EDISON

KEFI Minerals

Initiation of coverage

Good times For Tulu Kapi

Metals & mining

KEFI acquired Tulu Kapi in western Ethiopia for US$9.7m, or an average of US$5.14 per contemporary resource ounce. By subsequently reinterpreting the ore body in the light of new data, it has been able to devise a mine plan that extracts essentially the same quantity of metal by mining only half the tonnage of rock. As a consequence, upfront capital expenditure has been halved and the economics of the project transformed.

Year end	Revenue (£m)	PBT* (£m)	EPS* (p)	DPS (p)	P/E (x)	Yield (%)
12/13	0.0	(0.9)	(0.4)	0.0	N/A	N/A
12/14	0.0	(2.6)	(0.4)	0.0	N/A	N/A
12/15e	0.0	(2.1)	(0.2)	0.0	N/A	N/A
12/16e	0.0	(2.7)	(0.1)	0.0	N/A	N/A

Note: *PBT and EPS are normalised, excluding intangible amortisation and exceptional items.

New definitive feasibility study (DFS)

KEFI has now completed a new definitive feasibility study that proposes to mine 15.4Mt of ore at an average grade of 2.12g/t, an average stripping ratio of 7.4 and with an average metallurgical recovery of 91.5% to extract 961koz of gold over 13 years, between 2017 and 2030 (inclusive), for an initial capital cost of US$128m and ongoing total cash costs of US$40.8/t of ore (equating to a cost of production of US$761/oz). To minimise both initial capex and subsequent dilution, KEFI has elected to pursue a selective mining strategy using contract miners. Significant in making its election is the fact that there is a clear visible distinction between the ore (white) and host rock (green).

Minimal future equity dilution

In addition to minimising initial capex, management is also looking to reduce the share of equity financing in the overall funding package. As a result, it is seeking equity funding of less than US$20m, with the balance in the form of a US$120m combination of streaming deal, debt and infrastructure financing from the Ethiopian government and its development banks.

Valuation: Heads I win, tails I don't lose

On the basis of the assumptions contained in this report, we calculate that KEFI is capable of generating c £20m pa in earnings for eight years, from 2018 to 2025, or c 0.70p/share after dilution and generating a c 0.46p/share dividend. Applying a 10% discount rate to maximum potential future dividends at our long-term gold prices, our valuation of KEFI's equity is 1.93p/share currently, rising to 2.82p/share in FY19. Stated alternatively, an investment in KEFI shares at a price of 0.75p per share offers investors a potential 25.9% IRR over 17 years until 2031. In the meantime, with a resource multiple of US$9.36/oz, KEFI is trading at a 41.4% discount to the average of its London peers, based on the categorisation of its attributable resources. Similarly, its current EV of c US$19.3m is at a discount to the global average cost of discovery of its resources of US$21.0m (see Gold – The value of gold and other metals, published in February 2015).

20 August 2015

Price	**0.78p**
Market cap	**£14m**
	US$1.55/£
Net cash (£m) at 31 December 2014	0.6
Shares in issue	1,744.4m
Free float	89.5%
Code	KEFI
Primary exchange	AIM
Secondary exchange	N/A

Share price performance

%	1m	3m	12m
Abs	(3.1)	(13.9)	(52.3)
Rel (local)	1.7	(6.9)	(50.9)
52-week high/low		1.60p	0.73p

Business description

KEFI Minerals is an exploration and development company focused on gold and copper deposits in the highly prospective Arabian-Nubian Shield – principally the 95%-owned Tulu Kapi project in Ethiopia and, to a lesser extent, the 40%-owned Jibal Qutman project in Saudi Arabia.

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Investment summary: Financing Tulu Kapi

Company description: Arabian-Nubian shield specialist

KEFI is an exploration and development company focused on gold and copper deposits in the highly prospective Arabian-Nubian Shield – principally the Tulu Kapi project in Ethiopia and, to a lesser extent, the 40%-owned Jibal Qutman project in Saudi Arabia. The company has recently completed a definitive feasibility study on Tulu Kapi and this report therefore principally focuses on the development of Tulu Kapi from an exploration prospect into a mining project. Note that at the average of its London peers, given its resource categorisations, Jibal Qutman could be worth US$4.5m, or 0.17p per share (ie 23% of KEFI's current share price). At the average global cost of discovery of its resources, it would be worth US$2.8, or 0.10p per share (ie 13%).

Valuation: 1.93p per share plus Jibal Qutman

On the basis of the assumptions contained in this report, we calculate that KEFI is capable of generating average after-tax earnings of c £20m pa for eight years, from 2018 to 2025, or c 0.70p per share on a fully diluted basis, and free cash flow of c £32m pa on a 100% basis. Without taking into account the anticipated streaming deal and assuming a 10% discount rate, we calculate KEFI's unfinanced NPV at £68.0m, or 3.9p/share. The project's implied unlevered IRR is 26%. By contrast, we estimate that investors in KEFI's shares, at a price of 0.75p/share, may expect maximum potential dividends (cash flow after investments and funding) in the order of 0.46p/share, which are valued at 1.93p/share when similarly discounted at 10% on a fully funded and diluted basis, rising to 2.82p by 2019. Stated alternatively, an investment in KEFI shares at a price of 0.75p per share offers investors a potential 25.9% IRR over 17 years until 2031.

Sensitivities – both qualitative and quantitative

Our valuation above was conducted at our long-term gold price forecasts, which average US$1,413/oz over the 14 years of Tulu Kapi's mine life, from 2017 until 2030. In quantitative terms, each 10% move in the gold price from our base case assumption results in a 0.99p per share variation in our valuation, whereas each 10% variation in unit costs results in a 0.64pps variation. In qualitative terms, the risks associated with Tulu Kapi may be summarised as Ethiopian risk (in this case, including that associated with the necessary resettlement of 260-300 local households) plus execution risk. Owing to its past and the fact that mineral exploration has historically not been encouraged, Ethiopia only has one mine – Lega Dembi – in the south of the country. In mitigation however, the government is now keen to attract mining investment, which has grown tenfold in less than a decade. In addition, it was African's fastest growing, non-oil economy in 2007-08.

Financials: Minimal equity funding sought

KEFI had £0.6m on its balance sheet as at 31 December 2014, since which time it has raised an additional £4.4m (before costs) via the issue of 509.1m shares. This compares to an historic cash burn rate of £6.3m in FY14. For the purposes of our valuation and with management guidance, we have assumed a further equity raise of US$10m in FY15 via the issue of an additional 859.4m shares at a price of 0.75p/share. Thereafter, financing the project is assumed to be via a US$100m streaming deal and conventional debt (peaking in FY17). As a result, KEFI will be developing Tulu Kapi from a relatively small equity capital base. On the basis of these assumptions, we estimate that KEFI will have a maximum conventional debt funding component of £22.8m, which will equate to a 62.4% leverage (debt/[debt+equity]) ratio in FY17. Including the streaming deal, we estimate that the company's maximum funding requirement will be £84.3m, equating to a leverage ratio of 85.9%.

Company description: Transitioning into production

KEFI was formed in 2006 and has since rapidly evaluated and relinquished a number of exploration properties as well as acquiring new projects, particularly in the Levant. The Arabian-Nubian Shield (ANS), which spans the African and Arabian plates, became the company's primary focus in 2008, when it commenced exploration in Saudi Arabia. It expanded its activities on the ANS in December 2013, when it acquired 75% of Tulu Kapi in Ethiopia for £4.5m, from the previous licence holder, Nyota Minerals. In September 2014, it bought the remaining 25% of Tulu Kapi for £750,000 plus 50m shares.

