
MineModeller
MINEMODELLER
SURVEY AND MODELLING IN MICROSTATION
PrimeThought
Software Solutions

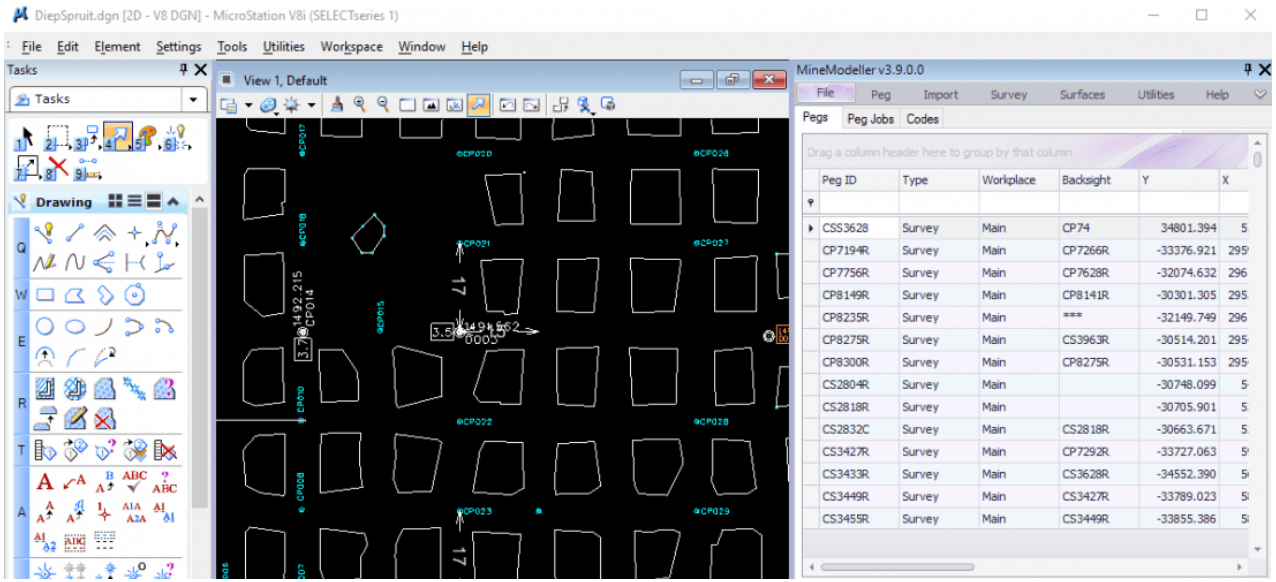
MineModeller

MineModeller is a complete underground and surface survey package hosted in the familiar Microstation environment. (minemodeller.com)

(If you don't have Microstation, see SurveyXL.net and ask us for a SurveyXL presentation)

Features:

- Different surveying methods catered for
- Pegs storage done securely in database.
- Imports data from different formats
- Synchronization of spatial data with databases
- Surface operations
- Import data directly from total station



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Methods of Surveying

MineModeller caters for the following methods of surveying:

- Double Button
- Double setup
- Traverse calculations with Bowditch correction
- Offsetting
- Contouring
- Measuring reports
- Automatic over and under mining calculations
- Gyro calibration and calculations

MineModeller also caters for:

- Automatic pillar creation
- Peg plotting

MineModeller allows importing data from:

- Modelmaker
- GemCom Surpac
- DataMine
- All text formats

When importing you can transform your data using general coordinate conversions (LO <-> Lat/Long) etc

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Data Storage

- Pegs registry is stored in securely in a central database – in either SQL Server, Oracle or SQLLite for standalone installations.

- Standard relational model with no proprietary data storage.

- Complex fields like survey job properties stored in published XML format, keeping data open in case of migration to other systems or integration to other systems.

- All data is stored in the Well Known Binary format of the Open Geospatial Consortium so that data is open to access by third party programs as needed, not locked in.

  www.opengeospatial.org

- Usual backup and restore procedures available since data is stored in central database server. Usual access control also because of this.

