

KALLAK

A real asset, and a real opportunity
to transform Jokkmokk

A presentation by Copenhagen Economics prepared for Beowulf Mining plc
7 September 2017

Disclaimer

The presentation has been prepared by Beowulf Mining Plc (the "Company" or "Beowulf") solely in connection with providing information on the Company and may be subject to change. It is being issued only to certain persons on the basis that they fall within one of the exemptions contained in the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005 (as amended) (the "Order") as referred to below. The contents of this presentation have accordingly not been approved by an authorised person for the purposes of section 21 Financial Services and Markets Act 2000 ("FSMA").

This presentation and its contents are exempt from the general restriction (in section 21 FSMA) on the communication of invitations or inducements to engage in investment activity on the grounds that it is being issued only to (i) persons who have professional experience in matters relating to investments who fall within the definitions of investment professionals as defined in Article 19 of the Order (Investment professionals), (ii) persons who fall within Article 43 of the Order (Members and creditors of certain bodies corporate), (iii) and persons who fall within Article 49 of the Order (high net worth companies, unincorporated associations etc). Persons not falling within these exemptions should not rely or act upon this presentation and in consideration of receipt of this presentation each recipient warrants and represents that he or it is a person falling within that description.

This presentation does not constitute or form part of any offer or invitation to purchase, sell or subscribe for, or any solicitation of any such offer to purchase, sell or subscribe for, any securities in the Company nor shall this presentation or any part of it, or the fact of its distribution, form the basis of, or be relied on in connection with, any contract therefore.

No reliance may be placed, for any purposes whatsoever, on the information contained in this presentation or on its completeness and this presentation should not be considered a recommendation by the Company, Cantor Fitzgerald Europe or any of their respective affiliates in relation to any purchase of or subscription for securities of the Company. The content of this Presentation has not been verified and has not been approved by an authorised person. Reliance on this document for the purpose of engaging in any investment activity may expose you to a significant risk of losing all of the property invested or of incurring additional liability. If you are in any doubt about this document, you should consult an appropriate independent advisor.

Neither this presentation nor any copy of it may be (i) taken or transmitted into the United States of America, (ii) distributed, directly or indirectly, in the United States of America or to any US person (within the meaning of regulations made under the Securities Act 1933, as amended), (iii) taken or transmitted into or distributed in Canada, Australia, the Republic of Ireland or the Republic of South Africa or to any resident thereof, or (iv) taken or transmitted into or distributed in Japan or to any resident thereof. Any failure to comply with these restrictions may constitute a violation of the securities laws or the laws of any such jurisdiction. The distribution of this document in other jurisdictions may be restricted by law and the persons into whose possession this document comes should inform themselves about, and observe, any such restrictions or other applicable legal requirements.

This presentation includes statements that are, or may be deemed to be, "forward-looking statements". Such forward-looking statements are based on assumptions and estimates and involve risks, uncertainties and other factors which may cause the actual results, financial condition, performance or achievements of the Company, or industry results to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Given these uncertainties, prospective investors are cautioned not to place any undue reliance on such forward-looking statements. No representation or warranty express or implied is made as to the fairness, accuracy, completeness or correctness of the presentation or opinions contained therein and each recipient of the presentation must make its own investigation and assessment of the matters contained therein. In particular, but without prejudice to the generally of the foregoing, no representation or warranty is given, and no responsibility of liability is accepted, as to the achievement or reasonableness of any future projections or the assumptions underlying them, forecasts estimates or statements as to loss howsoever arising from any use of, or in connection with the presentation. No responsibility or liability whatsoever is accepted by any person for any loss howsoever arising from any use of, or in connection with the presentation or its contents or otherwise arising in connection therewith. In issuing the presentation, the Company does not undertake any obligation to update or to correct any inaccuracies which may become apparent in the presentation.

An invitation to potential partners who have a stake in Kallak

KALLAK'S POTENTIAL

Various, independent estimates all indicate real and significant potential for Kallak to create new jobs and generate substantial tax revenues. Currently, Jokkmokk needs more investment, new enterprises and jobs. This is causing people to leave, looking elsewhere for opportunities, resulting in a declining population.

Mining the Kallak North deposit has the potential to provide around 250 direct jobs and SEK 600m in additional tax revenues to the municipality of Jokkmokk over 14 years.

If the mine life is extended with the Kallak South deposit, then SEK 1bn in additional tax revenues could be generated over 25 years.

Past experience suggests that a well-engineered plan is essential, so that the local community reaps the benefits of Kallak's potential. Beowulf believes that the case of Kallak and Jokkmokk is no different: the full potential benefits are likely *not* to materialise on their own, but through partnership and collaboration.

