history of the Arabian–Nubian Shield: A review of depositional, plutonic, structural, and tectonic events in the closing stages of the northern East African Orogen, 2011; P.R. Johnson, A. Andresen, A.S. Collins, A.R. Fowler, H. Fritz, W. Ghebreab, T. Kusky, R.J. Stern

An Expanding Arabian-Nubian Shield Geochronologic and Isotopic Dataset: Defining Limits and Confirming the Tectonic Setting of a Neoproterozoic Accretionary Orogen, 2014; P.R. Johnson

Tulu Kapi Gold Project: A history of repeated discoveries in Western Ethiopia; Fabio Granitzio, Jeff Rayner and Tadesse Aregay

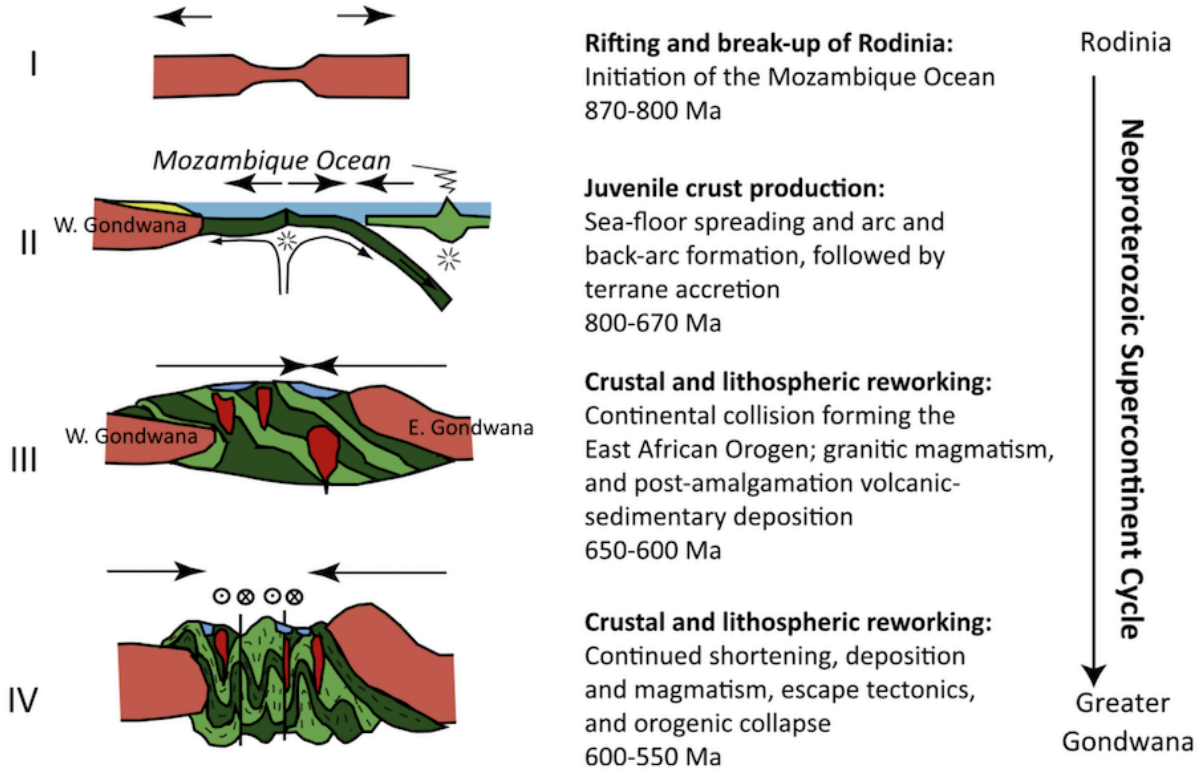
Gold-bearing volcanogenic massive sulphides and orogenic-gold deposits in the Nubian Shield, P.R. Johnson, B.A. Zoheir, W. Ghebreab, R.J Stern C.T. Barrie, R.D. Hamer, 2017

Figure 46: Structural and metamorphic map of the Arabian-Nubian Shield, showing tectonostratigraphic terranes, suture zones, the boundary between eastern and western arc terranes in the Arabian Shield and boundaries between the Arabian-Nubian Shield and flanking older crustal blocks. Arrows show displacement trajectories and sense-of-shear during transpressive orogenic phases in the region.



