

Ventyx Intelligent Mining Solution

Ventyx Exploration



Ventyx Exploration provides a comprehensive solution for the management of drilling and sampling data and integrates seamlessly with other Ventyx solutions.

The Industry Challenges

As the primary input to ore reserve calculations, geologic drilling and sampling data underpin the value of any mining or exploration enterprise. Too often the task of capturing and managing this key dataset falls to the most junior and inexperienced member of the organization and yet the most senior geologists are required to stake their professional reputation, as well as the financial viability of the enterprise, on this very dataset in complying with the various ore reserve reporting guidelines.

These reporting guidelines have become increasingly onerous over the years due to well documented cases of poor processes and data management, sampling or analytical bias and non-detection of fraud. These have resulted in poor quality ore reserve calculations which, in some cases, led to massive write-offs of shareholder value.

The reviewing geologist's task is often complicated by:

- Variable data capture formats due to lack of discipline and training in the field.
- Lack of visibility of the dataset throughout a drilling campaign due to reliance on key personnel to update the dataset.

- Lack of visibility of data quality controls, e.g. hole deviation measurement checks, bulk density measurement checks, sample quality and analytical quality checks.
- Lack of a single, well understood data repository for all drilling, sampling and analytical data.
- Problems accessing data from field locations due to poor communications.
- Inability to separate validated and checked data from invalid or new data.

The senior geologist responsible for calculating, reviewing and approving resource estimates will spend considerable time and money compiling and checking the data for a drilling campaign prior to its inclusion in resource models. However, lack of access to timely, accurate data means that when problems are found it is often too late to rectify the situation as drilling is well advanced or already completed.

The Solution

Exploration Data Portal

The Exploration Data Portal provides a web-based user interface for browsing and editing data and for executing import and export tasks on demand. The

portal is highly configurable and enables data to be accessed across poor quality communications such as over satellite links.

Exploration Data Import Automation

The data automation module provides facilities for building and executing import and export workflows to and from a variety of mining industry data formats, enabling automation of many day-to-day administrative tasks and ensuring consistency. A quarantine facility traps data with identifiable problems and extensive logs track system activity.

Exploration Data Export Automation

The data automation module also allows scheduled export to many mining formats to ensure the latest data are always available for 3D review and validation and to facilitate improved targeting of the drill program as more data become available.

Reporting Module

The reporting module allows management reports (e.g. drill program progress reports, missing data reports) to be launched from within the web portal, regardless of the physical location of the user.

Integration with other Ventyx Solutions

Ventyx Exploration integrates with other Ventyx solutions. For example, Ventyx Assay Management integrates seamlessly with Ventyx Exploration to provide more sophisticated control of sampling and analysis within a drilling program.

The Benefits

Consistency

Full automation of the data management process reduces human interaction once the data have been captured, reducing transcription errors and enforcing consistency at point of capture.

Efficiency

Automation significantly reduces the effort required in data management and reduces turnaround from capture to delivery to 3D packages, even when the data manager is on leave.

Visibility

Ventyx Exploration ensures the dataset always reflects the most up to date data, enabling unexpected results to be identified rapidly and a timely response implemented, retargeting the drilling campaign as required.

Quality

A single, structured repository, updated through well understood and efficient procedures, improves the data quality and reduces the time spent verifying data going into a resource estimate. There is only one copy of each piece of data, removing confusion and inefficiency.

Ventyx Exploration also supports data approval and validation processes so that once a drillhole is approved for use in a resource, any future changes to that drillhole are quarantined.

Accessibility

As a web-based solution, Ventyx Exploration provides the advantages of central management of the data required to prove an exploration or mining company's mineral reserve assets, without compromising the field geologist's ability to access that data in the field.

Security

Ventyx Exploration provides user and role based security to prevent unauthorized access to view or modify data. By providing a single, central repository the solution also provides security against accidental data loss resulting from events such as closure of field offices or loss of key staff.



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