

# Revolutionizing Mining Through Virtual Reality

Innovation and safety within reach of your company

## Immersive Reality

Photogrammetric processing  
and immersive virtual reality  
to revolutionize geological  
and geotechnical processes

**20**

**24**



# EXPERIENCE GEOLOGY LIKE NEVER BEFORE WITH VIRTUAL REALITY

Dataverso is an innovative startup at the forefront of the mining sector, revolutionizing the management of geological and geotechnical processes. Its cutting-edge platform seamlessly integrates photogrammetric processing with immersive virtual reality, empowering work teams to access and analyze critical data from virtually any location around the globe.

**Distance is no longer a barrier; instead, it has become a competitive advantage that enables teams to collaborate safely and effectively from any location.**



## Dataverso delivers cutting-edge technological solutions that enhance efficiency, lower costs, and improve safety across all operations.

What distinguishes Dataverso is its commitment to technological innovation and sustainability. This focus has enabled the development of solutions that not only optimize operational processes but also foster safer and more responsible mining practices.

By incorporating virtual reality into everyday mining operations, Dataverso empowers its clients to manage their mines more effectively, minimizing risks and significantly reducing their carbon footprint.





# Key Benefits

Dataverso plays a pivotal role in enhancing safety within mining operations by significantly reducing workers' exposure to high-risk zones. Through its innovative technology, geology and geotechnical teams can perform their essential tasks remotely, eliminating the necessity for physical presence in hazardous areas.

This advancement not only safeguards the well-being of professionals but also enables companies to maintain seamless operational continuity from virtually any location around the globe.



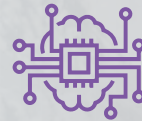
## Higher Efficiency

The integration of virtual reality offers rapid and seamless access to results, significantly enhancing collaboration among teams and streamlining the decision-making process. Dataverso presents a cutting-edge platform that enables real-time visualization and analysis of data, fostering improved coordination and communication across diverse workgroups.



## Cost Reduction

With Dataverso, mining companies can optimize their resources and achieve substantial reductions in operating costs. The platform's capability to facilitate agile process development based on precise data accelerates geological and geotechnical reconciliation. Furthermore, by significantly reducing the necessity for on-site presence, companies can realize considerable savings on materials, supplies, and travel expenses, which translates into heightened economic efficiency.



### Technological Innovation

Dataverso provides comprehensive end-to-end visibility into mining operations, empowering geology and geotechnical teams, along with decision-makers, to attain a thorough and precise understanding of the environment. This capability to visualize and analyze intricate data within a virtual landscape not only expedites reconciliation processes but also enhances the quality of data-driven decisions, ensuring they are both reliable and informed.



### Downsizing the Carbon Footprint

Dataverso plays a pivotal role in promoting environmental sustainability by significantly minimizing the necessity for travel to mining sites. By facilitating a greater number of operations to be conducted remotely, the platform effectively reduces the carbon footprint of mining companies. This innovative approach not only aligns with best practices in the circular economy but also reinforces a commitment to sustainable development.



### Time Saving

Utilizing Dataverso dramatically accelerates geological measurement and analysis processes, enabling quicker reconciliation and facilitating effective real-time decision-making. This significant reduction in time is vital for maintaining a competitive edge in an industry where both speed and precision are paramount.







# Capturing Structural Information

The platform enables precise identification and characterization of structural discontinuities within the mine, providing invaluable insights for geotechnical management. Dataverso offers a suite of essential descriptive parameters, including dip, dip direction, persistence, spacing, sinuosity, and thickness of the failure damage zone. This robust functionality ensures the accurate and efficient capture of critical structural information, which is vital for effective mine planning and operations, resulting in a comprehensive tool for geotechnical management.





