

MineSched 9.2.0

Enhancements

Setup Schedule

- **Haulage routes use the position at the end of the haul route segment**

The stockpile offsets defined in the **Publish Results > Animations** tab no longer impact haulage calculations and are now used only to define the stockpile position in the animation canvas.

- **Add new roads from existing source without duplicating existing roads**

In the **Setup Schedule > Material Flow > Haulage > Roads** tab, you can now use the **Refresh haulage geometry sources** icon to add new roads without having to remove or re-import the haulage design. If you delete roads in the source files, all references to the deleted roads are removed from the haulage process.

- **Solid names used to name mining locations**

When you import triangulated solids to create mining locations, MineSched automatically generates mining location names based on **Solid name** attributes. This feature only supports solids created in Surpac.

- **Mining locations that need to be evaluated are flagged**

In the **Setup Schedule > Evaluate** tab, all mining locations that require evaluation are now flagged.

- **New name for data grid in the Trucks tab**

In the **Setup Schedule > Material Flow > Haulage > Trucks** tab, the name of the data grid has been changed from **Truck Types** to **Truck library** to reflect the new Rimpull workflow.

- **New option to use Rimpull tables in the Truck library menu**

In the **Truck library** data grid of the **Setup Schedule > Material Flow > Haulage** tab, a new **Use Rimpull Table for Velocities** column with a check box has been added.

When you select the check box:

- the velocities are calculated from the rimpull and retard tables and the velocities are used to set the truck's velocities in the **Haulage routes** tab.
- the links to the d-field mapping for the haul road velocity defined in the **Roads** tab are ignored and the velocities are calculated from the rimpull and retard tables for the truck.

When you clear the check box:

- the links to the d-field mapping for the haul road velocity defined in the **Roads** tab are used.
- the velocities that are calculated from the rimpull and retard tables are ignored. If there are no d-field links for haul road velocities, the values in the velocity tables are retained for the road.

- **New Refresh Haul Road Velocities icon in the Truck library data grid**

In the **Setup Schedule > Haulage** tab, a new **Refresh Haul Road Velocities** icon has been added to the **Truck library** data grid.

- **New Rimpull tab in the Trucks tab**

In the **Trucks** tab, a new **Rimpull** tab has been added below the **Truck library** data grid. You can use this tab to define the following fields for a rimpull table:

- Effective grade
- Velocity
- Rolling resistance factor
- Full/Empty weight

- **New Retard tab in the Trucks tab**

In the **Trucks** tab, a new **Retard** tab has been added below the **Truck library** data grid. You can use this tab to define the following fields for a retard table:

- Effective grade
- Velocity
- Rolling resistance factor
- Full/Empty weight

- **Refresh Haul Road Velocities icon to populate the Haulage Routes velocity list**

In the **Setup Schedule > Material Flow > Haulage > Truck library** data grid, when you click **Refresh Haul Road Velocities**, any changes to the rimpull tables are reflected in the **Haulage Routes** velocities list, and the flag indicating that a change has been made to the rimpull tables is removed.

- **New Assign Global Speed Limit icon in the Haulage routes tab**

On the *Assign Global Speed Limit* form, when you select the **Set a global speed limit** check box, you can enter a value in the **Global haulage speed limit** field. If the haulage route velocity exceeds the **Global haulage speed limit** value, the haulage velocity is set to the **Global haulage speed limit** value.

- **Calculate Roadway Grade for rimpull table**

The **Roadway Grade** column in the rimpull table is calculated using the effective grade and rolling resistance factor. For the rimpull curve, the relationship between effective grade and roadway grade is:

Effective grade = roadway grade (%) + 1% per 10 kg/t of rolling resistance factor

- **Calculate Roadway Grade for retard table**

The **Roadway Grade** column in the retard table is calculated using the effective grade and rolling resistance factor. For the retard curve, the relationship between the effective grade and roadway grade is:

Effective Grade = roadway grade (%) - 1% per 10 kg/t of rolling resistance factor

- **New form appears when you refresh haulage geometry sources**

In the **Setup Schedule > Material Flow > Haulage > Roads** tab, when you click the **Refresh haulage geometry sources** icon, the *Refresh haulage geometry sources* form appears listing all distinct geometry sources (excluding GEMS sources) that can be refreshed.

- **Warning icon appears when changes have been made in the rimpull table in the Trucks tab**

When you select the **Use Rimpull table for velocities** check box and make changes to the rimpull or retard tables, a warning icon appears next to the relevant truck in the **Truck library**.

- **New spreadsheet view for rimpull tables**

In the **Setup Schedule > Material Flow > Haulage > Trucks** tab, you can use the new **Edit in spreadsheet view** icon on the **Full route** and **Empty route** rimpull tables to open a spreadsheet view for editing. By default, the **Effective grade** and **Velocity** columns are displayed. You can add or copy-and-paste entries in these columns. The calculated column (**Roadway grade**) is not visible in the spreadsheet view. When you confirm the values, MineSched validates them for correctness and then uses them in the corresponding tables.

