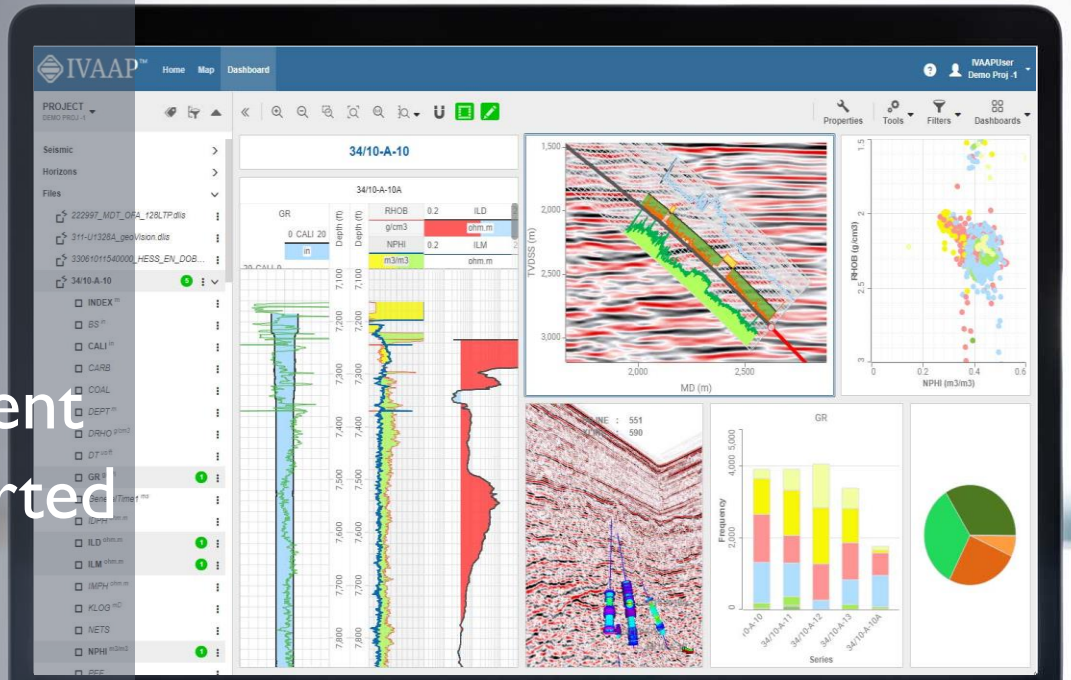
Training

IVAAP Client Getting Started Guide



INT | Empowering Visualization

IVAAP 2.7 | November 2020

Welcome to IVAAP

IVAAP™ is a digital framework designed to accelerate the development of web-based data visualization and analysis solutions for upstream E&P.

This document is designed to provide a quick overview of IVAAP's data visualization capabilities.

For more information refer to the user manual in the application accessed from the toolbar icon 

or contact support@int.com.

Getting Started Steps:

- Signing In
- Opening a Dashboard from Home Page
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- Working with Dashboards
- Adding a Curve to a WellLog
- Editing Curve Properties
- Interacting with the 3D Widget
- Saving / Restoring Dashboard
- Sharing Dashboards
- Reorganizing Widgets
- Adding a New Widget
- Filter Data Display
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- Projects
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- 2D Seismic and Well Correlation
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- Add Formula
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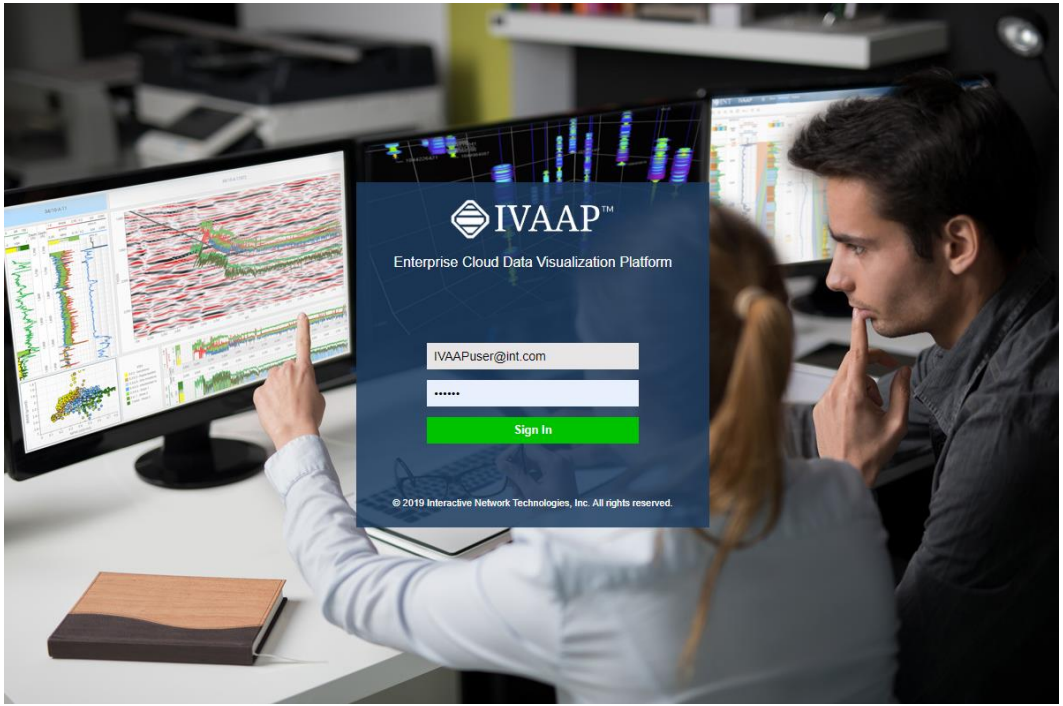
- Accessing WITSML Server

Signing in

Access IVAAP here: https://pub.ivaap.int.com/ivaap/viewer/ivaap.html

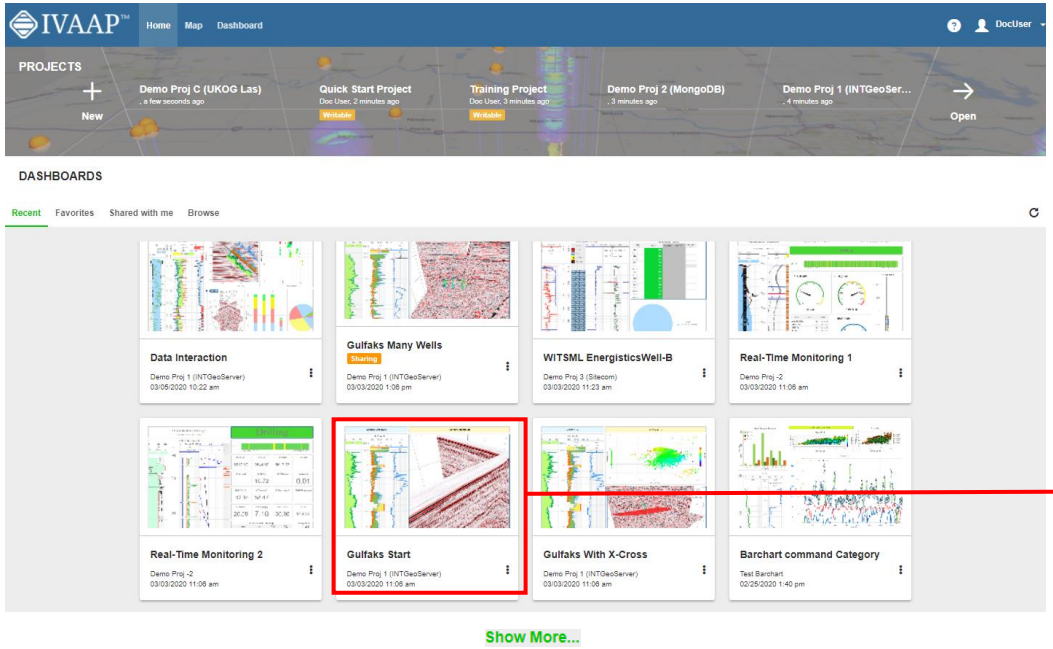
Enter your assigned **User Name** and **Password,** then click **Sign in.**