KEFI's exploration activities are now concentrated exclusively on the ANS, with Tulu Kapi, in Ethiopia, being its flagship project, followed by Jibal Qutman in Saudi Arabia. This report focuses on the development of Tulu Kapi from an exploration prospect into a mining project.

History

The ANS is the source of some of man's earliest known mining activities, including the Mahd adh Dhahab ('Cradle of Gold') mine, which is the leading gold mining area in the Arabian peninsula, located in the Al Madina province of the Hejaz region of Saudi Arabia, between Mecca and Medina. Gold was first mined in the area around 5,000 years ago in the form of swarms of gold-bearing quartz veins and the site has been identified as one of the possible locations of King Solomon's mines, with archaeologists having found a large abandoned gold mine, c 1Mt of waste rock and thousands of stone hammers and grindstones left by the ancients. Among other things, the area inspired the earliest known map, the Turin papyrus, which was used by the Egyptians to mine gold in Egypt and north-east Sudan.

Tulu Kapi (TK)

Although very little detailed academic work was performed on it at the time, the Tulu Kapi deposit was known and exploited as long ago as the 1930s, when an Italian company (SAPIE) conducted saprolite, hydro-mining of the quartz veins at depth near the contact of the diorite and syenite, where the degree of albitization is less and the degree of silicification is more. Note that this mineralisation is not the immediate target of either KEFI's exploration work or its development plans (see Geology, below).

Having lain dormant for some years, exploration restarted under the auspices of the UN Development Programme (UNDP), which drilled two diamond holes at Tulu Kapi during the 1970s and identified the eponymous UNDP zone (see Geology, below). Canadian junior, Tan Range (TREC), continued exploration work with grid soil, ground geophysical and diamond drill work (five holes totalling 374m) between 1996 and 1998. Mapping, soil sampling, ground geophysics (induced polarisation and magnetics) and additional drill holes (34 diamond drill holes totalling 6,908m on an 80x80m grid) were then performed by GPMC/Minerva between 2005 and 2009, which resulted in their reporting a maiden inferred resource at Tulu Kapi of 690,000oz gold in September 2009.

Exploration was intensified between 2009 and 2013 by TK's new owner, Nyota, in the form of airborne (radiometry) and ground (induced polarisation and magnetics) geophysical surveys plus 14 trenches (totalling 98m) and infill drilling (259 diamond drill holes, totalling 65,125 m, and 331 RC holes totalling 38,328m), which led to the expansion of the resource to 1.9Moz at an average grade of 2.3g/t (see Exhibit 6, below).

After a period of due diligence, KEFI acquired 75% of Tulu Kapi for £4.5m in December 2013 (cf historic exploration expenditure of >US$50m [source: KEFI Minerals]) – equivalent to US$5.17 per contemporary resource oz. In September 2014, it bought the remaining 25% of Tulu Kapi for £750,000 plus 50m shares – equivalent to US$5.06/oz at that time – such that its total

consideration in respect of Nyota's 1.9Moz resource estimate (see Exhibit 6, below) was US$9.77m (equivalent to US$5.14/oz).

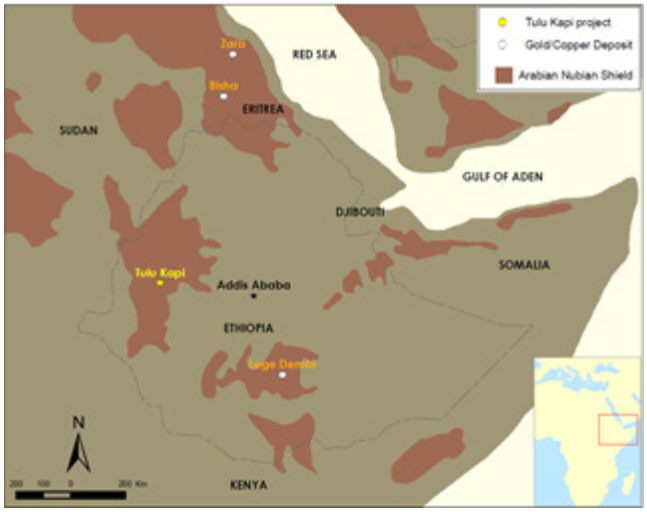
Geography

Tulu Kapi is located in the Oromia regional state (the biggest in the country) and in the Ghimbi/Gimbe zone of western Ethiopia, approximately 360km west of Ethiopia's capital, Addis Ababa. It is accessible via a 565km main road that passes less than 12km from the site and takes approximately ten hours to complete by car. KEFI holds exploration licences (ELs) that allow for exploration over 200km^2 including the Tulu Kapi deposit and some surrounding areas. The site is 1,600-1,765m above sea level.

Exhibit 1: Location of the Arabian-Nubian Shield and major tectonic structures

Source: KEFI Minerals

Exhibit 2: Location of Tulu Kapi in the Arabian-Nubian Shield



Source: KEFI Minerals

Geology

In general, the ANS consists of Precambrian crystalline rocks and hosts various minerals in a diverse range of deposit formations, including gold, copper, zinc, tantalum, silver, and potash, which can be found in mesothermal gold, polymetallic, quartz vein gold and volcanogenic massive sulphide (VMS) ores.

Tulu Kapi

The region around Tulu Kapi consists of typical greenstone geology. Tulu Kapi itself is located in the Tulu-Dintu shear zone – a major north-east/south-west trending fault – which is characterised by Neoproterozoic, meta-volcanic sedimentary successions that have been faulted and folded and intruded granites, mafics and ultra-mafics. The deposit itself exists at the contact of three plutonically related lithologies, being one syenite and two diorites into which two major dyke swarms have intruded (being porphyritic, dioritic and basic in nature, thereby indicating a dilational environment). Gold is hosted in the syenite, stacked up against the diorite, leading KEFI to posit that it represents a structurally-controlled, hydrothermally altered deposit in which the host rock is the gabbro sill, the heat source was the quartz and the structurally suitable deposition zone is albitized syenite. It is thought that the syenite itself is unlikely to be the source of the gold-bearing fluids and current thinking is that the shear zone represents a structure created by reactivation of a former vein-fault zone and that this reactivation caused the brittle syenite intrusion to shear, thereby forming a series of low angle faults that provided the conduit for both the swarm of dolerite sills and

mineralising fluids. As such, the principal gold mineralisation at Tulu Kapi is associated with shallow (c 30^{o}) northwest dipping zones of dense gold-bearing quartz veining, enveloped by an auriferous, highly albitized, metasomatic alteration centred on the shear zone. Gold is generally only associated with the albitized zones (including gold contained within quartz veins and fractures); however, there does not appear to be any correlation between the degree of albitization and the gold grade. The alteration also involves the replacement of the mafic minerals with sulphides (see Metallurgy, below). One of the significant consequences of this formation is the marked visible distinction between the (green) host rock of mafic syenite and the (white) ore comprising albitized syenite. The albitized zones are of a lensoid nature comprising discrete, stacked bodies that pinch and swell along both strike and dip. The thickness of the individual albitized zones is highly variable. Dykes and/or sills are present within the syenite in the form of mafic rocks (dolerite) and are up to 10m in thickness.

There are two ostensible zones of mineralisation, being the more fractured, but higher-grade central zone (c 2.7g/t) and the generally lower grade (c 1.1g/t), albeit first to be discovered, UNDP zone. The two are separated by the UNDP fault (an in-filled dyke). However, there is no major faulting to offset mineralisation.