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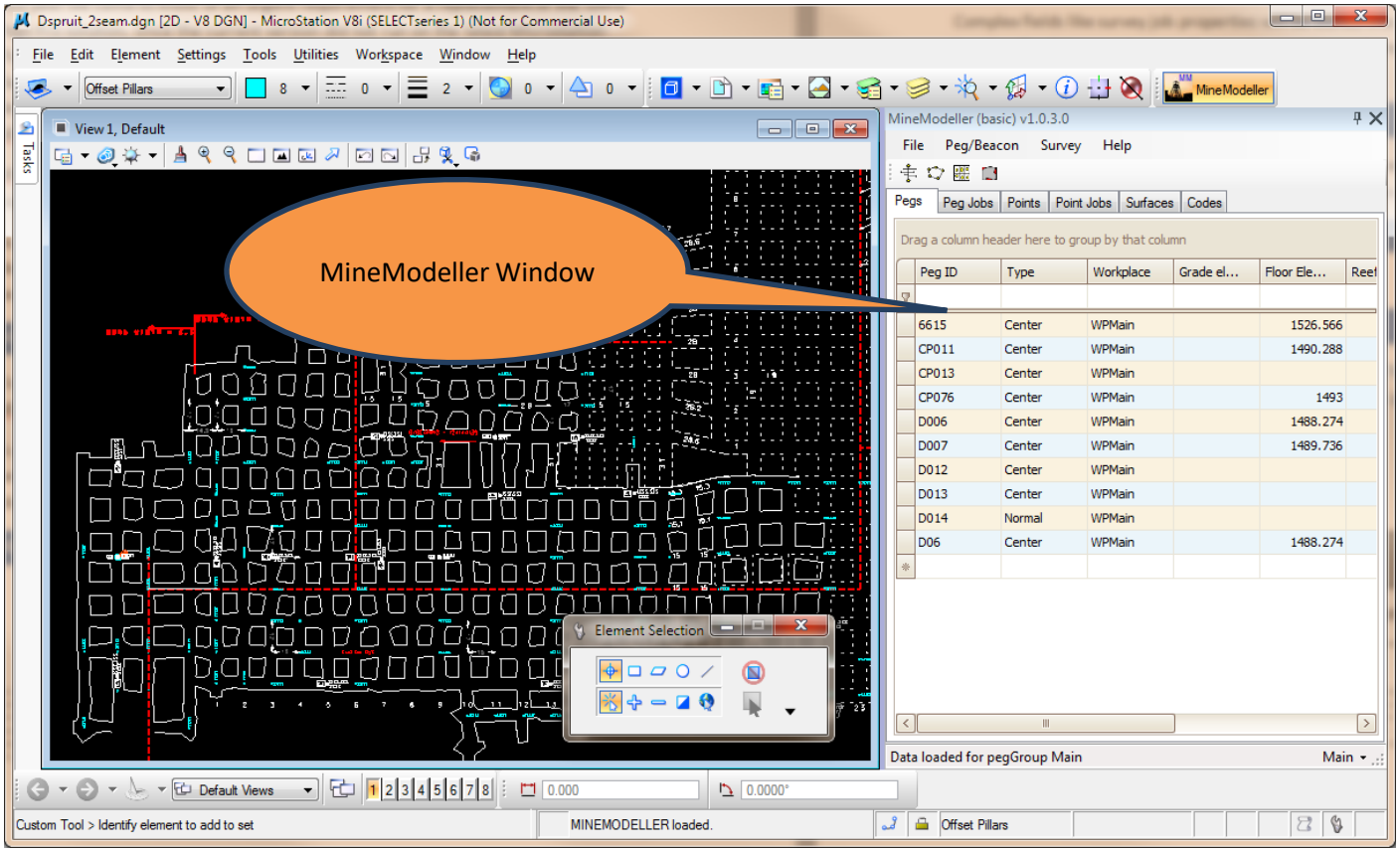
The MineModeller Application

MineModeller is a Microstation add-in that fully integrates with Microstation.



Error tolerances can be configured as well as the external database. Access control is applied, meaning only survey admins can approve pegs and set tolerances.