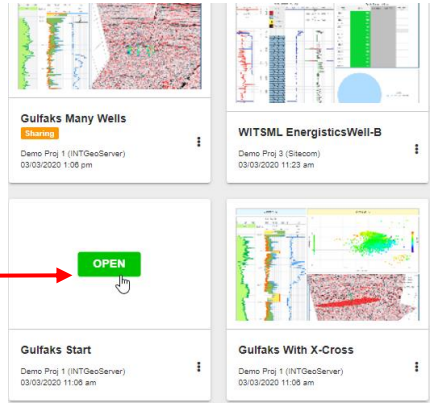
Opening a Dashboard from the Home Page

The Home Page displays the most recent user dashboards. Select **Gulfaks Start,** then click **Open.**

Home Page



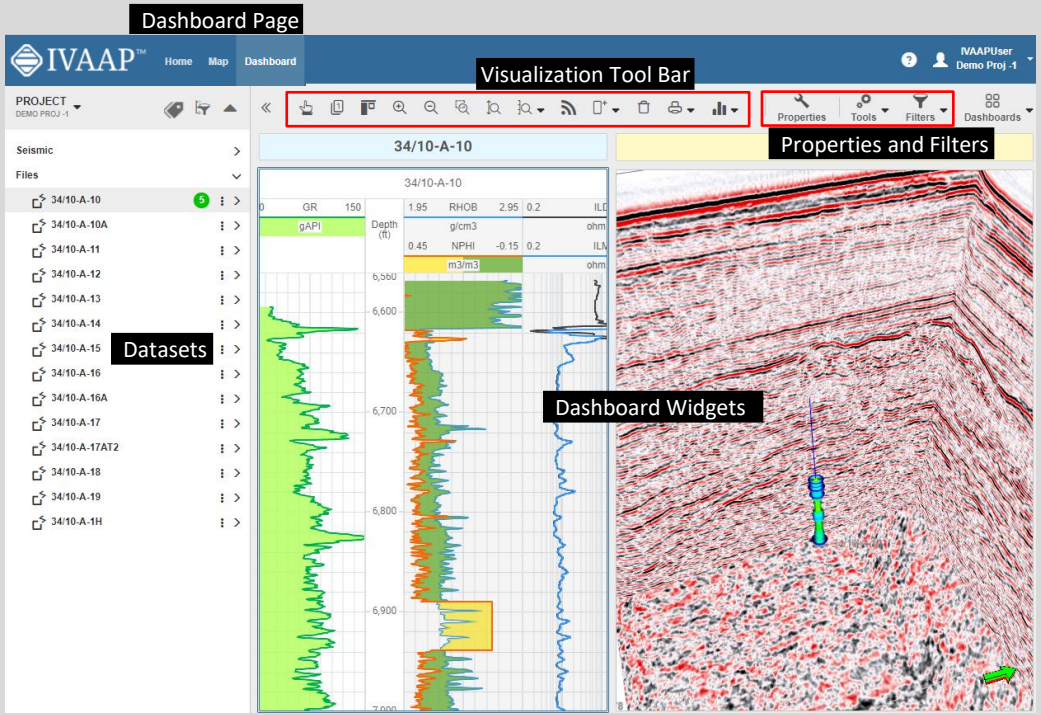
For a detailed list view of dashboards, click **Show more... or Browse**



Dashboard Page Layout

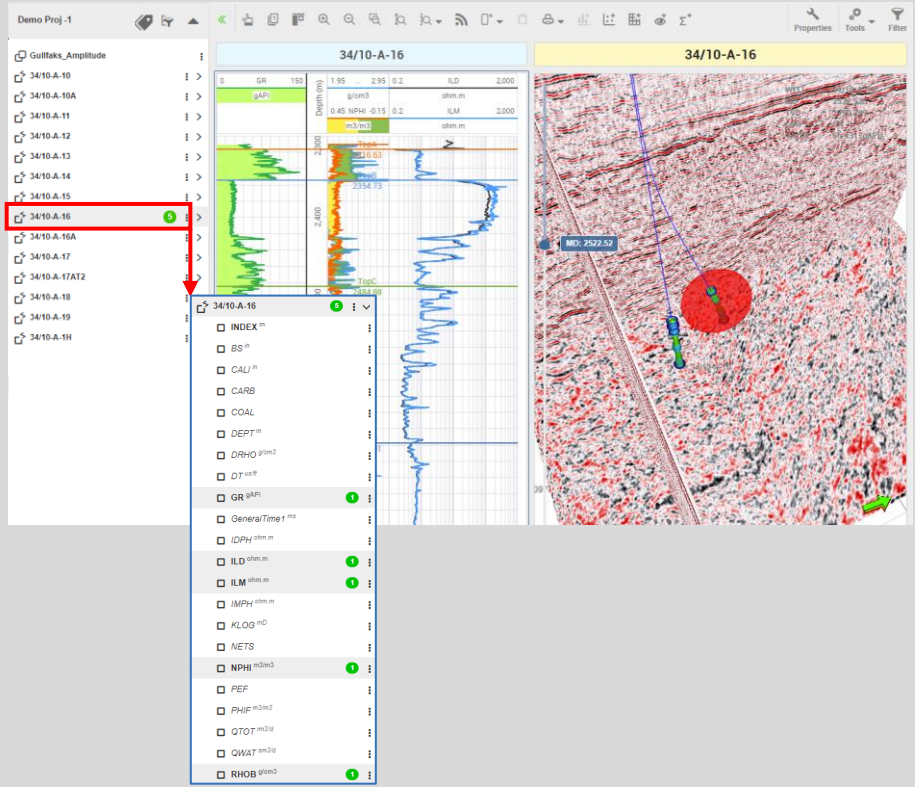
This typical **Dashboard Page** includes:

- The **Datasets** used by this dashboard and all other available Project datasets.
- **Widgets** used in this dashboard.
- **Visualization Tool Bar,** icons are displayed based on selected widget.
- **Properties** and **Filter** to customize widget display.



Working with Dashboards

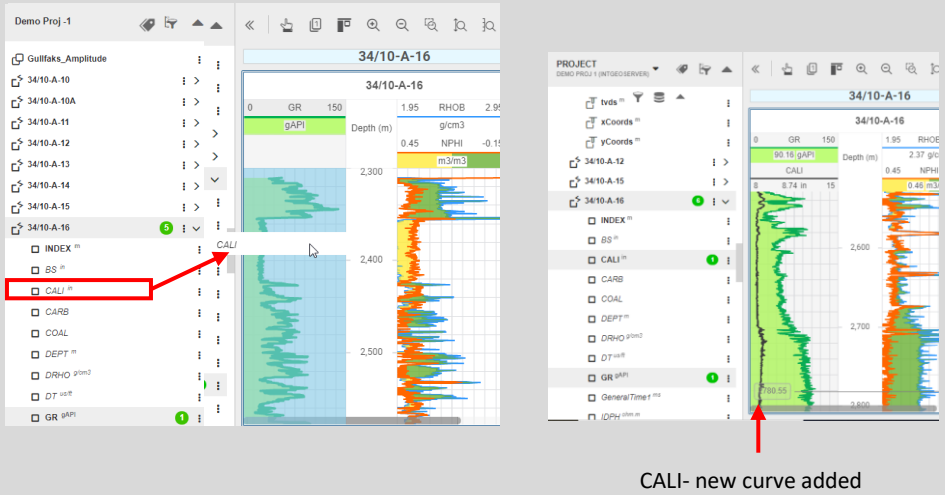
- Open the **Gulfaks Start** dashboard from the Home page.
- **Data Panel** is opened on the left.
- This dashboard is composed of a WellLog widget on the left side and a 3D widget on the right side.
- Click inside the WellLog widget.
- The Data Panel highlights the data displayed in the WellLog widget and the number of curves is shown in green.
- Click **well 34/10-A-16** to extend the tree and see which curves are used.



