CASE STUDY

How Eldorado Gold uses Seequent’s integrated solutions for better global decision making
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SEAN MCKINLEY, SENIOR GEOLOGIST, ELDORADO GOLD
Global mid-tier gold and base metal producer, Eldorado Gold, has introduced Seequent’s Central model management platform to its operations in Europe and the Americas. Central provides a repository for all Leapfrog Geo models. Project stakeholders are able to connect, confer and analyse the most up to date models, enabling time critical decisions and global collaboration. Eldorado is currently reviewing Seequent’s new resource estimation solution, Leapfrog Edge, with the aim of further integration.

When Senior Geologist, Sean McKinley jumps on a plane to visit Eldorado Gold’s mine sites these days, he’s already fully conversant with the sites’ geological models. Since implementing Seequent’s Central model management solution, Eldorado Gold can instantly share their geological modelling globally, improving decision making and collaboration, while also making sure there are no surprises.

Eldorado Gold is headquartered in Vancouver but the Company doesn’t have any projects in its time zone; even its Quebec project is still three hours ahead. Eldorado’s other assets are in Europe - Greece, Romania and Turkey and (formerly) China. Sean is based in Vancouver, but is responsible for resource development and the overseeing of all mine site drilling projects, including exploration and resource management.

Sean explains, “In the past we weren’t able to see what had been modelled at our mine sites in between visits. The files were just too big to send and our systems couldn’t support the real-time sharing of big data. Now with Central we just log in and in a matter of minutes we know what data has been used and what the shapes look like. Having current model revisions available immediately to all key project personnel allows for quick identification of potential errors or problems. We can also do a comparison between what the model looks like today versus two months ago. Throughout the assessment we can make comments and annotations right within Central.”

This collaboration in more or less real time improves strategic mine planning as Eldorado has the ability to readily react to new information and better analyse risks. “This integration allows us to properly manage complex projects from a distance and make better overall decisions,” Sean comments.

Eldorado first implemented Seequent’s Leapfrog Geo as a geological modelling solution in 2014, initially at the advanced Certej project in Romania and then at the Piavitsa and Skouries projects in northern Greece. Recognising the benefit of being able to accurately and regularly incorporate the dense datasets inherent at underground mines, implementation of Leapfrog Geo was then rolled out at Eldorado’s mine sites, enabling better grade control and resource estimation.

Initially, Sean was very hands-on with building geological models for the sites, but as competency spread, the sites took more responsibility. “Now, we are able to manage and collaborate from a distance. Central provides us with this ideal solution.”

Central is a platform for organisations to analyse, track and manage all geoscience data in one place. This single source of truth means that head offices and other project stakeholders can easily check in with mine sites and assist with modelling and collaborate on their development. The sheer size of the modelling projects, typically consisting of five or six gigabytes of data had made transferring project data
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Complex trees of folders and subfolders can be tricky to transfer, they are so large that if one folder gets shifted or corrupted the whole thing can fall apart. After multiple failed attempts to transfer different exploration Leapfrog projects, we integrated those projects onto Central and had them running and available to all users in a matter of hours.

The greatest levels of Central usage are currently at the Olympias mine in Greece where the model is updated weekly. Extensive underground drilling is ongoing, with lots of data coming in and active mine mapping and sampling all needing to be quickly incorporated, understood and acted upon.

This central management of geoscience data has also proved invaluable in Romania, at the Bolcana Project, where the 2017 exploration program totalled over 23,000 metres of drilling in 25 holes. Central’s use is similarly increasing at Eldorado’s Efemcukuru mine site in Turkey, where the exploration team is using it at some brownfield drilling projects.

At the Lamaque site in Canada, Central is being implemented to model the current Triangle deposit as well as additional exploration projects in the region.

Sean comments, “Central usage roughly correlates to the amount of drilling activity on a project. The more data-rich the project, the more Central is used. Geo provides the best tool to build and to quickly and accurately update complex models. Central provides a common storage for sharing and collaborating on projects.”

Although the benefits of moving to a single solution system are obvious, Eldorado encountered some challenges during implementation. This centred around users having to shift their thinking regarding their daily modelling practices and how they interacted more regularly with the headquarters in Vancouver.

Sean explains, “We noticed initially that we weren’t getting the level of usage of the

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We realised we needed to better educate our teams and help them understand that they weren’t the only people who were using the models. There’s myself, more senior managers in Vancouver, mine engineers, consultants – all using these models in different parts of the world. We therefore need them updated frequently and made available on Central. We worked hard to help our teams realise they weren’t working in isolation.

Working in this way required users to rethink their connection to their modelling. Models are no longer held remotely on someone’s PC and then shared when the modeller feels it is completed. As new data becomes available it is continuously used to update the model and make the model more efficient and more reliable. "Using Seequent’s integrated system also means we are able to keep all of this information in one place securely, not just for analysis today but also in the future. We’re going to be able to look back on our decisions and learn from them and really improve our overall strategic thinking.”

Eldorado is also currently reviewing Seequent’s resource estimation solution, Leapfrog Edge, and have just completed a comparison with their existing solution.

“Right now, we're creating 3D shapes in Geo that we export as DXF files and import into other applications for the purposes of resource estimation. This can be cumbersome, especially when we add drillholes and the shapes change. You then have to go through the whole process again - export the new shapes, take them into the other application and rerun the analysis,” explains Sean.

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resource estimation. We can also see how an estimate has changed over time and go back to another version if we prefer that; it’s easier to track and maintain.” Sean explains that the resources are ultimately calculated the same way behind the scenes of the software, “it’s just that with Seequent we’re able to do it all within one system.”

Combining all of its geological modelling and resource estimation in one place offers Eldorado convenience and time savings. “Changes in our geological models are auditable within Central while any changes to Geo models will cascade through the resource models generated in Edge,” says Sean.

Central Product Manager, Peter Joynt, comments, “In the operational space of the future there will be even more demand to integrate the vast amounts of data coming in from a variety of sources so that the best decisions can be made. Doing this removes subjectivity and builds processes that are consistent with the data. We recognise that as the pace of innovation increases, our customers need to rely on us to provide sensible solutions that keep pace, whilst delivering the increases in efficiency and bottom line savings that the industry expects.”

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PETER JOYNT, CENTRAL PRODUCT MANAGER, SEEQUENT
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