

## Araguaia Project Environmental Studies Summary

06<sup>th</sup> May 2021

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Horizonte Minerals is developing its 100% owned Araguaia Nickel Project (Araguaia or ANP) as Brazil's next major ferronickel mine. Araguaia is a Tier 1 mining project with a high-grade scalable resource, located south of the Carajás Mining District in the Pará State, north Brazil. At the present time, Araguaia has awarded all environmental licences and it is qualified to start the construction phase.

The Company has developed several studies to fulfil the Permitting process in Brazil and discloses on its website the Environmental Impact Report (RIMA) in Portuguese, public documents integrated to SEIA (Social and Environmental Impact Assessment). These documents are requirements for the application process for the Araguaia Project (South – ANS and North – ANN) permitting process (Preliminary and Installation Licences). As ANP is located in Brazil, the licensing process is formally in Portuguese, the country's official language. To facilitate the Report's understanding, the Company is disclosing by end of May ANS's RIMA in English. ANN's RIMA is very similar to ANS, which makes its translation unnecessary.

In the following lines, we present a summary of the licensing process for mining projects in Brazil. In the sequence, we indicate the socio-environmental studies of the ANP that were carried out by the Company and Consulting companies throughout the life of ANP.

### PERMITTING PROCESS

The permitting process for a large-scale mine in Brazil runs along two parallel pathways. These are the **mining permit (direitos minerais)** and **environmental permit (licenciamento ambiental)** pathways and each is managed by separate and independent public authorities. Both mining and environmental permits are necessary for ANP. Whilst the permit processes run in parallel and independently, there is one key stage-gate where the two pathways converge, at the mining concession stage (Portaria de Lavra). In order for the mining agency to approve the mining concession, the Company must demonstrate award of the construction licence (Licença de Instalação – LI).

#### Permitting framework

The Federal Constitution provides the basis for permitting in Brazil and a number of States provide their own complementary legislation. Federal, state or municipal governing bodies may have jurisdiction to issue licences or grant permits, depending on the size and nature of the project. Mining permits are governed via the Mining Code. Environmental permits are mostly governed by CONAMA legislation. In addition, the States often manage their own legislation for governing bodies and compensation agreements relating to environmental permits.

All **mining permits** are administered by the ANM Federal Agency. Some **environmental permits** are administered by the Federal Environment Agency (IBAMA<sup>1</sup>) in the case that mining projects cross one or more state borders. Other environmental permits are administered by State environmental agencies and this is the case for those mining projects where majority of impacts are contained within one state.

As the ANP does not cross state borders, IBAMA is not directly involved with environmental permitting. Therefore, the two key Agencies relevant to the ANP for permitting purposes include: National Mining Agency (Agência Nacional de Mineração – ANM<sup>2</sup>); and the State Secretariat for Environment and Sustainability of Pará – SEMAS).

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<sup>1</sup> Brazilian Federal Environment Licensing Agency (Instituto Brasileiro de Meio Ambiente e dos Recursos Naturais Renováveis – known locally as IBAMA).

<sup>2</sup> Brazil's National Mining Agency (Agência Nacional de Mineração or 'ANM') was formally known as the National Department for Mineral Production (Departamento Nacional de Produção Mineral or 'DNPM'. In December 2017, the Federal Law № 13.575/2017, created ANM replacing DNPM.

The ANS infrastructure is further advanced along the permitting pathway than ANN and supports mining operations for the initial eight years of the planned operations. The environmental studies which will underpin both mining and environmental permits for ANN infrastructure were delivered to SEMAS, with the objective of securing construction-ready approvals prior to commencement of mining in ANN in year 8 in the Mine Schedule, estimated for 2029.

Further details of mine permits, environmental permits and certificates required for the construction and operation of ANP are outlined in the Value Engineering Study (2020).

## **ENVIRONMENT AND SOCIAL STUDIES**

The Araguaia project is one of the few development-ready nickel laterite projects globally. Horizonte has successfully obtained the Construction Licence in December 2018 and the water permit for full-scale operation at Araguaia. An Environmental Impact Statement and Socio-Environmental Control Plan (RCA/PCA) was submitted to SEMAS for the Transmission Line environmental permit in 2019, having the LP/LI and the Vegetation Clearance and Fauna Rescue Approvals issued in February 2021.

Walm Engenharia (Araguaia South Project SEIA), Environmental Resource Management “ERM” (ANS ECP), Integratio (social and land studies), DBO Environmental Engineering (fauna inventory), Brandt (Transmission Line ECP and ANN SEIA) and Ramboll (Water Resources) retained to undertake the work for Preliminary Licence (LP), Construction Licence (LI) and further permits covering both Environmental and Social streams. Those Consultancies, across multiple disciplines, conducted a number of studies since 2013, including, but not limited to:

- Environmental Impact Study (SEIA) and Environmental Impact Report (RIMA)
- Environmental Control Plan (Plano de Controle Ambiental – PCA) - elaboration and detailing of socio-environmental programmes
- Atmospheric dispersion modelling
- Atmospheric, noise, surface and groundwater, fauna and flora monitoring, socioeconomic diagnosis, among others as part of base line build up.

The Company has conducted studies to both Brazilian and International Standards, applying IFC Performance Standards and Equator Principles to our work streams. Independent consultant reviews are taking place on international standards as part of the finance package Due Diligence work underway for Araguaia, including:

- Critical Habitat Assessment and Biodiversity Action Plan
- Ecological Services and Cumulative Impacts
- Stakeholders Engagement Strategy and Stakeholders mapping update
- Integrated Management System, based on ISO 14001: 2015 and ISO 45000:2018
- Environmental Impact Studies for Public Access

### **Public Access to Environmental Impact Report (RIMA)**

According to Brazilian legislation, the RIMA is a report that reflects the SEIA conclusions and must be presented in an objective and appropriate way for public review. The Report is written in a way that is accessible to local communities, illustrated by maps, letters, charts, graphs and other visual communication techniques, so that the Project advantages and disadvantages, as well as all environmental consequences of its implementation can be understood by stakeholders. Horizonte has displayed its RIMA in its site offices, at the environmental agency (Pará state) and also on its website.