

# Block Model (Raw Data)

A **Block Model** entity stores structured 3D block data—typically used in resource estimation, geological modeling, and spatial analysis. The model is uploaded as a **comma-separated ASCII text file**, where each row represents an individual block.

Import structured block models in CSV format. Each row represents a volumetric block with positional and attribute data.

→ *Commonly used in mining and geological modeling.*

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## Uploading a Block Model

1. Navigate to your project's **Catalog** section and click **"Add Object."**
2. From the dropdown, select **"Block Model."**

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3. Fill out the following fields:

Field	Description
<b>Item Name</b>	A descriptive name for the new block model entity.
<b>Capture Date</b>	<i>(Optional)</i> The original date the model data was captured.
<b>CSV Header</b>	A comma-separated line of headers that define how each column in the block model should be interpreted. (Details below.)
<b>Horizontal Datum</b>	The horizontal reference system used in the model.
<b>Vertical Datum</b>	The vertical reference system used for elevation values.
<b>Projection</b>	The map projection used in the dataset.
<b>Horizontal Units</b>	Units for X and Y coordinates (e.g., meters, feet).
<b>Vertical Units</b>	Units for Z coordinates (e.g., meters, feet).

## CSV Header

The **CSV Header** field defines how each column in your file should be interpreted. For example, a header line like:

XC,YC,ZC,XL,YL,ZL,AU,CU

...will produce a list of **Column Definitions** for each value, allowing you to specify their role in the model.

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## Column Types

Each column must be assigned a **Type**, which tells the system how to process it:

Type	Purpose
<b>Ignore</b>	Exclude this column from processing.
<b>Set</b>	The column contains a small set of repeating categorical values.
<b>Value</b>	Numeric values (e.g., grades, densities).
<b>Block Centroid X/Y/Z</b>	Coordinates for the block's center point.
<b>Block Origin X/Y/Z</b>	Coordinates for the block's origin corner.
<b>Block Dimension X/Y/Z</b>	Size of the block along each axis.

**Note:** You must choose **either** block centroids **or** block origins for positioning—not both. Using both will result in an input error.

## Level of Detail (LOD) Aggregation

Each numeric column (e.g., grades or quantities) can also be configured with a **Level of Detail (LOD) operation**, which determines how values are aggregated in lower-resolution views:

LOD Option	Description
<b>Average</b>	Average of all higher-resolution values.
<b>Min</b>	Minimum value from the finer data.
<b>Max</b>	Maximum value from the finer data.
<b>Add</b>	Sum of all values (ideal for counters).
<b>Multiply</b>	Product of all values.

## Uploading the File

- Click **“Choose File”** to upload your block model file (CSV or TXT format).
  - You may also upload a **ZIP archive** that contains your ASCII file.
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Click **“Create”** to start the upload process. You can monitor the progress in the project’s **“Pending”** section.

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