UNLOCKING KALLAK'S POTENTIAL

That is why Beowulf invites the municipality, commercial partners, regional government, relevant authorities and regulators, landowners, members of the Jokkmokk and Saami communities, and other interested partners, who share an interest in Kallak, to partner and collaborate, to develop and work together towards common goals: establishing the foundations for Kallak's success, and the realisation of a thriving, diversified and sustainable economy for Jokkmokk, with benefits spilling over to Norrbotten and the country.

Kallak can create opportunities, skilled jobs, reduce youth unemployment, harness Swedish innovation in the design and engineering of the project, adopting Sweden's fossil free goal, and revitalise Jokkmokk.

Unlocking Kallak's full potential, means that everyone with a stake in the project, needs to get involved, contribute, so that synergies between partners can be maximised. We can then get more out of the project.

As steward of the asset, Beowulf is committed to facilitate the processes necessary to articulate the goals for each partner, and to drive the partnerships towards achieving the goals.

This is Beowulf's invitation for all partners to come together, to unlock Kallak's potential.

BEOWULF'S PHILOSOPHY

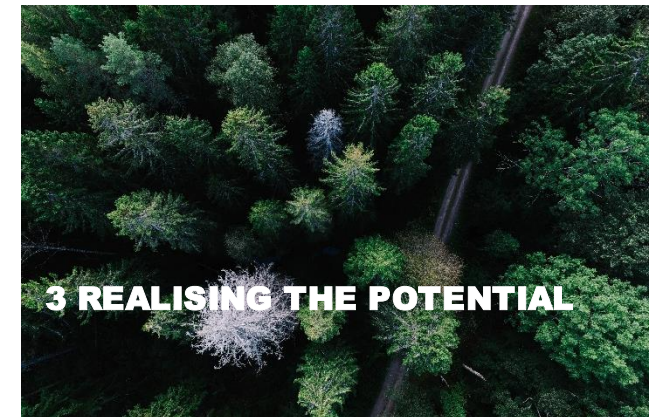
Beowulf's mission statements include becoming a local partner and delivering responsible development. Beowulf will facilitate the development of a modern and sustainable mining operation, but believes partners have a role to play in maximising social gains, and ensuring Jokkmokk and the region have a bright future. The role of Beowulf is only one part in the 'Big Picture' positive impact that Kallak will make.

The Company has already shown its commitment to the project, investing over SEK 72m, building trust locally, and nascent partnerships. The Company looks at the full life cycle of the mining project, with the goal being a thriving, diversified and sustainable economy for the people of Jokkmokk.

In this summary presentation, with the support of Copenhagen Economics, Beowulf has made the effort to outline concrete suggestions for partnerships, processes and the benefits of real collaboration: structured processes with transparent goals.

Kurt Budge, CEO of Beowulf Mining Plc.

Contents



An aerial photograph of a dense forest. A light-colored road or path curves through the middle of the image, separating the forest into two halves. The trees are mostly evergreens, with some deciduous trees showing yellow and orange foliage. The lighting is bright, creating strong shadows and highlights on the forest canopy.

PAST AND PRESENT

Photo by [Geran de Klerk](#) on [Inspirosh](#)

What is Kallak?

A REAL ASSET...

Kallak is a quality magnetite iron ore deposit located in Jokkmokk Municipality, Norrbotten, northern Sweden. The project is being developed by Jokkmokk Iron Mines AB ("JIMAB"), a 100% owned subsidiary of Beowulf Mining Plc, which is listed in both Stockholm and London, and is 57,4% owned by Swedish shareholders.

Kallak was discovered by the Geological Survey of Sweden ("SGU") in 1947 and was, in 2013, designated as an Area of National Interest ("ANI") due to its potential importance for the security of supply for Sweden.¹

In that sense, Kallak is deemed by the SGU as a strategic and valuable asset, worth protecting for its mining potential, alongside the producing mines of LKAB (Kiruna and Malmberget) to maintain Sweden's leading position as the single largest iron ore producer in Europe.

... AND A REAL OPPORTUNITY

JIMAB has applied for an exploitation concession to earn the mining rights for Kallak North, one of three known mineralised targets, which also include Kallak South and other Parkijaure licences. A mine at Kallak will make a positive economic impact on Jokkmokk, creating direct and indirect employment, providing the stimulus for new local and regional enterprises, and supporting Jokkmokk Municipality through tax revenues for a period of up to 25 years or more.

FACILITATED BY BEOWULF

To date, SEK 72m has been invested in Kallak, a significant commitment by JIMAB towards delivering a modern and sustainable mining operation, in partnership with the local community of Jokkmokk.