# Geotechnical Reconciliation

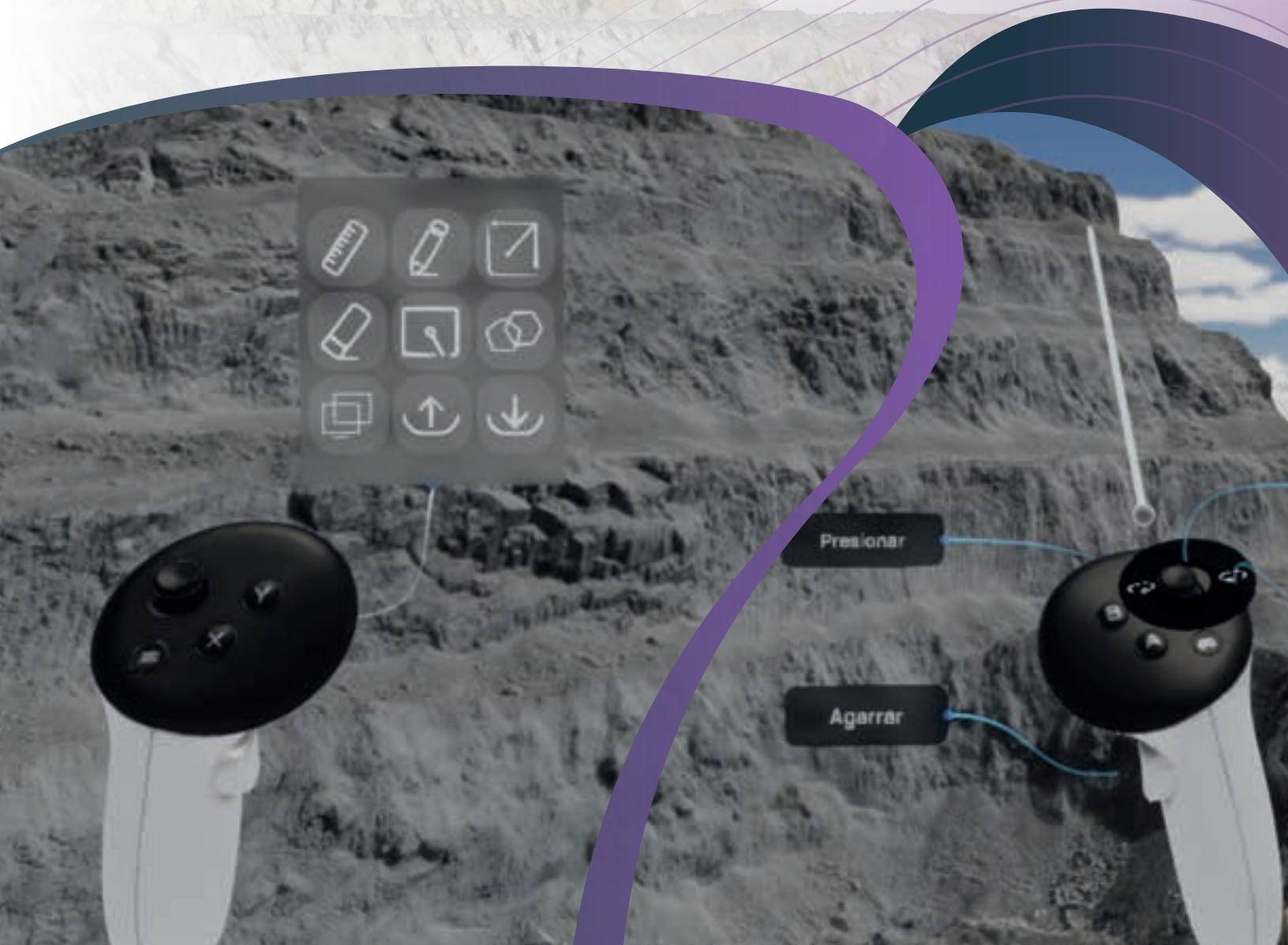
The software facilitates precise estimation of the slope condition factor by meticulously recording a range of geometric and geotechnical parameters. With Dataverso, engineers can conduct thorough assessments of slope safety and stability, ensuring that all structures adhere to the stringent safety standards necessary for secure and efficient operations.





# Structural Reconciliation and Monitoring

Dataverso enhances the comparison of geological models with immersive surveys, enabling comprehensive monitoring of structural evolution. Users can easily identify new structures, verify the continuity of existing structures, detect shear relationships, and process fault alignments. This robust continuous monitoring capability provides complete oversight of the structural stability within mining operations.



# Intuitive User Interface and Collaborative Tools

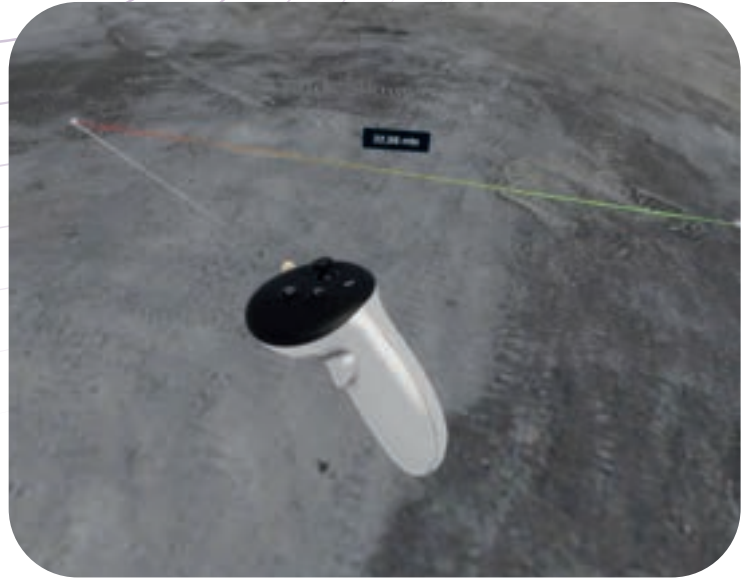
Dataverso boasts an intuitive user interface that simplifies navigation and maximizes the usability of its advanced tools. Teams can collaborate seamlessly in a dynamic virtual environment in real time, fostering enhanced cooperation and streamlining workflows.