Adding a Curve to a WellLog

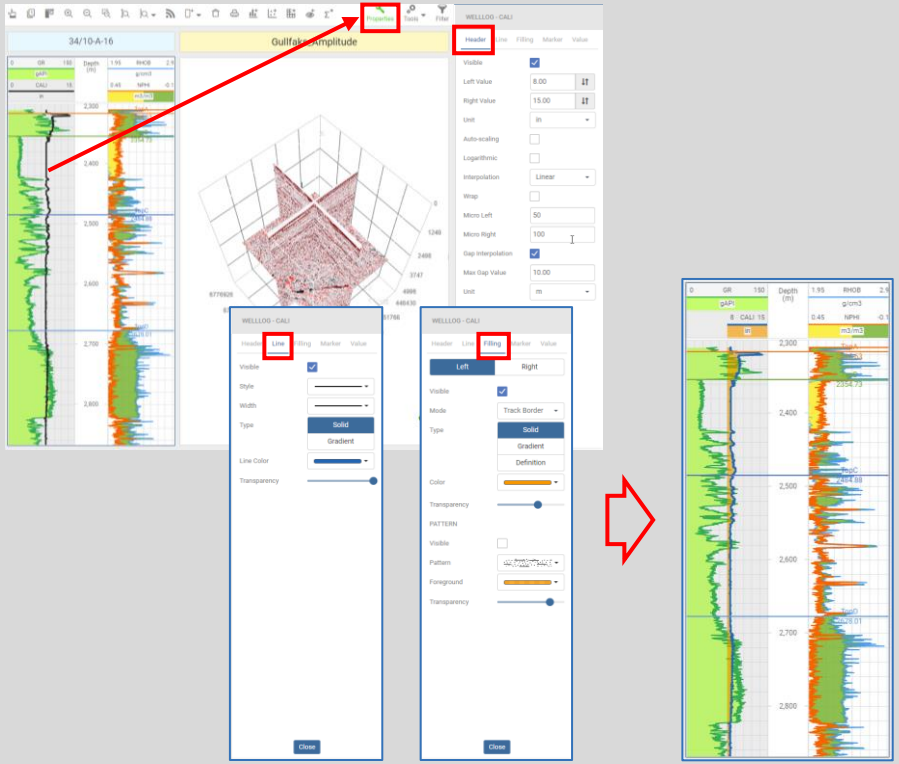
Adding a curve to the WellLog widget display is simply done by dragging a curve from the Data Panel toward one of the tracks.

- Select CALI curve and drag it inside the WellLog widget.
- See the track being highlighted.
- Release the mouse button over the first track.
- Observe the curve CALI being added to the first track.



Editing Curve Properties

- Select the curve CALI and click 🔧 or double-click CALI curve to open the Properties dialog on the right side.
- In the **Header** tab, change the Left Value to 8 in., change Micro Left to 50%.
- In the **Line** tab, change the line color to blue.
- In the **Filling** tab, click Visible, select left track border mode and add transparency.



Interacting with the 3D Widget

Click in the 3D widget.

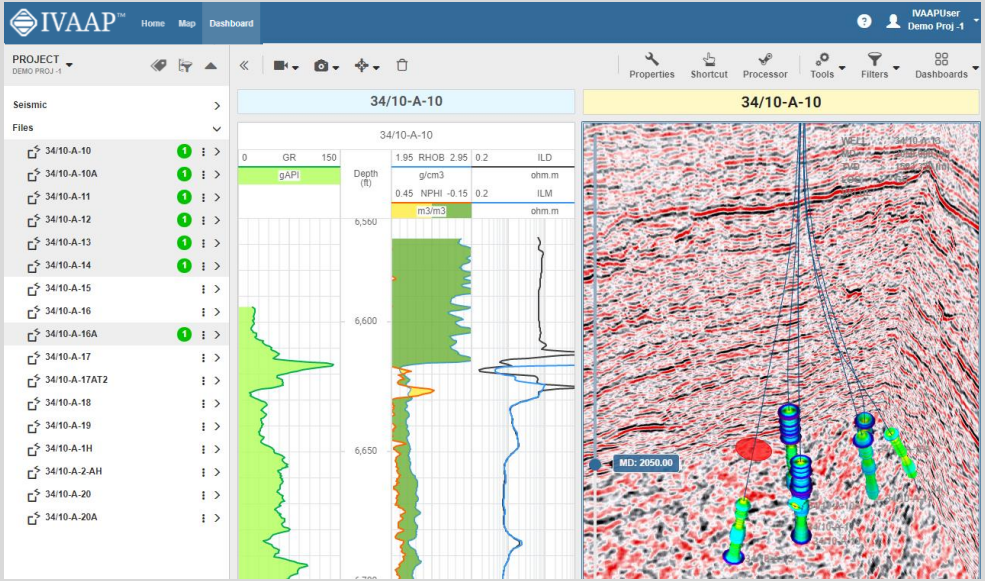
- Use the left mouse button to rotate, the right button to shift laterally, the middle button to zoom in/out, and double-click to edit the center of rotation.
- CTRL + left button click can be used to interactively move the inline, cross-line, or TVD slice.

In the Data Panel, click the well names.

- Observe the wells being added to the 3D view.

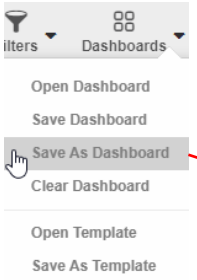
Click the wells in the 3D widget.

- Observe the WellLog widget being updated with the selected well.

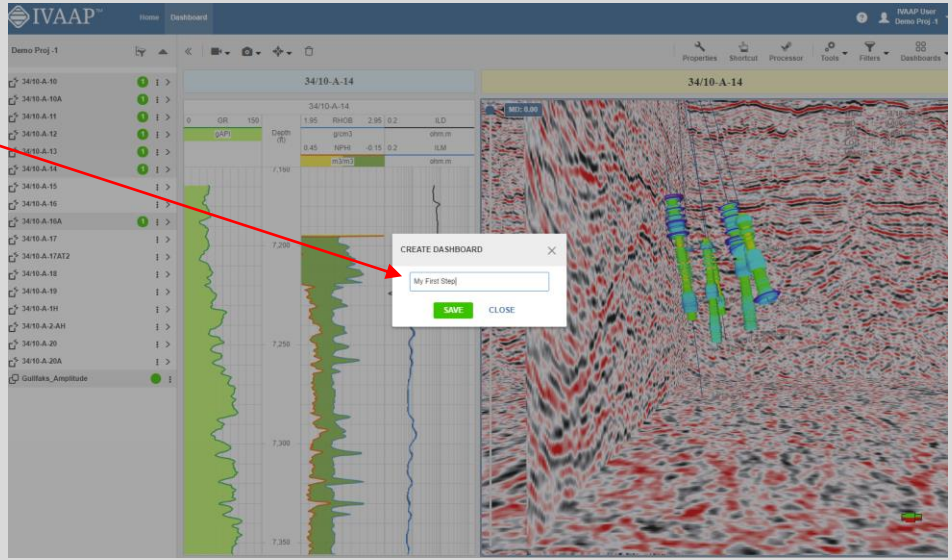


Saving / Restoring Dashboard

- Select **Save As** under the **Dashboard** dropdown



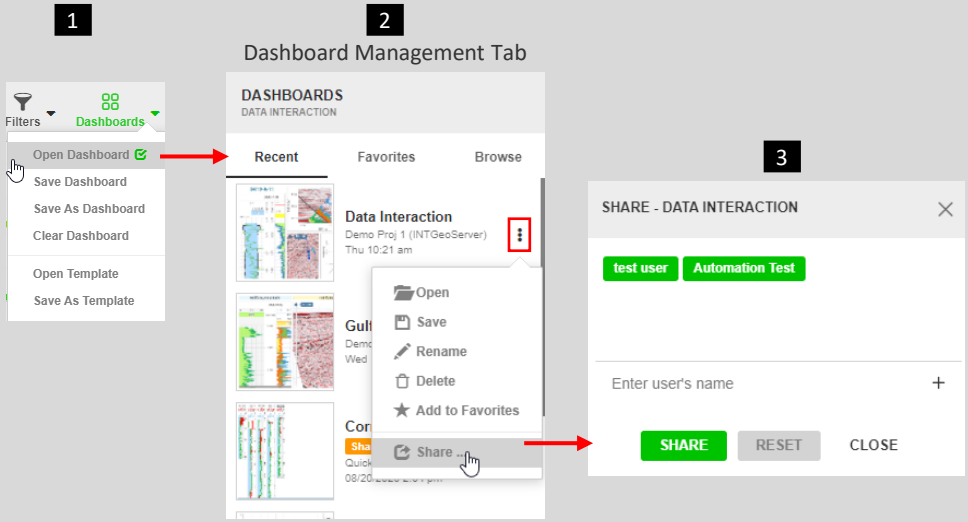
- In the pop-up window, name the dashboard **My First Step.**
- See the dashboard listed under **My Files.**
  - Compare with **Gulfaks Start Many Wells** dashboard.



Sharing Dashboards

1. To share a dashboard click on Dashboards and select Open Dashboard to display the Dashboard Management Tab on the right. All available dashboards will be displayed.
2. Click the Icon ⋮ next to a dashboard file or a folder or as required to display the menu. Select Share... from the menu.
3. Select one or more users and click SHARE. A progress bar will be displayed, and the popup will close if the sharing is successful. Shared files and folders are indicated by the Sharing icon.

Dashboard Templates can be shared in the same way. Select Open Template in the Dashboard Menu.