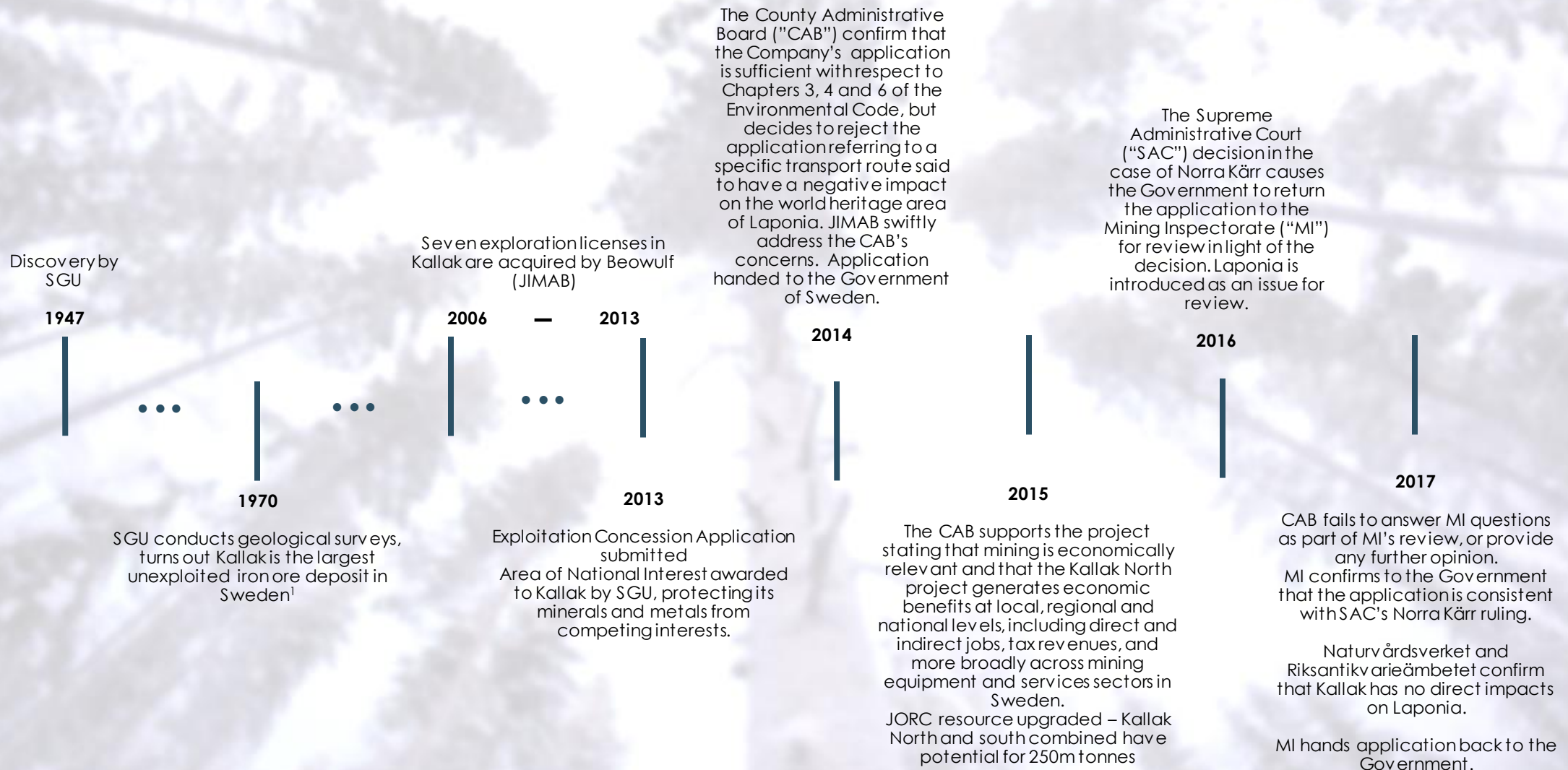
Kallak – a quality asset and an exciting opportunity for Jokkmokk



Photo: Curtesy of Beowulf Mining Plc.

Source: 1) SGU (2013): Beslut 2013-02-19 Utpekande och detaljgränsning av riksintresset Kallak i Jokkmokks kommun, Norrbottens län, enligt 3 kap. 7 § andra stycket i miljöbalken.

Story of Kallak – SEK 72m invested, potential 250m tonnes iron ore



1) Bergsstaten (2015) Yttrande Dnr BS 22-559-2013

Jokkmokk today

A DECLINING POPULATION

Jokkmokk is experiencing a declining and aging population. Compared to 2000, the number of inhabitants has decreased by 15%. About one fourth of the people moving from Jokkmokk are young people between 18-24 years of age.