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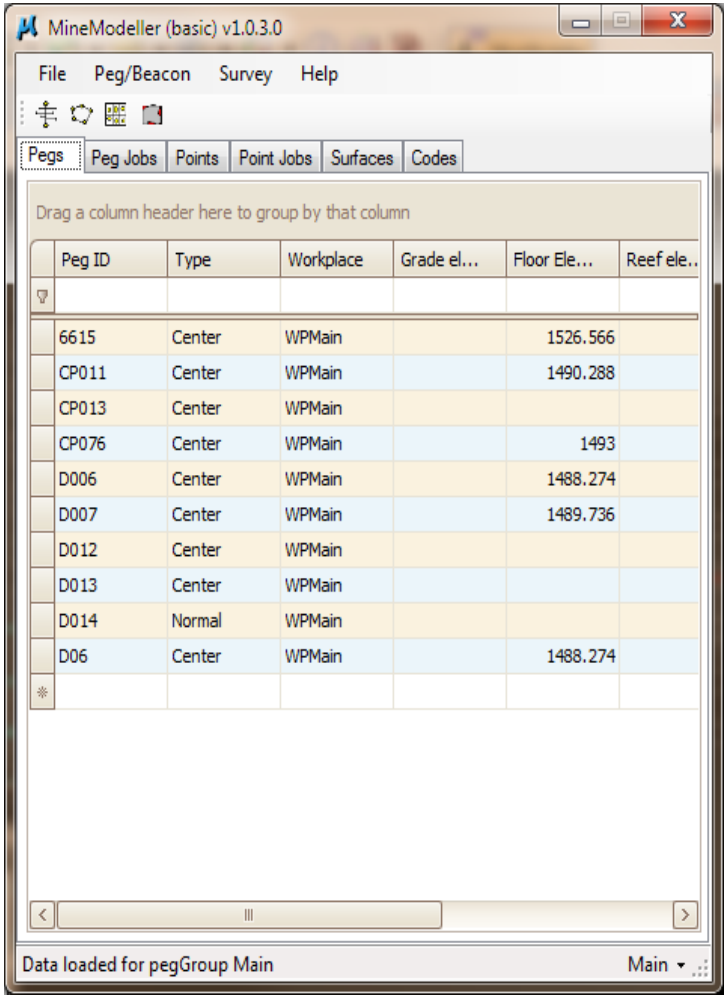
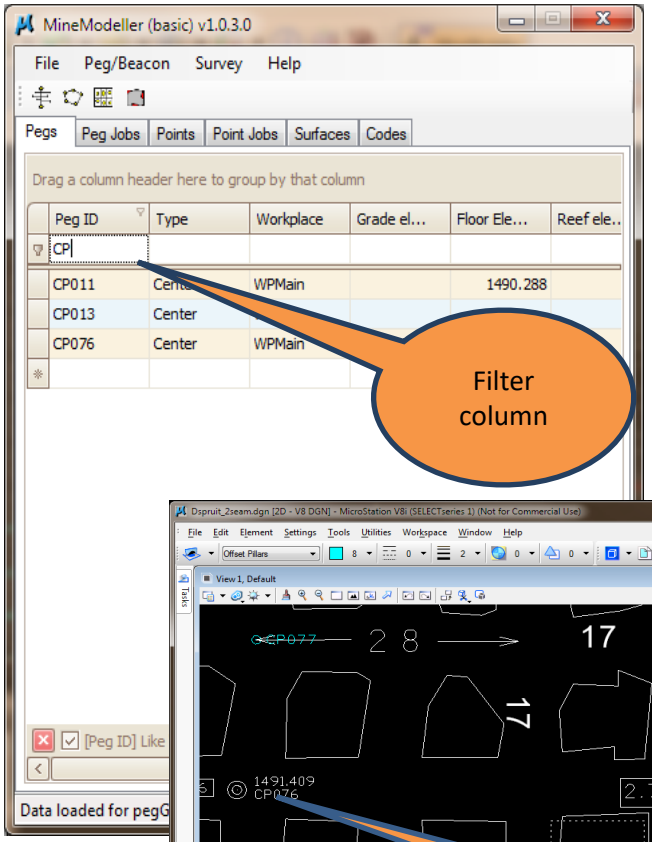
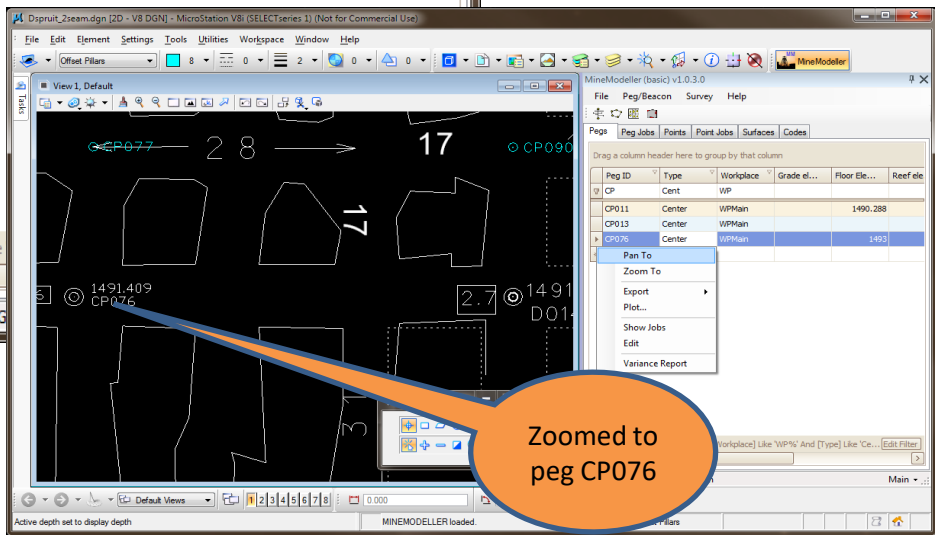
Working with pegs

When you are working with pegs you can use a grid to look at or filter data by pegs, peg jobs etc. You can apply multiple filters or even complex filters and then look at these pegs in Microstation by zooming to them as well.







