



Monitoring engineering  
structures with SENTNEL

Case Aura Minerals

senTneL





Reprodução: Aura Minerals

Monitoring engineering structures requires analyzing various elements, such as instrument readings, field inspection data, anomalies, graphs, reports, documents, among others. In this sense, technology becomes a great ally in optimizing processes, speeding up information evaluation and decision-making.

Aura Minerals is a Canadian mining company focused on the development and operation of gold, copper, base metals, and precious metals projects in the Americas, aiming to invest in innovation to optimize daily tasks. In Brazil, it operates in the Apoena (EPP) and Almas units, as well as in the growth projects Matupá and Borborema, and the exploration project Carajás (Serra da Estrela).



In line with the company's strong culture, Aura 360, which values innovation and transparency among its principles and practices, the company decided to implement a tool for managing the monitoring of its Brazilian dams. This aims to provide online visibility of geotechnical structures, allowing access to information across the entire corporate chain at any time and from anywhere.

To support its daily challenges in information management, Aura Minerals chose the SENTNEL software: an innovative and smart solution that enables the centralization and optimization of data in one place, providing users with an integrated view of the structure, while also promoting good governance practices and more effective decision-making.

According to João Paulo Freitas, Corporate Geotechnical Coordinator at Aura Minerals for the Americas, the SENTNEL software represents, among other things, the innovation and transparency practiced by the company in the field of geotechnics.

*“SENTNEL is mentioned in various external reports, such as the annual ESG report and the quarterly stock exchange reports, showcasing to the market the best practices adopted by Aura in the field of geotechnics.”*

João Paulo Freitas  
Corporate Geotechnical Coordinator





## Practicity, agility, and security : Benefits achieved with SENTNEL

Before the implementation of SENTNEL software, the monitoring processes for Aura Minerals' dams were not automated. Clipboards were used for field data collection, and after transcription to the computer, spreadsheets were used to generate graphs.

The implementation of SENTNEL provided greater convenience for field activities through the mobile application, ensuring accuracy in instrument readings and speed in analyses thanks to the immediate availability of data on the web after synchronization. Additionally, the use of the software brought increased security with enhanced transparency of the conditions of the structures.

According to Fernanda Carvalho, Geotechnical Geologist at the Apoena (EPP) unit, one of the major differentiators of the software is its ease of use, providing greater team adherence to its utilization.

*"Today, SENTNEL is a fundamental tool for our monitoring activities."*

Fernanda Carvalho  
Geotechnical Geologist





*“The alert and notification system has been a game-changer here.”*

Fernanda Carvalho  
Geotechnical Geologist



Another point highlighted by João and Fernanda was the SENTNEL alert and notification system. The issuance of alerts for identified anomalies and/or specific conditions of the instrumentation, configured according to criteria defined by the company, allows those responsible to stay attentive and updated on the events and occurrences of the structure.

Additionally, the ability to define criteria and users for receiving notifications enabled the creation of hierarchical levels in the system's communication. This ensures that alerts reach the correct recipients with the appropriate priority.

Also, on the list of highlights presented by Aura Minerals is SENTNEL's technical support service. Composed of over 90% engineers, the SENTNEL team ensures that questions and difficulties are resolved quickly and effectively, guaranteeing the proper functioning of the software and assisting users in their activities.

According to Yuri Vieira, Geotechnical Engineer at the Almas unit, even in contacts made outside of regular hours, he always receives prompt and satisfactory service, with his questions answered in time to assist him.

*“Whenever I get in touch, I receive good service in a timely manner.”*

Yuri Vieira  
Geotechnical Engineer





## + Technology + Productivity

The benefits provided using SENTNEL reveal how technology, aligned with a culture of transparency and innovation, has enhanced productivity in the monitoring processes of Aura Minerals' geotechnical structures.



