

DEVELOPMENT OF BALASAUSQANDIQ VANADIUM DEPOSIT

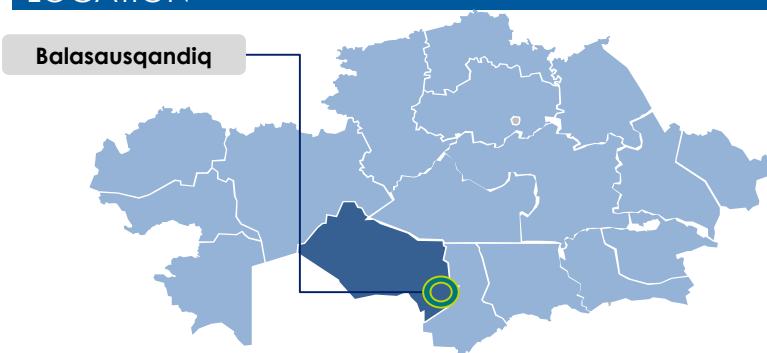
RESERVES

Category	Reserve (1000 t)	Mean grade V ₂ O ₅ [%]
B	832	1.00
C1	15,649	0.75
C2	54,366	0.74
B+C1+C2	70,847	

PROJECT PROFITABILITY



LOCATION



PRODUCT

ANNUAL PRODUCTION CAPACITY **5,600 tons/year V2O5**
22,400 tons/year V2O5
 GLOBAL DEMAND **120,067 mtV**

VALUATION METRICS

REQUIRED INVESTMENT **US\$ 100 MLN**
 PROJECT NPV **US\$ 2 BLN.**
 PROJECTR IRR **89%**
 OPERATING MARGIN **79%**



THE PROJECT

Phase 1: Mining and processing 1 Mtpa of ore. Production 5,600 tpa (to be funded from existing operations, debt, and exercise of options by strategic partner). Capex: \$100m
 Phase 2: Expansion to 4 Mtpa of ore. Production increase to 22,400 tpa (to be funded from earnings of Phase 1). Capex: \$225m



THE COMPANY

Ferro-Alloy Resources Limited (FAR) is a Guernsey registered company, formed in 2000, which is the 100% owner of Firma Balasa LLP, the holder of the rights to develop and exploit the giant Balasausqandiq vanadium deposit. FAR listed the LSE in 2019 and on the AIX in 2020. FAR has around 200 shareholders who include well-known institutions, management and individuals or family structures from the UK, Kazakhstan and several other countries. The Company is currently producing vanadium pentoxide, ferro-molybdenum and nickel concentrates, recovered from purchased concentrates and other vanadium-containing materials.



THE MARKET

Vanadium demand in 2021 was approximately 120,067 mtV with the steel production and vanadium redox flow battery (VRFB) markets accounting for 92 per cent and two per cent of the vanadium consumption, respectively. Global annual deployments of VRFBs are expected to reach approximately 32.8 GWh in 2031.



REASONS FOR ENGAGEMENT

The Balasausqandiq deposit is a very large black-shale deposit containing vanadium and valuable by-products - uranium, molybdenum, aluminium, rare earth metals and carbon; a sedimentary deposit, with a high grade of vanadium and negligible iron – a significant advantage, it is amenable to a processing method that is much lower in both capital and operating costs. By developing the Balasausqandiq deposit, FAR is to become: one of the world's largest producers of vanadium; the world's lowest cost producer of vanadium.

There is a potential to develop production of redox-vanadium batteries at the location of the plant.



INVESTMENT OPPORTUNITY

The project owner is looking for an investor and ready to consider various options of cooperation.