Ferro Alloy Resources

(LON:FAR)

Low-cost vanadium producer developing the giant Balasausqandiq vanadium deposit in southern Kazakhstan

Overview

- Principal asset is subsoil-use contract for the Balasausqandiq deposit located in the Shieliiskiy Region of Kyzlorda Oblast in southern Kazakhstan; an advanced black shale vanadium development project.
- PFS shows post-tax NPV10 of US$2bn using a flat US$7.50/lb V_2O_5 price with upfront stage 1 capex of US$100m and stage 2 capex of US$225m internally funded, for respective production of 5.6ktpa and 22.4ktpa V_2O_5.
- Unit costs before by-products of US$2.26/lb, US$1.54/lb on a co-product basis and negative US$-1.20/lb on a by-product basis gives the project an industry leading cost base; around 56% lower than current low cost peers.
- Ore body is not titano-vanidiferous-magnetite (TVM) in nature which enables a simpler metallurgical process which does not include high temperature roasting or pre-concentration. This reduces capex and opex by around 60% against TVM peers which account for 80% of current supply. Overall recoveries over 90% versus around 75% for TVM.
- Surface outcropping and large shallow orebody allow low cost mining with a low strip ratio.
- Annual revenue of US$135mpa combined with strong margins result in free cash flow generation of US$103mpa during phase 1; this rises to US$541mpa and US$430mpa in phase 2. 2.2 years of phase 1 cashflow is sufficient to fund phase 2 internally.

Existing Production

- The company currently operates a processing plant which treats brought-in concentrates.
- Near-term expansion of the existing operation, which produced c150t V_2O_5 in 2019, up to 1.5ktpa.
- Aiming to provide cashflow during construction phase.

Pro Mining Jurisdiction

- Kazakhstan is located on the Silk Road Economic Belt with corridor of roads, rail, energy, telecoms and infrastructure linking China to Europe.
- Significant site infrastructure already in place with easy access to roads, rail, power and water.
- Stable jurisdiction with a mining-friendly government.
- FAR has signed an Investment Incentive Agreement with Kazakh Government stipulating 0% tax until 2026 and full property tax exemption until 2024.

Reserves and Resources*

	Tonnes (Mt)	V2O5%	MoO3%	U3O8%
Balausqandiq – Ore Body 1				
Indicated	21	0.67%	0.03%	0.01%
Inferred	2	0.67%	0.03%	0.01%
Combined	**23.0**	**0.67%**	**0.03%**	**0.01%**

*Mineral resource estimates produced in Kazakh State Reserves Committee and Competent Person's Reports (2014), currently being upgraded to full bankable feasibility study

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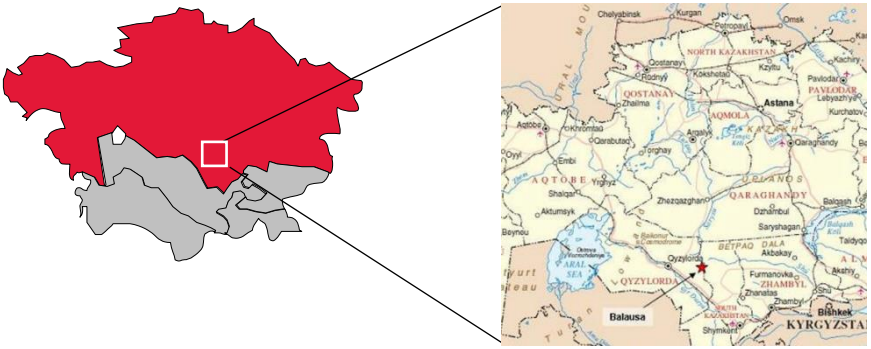
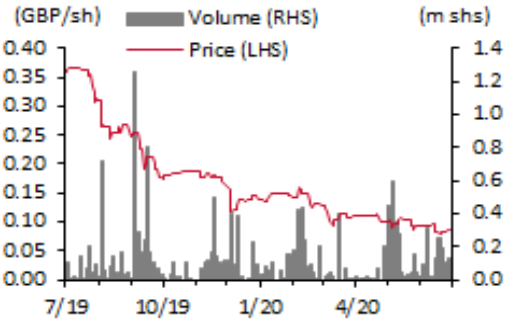
Sites



Financial Performance

Values in US$m unless otherwise stated	
Share Price (GBP)	0.09
Share Price (USD)	0.12
Shares Outstanding (m)	313.0
FDSO	313.0
Market Cap	37.6
Debt	0
Cash & Equivalents	4.6
Enterprise Value	32.9



Key Shareholders & Management

Firm	Stake
Andrey Kuznetsov	22.4%
Nicholas Bridgen	20.7%
Citadel Equity Fund	13.4%

Individual	Position
Nicholas Bridgen	CEO
Andrey Kuznetsov	Operations Director
Chris Thomas	Non-Executive Director
James Turian	Non-Executive Director