Inspections and instrument readings performed with the mobile application



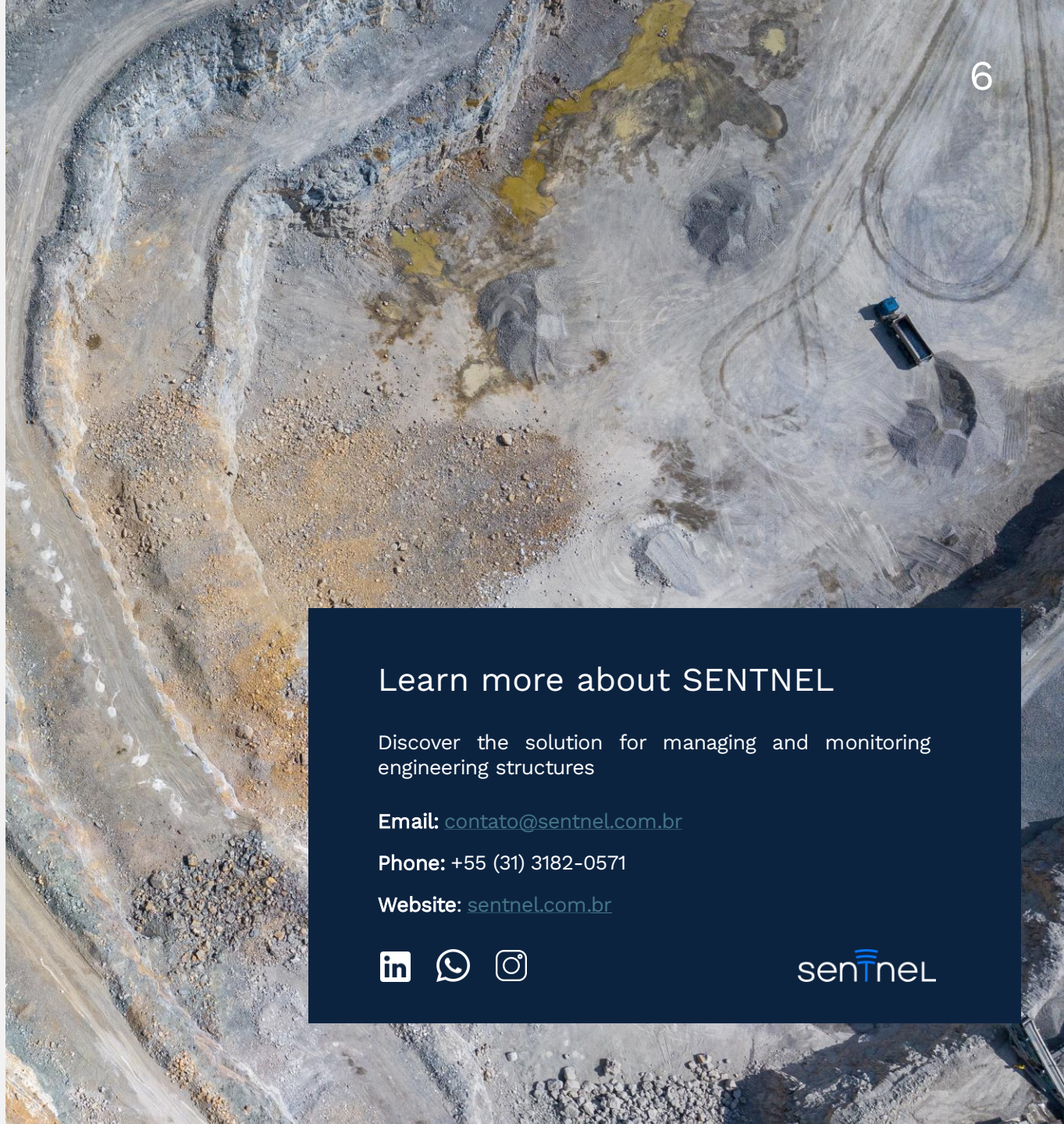
Instrumentation results available immediately after syncing the app with the web



Automatic report generation



Custom alerts and notifications



### Learn more about SENTNEL

Discover the solution for managing and monitoring engineering structures

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