Unless this trend is reversed, it will, over time, result in a decrease in the working-age population and fewer people to cover costs of welfare, benefits, schools, health care etc.

In 2015, the total work force of Jokkmokk amounted to 2 419 people, of which 427 commuted out of the municipality to work (and 267 commuted in).¹

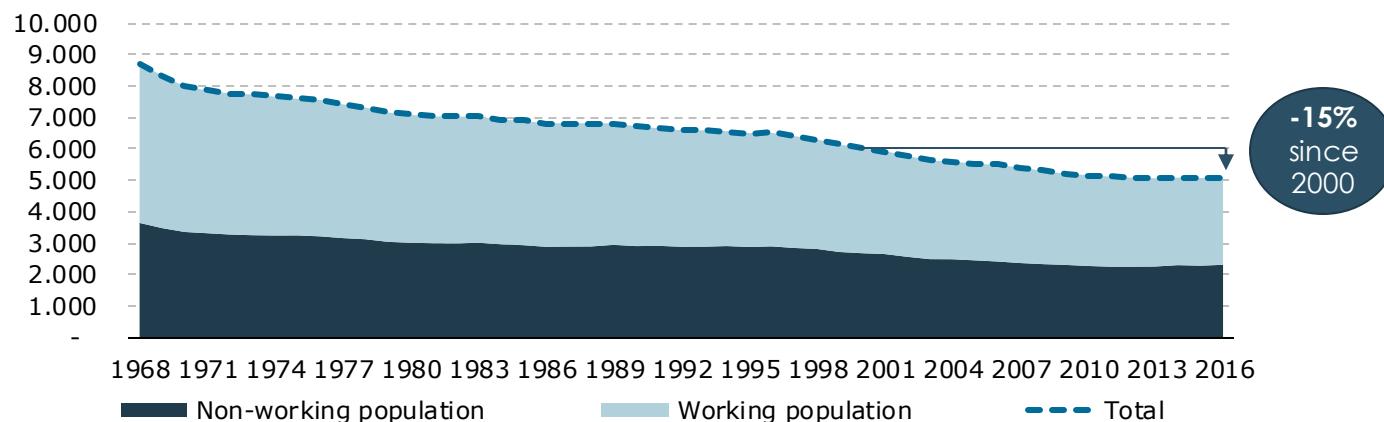
LACK OF LOCAL JOBS AND BUSINESS OPPORTUNITIES

The need to commute out of the municipality to find work may reflect a lack of job opportunities locally. Unemployment rates are higher in Jokkmokk than in Norrbotten generally, and in Sweden as a whole (March 2017). Especially, youth unemployment was high (12%) compared to the rest of Sweden (8%).²

Compared to the rest of Sweden, public sector employment is dominant in Jokkmokk (44% compared to 33%), with the biggest employers being the municipality of Jokkmokk, Vattenfall and Norrbotten County Council.³

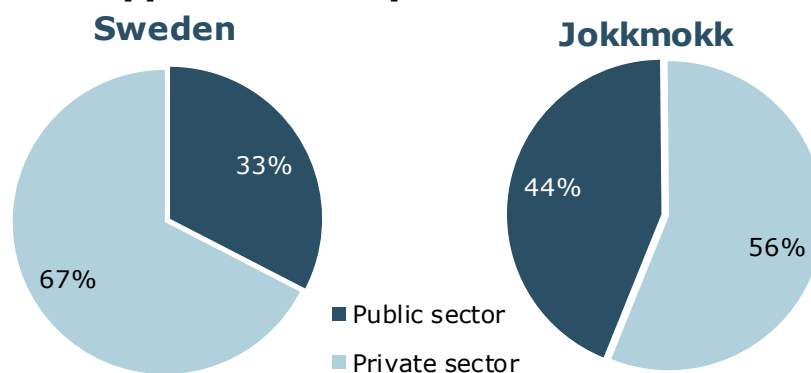
In 2015, inhabitants of Jokkmokk ranked job opportunities very low (35) compared to the average for municipalities in Sweden with fewer than 10 000 inhabitants (42).⁴

Negative population growth for many years



Source: Statistiska centralbyrån; Population Statistics

Business structure implies fewer than average work opportunities in private sector



” Det behövs fler gruvor i Norrbotten. Jag hoppas verkligen att det blir en gruva i Jokkmokk (...). Får man de här på plats så skapar det sysselsättning, industriell utveckling och skapar tjänsteföretag. Sven-Erik Bucht, Landsbygdsminister P4 Norrbotten 2014-01-21