The exact nature of the shear zone has not been fully confirmed and the shear contact is considered to be complex with deep drilling having identified high gold grades within the diorite located beyond the shear. In addition, the most recent deep, diamond drilling has identified particularly high gold grades at depth, within the syenite, close to the shear zone. Note that the degree of alteration in the syenite reduces with depth with less albitization and more silicification. This zone is variously known by KEFI as ‘The Deeps’ or ‘The Feeder Zone’.

Reserves and resources

The mineralisation at Tulu Kapi exists within in a 1,500 x 400m surface area, with gold, silver and pyrite existing in conjunction with minor amounts of sphalerite and galena.

To date, total historic exploration activities have comprised 71,690m of diamond drilling, 48,040m of RC drilling, 2,620m of RC hydrogeological drilling, 4,200m of diamond geotechnical drilling, 1,310m of trenching and a 20m historical adit. Resources in the (main) central area have been drilled on a 40m grid, concentrating to a 20m grid in some areas, which is relatively dense given the style of mineralisation and therefore suitable for reporting to the indicated category of resources. Outside the central area, the grid ranges from 40m to 80m and is suitable for inclusion within the inferred category. Note that a large portion of the resource also exists in the indicated category owing to extensive RC drilling.

Including Jibal Qutman, a summary of KEFI’s total attributable resource (with Tulu Kapi’s resource being assessed relative to an industry standard cut-off grade of 0.5g/t) is as follows:

Exhibit 3: KEFI Minerals' total attributable resource

		Cut-off grade (g/t)	Tonnage (Mt)	Grade (g/t)	Contained gold (Moz)	Attributable interest (%)	Attributable resource (Moz)
Tulu Kapi							
	Measured	0.50	0.00	0.00	0.00	100	0.00
	Indicated	0.50	19.40	2.65	1.65	100	1.65
	Inferred	0.50	1.51	2.32	0.11	100	0.11
	Total	0.50	20.91	2.62	1.76	100	1.76
Jibal Qutman							
Oxide	Measured		0.00	0.00	0.00	40	0.00
	Indicated		8.30	0.86	0.23	40	0.09
	Inferred		2.80	0.64	0.06	40	0.02
	Sub total		11.10	0.80	0.29	40	0.11
Sulphide	Measured		0.00	0.00	0.00	40	0.00
	Indicated		9.70	0.86	0.27	40	0.11
	Inferred		7.60	0.72	0.18	40	0.07
	Sub total		17.30	0.80	0.45	40	0.18
Oxide + sulphide	Measured		0.00	0.00	0.00	40	0.00
	Indicated		18.00	0.86	0.50	40	0.20
	Inferred		10.40	0.70	0.24	40	0.10
	Total		28.40	0.80	0.73	40	0.29
Grand total	**Measured**		**0.00**	**0.00**	**0.00**		**0.00**
	Indicated		**37.40**	**1.79**	**2.15**		**1.85**
	Inferred		**11.91**	**0.93**	**0.36**		**0.21**
	Total		**49.31**	**1.58**	**2.51**		**2.06**

Source: KEFI Minerals, Edison Investment Research

This modifies only fractionally for Tulu Kapi when considered with respect to differentiated cut-off grades to reflect potential future open pit and underground mining domains.

Exhibit 4: Tulu Kapi resource at differentiated cut-off grades

	Category	Cut-off (g/t)	Tonnes (Mt)	Grade (g/t)	Contained gold (Moz)
Above 1,400m RL	Measured	0.45	0.00	0.00	0.00
	Indicated	0.45	17.70	2.49	1.42
	Inferred	0.45	1.28	2.05	0.08
	Sub total	**0.45**	**18.98**	**2.46**	**1.50**
Below 1,400m RL	Measured	2.50	0.00	0.00	0.00
	Indicated	2.50	1.08	5.63	0.20
	Inferred	2.50	0.12	6.25	0.02
	Sub total	**2.50**	**1.20**	**5.69**	**0.22**
Total	Measured		0.00	0.0	0.00
	Indicated		18.78	2.67	1.62
	Inferred		1.40	2.40	0.10
	Total		**20.18**	**2.65**	**1.72**

Source: KEFI Minerals, Edison Investment Research

Of the 'above 1,400m RL' resource, 81% of the tonnage, 86% of the grade and 70% of the gold inventory have subsequently been converted into appropriately mineable reserves, as follows:

Exhibit 5: Tulu Kapi reserves

Category	Cut-off grade (g/t)	Tonnage (Mt)	Grade (g/t)	Contained gold (Moz)
Probable (high grade)	0.9	12.00	2.52	0.98
Probable (low grade)	0.5-0.9	3.30	0.73	0.08
Total		**15.40**	**2.12**	**1.05**

Source: KEFI Minerals, Edison Investment Research

Note that the mine design around which these reserves are derived is based on an optimised pit shell using a gold price of US$1,250 per ounce and that gold mineralisation remains open at depth (>400m below surface).

Tulu Kapi development under KEFI ownership

Albeit different methods of estimation were applied to the following resource estimates, a comparison of the development of the Tulu Kapi resource from its ownership by Nyota to KEFI is provided in Exhibit 6 below.

Exhibit 6: Tulu Kapi resource development, 2012-present

Year	Company	Project status	Tonnes (Mt)	Grade	Metal (Moz)
2012	Nyota	DFS	24.9	2.3	1.9
2013-14	KEFI	Due diligence	24.1	2.6	2.0
2014	KEFI	Update	26.7	2.3	2.0
2015	KEFI	DFS	21.1	2.6	1.8

Source: KEFI Minerals. Note: DFS = definitive feasibility study.

Key to KEFI's reinterpretation of the Tulu Kapi orebody after it took ownership of the project has been the inclusion of new or additional data. Under pressure from a government deadline by which to present a DFS, the previous owner, Nyota, has excluded data relating to 71 diamond drill holes in its resource estimate. Mostly deep and relatively high grade, the inclusion of data from these holes resulted in KEFI's ability to reduce the tonnage of the deposit (which was then constrained by wireframe modelling), while effectively maintaining the gold inventory at a higher average grade. In addition, accurate drill string surveying of historic holes allowed KEFI to reinterpret the data within the context of the known bending of the drill strings and markedly improve its understanding of the orebody.

The consequences of Tulu Kapi reinterpretation for the project

Nyota's higher tonnage, lower grade resource estimate resulted in its defining a similarly lower grade reserve estimate of c 1.2Moz contained within 20Mt at an average grade of 1.8g/t. Hence, its mining plan was predicated on a 2.0Mtpa operation at a grade of c 1.8g/t. KEFI's lower tonnage, higher grade resource estimate, by contrast, has allowed it to maintain reserves at c 1Moz, but to exploit it at a significantly lower processing rate of 1.2Mtpa.

The DFS completed by KEFI on Tulu Kapi in June 2015 is currently being reviewed by potential providers of debt finance. However, as a result of the lower processing rate, the updated DFS envisages that upfront capital costs will be reduced by more than half to US$141m (on the assumption of contract mining). It is estimated that a further reduction of some US$10m can be made, based on initial bids from contractors and saving through value engineering.

