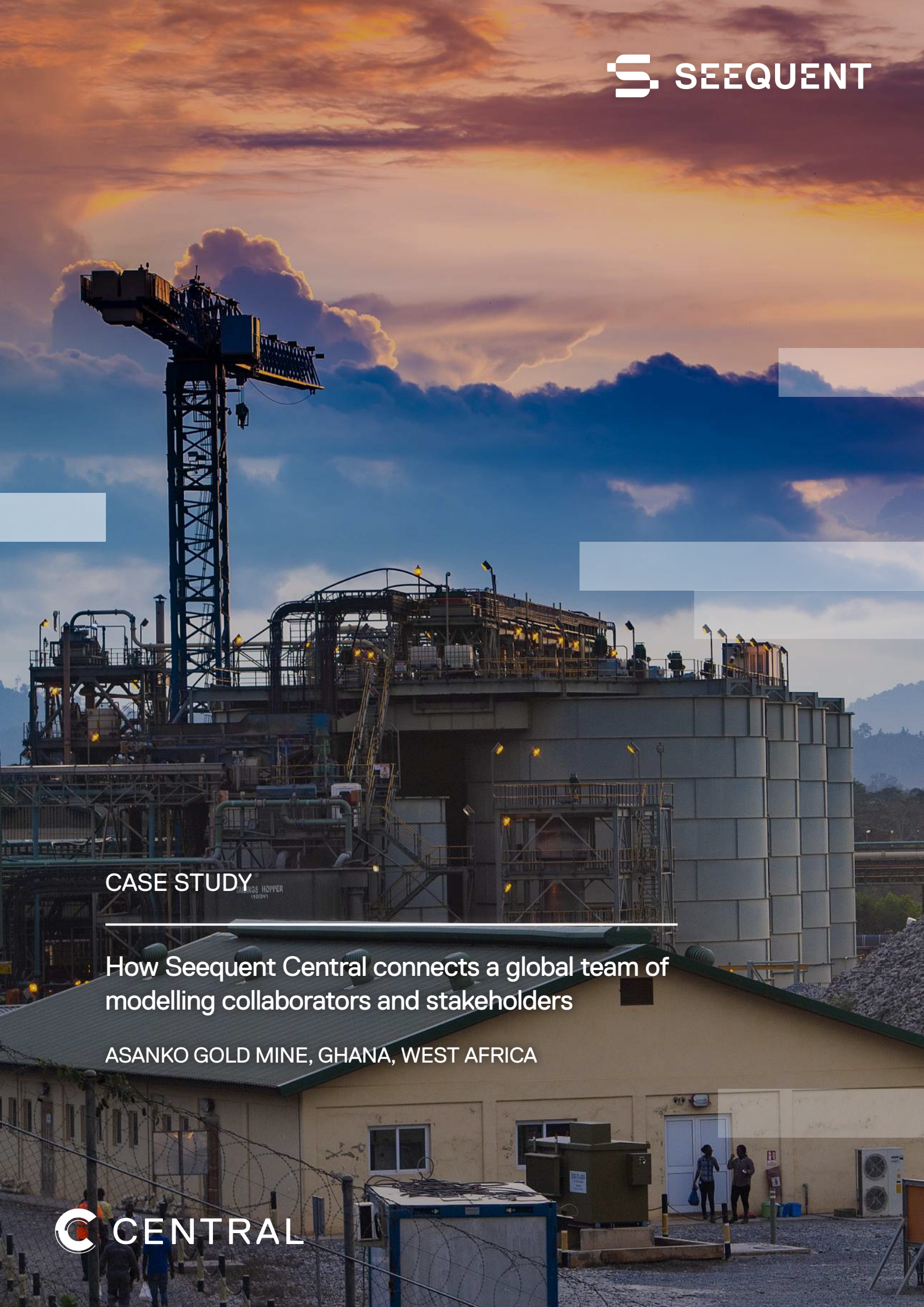

SEEQUENT

CASE STUDY

How Seequent Central connects a global team of modelling collaborators and stakeholders

ASANKO GOLD MINE, GHANA, WEST AFRICA

CENTRAL

The Asanko Gold Mine, a joint venture between Galiano Gold and Gold Fields, has introduced Seequent Central as their model management solution to improve collaboration between operational teams and stakeholders in Canada, Africa, the US, the UK and Australia. Central provides a repository for all Leapfrog Geo models, with stakeholders able to connect, confer and analyse the most up to date models, enabling global collaboration on time critical decisions.