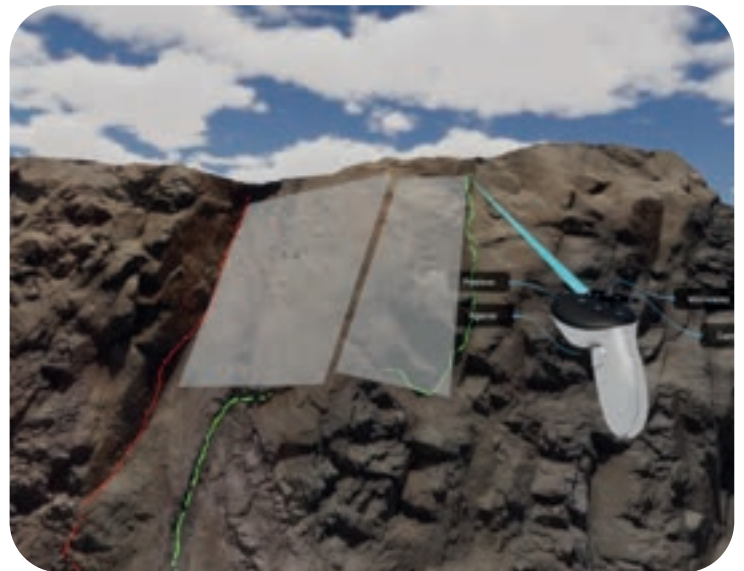
# Ruler Tool

The Ruler tool empowers users to precisely measure distances between a variety of geotechnical and structural elements. It facilitates the measurement of berm and ramp widths, structural spacing, cracks, structural displacements, and other critical components essential for comprehensive geotechnical assessments. By providing accurate data, this tool is indispensable for conducting thorough analyses of ground conditions.



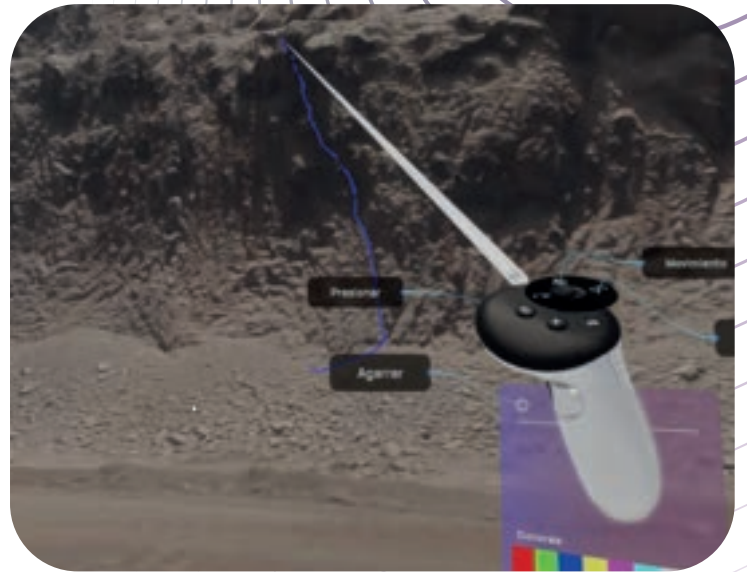
# Structural Measurement

This tool enables users to derive key parameters such as Dip and Dip Direction by defining a representative polygon. It is crucial for the structural characterization of the mine, providing engineers with accurate and detailed data that are vital for the planning and execution of safe and efficient operations.