Mining

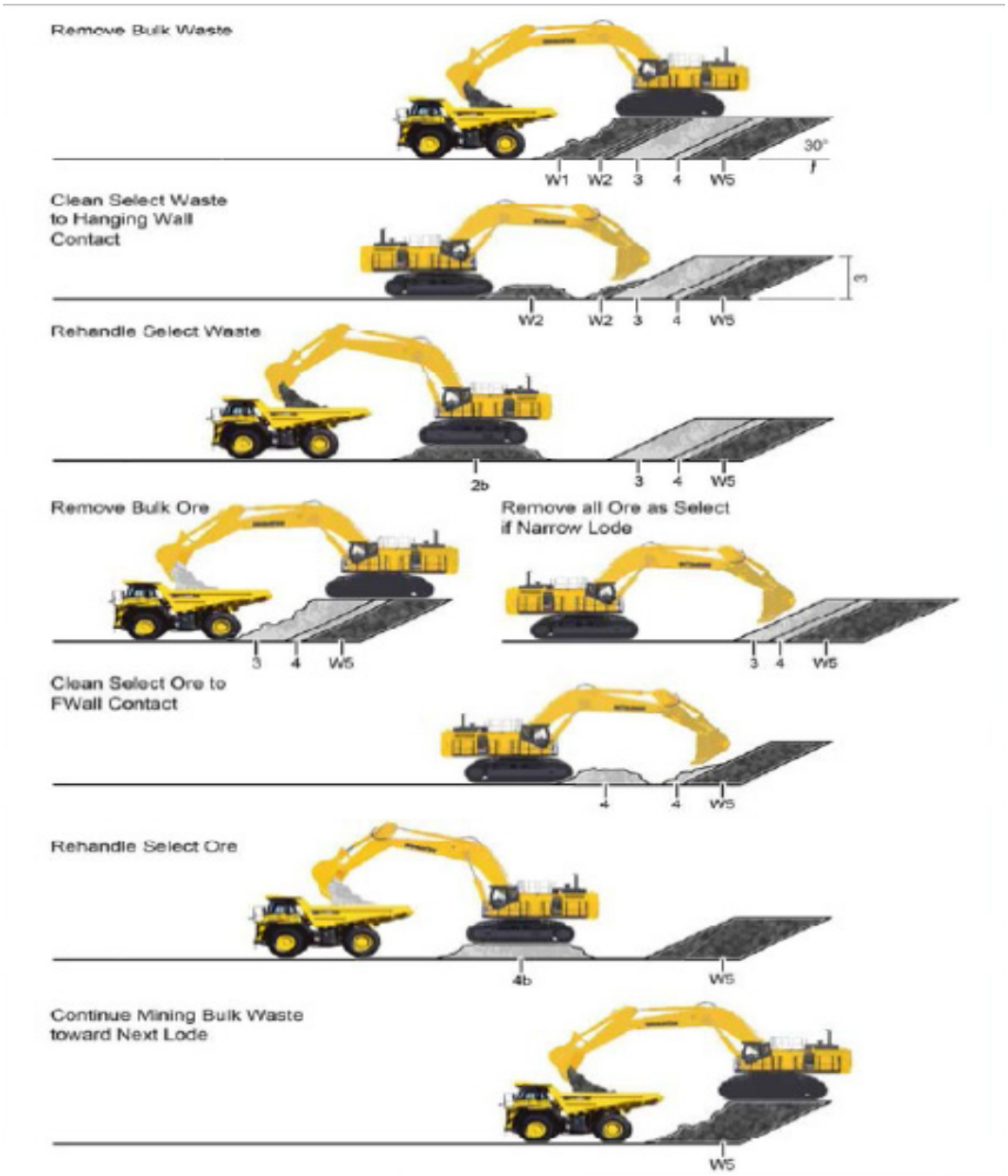
The DFS only considers ore above 1,400m (see Exhibit 4). This will be achieved by mining ore >0.9g/t gold for the first ten years and stockpiling anything between 0.5g/t and 0.9 g/t to be processed in the final three years of the 13 year project. The new mine design has a smaller footprint and is based on the conventional open-pit mining method. Open-pit and blast mining in conjunction with load and haul will be configured on 7.5m benches using 120t backhoe excavators. Every second blast hole will be used for grade control. In addition, KEFI intends to operate a selective mining process to further increase the mined gold grade from 1.8g/t to c 2.5g/t for the first ten years of ore processing, such that a 1.2Mtpa processing plant with gold recoveries of 91.5% will produce c 93koz gold pa. In particular, there will be a specific requirement for excavator cleaning and re-handling of waste material in a seven-step process:

1. bulk waste removal;
2. cleaning waste from the hanging-wall contact;
3. re-handling of selective waste;
4. removal of bulk ore;

5. cleaning of selective ore to the footwall contact;
6. re-handling of select ore; and
7. continuation of waste material mining.

It is envisaged that mining will progress across the bench from west to east to avoid collapsing the ore material into the waste. A schematic representation of the ore loading cycle is as shown below.

Exhibit 7: Selective mining ore loading cycle, schematic representation



Source: KEFI Minerals

In general, the cycle uses more productive top loading of trucks. However, the excavator will need to be on the same level as trucks when handling material less than 1m thick at the extreme eastern and western limits of the pit. In conjunction with the more selective loading cycle, this is forecast to increase unit mining costs from US$2.51/t to in excess of US$3.00/t. In addition, it will confer a requirement for precise and accurate blasting on the operators. To this end, KEFI is currently engaged in blasting studies with the Itasca Consulting Group of Minneapolis and the Julius Kruttschnitt Mineral Research Centre at The University of Queensland. A water cannon will be used in the pit to assist ore spotters to distinguish between green waste and white ore.

The average stripping ratio of the open pit in the first eight years of operations is 11.8 to one, owing to the dip of the orebody rather than rock competence or topography. It is relatively lower in earlier years, but then increases in the fourth year, when operations enter a low density area of veins, before falling again at the end of the life of the mine, such that it averages to 7.4 to one over the life of operations.

The berm width is 6m for 15m high batters, increased to 10m at the base with a maximum inter-ramp height of 120m. Geotechnical berms will be accommodated by the in pit road.

After optimising the financing structure in Q315, major construction work will commence in Q415. Initially, it is expected that a workforce of 700 plus 300 for construction will be required in 2016. This will decline to c 700 once steady state production is achieved. However, the mine will indirectly support a further 250 employees through its ongoing supply requirements. Gold production will commence in 2017.

Metallurgy

Petrography

Petrographical studies have determined that the gold at Tulu Kapi occurs on the grain boundaries and fractures within sulphides. The gold grains vary in size from c 1µm to 300µm, with an average of c 11µm, and hence gold grains can occasionally be seen in core.

According to a 2007 study commissioned by GPMC (the then owner), the most abundant type of sulphide associated with the gold is pyrite, followed by sphalerite, bornite, chalcopyrite, galena, arsenopyrite and tetrahedrite-tennantite. The absence of gold in arsenic, tellurium and antimony sulphide minerals is encouraging with respect to extractive metallurgy (note: this was later confirmed via more detailed metallurgical test work, conducted by Nyota, in 2010).

Weathering

The Tulu Kapi syenite hill is divided into two weathering zones, being a weathered and an unweathered zone. There is a sharp transition between the oxides and sulphides and the transition zone between the two is reported to range from <1m to only several metres in the majority of the deposit. On account of its negligible thickness, previous work on the metallurgical characteristics of this transition zone was abandoned.

There is also no evidence of any supergene enrichment.

Plant design

Conclusions relating to the metallurgical test work from both the PFS and DFS campaigns are summarised below:

- the oxide and transitional ores are of medium hardness and fresh ore becomes harder with increasing depth;
- all the ore types are amenable to gold extraction by conventional cyanidation;
- leach dissolutions of 97.4% and 96.4% were obtained for oxides and deep, hard, fresh ores, respectively, at a P_{80} grind size of 75µm in a leach time of 24 hours;
- recovery test work with and without gravity separation showed that gravity separation did not significantly increase overall gold recovery. As a result, run-of-mine cyanidation was selected as the process route; and
- leach optimisation test work indicated the following optimum parameters:
  - optimum grind: 80% passing 75µm
  - optimum initial cyanide concentration: 0.035% NaCN

- presence of preg-robbers: 1.75%
- residence time: 24 hours.