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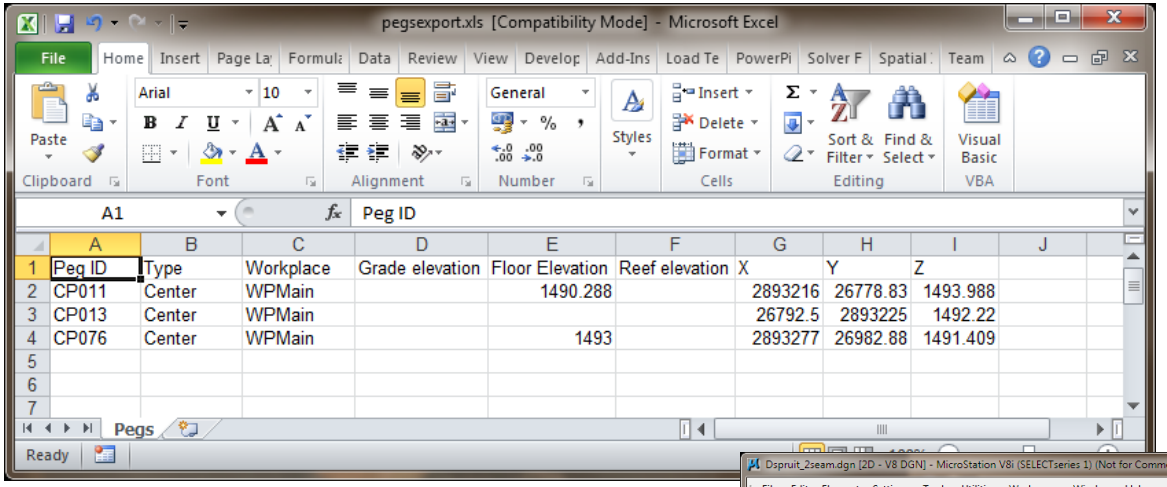
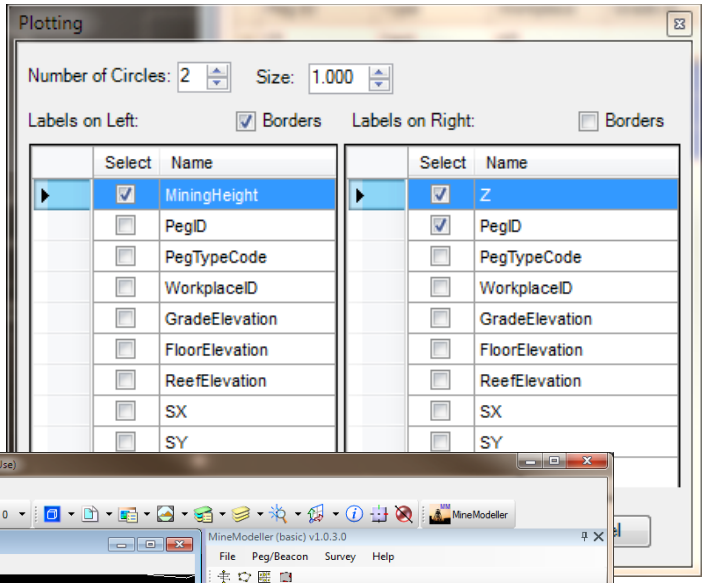
Exporting to Excel & Plotting pegs

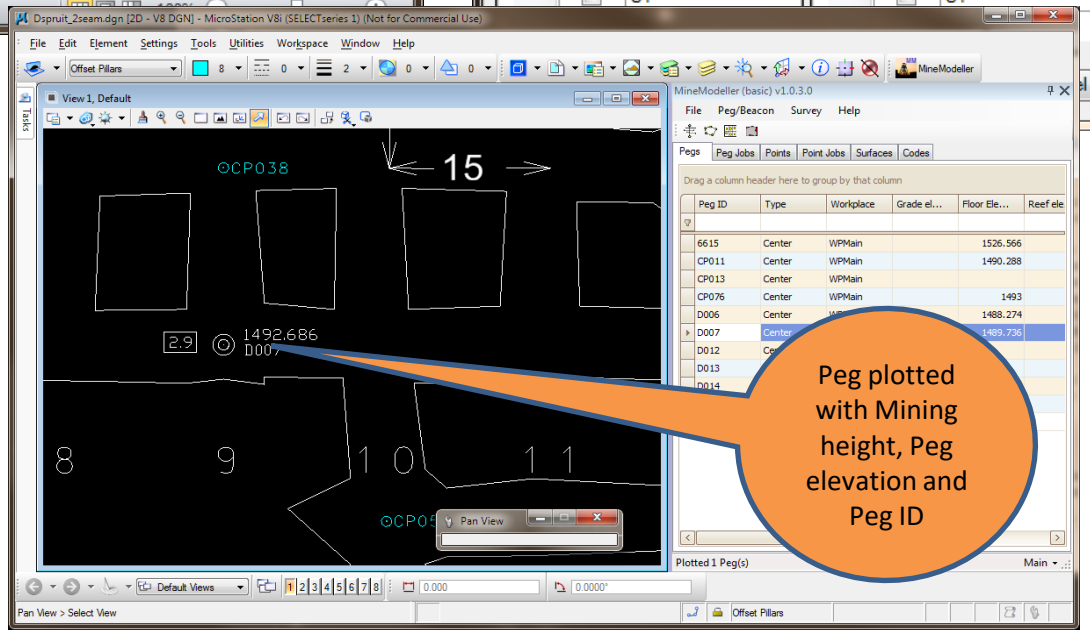
Selected pegs can be exported to Excel or a CSV file.



