

Case Study – Drilling Program Management System

SATEVA were asked to develop a system to automate the processes of the resource evaluation drilling division at a global iron ore mining company. The new Drilling Program Management system consists of 8 modules which include the financials, contracts, cataloguing, drilling, geophysics, hydrogeology, health and safety, and administration modules.

The financials module provides a planning, forecasting, and actuals tracking capability across all drilling, geophysics, and earthworks projects. Parameter and formulae driven financial plans and forecasts can be defined, managed, and tracked, and actual spend can be imported from SAP and compared to the plans and forecasts of each project team.

A contracts module tracks the contracts held with numerous contractors covering areas including drilling, geophysical surveys, hydrogeology, and laboratory services. Drilling contracts are the most common contracts and cover items such as metre rates, daily rates, consumables, equipment hire, work time, fuel and water, and specific rig rates. The names of all consumables and equipment are standardised and captured in a cataloguing module to allow for reporting across different contracts with various contractors.

The drilling module manages all cost and production information related to a drilling program. Key aspects of the module include drill design management, the capture of daily logs, invoice tracking, accruals reporting, and sample tracking pages. The daily log allows users to track drilled metres by rig, consumables usage, work activities performed, equipment usage, and fuel and water usage.

Other modules exist to track daily production for the geophysics and hydrogeology teams, and a health and safety module is used to track and report on contractor performance in relational to health and safety.

The system provides a number of reports on project progress, contractor performance, and other standard reports. A number of online analytical processing (OLAP) cubes are available to analyse all drilling metrics, drilling and consumable costs. Financial plans, forecasts, and actuals are also consolidated into a single OLAP costs cube which allows analysis by project, cost code, GL account, and by a variety of reporting periods.

The Drilling Program Management System is developed using the Microsoft SQL Server database and Microsoft ASP.Net web technologies. The system is used for all evaluation, mine lease, and tenement drilling and is used by over 200 users.

SATEVA is a technology consulting firm based in Perth, Western Australia. SATEVA specialises in providing technology consulting services to the mining, metals, and rail industries. Our company provides application development services in areas such as exploration, mine geology, grade control, planning, rail systems, ore tracking, inventory management, reconciliation, and data management.