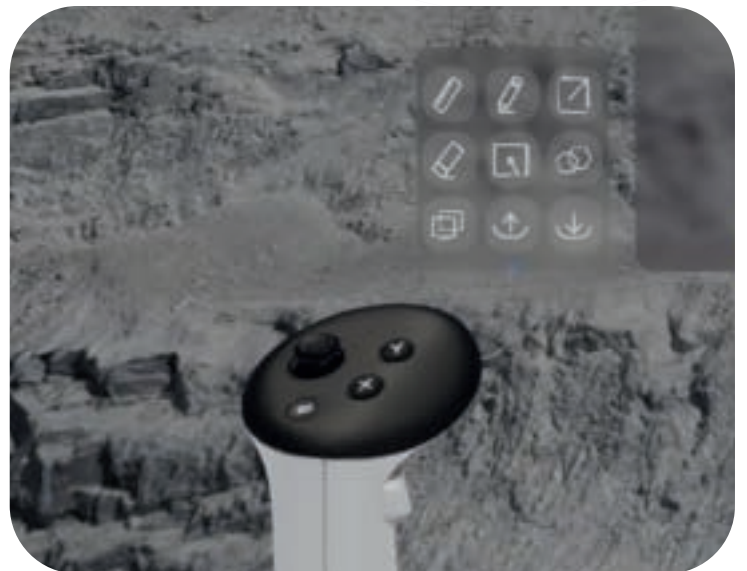
# Drawing

Users have the ability to draw lines in up to eight distinct colors, create polygons, project structures, and track significant faults. This versatile functionality enhances the correlation of structural information, offering a clear and precise visual representation of geotechnical and geological data, facilitating comprehensive analysis and informed decision-making.



# Deleting Elements

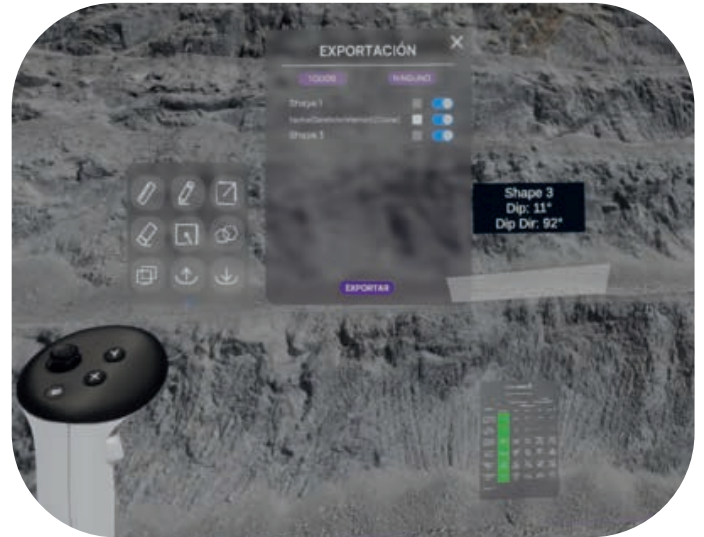
This tool provides users with the precise capability to effortlessly remove any drawing or measurement elements that are outdated or require modification. This functionality ensures total control over the displayed content, empowering teams to maintain data that is consistently current and accurate.





# Exporting

The exporting tool enables seamless uploading and downloading of lines, profiles, and surfaces, along with the capability to export information in PNG and various other compatible formats. This functionality significantly enhances the integration of data collected and analyzed within Dataverso with other systems and software platforms, improving efficiency and interoperability throughout the mining operational workflow.



# Condition Factor

Enables the mapping of the condition factor by considering variables such as visible gutters, induced cracks, minor discontinuity conditions, presence of unstable blocks, slope profile geometry, and the condition of the slope crest.



# Testimonials



The Dataverso class session was an incredibly impactful experience. The integration of theory and practical application in a virtual environment left a lasting impression on both students and instructors. The opportunity for real-time collaboration within the software greatly enhanced the learning experience, garnering outstanding feedback for its immersive and realistic virtual spaces.



**Carolina Águila Ortiz,**  
National Mining Director  
INACAP



I have had the privilege of witnessing two versions of Dataverso, and the evolution has been nothing short of remarkable. The latest version introduces the capability to capture and store data specifically for engineering analysis, significantly enhancing the value it brings to our operations. Moreover, the ability to conduct collaborative work sessions in a risk-free environment has truly transformed our approach to tackling geotechnical challenges.



**Gilberto Núñez Díaz,**  
Geotechnical Design Senior Engineer  
Antofagasta Minerals



The collaboration between Dataverso and Minverso has ushered in a new era of innovative technologies that were once considered unattainable in the mining industry. The capability to access the deepest sections of the mine from virtually anywhere, all while maintaining the highest standards of safety and work quality, signifies a profound paradigm shift in the operational dynamics of the mining sector.



**Gillian Armstrong,**  
Chief Communications Officer  
Minverso



dataverso 

 [info@dataverso.cl](mailto:info@dataverso.cl) /  +56 2 2714 4200 /  Pérez Valenzuela 1235, of. 201, Providencia  
Santiago de Chile, Región Metropolitana