	A	B	C	D	E	F	G	H	I	J
1	Peg ID	Type	Workplace	Grade elevation	Floor Elevation	Reef elevation	X	Y	Z	
2	CP011	Center	WPMain		1490.288		2893216	26778.83	1493.988	
3	CP013	Center	WPMain				26792.5	2893225	1492.22	
4	CP076	Center	WPMain		1493		2893277	26982.88	1491.409	
5										
6										
7										



Selected pegs can be plotted and one can choose the type and size of the peg symbol, what text to display and where relative to the peg and specify borders to. The default options plot according to the DME standards.



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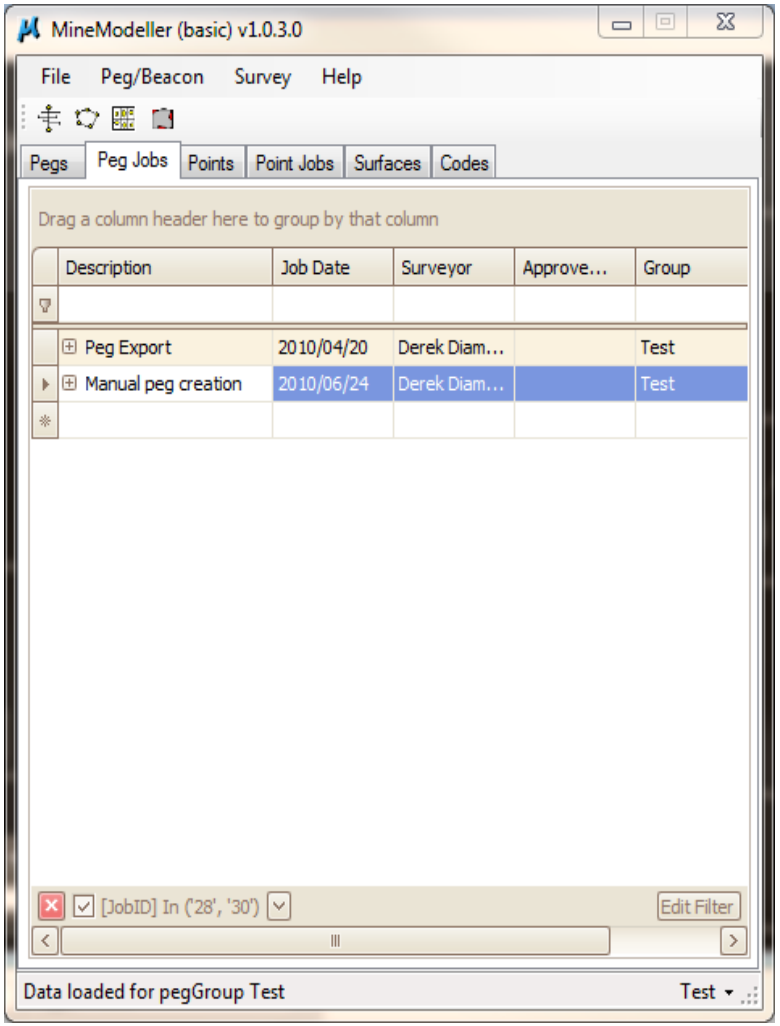
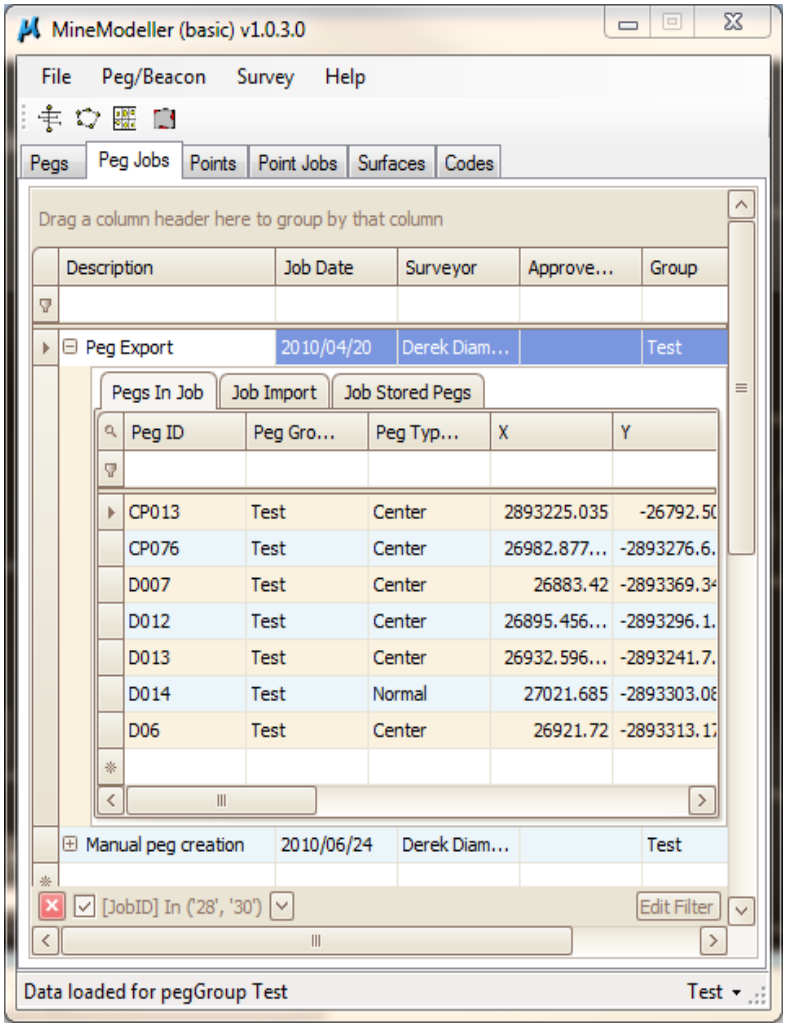
Peg Jobs