Source: An Expanding Arabian-Nubian Shield Geochronologic and Isotopic Dataset: Defining Limits and Confirming the Tectonic Setting of a Neoproterozoic Accretionary Orogen

Figure 47: Schematic illustration of stages in the development of the Arabian-Nubian Shield showing its setting in the supercontinent cycle, bracketed by the break-up of Rodinia and the assembly of Gondwana



Source: Late Cryogenian–Ediacaran history of the Arabian–Nubian Shield: A review of depositional, plutonic, structural, and tectonic events in the closing stages of the northern East African Orogen

Geological setting

The Arabian-Nubian Shield comprises mostly low-grade, greenschist metasedimentary and metavolcanic rocks, derived from ocean island-arc volcanism. Greenschists are metamorphic rocks that formed at low temperatures of 300-500°C and low pressures of 3-20 kbar, at crustal depths of 8-50 km. Ophiolites, pieces of oceanic crust that have been lifted above sea level onto the edges of continental plates, are abundant across much of the shield, from its northern extreme, almost to the equator. They range in age from 890 Ma to 690 Ma, documenting some 200 million years of oceanic magmatism, and they are found in suture zones dating from 780 Ma to 680 Ma, reflecting 100 million years of terrane convergence. High-grade metamorphic rocks were exhumed from beneath the low-grade sequence both in extensional and compressional settings. The Shield was intruded by plutonic rocks (igneous rocks formed at great depth) in different tectonic settings. Finally, younger rocks including dykes, molasses-type sedimentary rocks (sandstones, shales), potassium rich ('high-K') volcanic rocks, and alkaline granitic rocks were formed during the later tectonic stages of the Shield's evolution.