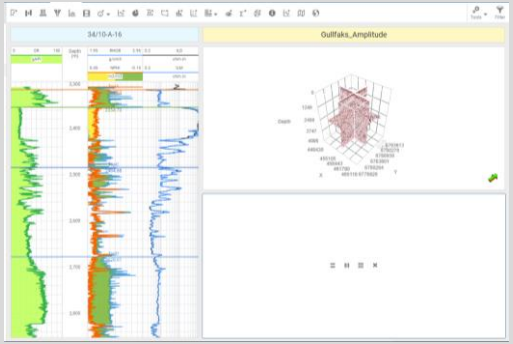
NOTE: If a folder is shared, all the dashboards in the folder will be shared. All the dependencies like Dashboard and Widget Templates, State Definitions, Tops, Formulas etc. will also be shared when applicable.

Reorganizing Widgets

Select Gulfaks Start dashboard.

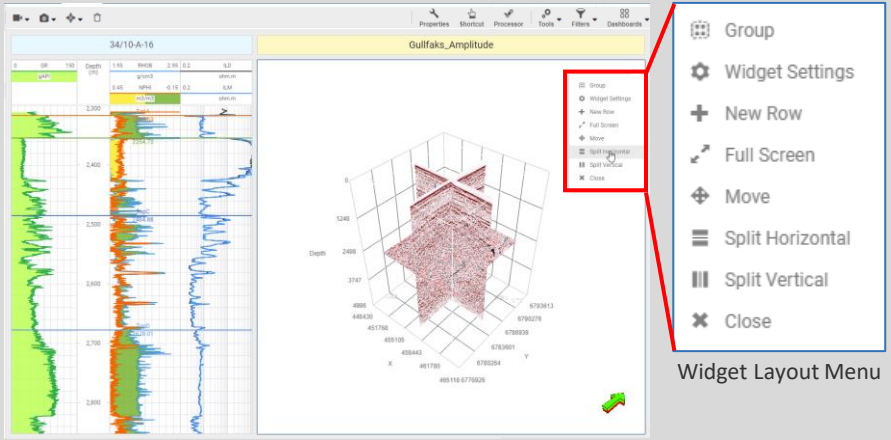
All widgets display the icon ⋮ in the top right for access to the **Widget Layout Menu**.

- In the 3D widget, select **Split Horizontal**
- Select **Move** to move the 3D widget to the bottom empty area, then drag.



Split Horizontal

Move

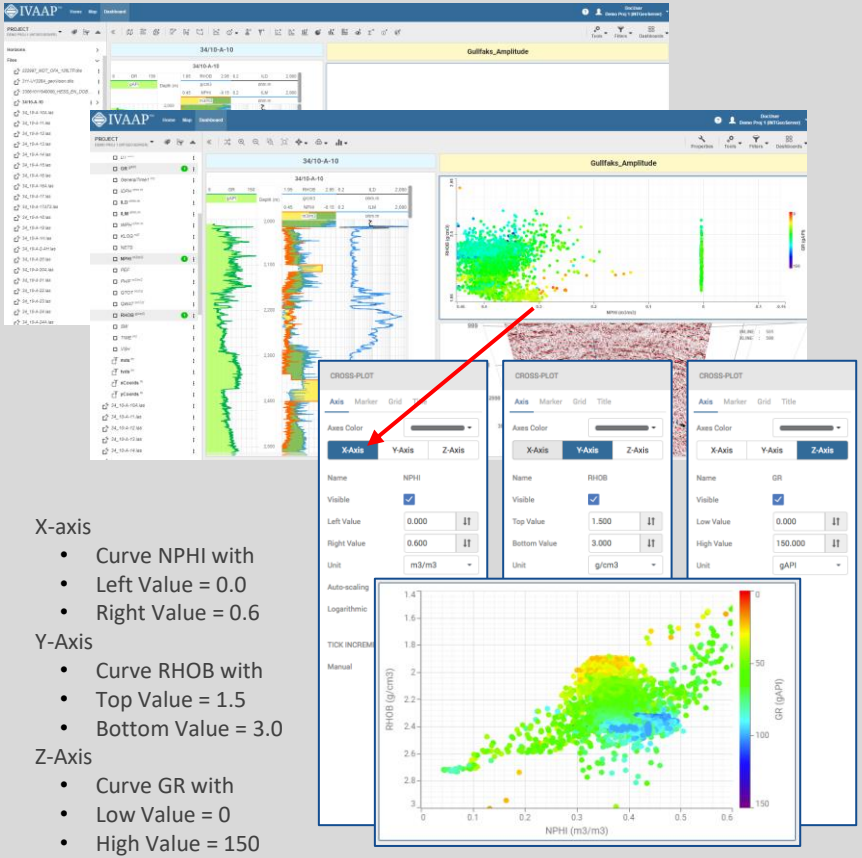


Widget Layout Menu

Adding a New Widget

Click the empty area.

- Observe the toolbar listing all available widgets.
- Select **Cross-Plot** widget.
- From the **Data Panel**, drag and drop curves to X-Axis, Y-Axis, and inside the chart area for Z-Axis, which is used as gradient color.
- Double-click to open the **Properties** dialog to edit curve limits.
- Save the dashboard as **My Second Step.**
  - Compare with **Gulfaks with Cross-Plot** dashboard.



X-axis
- Curve NPHI with
- Left Value = 0.0
- Right Value = 0.6

Y-Axis
- Curve RHOB with
- Top Value = 1.5
- Bottom Value = 3.0

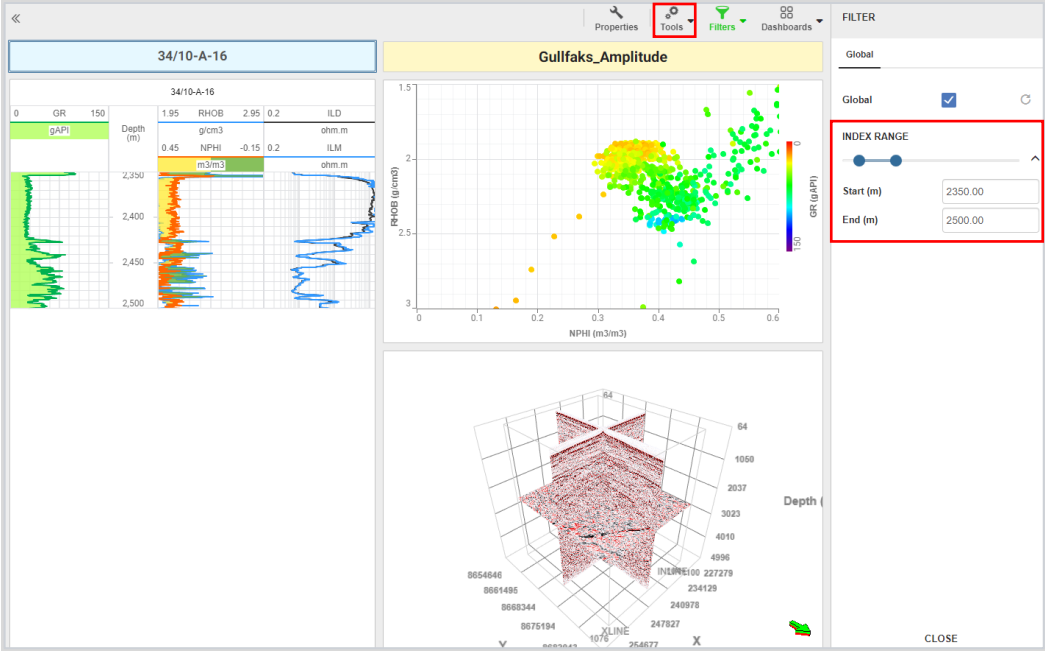
Z-Axis
- Curve GR with
- Low Value = 0
- High Value = 150

Filter Data Display in the Widget

- Open **Gulfaks with Cross-Plot** dashboard.
- Click on in the toolbar and select Filter
- Modify the Index Range as shown in the image.
- Observe the displayed data change.