As a result, a simple carbon-in-leach process route has been chosen to mitigate the effects of potential preg-robbing, especially at the start of operations, on account of incomplete grubbing and clearing of organic material before processing.

In general, the plant has been designed to be 'dumb' (ie with low levels of automation, such as automatic titration) to reflect the fact that the operation will have limited access to appropriately trained technicians.

A secondary crusher will be installed in the second year of operations to process the harder, fresh ore, which will have an additional power requirement of 4.6MW.

Overall life-of-mine recoveries of gold are forecast to average c 91.5%.

Community resettlement

All land in Ethiopia is owned by the government and every Ethiopian is entitled to land (effectively, on a long lease) at the age of 18, although the land is allocated to the family at an earlier stage. As a result, the landscape is characterised by a large number of small landholdings and any initiative such as the development of a mining project at Tulu Kapi will require a programme of resettlement including, where appropriate, infrastructure such as roads and schools etc. On the other hand, this is concluded via the agency of the government and it is a not uncommon aspect of life in Ethiopia. Moreover, it is not in the government's interest to create a precedent for an inflated settlement in compensation of relocation.

In the case of Tulu Kapi, the focal government entity is the Ministry of Mines. At the same time, KEFI has been involved in an active period of community consultation (in collaboration with the government) and stakeholder engagement, with the result that its Resettlement Action Plan (RAP) has now been approved as part of the Mining Agreement signed between the company and the government.

Compared with Nyota's mine plan, the reduced footprint of the updated pit plus a process of minimisation has resulted in a decrease in the area of land affected, from 1,170ha to 690ha and a concomitant reduction in the number of households needing to be relocated, from 460 to 260-300, representing c 1,300 people from the local kebele (village) plus a further c 500 people from the surrounding countryside.

In negotiating the RAP, KEFI and the government offered the villagers 17 potential site options, of which three were chosen by the villagers. The most favoured site is reported to be situated on better agricultural land, although land that is perhaps not optimally suited to coffee cultivation (an important cash crop in Ethiopia).

In consideration of the RAP, KEFI has budgeted US$7.5m (which is deductible against future tax liabilities). This includes building starter homes, US$1.245m for livelihood restoration and US$0.1m in community development. In addition to compensation for structures, residents are also entitled to crop compensation (eg five years for coffee), which is currently in the process of being negotiated.

The site of the new kebele will require a new 5km road to be constructed, which will be best conducted in the dry season (from September to May). In terms of timing therefore, KEFI is intending to wait until the harvest (generally in October to November, but in December for coffee) before paying crop compensation, which will then be based on actual, rather than supposed yields. Residents have a statutory 90-day time limit to relocate once compensation has been paid (assuming that the road has been completed), with the result that KEFI is planning on the basis of having effective access to the site from late November.

Infrastructure

Power

The plant will be powered by overhead grid power lines. Existing power lines are 40km away. A new, 47km long, 132 kV power line from Gimbi to Tulu Kapi will also be required, which KEFI will construct and then sign over to the government. The plant's initial power requirement is estimated at 10MW plus an additional 3MW at start-up. It will then increase to 13MW as a result of the incorporation of an additional secondary crusher to process the fresh ore from the second year of operations. Hence, infrastructure will be constructed for a power requirement of 15MW, with the additional 2MW being made available to the local community. The estimated capital cost of the power infrastructure is US$10.5m plus a US$1.0m contingency.

A 5MW emergency power plant, comprising three generators has also been budgeted for as a back-up supply. It will be sized to keep certain, key process equipment operational when grid power is not available, but not the complete plant, at an estimated additional capital outlay of US$0.4m.

Water

Contrary to popular perception, there is no shortage of water in western Ethiopia, with the region experiencing average annual precipitation of 150cm annually (cf 59.4cm pa in London). The majority of this occurs in the wet season, between May and September, and particularly between June and August. Note that heavy rain, for these purposes should be interpreted relative to that experienced in London, but not the tropics. Nevertheless, the design of the process plant will be around the concept that rainwater can be stored and reused.

Roads

Although there is an existing road which connects the village of Kelley to the project area, KEFI intends to construct two major roads outside the mine licence area to both minimise the impact of the operation of the local community as well as to improve Tulu Kapi's connectivity with the outside world. Specifically, these will be:

- a 14.97km road from Kelley to Tulu Kapi, of which c 9.5km will be outside the mine licence area; and
- a 4.5km southern bypass road.

Tailings and waste

As a result of the more selective mining techniques, it has also been possible to relocate the sites of the waste dumps to minimise haulage distances.

In the meantime, the preferred site for the development of the Tulu Kapi tailings storage facility (TSF) is an area immediately adjacent to and to the east of the proposed plant site. The site will be developed as an impoundment facility with staged downstream wall lifts to match the anticipated deposition of 1,200ktpa of gold tailings for a period of six years, after which the facility will be self-raised as a day wall facility for a further five years.

Financial, fiscal and legal environment

All project plans have been approved and form a legally binding contract with the government as part of the mining agreement.

On granting a mining licence for Tulu Kapi, the Ethiopian government has a right to a 5% free-carried interest in the project. Thereafter, profits are subject to a 25% mining tax and a 7% royalty (after deducting past and future capex). Moreover, the royalty code is written in such a way that KEFI benefits from any future reduction in the 7% rate, but is protected in the event that it rises.

In the meantime, capital goods may be imported free from import taxes (assuming they are included on the Mining List). However, taxes become payable once commercial production is declared (eg for reagents, such as cyanide).

Ethiopia

Origins and antiquity

Some of the oldest evidence for anatomically modern humans has been found in Ethiopia and it is now generally supposed that it was from Ethiopia that modern homo sapiens first left Africa in their colonisation of the world. Its ancient Ge'ez script (also known as Ethiopic) is one of the oldest alphabets still in use in the world.

Political history

After 44 years as Emperor, the reign of Haile Selassie came to an end in 1974, amid general discontent among the middle classes regarding the modernisation of the country, food shortages, a series of border wars, the first oil shock and its attendant inflation, and the politics of the Cold War. Power was seized by a communist military junta known as the Derg, which was backed by the Soviet Union. Among other things, the Derg was responsible for the period of the so-called Red Terror, which resulted in the deaths of as many as half a million Ethiopians until the time of its defeat by another communist faction, the Ethiopian Peoples' Revolutionary Democratic Front (EPRDF) in 1991. In 1994, a constitution was adopted that led to Ethiopia's first multiparty election in 1995. Three years later, a border dispute with Eritrea led to the Eritrean-Ethiopian War, which lasted until June 2000 and resulted in Eritrea's independence and Ethiopia's losing its coastline and access to the sea. On 15 May 2005, Ethiopia held a third multiparty election. Though the Carter Centre approved the pre-election conditions, it expressed its dissatisfaction with post-election matters and the European Union accused the ruling party of vote rigging. After a period of post-election violence, opposition leaders were subsequently jailed. Amnesty International described them as 'prisoners of conscience' and they were subsequently released.

During the 2010 parliamentary election, it is believed that the EPRDF halted the counting of votes for a period of time. According to the Democracy Index published by the Economist Intelligence Unit (EIU) in late 2010, Ethiopia became an 'authoritarian regime' at this point (ranking 118 out of 167 countries) as a result of a crackdown on opposition activities and media and civil society ahead of the election. The EIU argues that this has made Ethiopia a de facto one-party state. However, the EPRDF claimed victory and remains in power despite charges of fraud and intimidation.