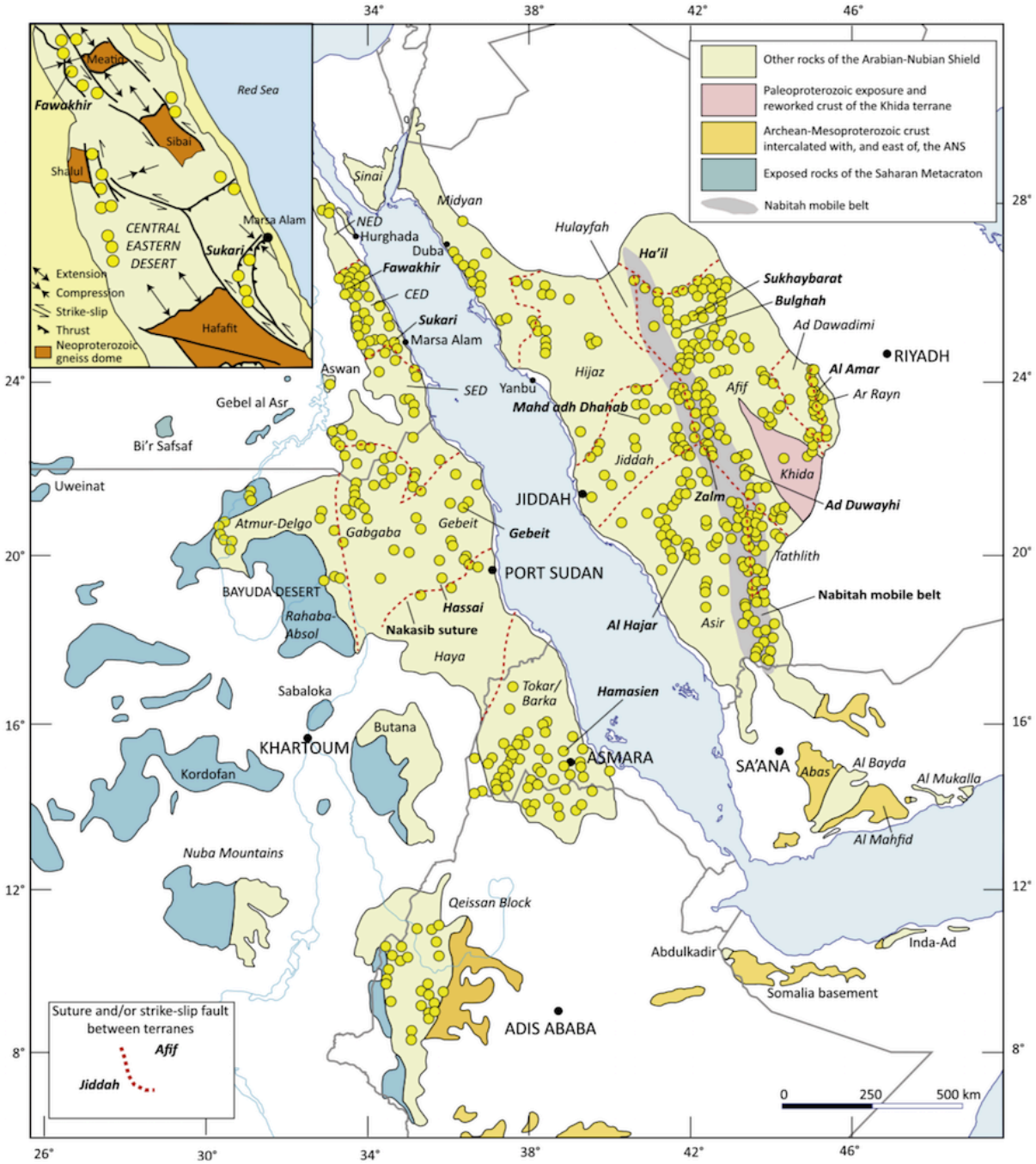
Gold deposits

The Arabian-Nubian Shield hosts a number of different gold deposit styles, in a variety of tectonic settings. The occurrences are predominantly late Cryogenian–Ediacaran (650 Ma to 542 Ma) orogenic-type gold in a variety of structural and lithologic settings, though there are a variety of other deposit types. In the Arabia Shield, Madh Ad Dhahab and Al Amar are both epithermal gold, Ar Rjum and Ad Duwayah are intrusive related, and Mansourah and Mansarrah are listweanite deposits. In the

Nubian Shield, the main deposit types are orogenic gold and gold associated with VMS mineralisation. Gold bearing VMS deposits are mined at Bisha (Eritrea) and at Hassai (Sudan). Orogenic gold is mined Sukri and Hamash (Egypt), in Sudan, Eritrea and at Lega Dembi and Sakaro (Ethiopia).

This combination of the subduction-related origin of the Shield, widespread shearing, and metamorphism associated with late Neoproterozoic orogeny are highly favourable for the development of these types of gold deposits. The Arabian-Nubian Shield hosts the largest known Neoproterozoic gold resource on Earth.

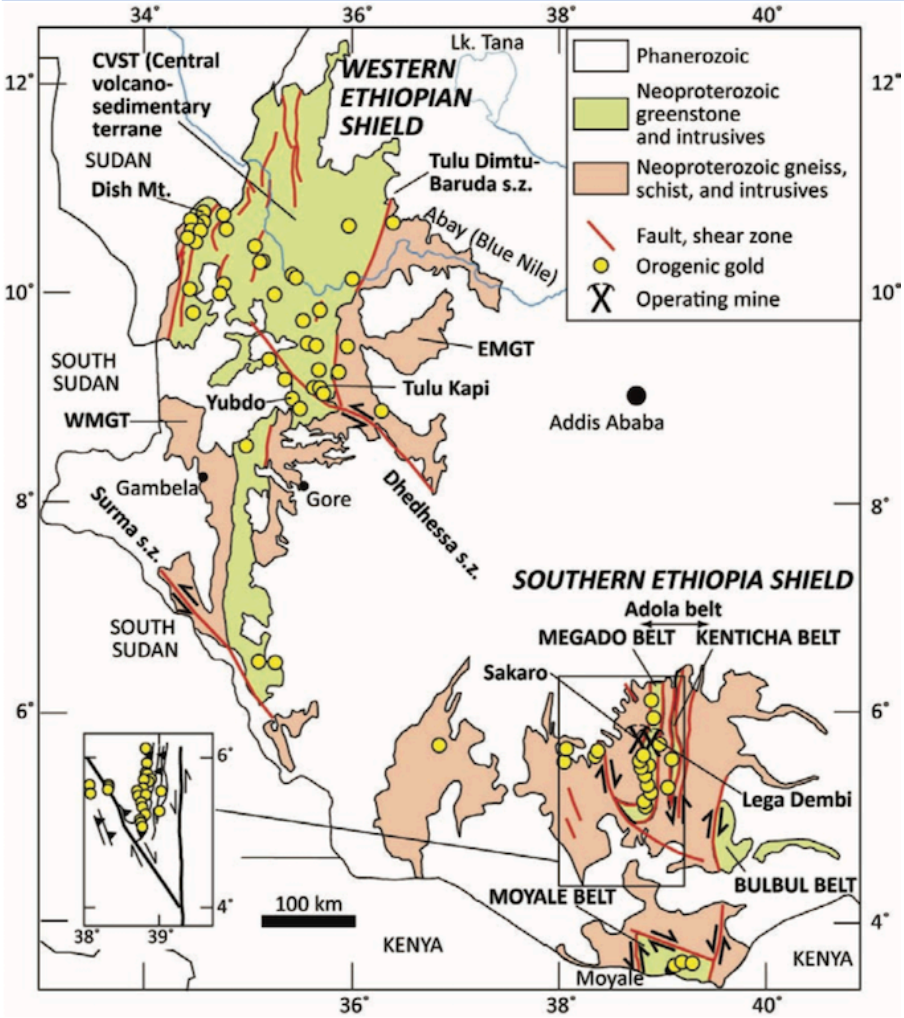
Figure 48: Simplified plot of gold occurrences in the Arabian–Nubian Shield



Source: Late Cryogenian–Ediacaran history of the Arabian–Nubian Shield: A review of depositional, plutonic, structural, and tectonic events in the closing stages of the northern East African Orogen

Tulu Kapi in Western Ethiopia, and Lega Dembi in Southern Ethiopia are both orogenic gold deposits. The Tulu Kapi deposit is hosted by syenite in strongly sheared metavolcanic and metasedimentary rocks in what is known as the central volcano-sedimentary terrane greenstone belt.