Importing pegs, manually entering pegs and surveying pegs operations are recorded as peg jobs and you can get information on these jobs.





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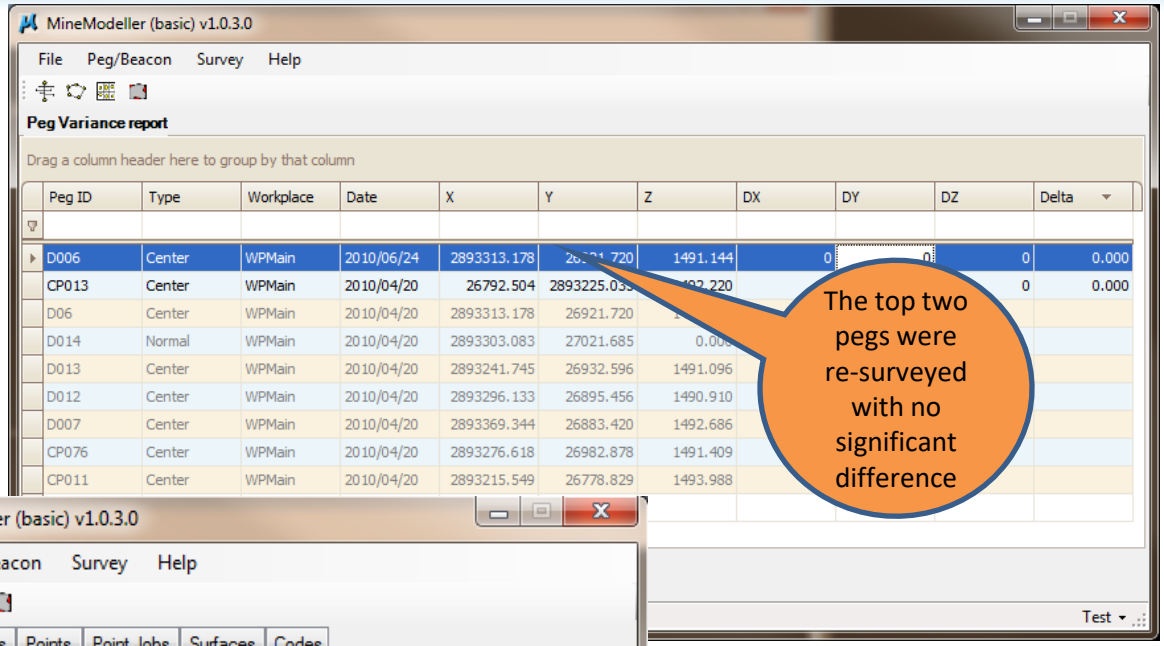
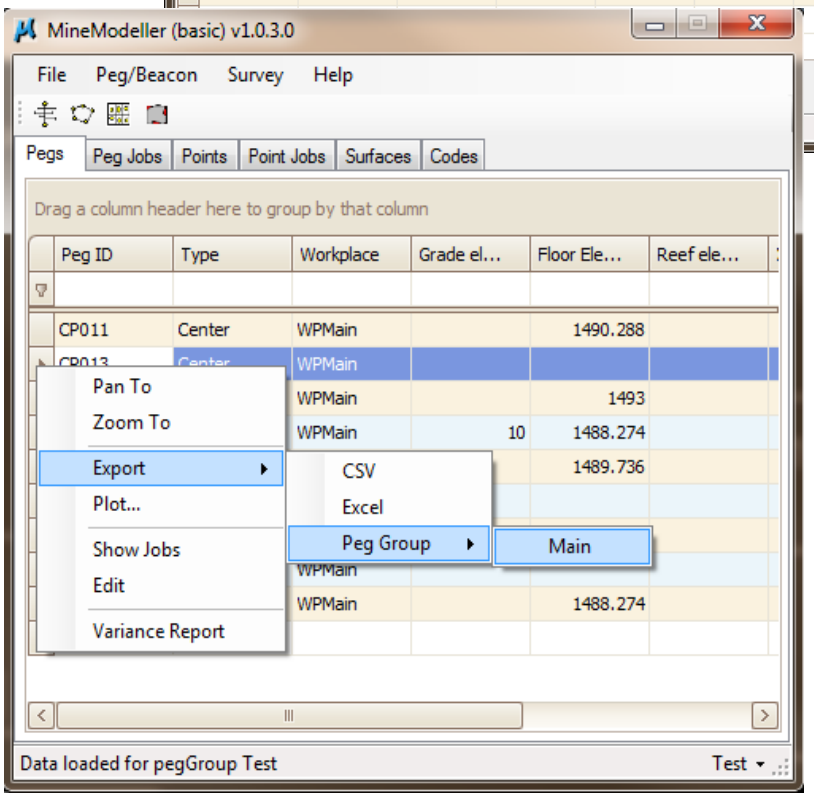
Peg Variance Report