The latest parliamentary elections in Ethiopia were conducted in May 2015. Following the re-election of the EPRDF, which with its allies has claimed 100% of the votes, the opposition parties formed coalitions with the EPRDF so as to join in the ruling party and the administration appointed by it.

Constitution and political framework

Ethiopia is a federal parliamentary republic, in which executive power is exercised by the government and the prime minister is the head of government. Federal legislative power is vested in both the government and the two chambers of parliament. The judiciary is deemed independent of the executive and the legislature (although this has been questioned in practice, inter alia, by Freedom House).

There are five levels of government, comprising the federal government overseeing ethnically based regional states, zones, districts (woreda) and neighbourhoods (kebele). Since 1996, the country has been divided into nine ethnically based and politically autonomous regional states

(kililoch) and two chartered cities (Addis Ababa and Dire Dawa). The kililoch are subdivided into sixty-eight zones, and then further into 550 woredas and several special woredas.

The constitution assigns extensive power to regional states, which can establish their own government and democracy according to the federal government's constitution. Each region is governed by a regional council to which members are elected to represent the districts and the council has legislative and executive power to direct internal affairs of the regions.

Article 39 of the Ethiopian Constitution provides that each state has the right to secede from the federation.

International relations

Ethiopia has a close regional relationship with the US and is a strategic partner in the Global War on Terrorism – a fact that causes friction between Ethiopia, Eritrea and the USA. For its part, the United States is the largest single, international donor to Ethiopia, with annual aid typically in the order of US$0.5bn.

Relations between the US and Ethiopia were formalised in 1903 and were generally friendly under the emperors. The relationship cooled markedly after the Ethiopian Revolution however, owing to the Derg's association with international communism and US criticism at the regime's human rights abuses. In July 1980, the US Ambassador to Ethiopia was recalled, while The International Security and Development Act of 1985 prohibited all US economic assistance to Ethiopia with the exception of humanitarian disaster and emergency relief. Later, the US rejected Ethiopia's request for military assistance in the Eritrean war of independence. Relations improved with the downfall of the Derg and diplomatic relations were restored to full ambassadorial level in 1992. Legislative restrictions on non-humanitarian assistance to Ethiopia were also lifted. US development assistance is officially directed towards reducing famine vulnerability, hunger, and poverty, although the Ethiopian government has recently been accused of misusing funds and the US consequently criticised for allowing its aid to be used to erode democracy.

On 29 July 2015, Barack Obama became the first sitting US president to speak in front of the African Union in Addis Ababa.

Internationally, Ethiopia is one of the founding members of the UN, the G-77 Non-Aligned Movement (G-77) and the Organisation of African Unity. Addis Ababa serves as the headquarters of the African Union.

Geography and climate

With an area of 1.1km^2 (0.4m square miles), Ethiopia is the 27th largest country in the world, comparable in size to Bolivia.

The Ethiopian Highlands cover most of the country and ensure that the climate is much cooler than would be expected, given Ethiopia's latitude. As a result, there is also wide diversity in terms of vegetation, from large, fertile jungles in the west to desert and semidesert in the surrounding lowlands.

Most of the country's major cities (including Addis Ababa) are situated at elevations of c 2,000-2,500m, which ensures that it experiences a mild climate with fairly uniform year-round temperatures.

The predominant climate type is characterised as tropical monsoon, although there is wide topographic-induced variation.

Economy

By GDP, Ethiopia now has the largest economy in east and central Africa. According to the IMF, it is also one of the fastest expanding economies in the world, with growth of over 10% from 2004 to 2009. In 2007 and 2008, it was Africa's fastest growing non-oil dependent economy.

In mid-2011, two consecutive missed rainy seasons precipitated the worst drought in east Africa for 60 years, causing inflation to reach 40% and fermenting high public sector wage increases (among other things). Growth has since decelerated, but is projected to stabilise at c 6.5% pa.

In spite of fast growth in recent years, in absolute terms, GDP per capita is one of the lowest in the world. Agricultural productivity is low and the country is still frequently beset by droughts, despite the fact that 14 major rivers rise in its highland plateau, including the Blue Nile. Despite being frequently referred to as 'the water tower of eastern Africa', just 1% of its water resource is used for power production and only 1.5% for irrigation.

It is the view of the current government that maintaining state ownership in certain sectors is vital to ensure that infrastructure and services are extended into rural Ethiopia, which would not otherwise be lucrative enough economic propositions to be attractive to private enterprises.

The Ethiopian constitution defines the right to own land, which belongs to 'the state and the people'. Citizens may lease land for up to 99 years, but are unable to mortgage or sell it. Renting of land for a maximum of twenty years is allowed in an effort to ensure that land is directed to the most productive users. However, land distribution and administration is reported to be a sector of the economy in which corruption is visceral.

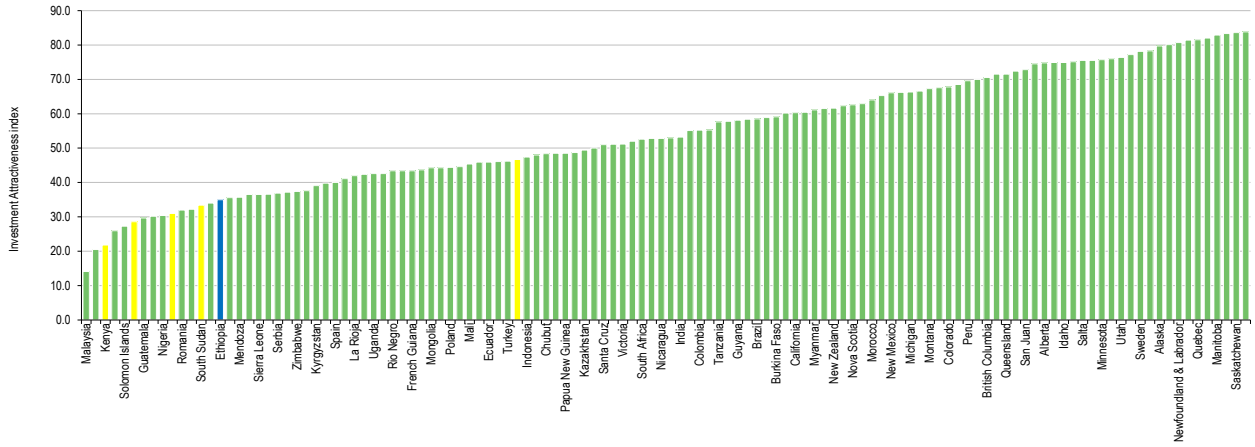
Mining

Annual gold production from Ethiopia is in the order of 344koz pa, mostly from artisanal sources. Despite its prominent position covering c 220,000km^2 of the ANS, Ethiopia has suffered from an historic lack of exploration and mining investment, with the result that the only operating mine in the country is Lega Dembi in the south of the country, with annual output of c 150koz pa.

However, the government is keen to reverse this historic oversight and also to attract investment, with the result that it is in the process of liberalising the investment environment. As a result, mining investment has grown from c US$100m in 2003 to US$1.3bn in 2012, with more than 300 exploration licences (ELs) being active. Typically, these are held by junior companies exploring for gold, but also include majors such as Newmont and Goldfields.