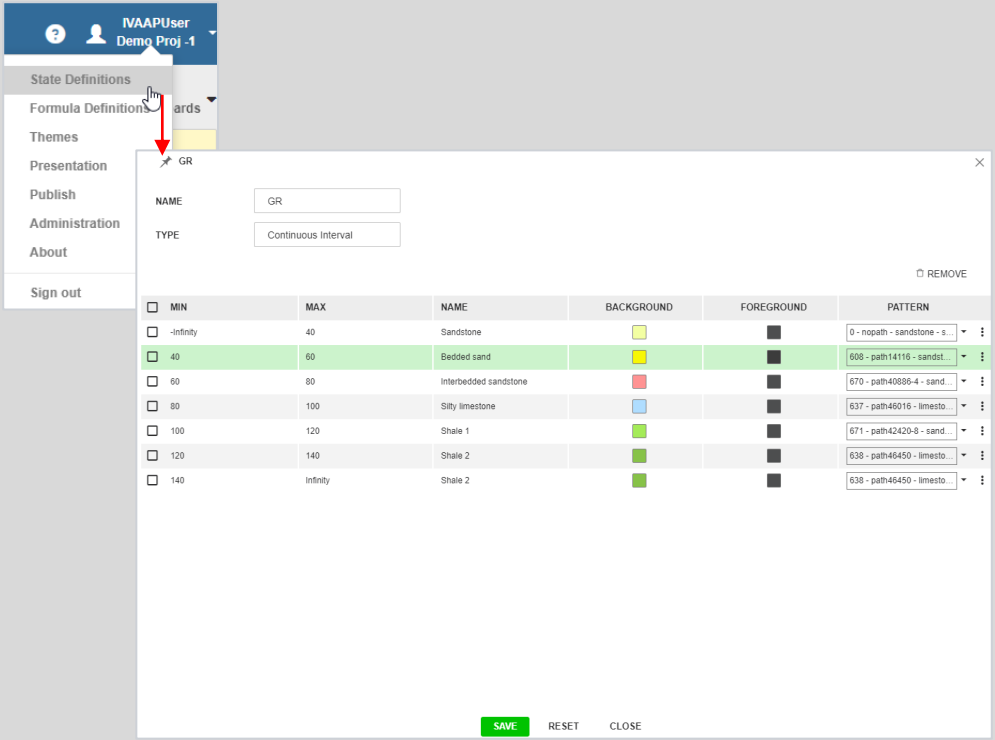
All the data will still be retrieved from the server, but the Filter will only restrict it's display in the widget on the screen.

To restricts the data retrieval from the server based on the criteria applied, select Data Intervals option in the menu instead.



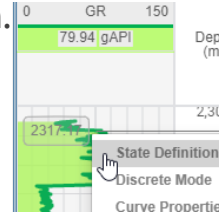
Add State Definition

- Click on the Config Menu on the top right and select State Definitions.
- Add the State Definition as shown, click SAVE and close the window.

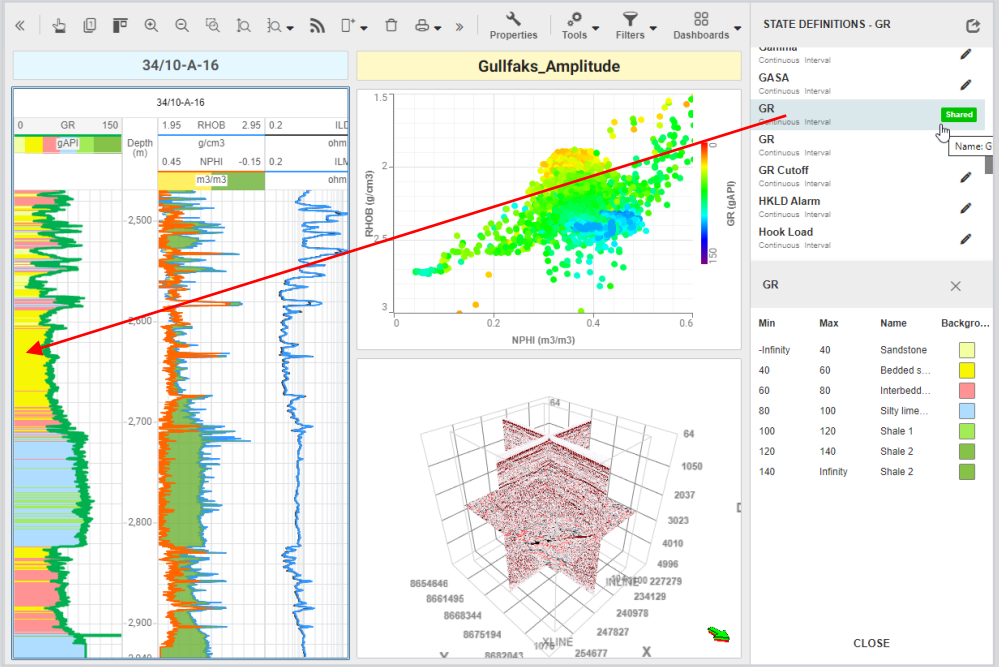


Add State Definition to a Curve

- Open **Gulfaks with Cross-Plot** dashboard.
- Right click on ‘GR’ curve in WellLog widget and select State Definition.

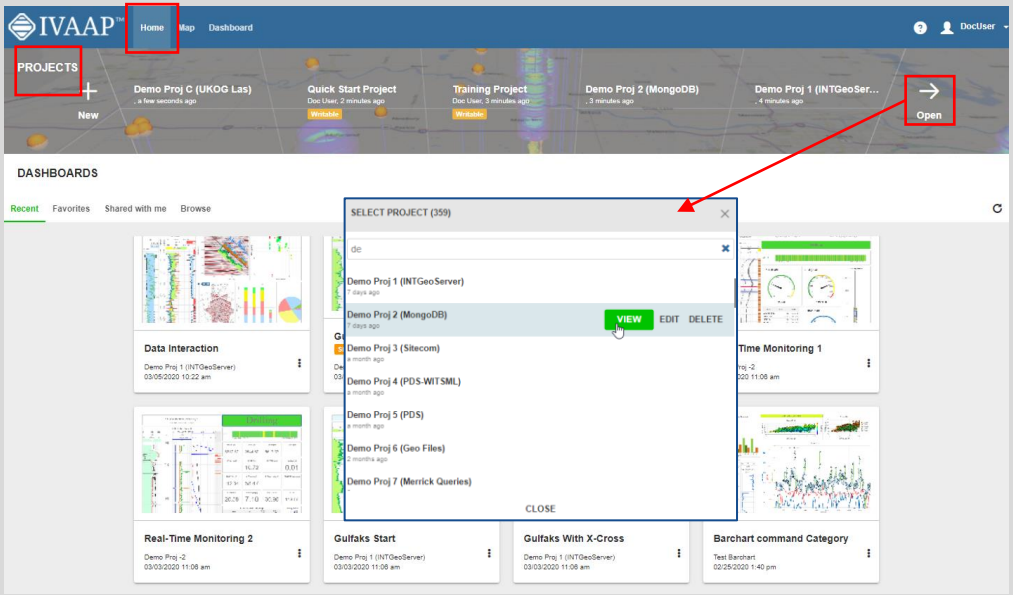


- From the displayed tab, select the State Definition added earlier.
- Observe the change in the widget.



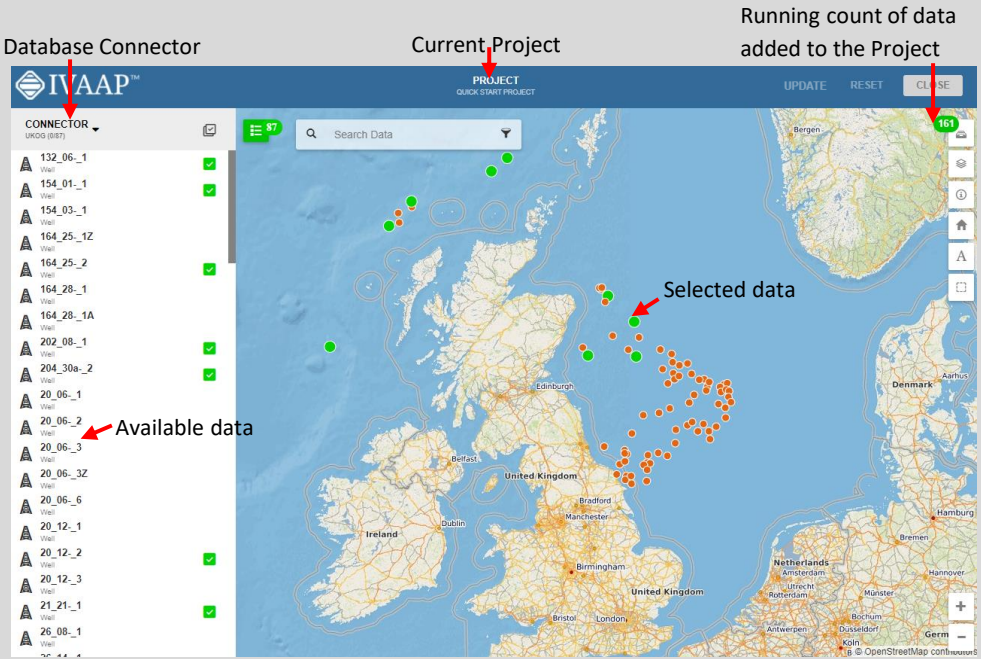
Projects

- The Home Home page lists five recently modified Projects. Click on the name to open it.
- To Open another project, click Open button to open the pop-up window.
- Select the **Demo Project -2** from the list and click VIEW to open the Project.
- The project opens and all available project data is displayed in the data panel on the left, the Dashboard Templates tab is opened to the right and the data visualization area is displayed in the center.