Variance reports will display a report for all selected pegs showing if they have been re-surveyed and if so, the variance measurement. This shows the greyed pegs which have not been re-surveyed and the actual variance of the others.



Peg Groups



Pegs can be stored in independent Peg Groups and can be exported between groups and be viewed by codes as well.

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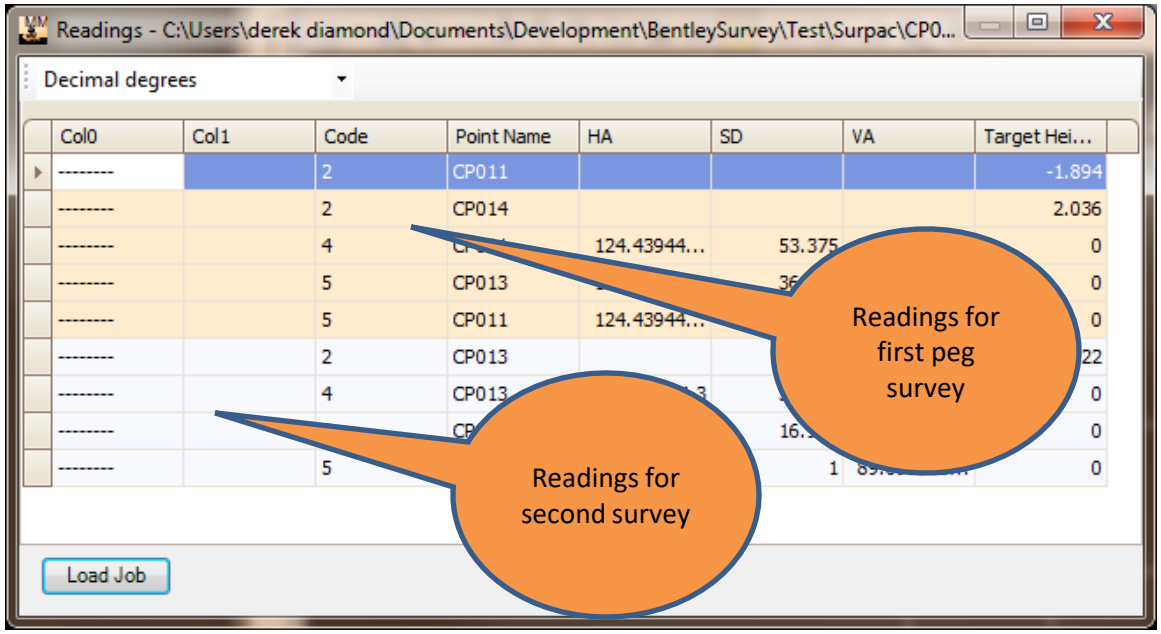
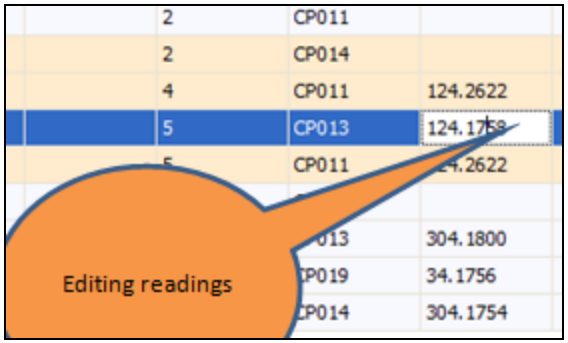
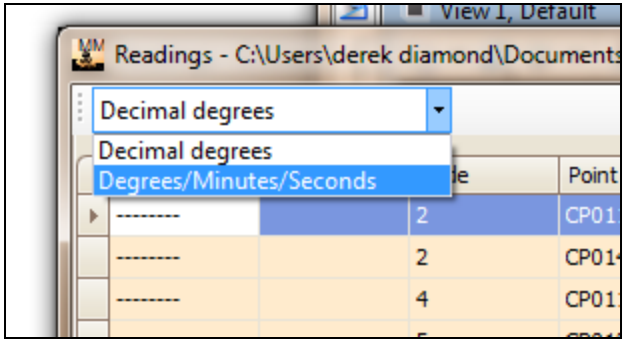
Peg surveying methods