- **Haul route velocities calculated based on truck selection**

The velocities for a selected haul route are calculated on the basis of truck assigned to route. When a new truck is assigned to a haulage route, the calculation is updated and takes into account whether the new truck is using rimpull-retard data for velocities.

- **Modifications to roads in haul route changes rimpull velocities**

Any changes you make to the full or empty roads for a haulage route (for example, adding roads, deleting roads, or changing roads) results in changes in the rimpull velocities for the haul route.

- **Rimpull velocities and bench roads**

When you use rimpull tables to calculate velocities for a truck, the bench roads in the haul routes corresponding to that truck will use rimpull velocities. When you do not use rimpull tables to calculate velocities for a truck, the bench roads in the haul routes corresponding to that truck will use imported velocities from their respective design source.

- **Refresh function in the Roads tab references Rimpull velocities**

When you click the **Refresh haulage geometry sources** icon in the **Roads** tab to update MineSched with a modified design, it will always honour the rimpull velocities.

- **Changes in bench collections of haul route calculates velocities accordingly**

In the **Setup Schedule > Material Flow > Haulage > Truck library** data grid, when you select the **Use rimpull table for velocities** check box and make changes to the source haulage design, the refresh road function will also apply the rimpull velocities to the new haulage routes.

- **New spreadsheet view for retard tables**

In the **Setup Schedule > Material Flow > Haulage > Trucks** tab, you can use the new **Edit in spreadsheet view** icon on the full route and empty route retard tables to open a spreadsheet view for editing. By default, the **Effective Grade** and **Velocity** columns are displayed. You can add or copy and paste entries in these columns. The calculated column (**Roadway Grade**) is not visible in the spreadsheet view. When you confirm the values, MineSched validates them for correctness and then uses them in the corresponding tables.

- **The Full and Empty weight values in the Rimpull tables populate based on calculations**

In the **Rimpull** and **Retard** tables, the **Full weight** and **Empty weight** fields are calculated for the selected truck using the **Empty truck weight** and **Tonnes per load** columns in the **Truck library** data grid. The fields are not available for editing.

Define Geology

- **New warning icon in the Models tab**

In the **Define Geology > Models** tab, a new warning icon appears next to the **Source** field if you modify a block model source file.

- **New Refresh block model icon in the Models tab**

In the **Define Geology > Models** tab, you can use the new **Refresh block model** icon to update changes to the block model. When you click the **Refresh block model** icon, MineSched now provides a list of updated attributes and material classes associated with a model.

- **Invalid attributes are flagged**

When you click the **Refresh block model** icon, any defined attributes that are no longer valid in the updated block model are now flagged with a warning icon. The flags are removed when a valid attribute has been defined.

- **Block model sources can now be redefined to include updated models**

In the **Define Geology > Models** tab, you can now change the block model source file for any defined block models without resetting all the links at all mining locations or re-importing all the attributes. When you click **Refresh block model**, a warning icon appears beside the changed block model source file and the new attributes and material classes are updated.

- **Refresh block model message for unsupported model types**

When you try to refresh an unsupported model, an error message is displayed that contains a summary of success and failure messages for all the models that you chose to refresh.

General

- **Support for import of SDM file in MineSched**

You can now import GEOVIA SDM files to create locations and also add solid and surface constraints for the locations.

- **Support for export of SDM files in Minesched**

In the **Publish Results > Graphical Results** tab, you can now export blocks, bench plans, and end of period surfaces to SDM file format. Also in underground scenarios, in the **Setup Development > Headings > Underground headings** data grid, support for export to SDM is now added for headings.

Issues Fixed

Define Geology

- **New block model attributes were not populated when you clicked Extract from model**

In the **Define Geology > Models** tab, when you click **Extract from model**, the block model attributes in the **Material class attribute** and **Volume adjustment attribute** lists are refreshed without the need to restart MineSched. MineSched does not support this functionality for GEMS or Minex block models.

Miscellaneous

- **Update of MineSched version**

MineSched has been updated to 9.2.0.

- **Update of Network Licence Manager version**

MineSched is now distributed with the Network Licence Manager version 14.9.1.

Other Area

- **Host ID and Licence Type added to usage log**

MineSched usage logs include Host ID and Licence Type information.

- **Cyrillic data copied into MS Excel was incorrect**

When you copy Cyrillic data from MineSched and paste it into MS Excel, the results are now correctly displayed, and the last line of data is no longer lost.

Publish Results

- **Micromine files exported from MineSched were not opening**

When you export Micromine files from MineSched, you can now successfully open the files in Micromine.