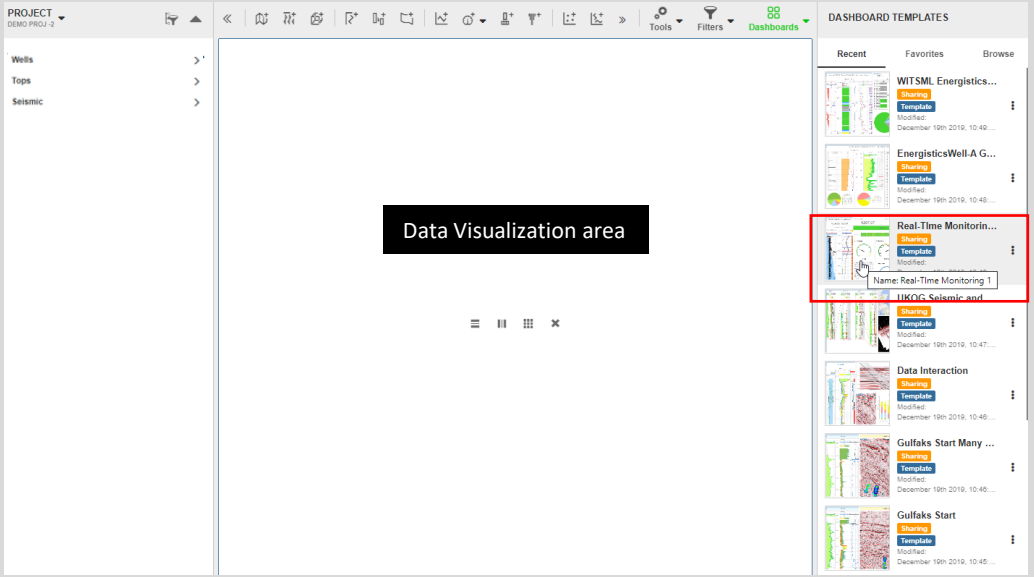
Map Search

- To Edit the project using a Map, click **Map** in the Navbar. All available datasets for the currently opened project are displayed on the Map search window.
- To add or remove data, click on the map or data panel and click UPDATE. Selected data is shown with a green marker.



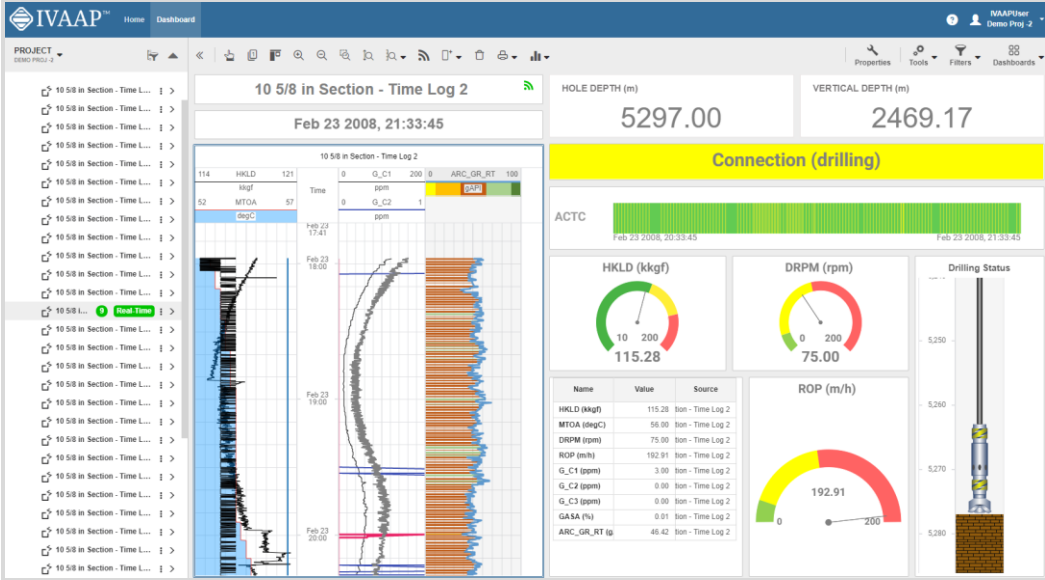
Using Dashboard Templates

- Open Demo Project 2.
- The Dashboard Templates tab is displayed to the right.
- Select My files\First Steps**Real-Time Monitoring 1** template file.



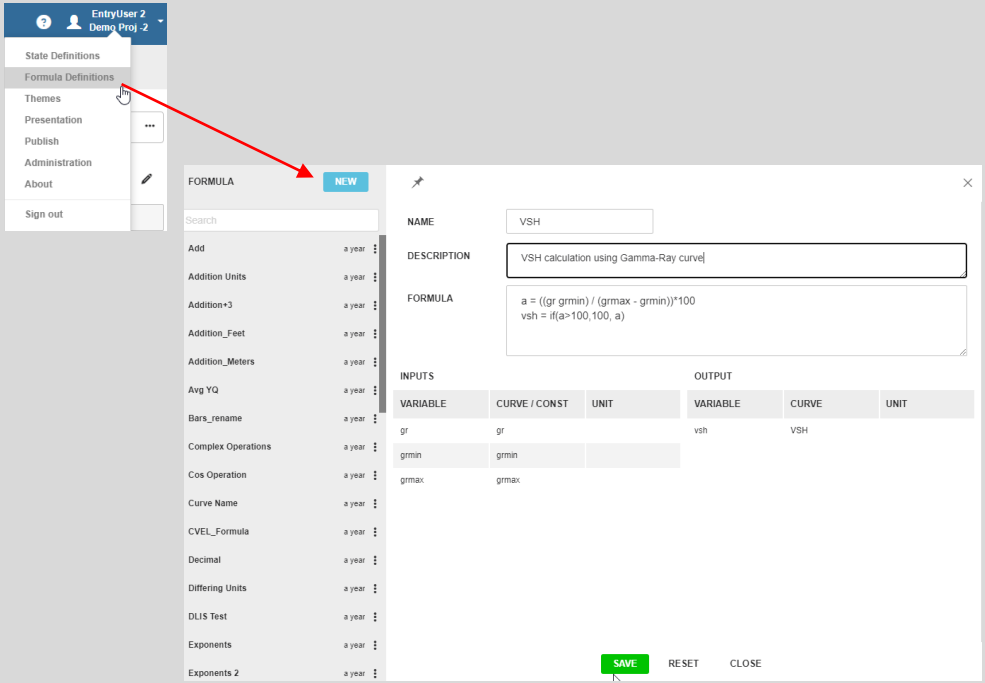
Real-Time Monitoring 1

- Select a well from the Data Panel and click on the data set showing the Real-Time icon to display the data.
- The real-time notification is added to the dashboard.
- All the widgets are updated automatically.



