

## MineSched 2020.1

### Enhancements

#### Setup Schedule

- **View direction arrows on the roads in the 3D Canvas**

On the **Setup Schedule > Material Flow > Haulage** tab, you can click the **Display menu > Direction** function to display the direction arrows on the roads in the 3D Canvas.

- **Track the progress of a production location for surface scenarios**

You can use the new **Setup Schedule > Production Progress Tracking > Surface** tab to track the progress of a production location for surface scenarios. On the **Surface** tab, when you add tracking for a polygon in the **3D Canvas**, the **Ancillary Activity**, **Unit**, **Activity Total**, **Completed Total**, and **Completed Percentage** columns in the **Polygon ancillary activities** data grid are displayed for each polygon.

- **Evaluate surface locations using data in the Polygon mining activity data grid**

On the **Setup Schedule > Evaluate > Surface** tab, you can evaluate a location using the data in the **Polygon mining activity** and **Polygon ancillary activities** data grids on the **Setup Schedule > Production Progress Tracking > Surface** tab. The charts and reports on the **Evaluate** tab displays the mass and volume of the part of the location for which mining is still in progress.

- **Refresh the production progress tracking data for a surface scenario**

On the **Setup Schedule > Production Progress Tracking > Surface** tab, you can click the **Refresh ancillary tracking data** icon to remove warning icons and update polygons.

- **Display mining data for the mined and unmined portions of the location**

On the **Setup Schedule > Production Progress Tracking > Surface** tab, when you select a mining location in the 2D Canvas, in the **Polygon mining activity** data grid, you can view:

- the **Percentage completed** field
- the **State**, **Unit**, and **Value** columns for mined and unmined portions of the mining location

When you modify the **Percentage completed** field, the values for **Mined** and **Unmined** for each polygon are updated in the **State** column in the **Polygon mining activity** data grid.

- **Display mined and unmined values according to the Percentage Completed field**

On the **Setup Schedule > Production Progress Tracking > Surface** tab, when you enter a value in the **Percentage completed** field, the total percentage is divided into mined and unmined values and displayed in the **Value** column in the **Polygon mining activity** data grid.

- **Indicate changes in ancillary activities on the Production Progress Tracking tab for surface scenarios**

On the **Setup Schedule > Locations > Surface** tab, when you change one or more fields on the ancillary activities tab, a warning icon is displayed next to:

- the mining location in the **Production progress tracking** data grid on the **Setup Schedule > Production Progress Tracking > Surface** tab for a surface scenario
- one or more polygons in the **Production progress tracking** data grid
- one or more polygons in the **Polygon ancillary activities** data grid
- the ancillary activities in the **Ancillary Activity** column in the **Polygon ancillary activities** data grid

To update the changes and remove the warning icon, click the **Refresh ancillary tracking data** icon.

- **Indicate changes in mining activity on the Production Progress Tracking tab for surface scenarios**

A warning icon is displayed next to the mining location and the polygons in the **Production progress tracking** data grid on the **Setup Schedule > Production Progress Tracking > Surface** tab, when you change one or more fields on the **Mining** tab on the **Setup Schedule > Locations > Surface** tab.

- **Delete the tracking data for polygons**

On the **Setup Schedule > Production Progress Tracking > Surface** tab, in the **Polygon ancillary activities** data grid, you can select one or more polygons and click the **Delete** icon to delete the tracking information of polygons in the location. An information icon is displayed next to the location in the **Locations** data grid on the **Setup Schedule > Evaluate > Surface** tab. You can remove the information icon when you click the **Update selected locations** or **Update all locations** button.

- **Expand and display the tracking information for ancillary activities**

When you split a location into polygons for an ancillary activity and add tracking for the polygon, the tracking information for the ancillary activity is displayed in the **Polygon ancillary activities** data grid on the **Setup Schedule > Production Progress Tracking > Surface** tab. You can expand the polygon and display the tracking information of each polygon for a surface scenario.

- **Mined value reflects changes made in the Units value**

On the **Setup Schedule > Production Progress Tracking > Surface** tab, in the **Polygon mining activity** data grid, when you select a different option in the **Unit** column of **Total** row, the following values are set as 0:

- the **Value** column of the **Mined** state
- the **Percentage completed** field

When you enter a greater value in the **Mined** state than the value in the **Total** state, the **Value** column of the **Mined** state and the **Percentage completed** field is set to the previous values you have entered.

- **Date/event rules applied for triggering mining activity**

You can now trigger an event by defining the quantity, or percentage of a mining activity in the **Date/event** column for both underground and surface scenarios. You can enable this by specifying appropriate values in the **Type**, **Unit**, and **Percentage** fields on the *Event Builder* form. The rules can be defined for underground and surface production progress tracking, and development progress tracking.

- **Export haul roads on the Haulage tab**

On the **Setup Schedule > Material Flow > Haulage** tab, you can use the new **Export Design** icon to open the *Save Geometry* form in which you can export haul roads.

- **Create a schedule using tracking data for surface scenarios**

You can now create a schedule using the tracking data in the **Polygon ancillary activities** and **Polygon mining activity** data grids on the **Setup Schedule > Production Progress Tracking > Surface** tab. The tracking data consists of the locations for which mining is still in progress.