Internationally, Ethiopia ranks 108 out of 122 for mining investment attractiveness, according to the 2014 Fraser Institute survey (below). While towards the bottom end of the sample however, Ethiopia nevertheless ranks higher than any other countries in northeastern Africa (eg Kenya, Egypt, Sudan and South Sudan), with the single exception of Eritrea.

Exhibit 8: Fraser Institute index of attractiveness for mining investment



Source: Fraser Institute

People and population

Ethiopia's population has grown from 18.4m in 1950 to 87.9m in 2014, with the result that it is the most populous landlocked country in the world, as well as the second most populous nation in Africa after Nigeria, and ahead of South Africa. It is a multilingual nation with around 80 languages spoken, the two largest of which are the Oromo and Amhara. The lingua franca of business however is English.

A slight majority of the population is Christian, while around a third is Muslim (primarily Sunni).

Assumptions

With collaboration from Senet, Golders, Epoch and Snowden, an updated DFS on the Tulu Kapi project was completed in July 2015. Capex for the project was estimated to be US$176m. However, the study was completed as if Tulu Kapi would be owner-operated. In consideration of the need to minimise initial capital expenditure as well as the more exacting technical requirements of the selective mining campaign, KEFI management has decided to pursue a contract mining business plan, with the result that it estimates that development capex will reduce to US$135.1m, composed of pre-strip mining (US$10.6m), processing (US$72.2m), infrastructure (US$17.8m), tailings (US$8.2m), relocation (US$7.8m) and US$18.4m in owners and indirect costs. On top of this, the company will have to inject US$6m in working capital. Overall, pre-production capex equates to US$1,396 per annual oz of gold production at full capacity, or US$112.6/t of ore processed. In compensation, mining costs have been increased from a life-of-mine average of US$2.51/t mined to US$3.21/t.

A summary of the other principal assumptions that we have made in our evaluation of KEFI Minerals is as follows.

Exhibit 9: Tulu Kapi assumptions

	2017e	2018e	2019e	2020e	2021e	2022e	2023e	2024e	2025e	2026e	2027e	2028e	2029e	2030e
Waste (kt)	7,281	12,922	15,446	17,368	16,688	17,091	14,120	7,462	3,728	1,740	353	0	0	0
Stripping ratio	9.1	10.8	12.9	14.5	13.9	14.2	11.8	6.2	3.1	1.4	0.3	0.0	0.0	0.0
Ore processed (kt)	**800**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**1,200**	**193**
Grade (g/t)	1.95	3.01	3.33	2.27	2.60	2.63	2.91	2.68	2.49	1.64	0.86	0.70	0.70	0.68
Contained gold (koz)	50.2	116.1	128.6	87.7	100.1	101.4	112.2	103.3	95.9	63.4	33.3	26.9	26.9	4.3
Recovery (%)	92.63	92.92	92.97	92.43	92.62	92.08	90.39	89.47	89.88	90.54	90.89	91.41	89.80	88.78
Recovered gold (koz)	46.5	107.9	119.5	81.1	92.7	93.4	101.5	92.4	86.2	57.4	30.2	24.6	24.1	3.8
Operating costs														
Mining (US$/t mined)*	2.81	3.39	3.66	2.01	2.75	2.94	3.50	4.14	4.67	5.36	4.85	3.00	3.02	9.70
Milling (oxide)	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98	9.98
Milling (fresh ore)	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63	7.63
Milling (hard ore)	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60	9.60
Total (US$/t)	43.69	53.59	64.37	44.82	54.60	58.75	59.62	45.25	33.99	27.37	19.01	13.61	15.06	23.92
Gold price (US$/oz)	1,347	1,408	1,483	1,467	1,409	1,404	1,389	1,379	1,398	1,423	1,431	1,439	1,409	1,395
Sustaining capex (US$000's)	3,054	5,927	2,649	3,350	2,248	800	0	0	0	0	0	0	0	0

Source: KEFI Minerals, Edison Investment Research. Note: *Includes waste.

Additional costs include the 7% mining royalty, US$8.5m in life-of-mine offsite costs and an US$11.9m provision for closure costs. On-site general and administrative costs are forecast to be US$7.1m pa during full mining and processing operations and US$3.6m pa while reprocessing stockpiles. Head office costs are assumed to amount to £2.0m pa. A carried-forward tax loss of US$60m has also been applied to future pre-tax profits before tax is payable.

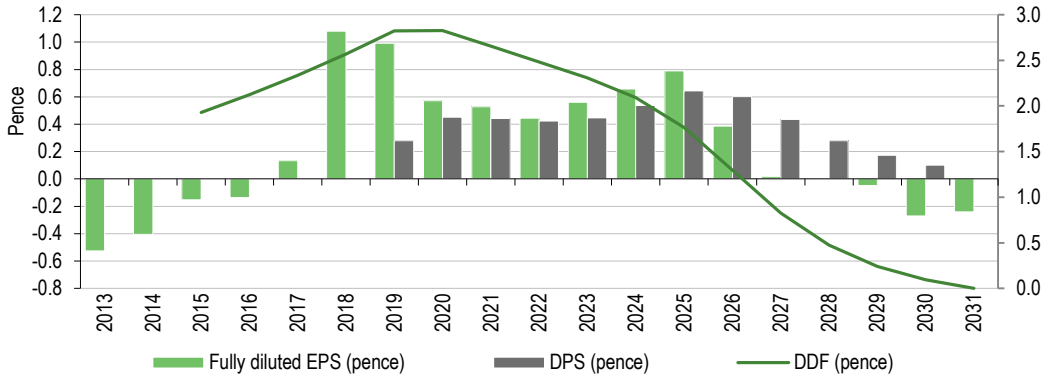
In line with management guidance on various scenarios being considered, funding for the project is deemed to be provided in the form of a US$100m streaming agreement (providing the financing company with a 16% internal rate of return on its investment in US dollar terms from initiation in FY16 – Edison estimate) and a US$10m equity raise (assumed in 2015) with the balance being provided in the form of conventional debt (attracting an 11% rate of interest), peaking in FY17.

Valuation

On the basis of the above assumptions and converted at the appropriate foreign exchange rate of US$1.55/£, we calculate that KEFI is capable of generating average after-tax earnings of c £20m pa for eight years, from 2018 to 2025, or c 0.70p per share on a fully diluted basis, and free cash flow of c £32m pa on a 100% basis. Without taking into account the anticipated streaming deal and using a 10% discount rate, we estimate KEFI's unfinanced NPV at £68.0m, or 3.9p per diluted share. The project's unlevered IRR comes at 26.1%.

By contrast, we estimate that investors in KEFI's shares, at a price of 0.75p/share, may expect maximum potential dividends (cash flow after investments and funding) in the order of 0.46p/share, which are valued at 1.93p/share when similarly discounted at 10% on a fully funded and diluted basis, rising to 2.82p/share in FY19. An investment in KEFI shares at a price of 0.75p per share will generate a return of 25.9% over 17 years to 2031.

Exhibit 10: Edison estimate of life of mine KEFI EPS and (maximum potential) DPS



Source: Edison Investment Research. Note: DDF = discounted dividend flow.

Sensitivities

Quantitatively, our DDF valuation of 1.93p is most sensitive to the gold price, cash costs and the discount rate inputs, as shown in Exhibits 11 and 12 below.

Exhibit 11: Discounted dividend valuation sensitivity to gold prices and costs

Valuation (pence per share)		Gold price					
		Spot price*	-20%	-10%	Base case	+10%	+20%
	+20%	0.00	0.00	0.00	0.67	1.62	2.58
	+10%	0.00	0.00	0.36	1.29	2.26	3.23
Cash costs	Base case	0.00	0.04	0.96	**1.93**	2.91	4.89
	-10%	0.40	0.62	1.59	2.58	3.56	4.56
	-20%	1.18	1.24	2.23	3.23	4.23	5.22

Source: Edison Investment Research. Note: *US$1,100/oz.