” Lokal tillväxt och investeringsklimat går mot en ny istid. Fortsätter det kommer Jokkmokk frysa ihjäl. Robert Bernhardsson Kommunstyrelsens ordförande (S), Jokkmokk NSD Debatt 2017-04-07

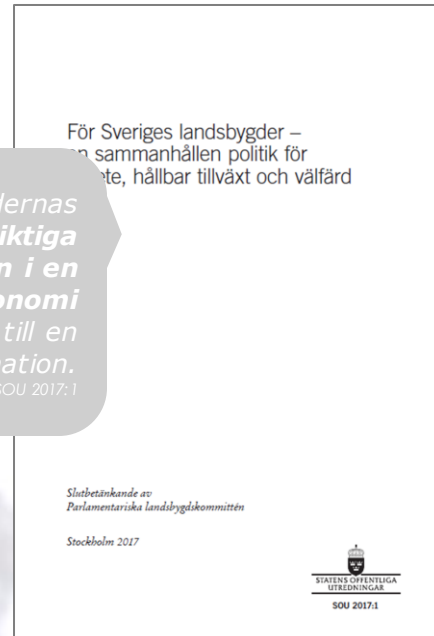
Note: Share of private and public sector employment (16-64 year olds) in Jokkmokk municipality in 2015

Source: Statistics Sweden; The Swedish Occupational Register

Source: 1) Statistics Sweden 2017, 2) Jokkmokk Kommunfakta 2017, 3) Statistics Sweden; Business register 2014, 4) Statistics Sweden; Medborgarundersökning hösten 2015. Statistics Sweden surveys citizen 'satisfaction' on a scale from 0-100. Ratings below 40 can be interpreted as "not satisfying". Ratings above 55 can be interpreted as "Satisfied", and ratings of 75 or higher can be interpreted as "very satisfying".

A clear role for the mining industry in future growth and development

” Bland annat är landsbygdernas natur- och kulturmiljöresurser **viktiga för att ta Sverige in i en biobaserad och fossilfri ekonomi** och för att göra Sverige till en utvecklad besöksnation.
SOU 2017:1



” Genom ett långsiktigt hållbart användande av landets mineralresurser, i samklang med miljö-, natur- och kulturvärden, skapas tillväxt i hela landet.
Sveriges mineralstrategi (2013)



” Etableringar [kan] bidra till mer hållbar och diversifierad tillväxt lokalt och regionalt, som kan främja utvecklingen i andra sektorer och branscher
Sveriges mineralstrategi (2013)

Sveriges mineralstrategi

För ett hållbart nyttjande av Sveriges mineraltillgångar som skapar tillväxt i hela landet.

” Näringsens och regionernas kompetensförsörjning ska tryggas i ett nära samarbete mellan näringen och aktörer på lokal, regional och nationell nivå.
Sveriges mineralstrategi (2013)



” Vision 2025: Norrbotten och Västerbotten har utvecklat och stärkt sin ledande ställning inom **innovativ och hållbar utveckling av mineralsektorn**, såväl nationellt som internationellt.
Regional Mineralstrategi för Norrbottens och Västerbottens län - 2025

” Med gruvnäringen som nav stimuleras **teknologisk utveckling och tekniskt lärande**.
Regional Mineralstrategi för Norrbottens och Västerbottens län - 2025

An aerial photograph of a dense forest, likely a coniferous one, with a dirt road running horizontally across the middle. The trees are mostly green, with some bare, greyish branches visible on the left side. The text "THE POTENTIAL" is overlaid in white, bold, sans-serif capital letters on the left side of the image.

THE POTENTIAL

Photo by Geran de Klerk on Unplash

The Kallak base case

20+ YEARS OF BUSINESS ACTIVITY

Kallak North is a quality magnetite iron ore deposit with a 122,9m tonne resource, indicated and inferred.

Beowulf is focused on developing a modern and sustainable mining operation, with concentrate production from Kallak North lasting for a minimum of 14 years.

The final product will be premium iron ore

concentrate, up to 71% iron content, with the Company's focus on European & Middle Eastern markets for pellet feed/Direct Reduction Iron ("DRI") facilities and chemical grade uses.