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低成本钒生产商在哈萨克斯坦南部开发大型Balasausqandiq钒矿床

摘要

- 主要资产是位于哈萨克斯坦南部克孜勒达州的谢利埃斯基地区的Balasausqandiq矿床的地下使用合同；先进的黑色页岩钒开发项目。
- PFS显示，税后NPV10为$20亿美元，使用固定的$7.50美元/磅V_2O_5（无氧化二钒）价格，第一阶段的资本支出为1亿美元，第二阶段的资本支出为$2.25亿美元，由内部供资，分别生产5.6ktpa和22.4ktpa V_2O_5。
- 副产品前的单位成本为2.26美元/磅，副产品为1.54美元/磅，副产品为负1.20美元/磅，使该项目具有行业领先的成本基础；比目前的"低成本"同行低约56%。
- 矿体本质上不是钛-钒铁磁铁矿（TVM），它使冶金过程变得更简单，且不包括高温焙烧或预浓缩。与TVM同行相比，这降低了约60%的资本支出和运营支出，后者占当前"供应"的80%。总体回收率超过90%，而TVM约为75%。
- 地表露头和大型浅矿体使低剥落率的低成本开采成为可能。
- 年收入为$135mpa美元，加上强劲的利润，可在第一阶段产生$103mpa美元的自由现金流；在第2阶段，这分别上升到541mpa和430mpa。第1阶段2.2年的现金流足以为第2阶段内部供资。

现有生产

- 公司目前经营一家加工厂，处理进口浓缩物。
- 现有运营的近期内扩展，2019年生产了c150t V_2O_5，最高可达1.5ktpa。
- 旨在施工阶段提供现金流。

最佳采矿管辖权

- 哈萨克斯坦位于丝绸之路经济带，公路，铁路，能源，电信和基础设施的走廊将中国与欧洲连接在一起。
- 便捷的道路，铁路，电力和水源已经建立了重要的站点基础设施。
- 稳定的管辖权以及对矿业友好的政府。
- FAR已与哈萨克斯坦政府签署了《投资激励协议》，规定到2026年应缴纳0%的税，到2024年应免征全部财产税。

储量和资源量

	吨位（Mt）	V_2O_5%	MoO_3%	U_3O_8%
Balausqandiq – 矿体1号				
控制	21	0.67%	0.03%	0.01%
推断	2	0.67%	0.03%	0.01%
总	**23.0**	**0.67%**	**0.03%**	**0.01%**

* 哈萨克斯坦国家储备委员会和合格人士报告（2014年）中产生的矿产资源估算，目前在升级为可进行完全银行可行性研究

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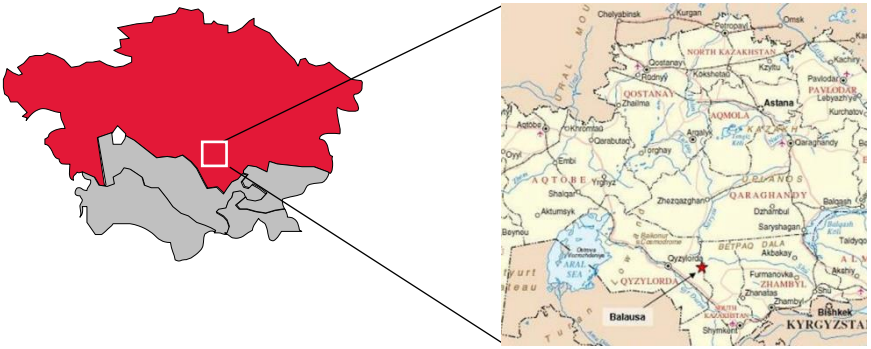
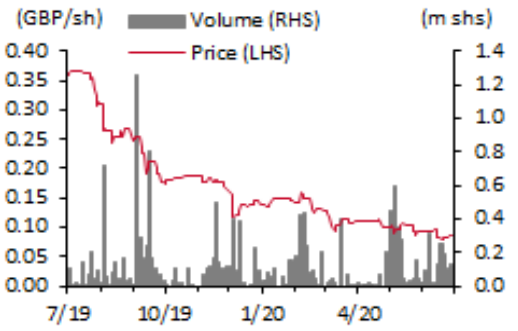
现场地图



财务绩效

除非另有说明，以百万美元为单位的价值	
股票价格 (GBP)	0.09
股票价格 (USD)	0.12
已发行股票 (m)	313.0
完全稀释后的股份	313.0
市值	37.6
债务	0
现金及现金等价物	4.6
企业价值	32.9



最大股东和公司管理

股东	所有权股份
Andrey Kuznetsov	22.4%
Nicholas Bridgen	20.7%
Citadel Equity Fund	13.4%

姓名	职位
Nicholas Bridgen	CEO
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