Exhibit 12: Discounted dividend valuation relative to discount rate

Discount rate (%)	0%	5%	10%	15%	20%	25%	30%
Valuation (pence)	4.95	3.04	**1.93**	1.26	0.85	0.58	0.40

Source: Edison Investment Research

Financials

KEFI had £0.6m on its balance sheet as at 31 December 2014, since which time it has raised an additional £4.4m (before costs) via the issue of 509.1m shares. This compares to an historic cash burn rate of £6.3m in FY14. For the purposes of our valuation and with management guidance, we have assumed a further equity raise of US$10m in FY15 via the issue of an additional 859.4m shares at a price of 0.75p/share. Thereafter, financing the project is assumed to be via a US$100m streaming deal and conventional debt (peaking in FY17). As a result, KEFI will be developing Tulu Kapi from a relatively small equity capital base. On the basis of these assumptions, we estimate that KEFI will have a maximum conventional debt funding component of £22.8m, which will equate to a 62.4% leverage (debt/[debt+equity]) ratio in FY17. Including the streaming deal, we estimate that the company's maximum funding requirement will be £84.3m, equating to a leverage ratio of 85.9%.

Exhibit 13: Financial summary

£'000s	2013	2014	2015e	2016e	2017e
December	IFRS	IFRS	IFRS	IFRS	IFRS
PROFIT & LOSS					
Revenue	0	0	0	0	37,318
Cost of Sales	(927)	(2,071)	(1,971)	(1,990)	(24,499)
Gross Profit	(927)	(2,071)	(1,971)	(1,990)	12,819
EBITDA	(927)	(2,071)	(1,971)	(1,990)	12,819
Operating Profit (before amort. and except.)	(927)	(2,189)	(2,131)	(2,790)	8,362
Intangible Amortisation	0	0	0	0	0
Exceptionals	(442)	(379)	0	0	0
Other	0	0	0	0	0
Operating Profit	(1,369)	(2,568)	(2,131)	(2,790)	8,362
Net Interest	4	(413)	10	57	(3,523)
Profit Before Tax (norm)	(923)	(2,602)	(2,121)	(2,733)	4,839
Profit Before Tax (FRS 3)	(1,365)	(2,981)	(2,121)	(2,733)	4,839
Tax	0	0	0	0	0
Profit After Tax (norm)	(923)	(2,602)	(2,121)	(2,733)	4,839
Profit After Tax (FRS 3)	(1,365)	(2,981)	(2,121)	(2,733)	4,839
Average Number of Shares Outstanding (m)	493.4	952.4	1,919.6	2,603.8	2,603.8
EPS - normalised (p)	(0.4)	(0.4)	(0.2)	(0.1)	0.1
EPS - normalised and fully diluted (p)	(0.4)	(0.4)	(0.2)	(0.1)	0.1
EPS - (IFRS) (p)	(0.3)	(0.3)	(0.1)	(0.1)	0.2
Dividend per share (p)	0.0	0.0	0.0	0.0	0.0
Gross Margin (%)	-	-	-	-	34.4
EBITDA Margin (%)	-	-	-	-	34.4
Operating Margin (before GW and except.) (%)	-	-	-	-	22.4
BALANCE SHEET					
Fixed Assets	7,152	9,299	9,933	62,761	93,892
Intangible Assets	6,900	9,139	9,133	9,127	8,145
Tangible Assets	252	160	800	53,634	85,747
Investments	0	0	0	0	0
Current Assets	4,014	1,061	3,906	13,669	6,263
Stocks	0	0	0	3,110	3,110
Debtors	655	335	0	3,067	3,067
Cash	3,279	640	3,820	7,406	0
Other	80	86	86	86	86
Current Liabilities	(3,363)	(3,202)	0	(1,852)	(1,852)
Creditors	(3,363)	(3,202)	0	(1,852)	(1,852)
Short term borrowings	0	0	0	0	0
Long Term Liabilities	0	0	0	(64,454)	(86,107)
Long term borrowings	0	0	0	0	(24,621)
Other long term liabilities	0	0	0	(64,454)	(61,486)
Net Assets	7,803	7,158	13,839	10,124	12,196
CASH FLOW					
Operating Cash Flow	(1,424)	(2,006)	(4,838)	(6,315)	12,819
Net Interest	4	(413)	10	57	(3,523)
Tax	0	0	0	0	0
Capex	(877)	(3,133)	(1,776)	(54,610)	(36,571)
Acquisitions/disposals	(1,083)	(750)	0	0	0
Financing	4,735	3,663	9,784	0	0
Dividends	0	0	0	0	0
Net Cash Flow	1,355	(2,639)	3,180	(60,867)	(27,275)
Opening net debt/(cash)	(1,924)	(3,279)	(640)	(3,820)	57,048
HP finance leases initiated	0	0	0	0	0
Other	0	0	0	0	0
Closing net debt/(cash)	(3,279)	(640)	(3,820)	57,048	84,323

Source: Company sources, Edison Investment Research

Contact details	Revenue by geography
23 Ezekia Papaioannou Street, Office 21, 2nd Floor, Nicosia. Cyprus 1075 +357 22 25 61 61 KEFI-minerals. com	N/A

Management team

Executive Chairman: Harry Anagnostaras-Adams	Non-Executive Deputy Chairman : Ian Plimer
Harry Anagnostaras-Adams qualified as a chartered accountant while working with PricewaterhouseCoopers and has a MBA from the Australian Graduate School of Management. He has overseen a number of business start-ups, both in the mining industry (eg KEFI and EMED Mining) and outside (eg Citicorp Capital Investors, Pilatus Capital and Cyprus-based Semarang Enterprises) in the capacity of chairman, deputy chairman or MD.	Ian Plimer is Emeritus Professor at The University of Melbourne where he was professor and head of the School of Earth Sciences (1991-2005). He was professor of geology at the University of Newcastle (1985-91) and professor of mining geology at the University of Adelaide (2005-12). Inter alia, he serves on the boards of Silver City Minerals and Niuminco Group (ASX-listed) and Hancock Prospecting, TNT Mines and Perth Resources (unlisted).
Exploration director: Jeff Rayner	**Non-executive director: John Leach**
Jeff Rayner is a geologist with more than 24 years' experience in gold exploration and mining in Australia, Europe and Asia. He started his career in Australia with BHP Gold and later Newcrest Mining. He was involved in the early exploration discovery of the Cracow, Gosowong and Cadia Hill deposits (all of which are operating mines), as well as Monte Ollasteddu and Biely Vrch. He joined EMED in 2006 and became MD of KEFI in November 2006 and exploration director in October 2014. He is a member of the Australasian Institute of Mining and Metallurgy and of the Society of Economic Geologists.	John Leach has over 25 years' experience in senior executive positions in the mining industry internationally and is currently also the CFO of EMED Mining. He holds a BA (economics) degree and an MBA. He is a member of the Institute of Chartered Accountants (Australia), a member of the Canadian Institute of Chartered Accountants and a Fellow of the Australian Institute of Directors.

Principal shareholders	(%)
Odey Asset Management	14.0
Standard Life	7.0
H. Anagnostaras-Adams Esq	4.7
Ausdrill International Pty	4.3
EMED Mining	4.2
BlackRock	2.3
City Financial Investments	2.2
J. Rayner Esq	0.8

Companies named in this report

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