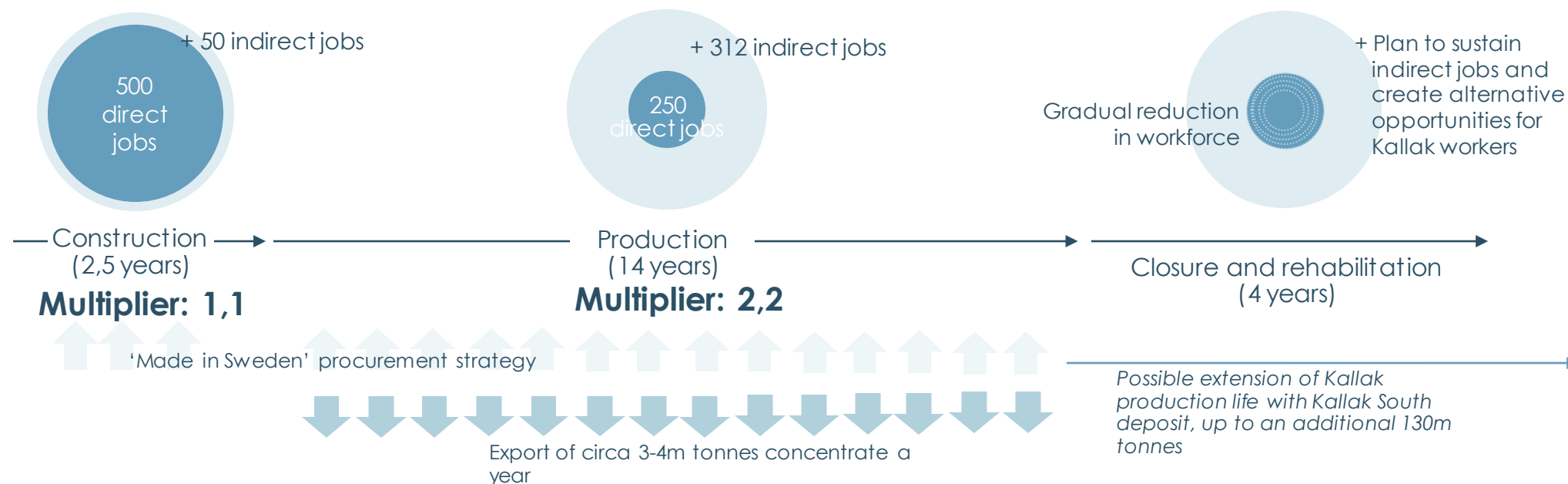
JOBS

The project requires a workforce of around 500 people in the 2,5 year long construction phase and around 250 people permanently during the 14 year production phase. Relative to the size of the labour market in Jokkmokk, 250 jobs is massive and

equivalent to a demand shock of more than 50 000 jobs in Stockholm.

Significantly, the production phase will support a large number of indirect jobs in Jokkmokk and the surrounding region through the purchase of goods and services locally. Researchers from Luleå Tekniska Universitet ("LTU") have estimated that for every job at the mine, another 1,2 jobs will be created in Jokkmokk municipality.

The Kallak project (north deposit) – Job creation in Jokkmokk



Note: Indirect (and direct) jobs reported are for Jokkmokk. Indirect jobs in Norrbotten are estimated by LTU to be even higher. Here we only report local effects in Jokkmokk to remain conservative. Source: LTU (2013) Samhällsekonomisk effektstudie av gruvprojektet Kallak, MKB (2014)

Transforming Jokkmokk – a thriving, diversified and sustainable economy

A SHIFT IN BUSINESS STRUCTURE

Kallak will become a major employer in Jokkmokk; about half the size of the municipality.¹

Kallak will bring almost as much employment to Jokkmokk every year as all of Jokkmokk's most typical workplaces (1-4 employees) together. Last year, only 3 new 'typically sized' employers established themselves in Jokkmokk.² All else equal, Kallak will move the business structure more towards the country average of 67% private

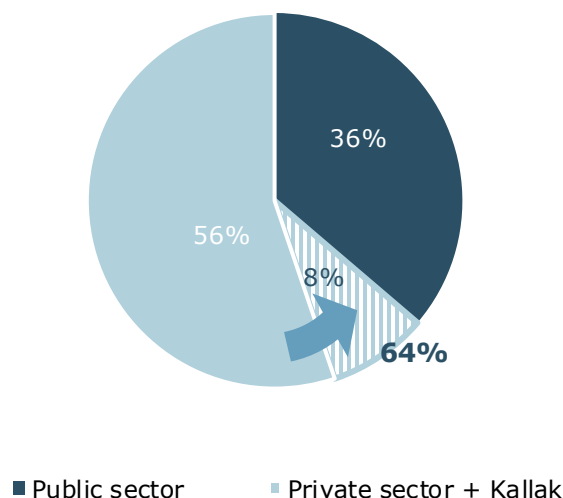
sector jobs. Expansion with local suppliers and businesses can add to this development even further.

