

TANTALUM & NIOBIUM COMPLEX

INVESTMENT OPPORTUNITY SCORECARD

MINING & METALS

TANTALUM & NIOBIUM COMPLEX

Opportunity Description: Build a facility to produce 500 ktpa of Ferro-Niobium, 257 ktpa of Niobium Oxide, and 126 ktpa of tantalum–potassium Salt through exploration of Ghurayyah resource

INVESTMENT OVERVIEW

INVESTMENT HIGHLIGHTS

- Expected investment size: USD 300 Mn
- Plant capacity: 500 ktpa Ferro-Niobium, 257 ktpa of Niobium Oxide, and 126 ktpa of tantalum–potassium Salt
- Niobium is a rare and ductile metal with relatively low density, high ductility, high melting point, and superconductor properties.

VALUE PROPOSITION

- Saudi Arabia has discovered more than 40 commercial minerals reserves, including large amounts of bauxite, as well as silver, zinc, copper, magnesite, and kaolin deposits. The Kingdom has some of the world’s largest reserves of phosphate and tantalum
- Saudi Arabia has a healthy reserve of untapped mining potential valued at SAR 4.88 trillion (USD \$ 1.3 trillion)
- Ghurayyah resource, based on a JORC-compliant exploration program, contains a 424M resource with PPM content of 137 Ur, 185 Ta and 2,486 Nb, and 7,511 Zr oxide, in addition to other REE such as yttrium and thorium. Opportunity to leverage the resource for the mining and beneficiation of tantalum and Niobium

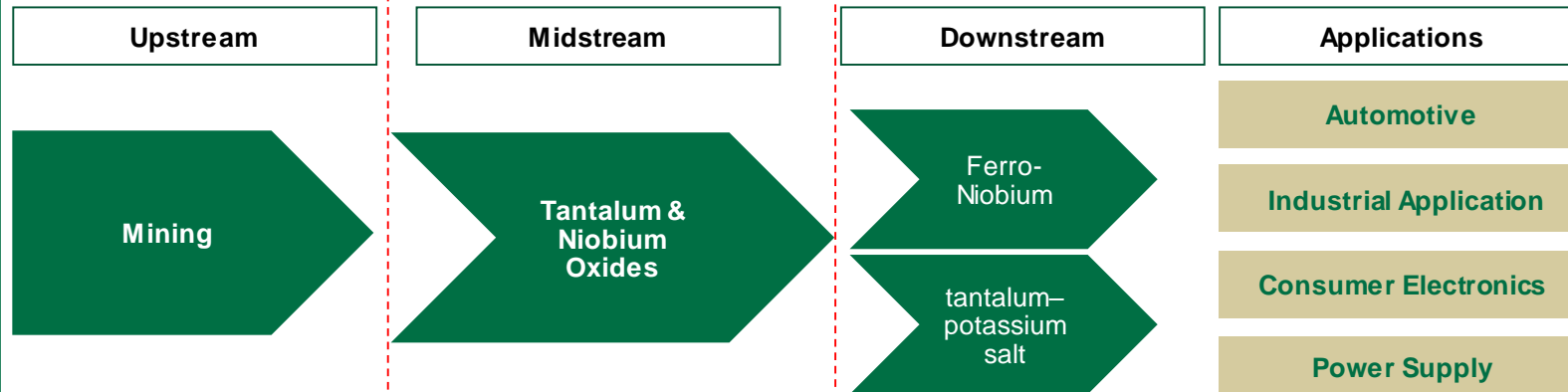
MARKET OVERVIEW

GLOBAL TREND

- The market for tantalum is expected to register a CAGR of over 5.5% till 2025
- Growing demand for Tantalum and limited market supply pipeline can potentially create market tightness
- Global Tantalum demand is expected to exceed 3 KTA by 2025 driven mostly by the use in semiconductors and super alloys
- Niobium market size was estimated at over 120 KTA in 2020 and projected to grow at a CAGR 5% to 2026, with a market dominance in the steel production

VALUE CHAIN ANALYSIS

Opportunity focus



KEY DEMAND DRIVERS

- Tantalum is a crucial component in the production of next-generation semiconductors, which allows electronics manufacturers to produce chips of increasingly greater information densities.
- The growth from the electrical and electronic industry and extensive usage of tantalum alloys in aviation and gas turbines.
- Replacement of solid capacitors with polymer tantalum capacitors is likely to act as an opportunity in the future. In the short term, as 5G is rapidly growing, the need for tantalum increases

DEFINITIONS

#	SCORECARD SECTION	DEFINITIONS
1	Market size	Size of market in value/volume in KSA and/or Region (MENA/GCC) covering future projections based on available estimates from published /government sources
2	Business drivers	A select number of factors that will influence future demand for the related product/service
3	Investment highlights	An overview of key financial metrics summarizing the investment opportunity along with the expected return based on the suggested investment size
4	Value proposition	Summary of key differentiators that position KSA as a strategic choice over other regional/global peers
5	Market readiness	An overview of KSA market structure, market maturity and level of participation by local and global players
6	Competitor analysis	List of the local & international players manufacturing the underlying product in Saudi Arabia and their market share
7	Global trends	Latest business developments within the sector/product category
8	Scalability and localization	Ease of scaling the business across the value chain or into new adjacent products or geographies that would maximize the opportunity's investment returns and the ability and potential to locally manufacture the product and its components
9	Import dependency	An overview of the countries from which Saudi Arabia is importing the product and their value/volume and share in total imports
10	Value chain analysis	The process or activities that would potentially need to be carried out to deliver the underlying product or service
11	Key stakeholders	Government institutions, organizations, and/or authorities that participate or influence the market for the underlying product/service
12	Enablers	Factors that enable investment in the underlying opportunity
13	Cost of doing business in KSA	Key factors that position KSA as a competitive destination for investment in the region. Productivity adjusted wages do not include cost of \$1.23/hour towards annual recurring charges including work permit, resident identity (iqama) and health insurance

DISCLAIMER

- This report must be used only to access information, and the information must not be construed, under any circumstances, explicitly or implicitly, as an offer to sell or a solicitation to buy or sell or trade in any opportunity herein mentioned.
- Ministry of Investment (MISA) has no undertaking to update these materials after the date, with the understanding that such information may become outdated or inaccurate.
- Mentioned information in this report is obtained from reliable sources but its accuracy and reliability are in no way guaranteed. No guarantee of any kind is tacit or explicit when projections of future conditions are attempted. MISA has used public/or confidential data and assumptions and has not independently verified the data and assumptions used in the analyses. Changes in underlying data or operating assumptions will clearly impact the analyses and conclusions.
- The financial evaluations, projected market and financial information, and conclusions contained in these materials are based upon standard methodologies, are not definitive projections, and are not guaranteed by MISA
- The content of this report must not be construed as an implied promise or guarantee for profit or limited loss express or implied by or from MISA or any of its officers, directors, employees and affiliates. All mentioned investments in this report are subject to risk, which should be considered prior to making any investment decisions
- MISA shall have no liability whatsoever to any third party, and hereby any third party waives any rights and claims it may have at any time against MISA with regard to this report, any services or other materials, including the accuracy or completeness thereof.

CONNECT WITH US FOR MORE DETAILS:

Metals@misa.gov.sa

investsaudi.sa



@investsaudi