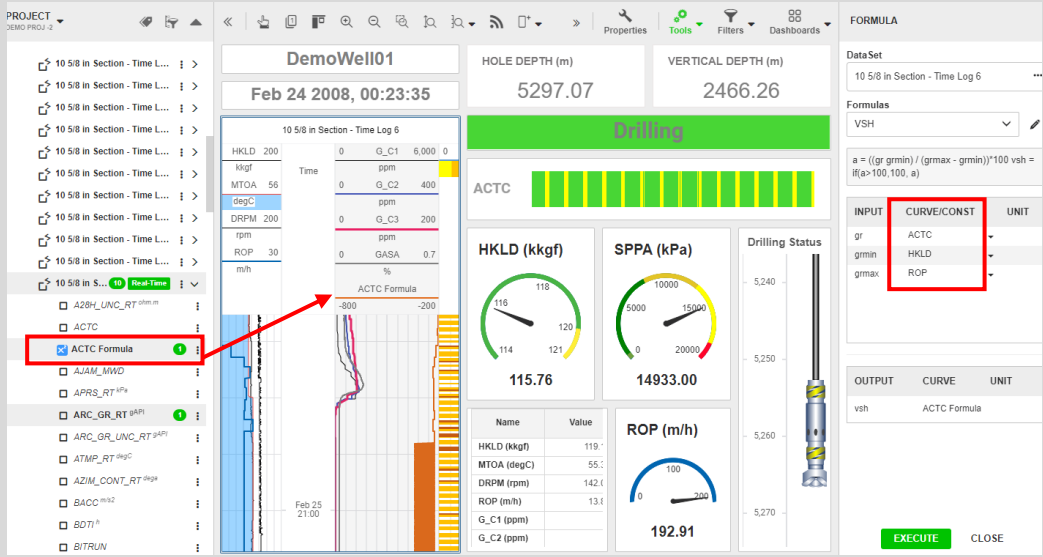
Add a Formula - I

- Click on the Config Menu on the top right and select Formula Definitions.
- Click NEW
- Add a formula as required and click SAVE and close the window.



Add a Formula - 2

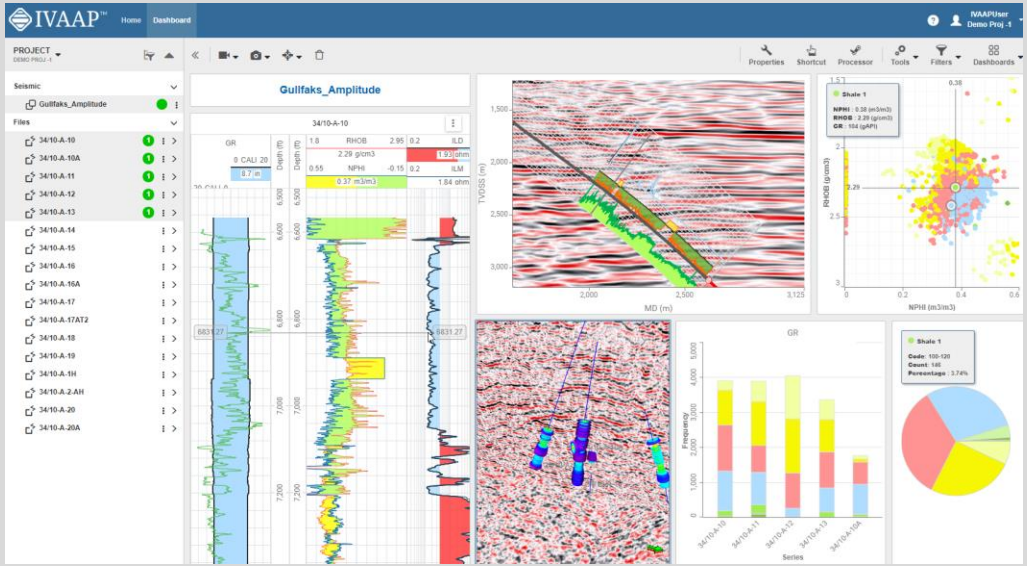
- Click on Tools and select Formula option
- Select the formula created earlier and add the Curve/Constant as shown.
- Clicking Execute will add the output curve in the data panel as shown in red. The Formula curve is also shown added to the WellLog widget.



Data Interaction

Select **Data Interaction** dashboard.

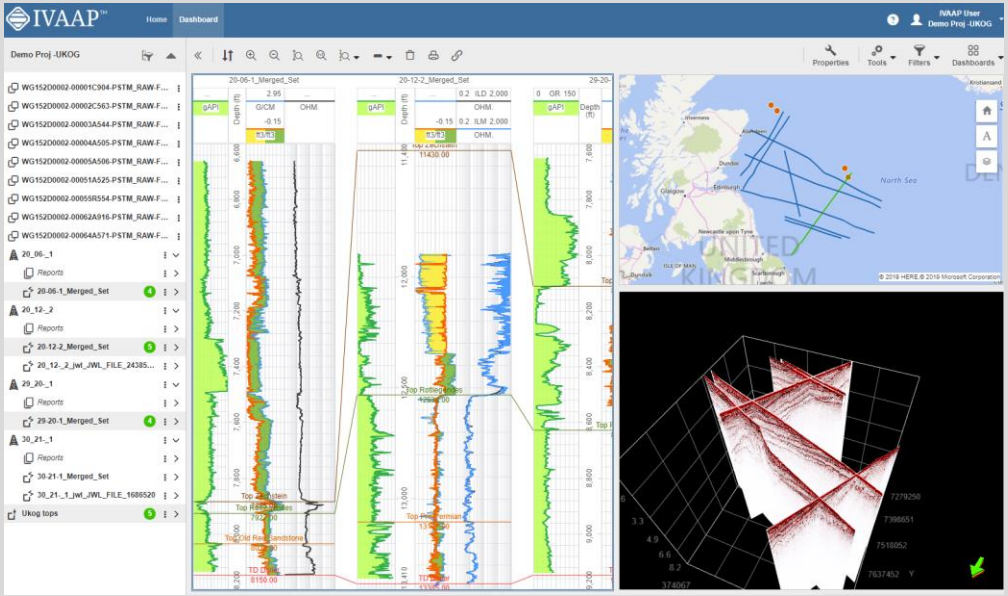
- Navigate between widgets.
- Observe the interaction between widgets.
  - Selecting a well in the 3D widget will update the WellLog and the Cross-Section.
  - Moving the cursor in WellLog will update the cursor position in other widgets.
  - Class selected in the Pie Chart will highlight in all the other widgets.



2D Seismic and Well Correlation

Select the **UKOG Seismic and Wells** dashboard.

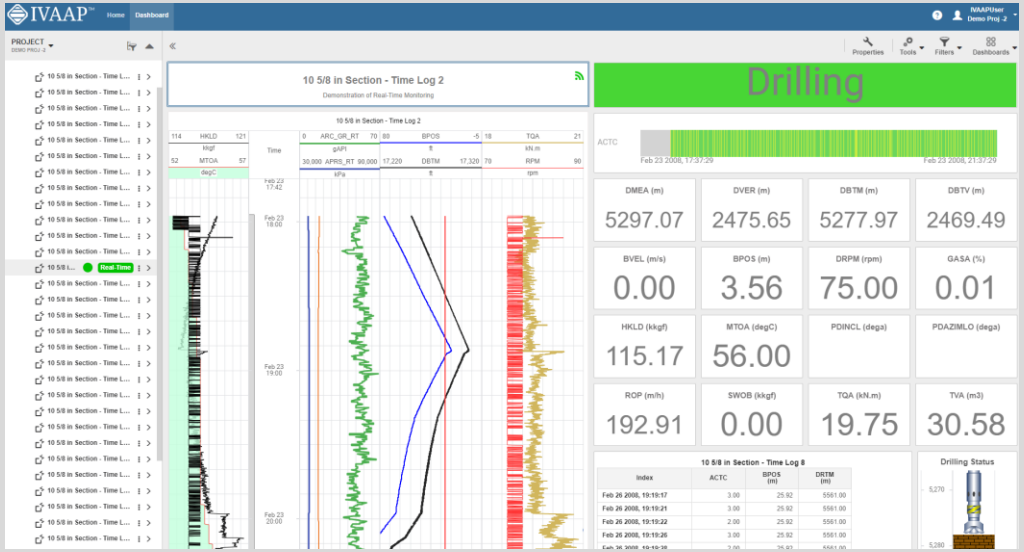
- Wellhead locations and 2D Seismic lines are visualized in the Map widget.
- Log curves and tops are displayed in the WellLog Correlation widget.
- 2D seismic lines and the Correlation Fence is displayed in the 3D widget.



Real-Time Monitoring 2

Open **Real-Time Monitoring 2** dashboard.

- Combine multiple numerical gauges with well log data to monitor drilling status.