MORE JOBS, MORE TAXES

Estimates of Kallak's tax contribution to the municipality of Jokkmokk range between SEK 19-63m a year, or SEK 266-882m over the 14 years of production, depending on the assumption on share of locals in the workforce.³

Looking further ahead and at the Kallak North and South deposits combined with a potential global resource of 250m tonnes, Kallak could support a production life of 25 years or more. Assuming yearly taxes of SEK 44m (the mid-point of the SEK 19-63m range), this could mean a total contribution from Kallak to Jokkmokk municipality of more than SEK 1bn, and support the development of an economy that lives well beyond Kallak.

Towards a more diverse business structure



Note: Change in share of public and private employment in Jokkmokk with an 250 people increase in private sector employment, all else equal.

Source: Copenhagen Economics' calculations based on data from Statistics Sweden and LTU (2013) Samhällsekonomskeffektstudie av gruvprojektet Kallak

Tax contribution of Kallak

14 years of mining
at Kallak North



25 years of mining
at Kallak North,
South, and
Parkijaure

Note: Total tax contributions based on a 14 and 25 year production phase with a yearly tax contribution of SEK 44m. SEK 44m is the midpoint between Ramböll's low-scenario estimate of SEK 19m with a 30% local work force and LTU's estimate of SEK 63m with a 100% workforce. Contained in this interval is Ramböll's high-scenario with SEK 40m in taxes a year, corresponding to a 70% local work force.

Source: Ramböll (2015) Samhällsomvandling som följd av eventuell gruvetablering i Jokkmokk, LTU (2013) Samhällsekonomskeffektstudie av gruvprojektet Kallak

Source: 1) 250 jobs versus 575 in 2014 according to Statistics Sweden, Business Register 2) Copenhagen Economics' calculations based on data from Statistics Sweden 2017 and Regionfakta, Norrbotten, 2016. Self-employed are disregarded. 3) Ramböll (2015), LTU (2013).

An aerial photograph of a dense forest. The trees are mostly green, but there is a prominent dead, white tree in the lower-left quadrant. A dirt road or path runs diagonally from the top right towards the bottom center. The text "REALISING THE POTENTIAL" is overlaid in the center in a bold, white, sans-serif font.

REALISING THE POTENTIAL

Photo by Geran de Klerk on Unsplash

Realising the potential of Kallak

THE DEVELOPMENT PHILOSOPHY OF BEOWULF

Estimates from both Ramböll and LTU suggest a potential of 1-1,2 new indirect jobs in Jokkmokk for every direct job at Kallak (i.e. a multiplier of 2-2.2). When taking into account all jobs created nationally from a mine (including both direct, indirect and the so-called induced jobs), Svemin, the industry association of mines, mineral and metal producers in Sweden, estimates a multiplier of 4.¹

History, however, suggests that to maximise the local positive effects of direct investment, **a formal strategy** for sourcing from the local labour, goods and services, and for developing these further, needs to be formulated and initiated.

Beowulf does not believe that the current labour market and business community in Jokkmokk will be able to realise a multiplier in the 2.2 region, without a strategic plan and capacity building.

With an objective to realise the full potential of Kallak in Jokkmokk, Beowulf invites the community, the municipality, county, government and local businesses and business organisations to a structured cooperation with the aim of preparing the labour market, business life and (social) infrastructure for the big investment that Kallak is, while at the same time safeguarding other interests, such as tourism, and the interests of the Saami reindeer herders and their communities.

Beowulf has identified a number of activities that could help prepare Jokkmokk and maximise the likelihood of realising the full potential of Kallak. Similarly, Beowulf has identified a number of potential commercial partners where mutually beneficial strategic partnerships could be formed upon Beowulf receiving the exploitation concession.

Beowulf is committed to local development in close cooperation with other stakeholders and propose a number of concrete dialogue processes that will result in contractual commitments and follow-up over the course of the mining operation, ensuring that local economic potential is reaped (see next slides). Beowulf believes that such processes are currently absent in Sweden.

Source: 1) Svemin (2012) 'Gruvbranschen - en tillväxtmotor för Sverige'

Copenhagen
Economics

Collaboration

VATTENFALL

Mine electrification,
zero-diesel,
zero carbon

#Inlandsbanan

Supply chain
optimisation



LULEÅ HAMN
PORT OF LULEÅ · SWEDEN

Supply chain
optimisation

LULEÅ
TEKNISKA
UNIVERSITET

Innovation,
education partner;
Technical, Environmental,
Political science,
Economics

- Job centres
- Business associations and incubators
- Local businesses and suppliers
- Regional banking/finance e.g. commercial banks, Norrlandsfonden

- Government (local, regional, national)
- Social, Public Infrastructure & Services Planning (Trafikverket)