THE PROJECT

The Asanko Gold Mine, located in Ghana, West Africa is a large scale, multi-pit asset, that is a joint venture between Galiano Gold and Gold Fields, with Galiano Gold as the operator. Both have a 45% interest, with the remaining 10% held by the Government of Ghana. Built in 2015 ahead of schedule and within budget, first gold was poured in January 2016 and commercial production commenced in April 2016.

In January 2019 Central was introduced to connect a global team of modelling collaborators and stakeholders and to avoid version control issues. Central allows 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 operations, assist with modelling and collaborate on development.

The Asanko Gold Mine's Senior Exploration Geologist, Benjamin Osei Tutu, says, “Central provides a smooth transition right from exploration into mining production. I’d estimate that we’re probably cutting the amount of time we spend on modelling by half, as there’s less back and forth, modelling is a continuous process, we are all agreed on what to do.”

Ben continues, “Using Central we are able to add value and de-risk our projects from the outset. People from different parts of the world are able to look at the same project in real-time and when the model is updated everyone can comment and refine. At the end of the day, it’s not just one person’s view, it’s a collective view from everyone who has experience and understanding of the deposit. This not only improves our decision making but it simplifies the workflow and cuts the work time significantly.”

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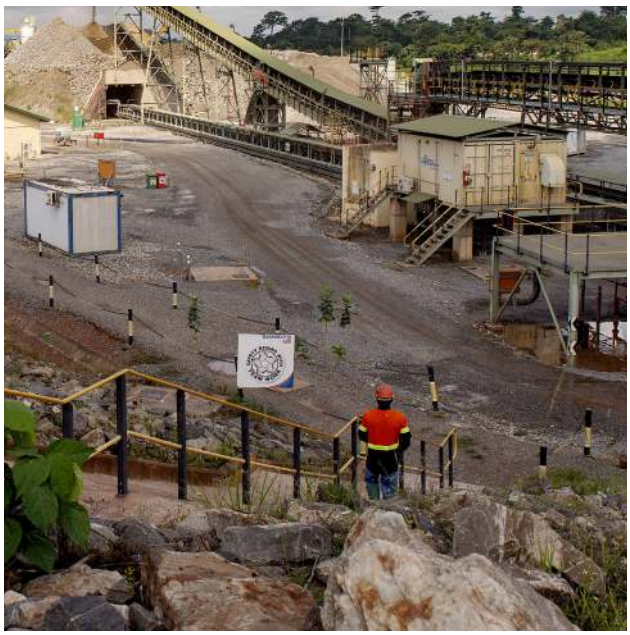

SITUATION

Working on the Asankrangwa Belt, one of Ghana's most prospective and underexplored gold regions, means that teams spread throughout the globe need to be able to work collaboratively and quickly to make best use of the latest information. On the ground, the pressure is on to discover new resources to replace those depleted by mining. Critical decisions are made on the data that is collected from drilling, so precision, speed and accuracy in how data is managed and analysed is key.

In 2018, the Asanko Gold Mine had some eleven Leapfrog projects running at their mine site. Models were stored on local machines and then shared via USB flash drives for model review by key collaborators spread globally and for sign-off by their Technical Office in Johannesburg. The approach could result in multiple copies of models and projects and ran the risk of confusion over which was the latest version.

Stakeholders were also not involved early enough in the modelling process. Benjamin Osei Tutu explains, "Before Central you'd produce the model and give your outputs to the next team who is going to use it, typically the Mineral Resource team and they'd come back with changes, sometimes they could have entirely different ideas and this caused delays while these new ideas were taken on board."

RESPONSE

The key goals the Asanko Gold Mine wanted Central to achieve were easy stakeholder collaboration, avoidance of version control issues, and secure data access control and back up.

Using Central, version control issues were eradicated. Different modelling scenarios held as a single source of truth could be immediately critiqued by contributors worldwide. A detailed audit trail of data used and the evolving mineralisation rationale was stored and accessed easily in Central making compilation of final technical reports and external peer review seamless. The model was dynamically updated by each contributor in which all contributors had access to the same data.

Galiano Gold's Senior Resource Specialist, Paula Ogilvie, comments, "Central enabled the modelling team to establish a best-fit, refined consensus model in an exceptionally short period of time. The Central platform allowed us to test a range of different structural and mineralisation scenarios, each of which had critical implications for the resource estimate, pit design and ultimately the economic feasibility for each deposit."