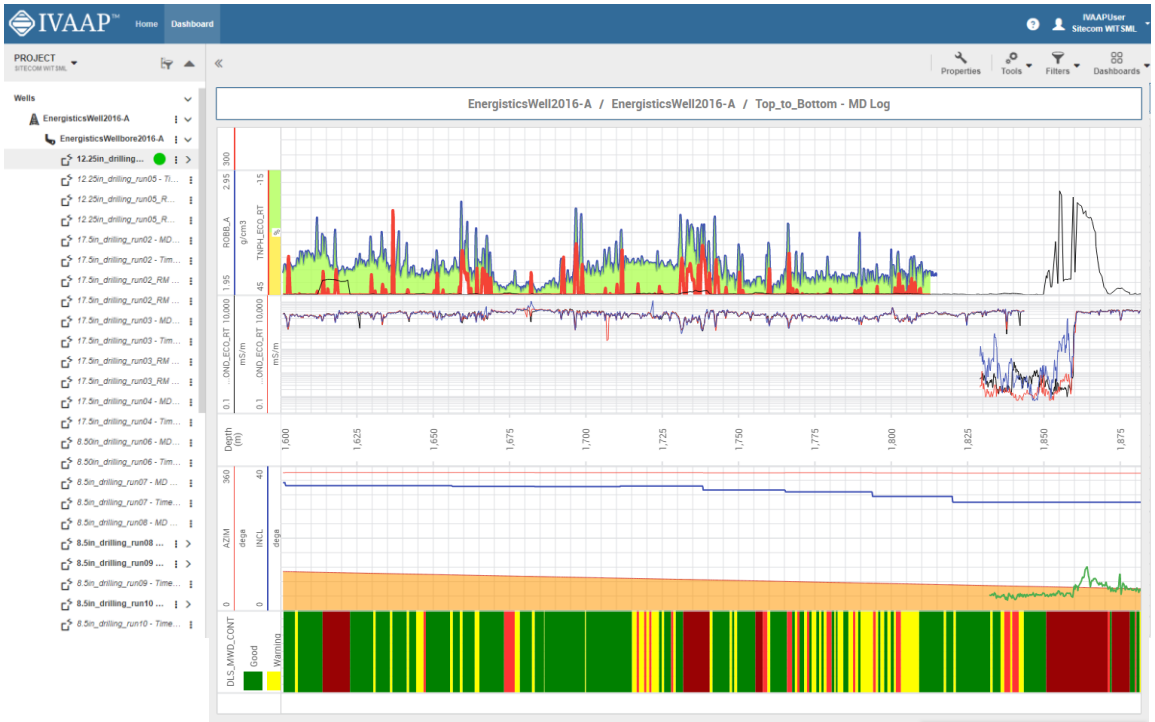


Accessing WITSML Server

The next three dashboards are examples of IVAAP accessing Kongsberg Intellifield SiteCom server using public WITSML 1.4.1 data.

Open **WITSML EnergisticsWell-A** dashboard.

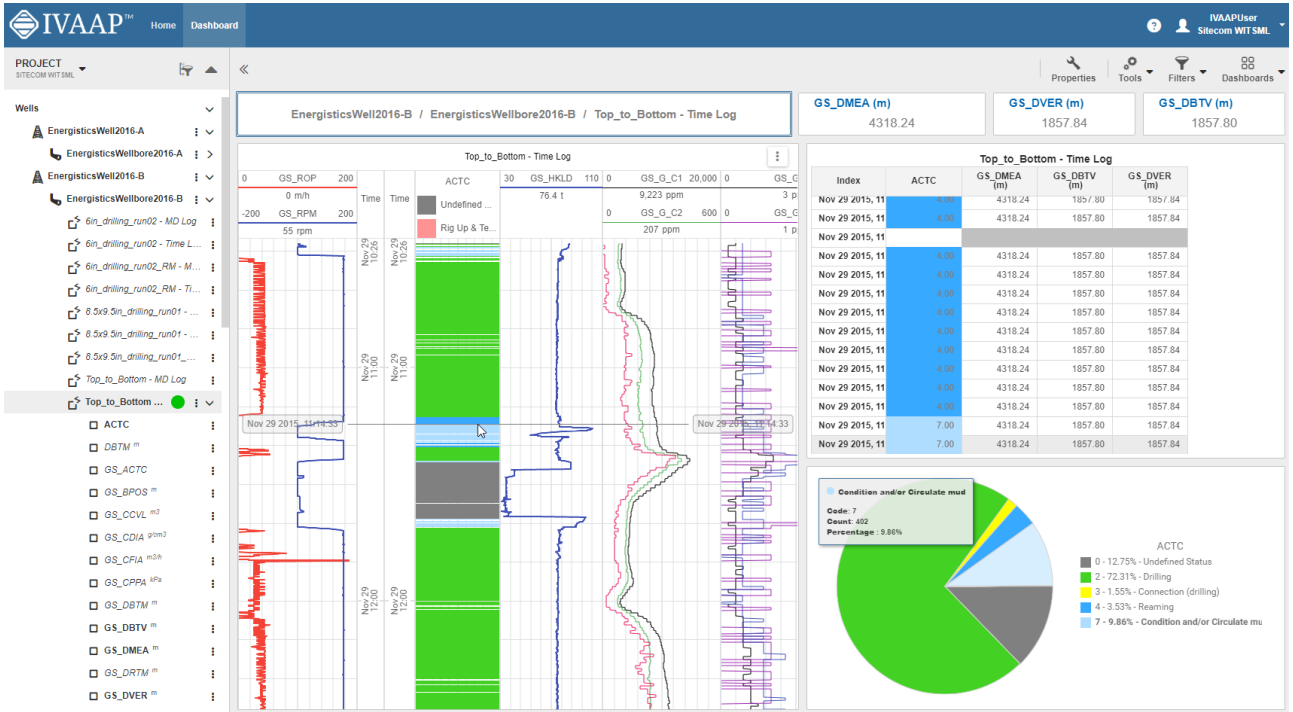
- Kongsberg Intellifield SiteCom
  - ► Well EnergisticsWell-A



Accessing WITSML Server

Open **WITSML EnergisticsWell-B** dashboard.

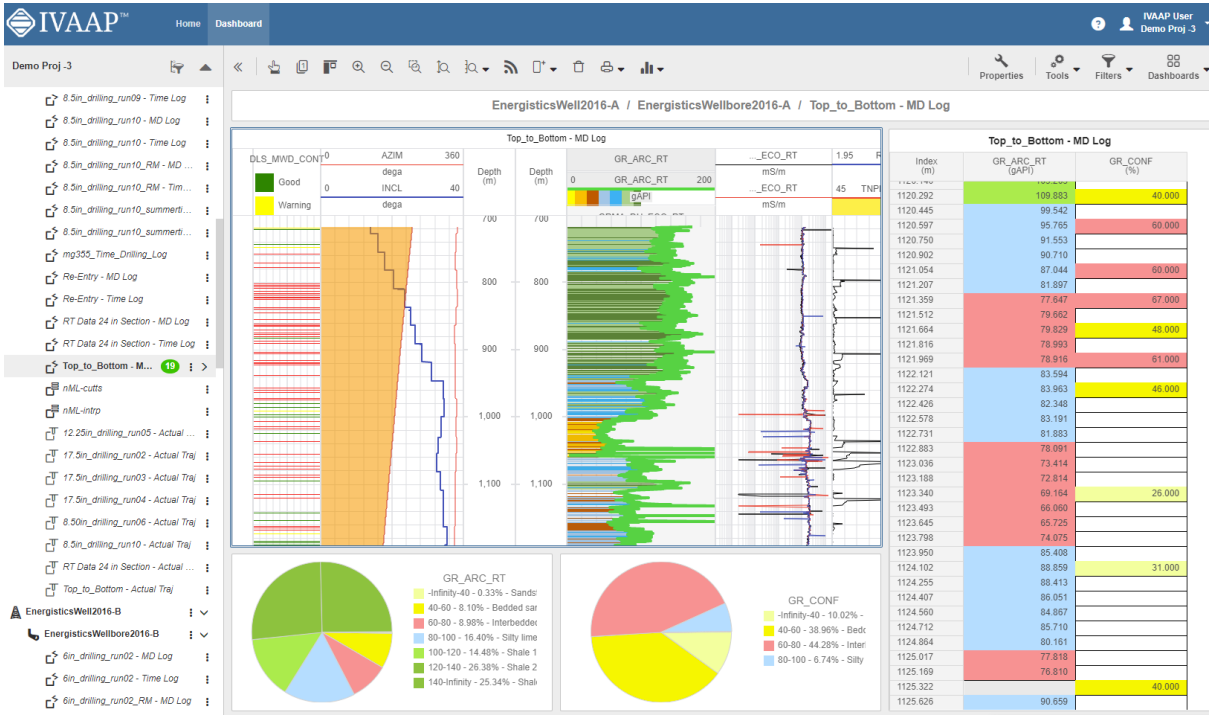
- Kongsberg Intellifield SiteCom ► Well EnergisticsWell-B



Accessing WITSML Server

Open **EnergisticsWell-A Gamma** dashboard.

- Kongsberg Intellifield SiteCom ▶ Well EnergisticsWell-A



For questions or help,
please contact support@int.com.