Source: Copenhagen Economics

Opportunities for partnerships and collaboration

LABOUR MARKET – TASK FORCE *LOCAL JOBS*

2017	+3-9 months	+9-12 months	+12-15 months	+18-24 months	+ 2 years	+2-14 years
Exploitation Concession granted	Workshop(s): Beowulf, municipality, and jobcentre to identify skill set requirements for employment at Kallak and need for skill development of primarily unemployed in Jokkmokk	Task Force Local Jobs: Job centre evaluates skills of unemployed and offer relevant, qualifying training for mining industry	Task Force Local Jobs: Beowulf and jobcentre design vocational training programme Beowulf, jobcentre, and municipality discuss and agree on targets for all stakeholders in Task Force Local Jobs	Task Force Local Jobs: First group of trainees start in vocational training with Beowulf	Task Force Local Jobs: First group finishing vocational training transfers to regular employment at Beowulf Second group of unemployed starts vocational training programme	<i>Evaluation of and reporting on achievements compared to targets</i>

LOCAL SUPPLIERS AND SUBCONTRACTORS - TASK FORCE *'MADE IN SWEDEN'*

2017	+6-12 months	+12-18 months	+18-24 months	+ 2 years	+2-14 years
Exploitation Concession granted	Workshop(s): Beowulf and business associations (e.g. Invest in Norrbotten, Sveriges Näringsliv, Luleå Näringsliv, Strukturm, Norrlandsfonden, North Business Arena) to discuss opportunities for local and regional suppliers and subcontractors	Task Force Made in Sweden: Representatives from Beowulf and business associations sign MoU and make checklist for local businesses to prepare to supply the Kallak project. Business associations offer seminars and counselling to local businesses on how to manage large orders and sustainably grow the business Beowulf, business associations, and municipality discuss and agree on targets for all stakeholders in Task Force 'Made in Sweden'	Task Force Made in Sweden: Beowulf design procurement guidelines to favour local content in procurement, i.e. through partnerships between big national or international suppliers and local ones	Task Force Made in Sweden: Beowulf procures goods and services according to procurement guidelines	<i>Evaluation of and reporting on achievements compared to targets</i>

Opportunities for partnerships and collaboration

STRATEGIC, COMMERCIAL PARTNERSHIPS AND COLLABORATION

2017	+6-9 months	+9-12 months	+ 12 months
Mining concession granted	Beowulf initiate meetings with Vattenfall to discuss opportunities for collaboration Vattenfall and Beowulf identify areas in national and regional strategies where they can play a significant and mutually beneficial role	Beowulf and Vattenfall to further explore and develop mutually beneficial partnerships Research other potential partners, sponsors etc.	Beowulf and Vattenfall define scope of collaboration and sign MoU

Som ett nytt långsiktigt klimatmål ska Sverige **senast år 2045 inte ha några nettoutsläpp av växthusgaser till atmosfären.**

Press release from Swedish Government 15. June 2017

” Bland annat är landsbygdernas natur- och kulturmiljöresurser **viktiga för att ta Sverige in i en biobaserad och fossilfri ekonomi** och för att göra Sverige till en utvecklad besöksnation.

SOU 2017:1



Opportunities for partnerships and collaboration

STRATEGIC, COMMERCIAL PARTNERSHIPS AND COLLABORATION

2017

+6-9 months

+9-12 months

+ 12 months

Mining
concession
granted

Beowulf initiate
meetings with local
suppliers of transport
infrastructure to discuss
opportunities for
collaboration

Identify how Beowulf
can support existing
capacity expansion
plans and become a
strategic partner
(yearly transportation
need for 3-4m tonnes
concentrate)

Identify project
specific needs for
Kallak project and
examine how
Inlandsbanan's and
the port of Luleå can
accommodate
Beowulf to optimise
joint benefits of
partnership

Beowulf and
Inlandsbanan/Port of
Luleå define scope of
collaboration and sign
MoU

Consider possible
interface and
synergies with regional
and national
development plans

” Utvecklingen av infrastruktur,
viktig för att både skapa fler jobb
och nå målet om att bli ett av
världens första fossilfria
välfärdsländer.

Previous minister of infrastructure, Anna Johansson, 24
March 2017

” Regeringen uppdrog den 21
maj 2015 åt Trafikverket att ta fram
ett **Inriktningsunderlag**
inför den långsiktiga
infrastrukturplaneringen för
perioden 2018-2029.

Regeringsbeslut, 2017-03-23

#Inlandsbanan

LULEÅ HAMN
PORT OF LULEÅ · SWEDEN

Next steps – Building momentum

