

Ventyx Intelligent Mining Solution

Ventyx Assay Management



Ventyx Assay Management provides a complete analytical data control solution, delivering comprehensive, timely and high quality information to improve decision-making, reduce risk and maximize control.

The Industry Challenges

Improving access to critical information

Most aspects of the value of a mining enterprise are represented by two key numbers – tonnes and grade. Across the entire value chain, from grass-roots exploration through to final product shipment, these two numbers are critical to understanding and accurately reporting on the value of resources, reserves, stockpiles and final product sold. However, the mineral industry has particular challenges in sampling and analysis. The primary challenge is in acquiring a representative sample from ore bodies that are typically very heterogeneous. Samples, whether in exploration, mining or processing, are only a very tiny fraction of the material they represent. Most other industries that make use of analytical data, such as pharmaceuticals or chemical plants, are dealing with a smaller amount of higher value product, making it more cost effective to increase sample coverage. They are also operating with more consistent inputs, making it considerably easier to acquire a representative sample.

To correctly handle analytical data in the minerals industry it is critical to accurately store and associate the full sampling and analysis protocol with each sample. Types of information required to establish sample validity include sample-splitting methods, including particle size at each stage, and initial sample capture conditions, as well as details of QA samples.

The industry has, to date, managed analytical data with varying degrees of rigour. An increasingly onerous corporate governance environment means that all analytical data must be managed with structured, repeatable business processes incorporating sufficient quality control mechanisms to demonstrate the accuracy of those results. In order to maintain this level of information with high data volumes, efficient and automated information management systems are required, coupled with tools to maximize the value of human judgement in the process.

The Solution

The Complete Solution for analytical data management

Ventyx Assay Management was built for mining and allows for rigorous tracking and storage of both the analytical data and sampling protocols for all types of samples in the mining value chain, including the most complex metallurgical test work samples. The web-based system facilitates “self-service”, enabling the business user to register samples, track samples through the process and review and authorize use of analytical data receipted from the lab. This brings to the business a completely new approach to controlling and governing a key process, with appropriate checks and controlled handover of samples and data.

Ventyx Assay Management provides a flexible and comprehensive solution for managing all types of mining industry analytical data, including:

- Data relating to grass roots exploration samples
- Exploration drilling samples
- Mine production drilling and face sampling samples
- Plant production samples
- Final product samples
- Water quality samples

Ventyx Assay Management includes manual data capture from log-sheets, provides validation routines for identifying data with low integrity, and has the ability to quarantine this data for review and then make the data available for analysis.

This eliminates the multi-spreadsheet, multi-system environment and enables sharing of data across the organization from a single, reputable source.

Features of Ventyx Assay Management include:

- Any number of base systems can be linked to the centralized assay repository through the Ventyx integration layer.
- Any number of LIMS systems, either internal or external, can be linked into the centralized assay repository.
- Integration with the ERP system for budget, accruals and invoice processing.
- Bandwidth efficient browser based user interface.
- Support for either a single central repository or distributed repositories.
- Support for automated routing of data to appropriate end-points (eg base systems, ERP) based on the type of analytical data.
- Sophisticated, configurable per batch validation rules based on the type of analytical data.
- Support for structured sign off and data acceptance.

The Ventyx Assay Management solution provides the ability to maintain central control of assay related data across the entire organization.

The solution has been designed to provide a high level of flexibility to cater for diverse site requirements while enabling a corporation to utilize a single software solution across its operations. It provides a complete analytical data management system that enables the organization to take-on assay data from various sources including the LIMS, external laboratories and any other systems and devices.

Ventyx Assay Management could be viewed as an extension of the LIMS environment to the laboratory's clients, giving the same level of rigor across the entire process of collecting samples through to final approval of the results.



The Benefits

Improved decision-making and increased control

The integrity of samples and assay results are maintained from when the sample is taken and registered in the base application until the results are reported back. The business owners of the samples can be assured of the quality and integrity of analytical assay results before this information is used for internal decision making and external reporting. This ensures the accuracy of chemical assays, which is critical in determining the feasibility of mining operations and calculating the value of in-transfer materials, internally and externally.

The Ventyx Assay Management solution provides the ability to maintain central control of assay related data across the entire organization. This includes sample management and tracking through the entire mining value chain, matching demand with capacity, transfer of results from laboratories to a centralized (secure) repository to enable QA/QC to be performed on the results as required, and the release and transfer of results back into base applications for reporting purposes.

The solution enables compliance with SAMREC and JORC standards and audit requirements and improves the efficiency of sample and assay result management.



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Some of the world's largest private and public enterprises rely on Ventyx solutions to minimize risk, enhance operational and financial performance, and execute the right strategies for the future.

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