Being able to work on models remotely also provided another time saving advantage, geologists didn't have to be physically in Ghana, which had sometimes become a serious logistical issue due to visa constraints. Ben explains, "Carrying out analysis remotely via Central had a significant impact, we didn't need to have someone on the ground in Ghana and this meant we could significantly speed up our decision making and avoid any possible delays."

OUTCOME

Central has successfully helped the two different entities of Galiano Gold and Gold Fields to collaborate and has fully achieved the Joint Venture's goals.

Benjamin Osei Tutu comments, "We're able to share real time updates of the models as new data is generated from mapping and drilling. One of the biggest challenges we face is transitioning from exploration to mining. When you are able to easily involve key stakeholders from the outset in the process and get your models right from the beginning, you can transition much more smoothly.

Comments Mike Begg, Galiano Gold's SVP Technical Services, "With Central we can now hold an entire project in a centralised space, this is not just better security, data integrity and housekeeping but it improves overall decision making and our confidence in it. We're also able to immediately review changes, so major decisions can be made in Johannesburg or Australia and we are confident that we're dealing with the latest information and seeing what the geologist sees."

The Asanko Gold Mine is also evaluating Leapfrog Edge, Seequent's resource estimation solution, which will enable them to streamline modelling and resource estimation into one workflow. The Joint Venture is also considering integrating Central with the IMDEXHUB-IQ™. Enabling 3D visualisation of drillhole progress and collection of structural geology data in near real-time, all in the context of the user's 3D geological model.

Seequent's Senior Project Geologist, Africa, Andre Hanekom comments, "As we do with many of our customers, we're also working with Galiano Gold on new ways to help capitalise their use of remote analysis. We intend using Central for borehole planning. This adds real value enabling remote sites to provide much more efficient feedback and receive instant help in making time critical decisions."

Seequent Central has enabled the Asanko Gold Mine to achieve the following modelling goals:

- Version control.
- Auditability of model updates.
- Application of annotations as a communication tool for model reviews.
- Locking of models during update process.
- Permission based access to models.
- Collaboration between teams at operations and head offices in Canada, Africa, the US, UK and Australia.
- Centralised storage of projects.

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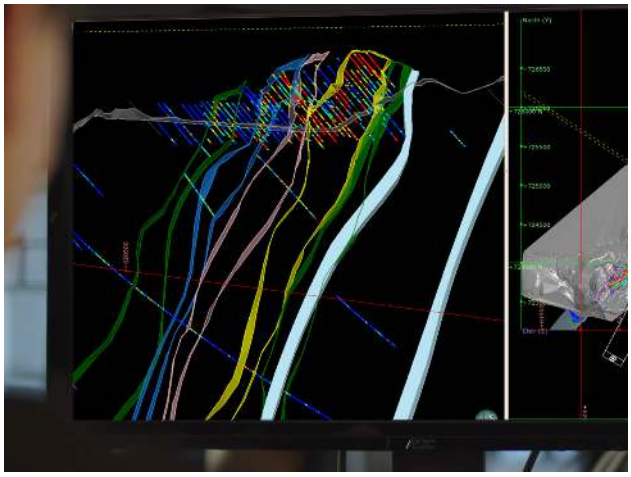
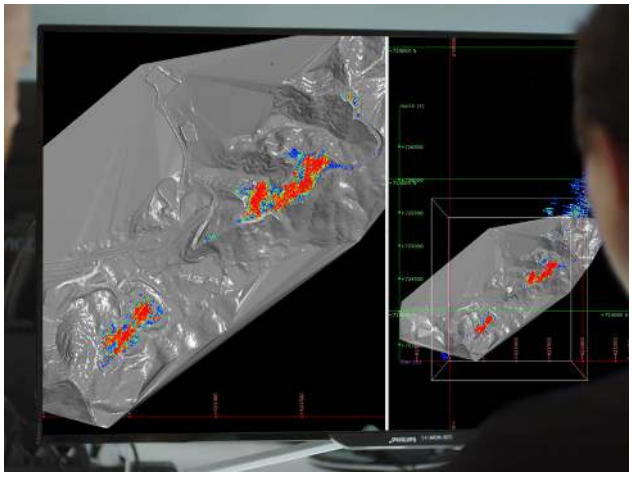
>
> Mike Begg, SVP Technical Services, Galiano Gold





Contact Seequent for more information on Central

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