Figure 49: Gold occurrences and producing mines in Western and Southern Ethiopia

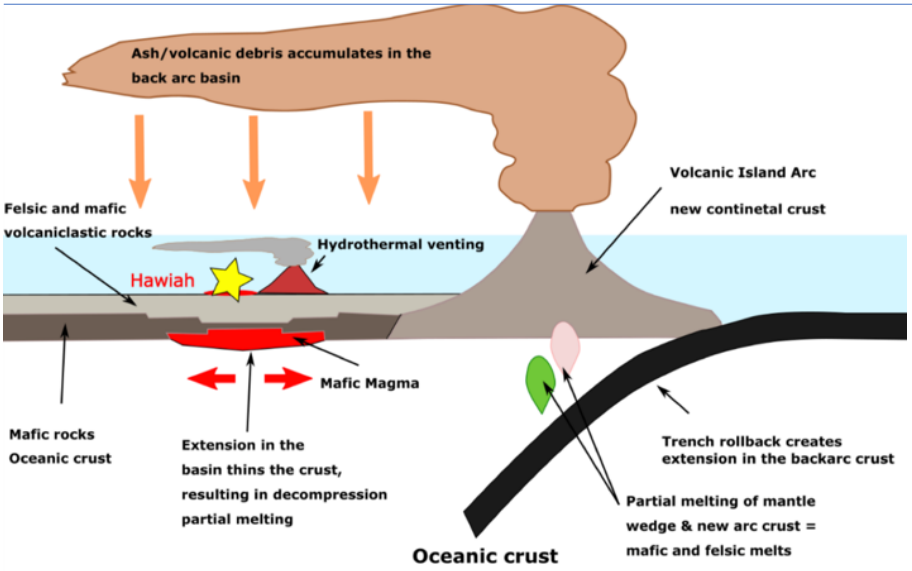


Source: Gold-bearing volcanogenic massive sulphides and orogenic-gold deposits in the Nubian Shield; P.R. Johnson et al, 2017

Volcanogenic massive sulphide (VMS) deposits

Hawiah is an example of VMS mineralisation. VMS deposits are an important source of copper, accounting for ~6% of global production, as well as a significant supplier of zinc (~22%), lead (~10%), gold (~2%) and silver (~9%). VMS deposits tend to follow tectonic plate boundaries and ancient underwater volcanic activity and tend to occur in clusters, with sometimes as many as 20 or more such deposits within an area of several tens of square kilometres. This clustering of ore lenses in close proximity, and the polymetallic nature of the deposits suggests potential for long-term production. The Arabian-Nubian Shield hosts a number of notable VMS deposits including Bisha (Nevsun and Zijin Mining) and Asmara (Sichuan Road and Bridge Mining Investment Development) in Eritrea, Hassaii (Ariab) in Sudan, and Jabal Sayid (Barrick and Ma'aden) and Al Masane (Al Kobra Mining) in Saudi Arabia.

Figure 50: Formation setting for the Hawiah deposit, modified after Volesky, 2017



Source: KEFI

Appendix 4: Companies mentioned

Company	Code
KEFI Gold and Copper	KEFI.L
Barrick Gold	GOLD
Caledonia Mining	CMCL
Endeavour Mining	EDV.TO
Galiano Gold	GAU
Hummingbird Resources	HUM.L
Ivanhoe Electric	IE
Newcore Gold	NCAU.V
Orezone Gold Corp	ORE.V
Osino Resources	OSI.V
Pan African Resources	PAF.L
Perseus Mining	PRU.AX
Robex Resources	RBX.V
Shandong Gold	1787.HK
Shanta Gold	SHG.L
Thor Explorations	THX.V
Tietto Minerals	TIE.AX
Toubani Resources	TRE.V
West Africa Resources	WAF.AX

The author

Simon Francis is a UK qualified chartered accountant with significant experience in the natural resources and minerals sector. Simon led research in the sector in various roles at major financial institutions including Macquarie, Samsung and HSBC, in a career spanning more than 20 years. He has been involved in approximately US$4bn of capital raising, for a number of natural resources companies. Simon has been engaged in the financing of early stage companies using production agreements, and has privately funded exploration companies in various metals and jurisdictions. Simon seeks to deploy capital in undervalued mining and resources opportunities that have been missed by the market.