- **Reverse haul road directions on the Haulage tab**

On the **Setup Schedule > Material Flow > Haulage** tab, you use the new **Reverse** mode to reverse haul road directions. If a haul road is added to a haulage route and you reverse the direction of the haul road, warning icons are displayed next to all impacted routes. To remove the warning icons, you can do one of the following:

- define new routes on the **Full path** and **Empty path** tabs
- click **Reverse Full Path** on the **Empty path** tab
- click **Refresh haulage geometry sources** to restore the direction according to the selected haulage geometry sources on the **Roads** tab

If you ignore the warning icons on the **Haulage routes** tab and run a schedule, a warning message is displayed.

- **View warning icons when you change the split locations functionality**

For polygons in a location added for production progress tracking, when you change the split location functionality for an ancillary activity on the **Setup Schedule > Activities** tab, you can view warning icons on the **Production Progress Tracking** tab next to the:

- mining location and polygons in the **Production progress tracking** data grid
- polygons in the **Polygon ancillary activities** data grid
- ancillary activity for which you have disabled the split location functionality in the **Polygon ancillary activities** data grid

When you click the **Refresh ancillary tracking data** icon:

- the warning icons are removed from all the data grids on the tab
- in the Polygon ancillary activities data grid, if the split location functionality is disabled or enabled, the ancillary activity is removed or added, respectively

## **Publish Results**

- **Export existing and new reports**

On the **Publish Results > Standard Reports** tab, you can now use the **Export to ODBC** and **Export to MS Access** functions to export:

- the existing **results\_haulage\_routes\_and\_speeds** report
- the following new reports:
  - **results\_resource\_capacities**
  - **results\_resource\_holiday\_calendar**
  - **results\_resource\_list**
  - **results\_resource\_working\_times**

The reports are saved in the working directory instead of the **Trash** directory. You can now open the files in the database in which you have exported the reports.

- **Create graphical results for unmined portions of surface locations**

On the **Publish Results > Graphical Results** tab, you can now click the **Create** button to create graphical results for unmined portions of surface locations (after adding the locations for surface production progress tracking).

## General

- **New Activity Rates and Activity Resource Capacities command in the Spreadsheets menu**

On the **Setup Schedule > Production > Activities** tab, when you select **Enable Spreadsheet Views** in the **Spreadsheets** menu, you can view the new **Activity Rates** and **Activity Resource Capacities** spreadsheets.

- **Enable spreadsheets for SDM models**

You can enable the following additional spreadsheet views for SDM models from the **Spreadsheets** menu:

- Precedences
- Priorities
- Resource Capacities
- Production Rates
- Location Constraints
- Spatial Relationships
- Polygon Precedences
- Production Parameters

- **Ability to view full scenario path on the Recent Scenarios tab**

You can view the scenario name as Drive letter/First folder/.../ScenarioName while opening scenarios with the **Browser** icon (on the **Scenario > Open > Recent Scenarios** tab). The full path of the scenario is now displayed as a tool tip when you hover over the scenario name.

## Define Geology

- **Support for multiple material class attributes in SDM or SSO model**

You can now use multiple material class attributes in the **.sdm** files to define an SDM or SSO model.

## Create Schedule

- **Animation canvas displays only unmined portion of polygons**

The **Animation Canvas** displays only the unmined portions of the defined polygons when you add polygons for surface tracking, specify percentage of mining completed in the **Percentage completed** field, and then run a schedule.

## Issues Fixed

### Create Schedule

- **Clicking Create Schedule and running schedule caused MineSched to display an incorrect error message**

MineSched displays a correct error message to notify a problem, when you run a schedule from the **Create Schedule > Create Schedule** tab. The erroneous message "Given key is not in the dictionary" is no longer displayed.

### Setup Schedule

- **A negligible difference in quantity balance of stockpile and history balance caused MineSched to exit unexpectedly**

When there is a negligible difference in quantity balance of stockpile and history balance, MineSched no longer exits unexpectedly.

- **Selecting an aggregate quality in the Process rates data grid for specific cases caused MineSched to exit unexpectedly**

On the **Setup Schedule > Locations > Surface** tab, when you select an aggregate quality in the **Units** column in the **Process rates** data grid and create a schedule, MineSched no longer exits unexpectedly. The dashboard charts and standard reports now show accurate results.

- **MineSched supports Micromine .tridb files**

On the **Setup Schedule > Locations > Surface** tab, when you now add **Surpac Constraint File** for a location, MineSched enables the addition of the new format of Micromine 2020 **.tridb** files.

#### Miscellaneous

- **A value slightly greater than one for the mining fraction of a block caused MineSched to exit unexpectedly**

When the value is slightly greater than one for the mining fraction of a block, MineSched no longer exits unexpectedly.

#### General

- **View the License Management tab on the Settings tab**

On the **Scenario > Settings** tab, you can now view the **License Management** tab. On the **License Management** tab, you can use the **Configure** button to configure the following:

- Dassault Systèmes Licensing
- GEOVIA Licensing

- **DevExpress upgraded to version 19.2.4**

MineSched now uses DevExpress version 19.2.4.

- **Export MineSched scenarios**

MineSched 2020.1 scenarios can now be exported to the following MineSched versions:

- MineSched 9.1
- MineSched 9.2
- MineSched 2019
- MineSched 2020

#### Define Geology

- **New default options for partial attribute Naming fields**

On the *Partial Attribute Naming Convention* form, the default options in the **Naming** fields are:

- **material\_partial** for material class attributes
- **material\_quality** for quality attributes