Currently MineModeller reads from total station files. When the data is read in from the device files lines of separate jobs have separate colours and readings can be edited before the job is loaded. You can also convert the displayed angles to decimal degrees or degrees minutes seconds.







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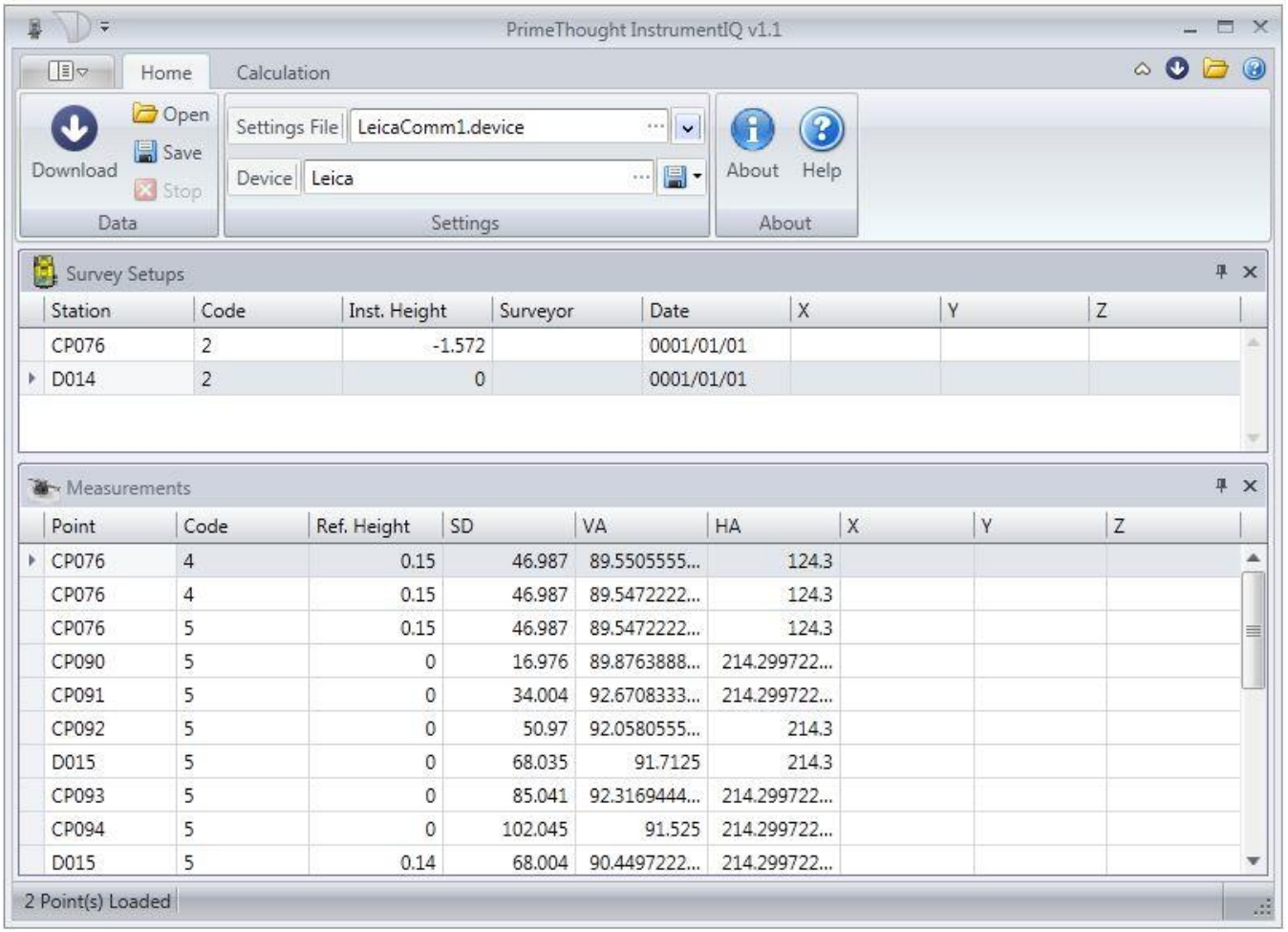
Reading from devices

- Topcon and Leica instruments can be read with the Instrument I/F button on the double set up or double button screens.



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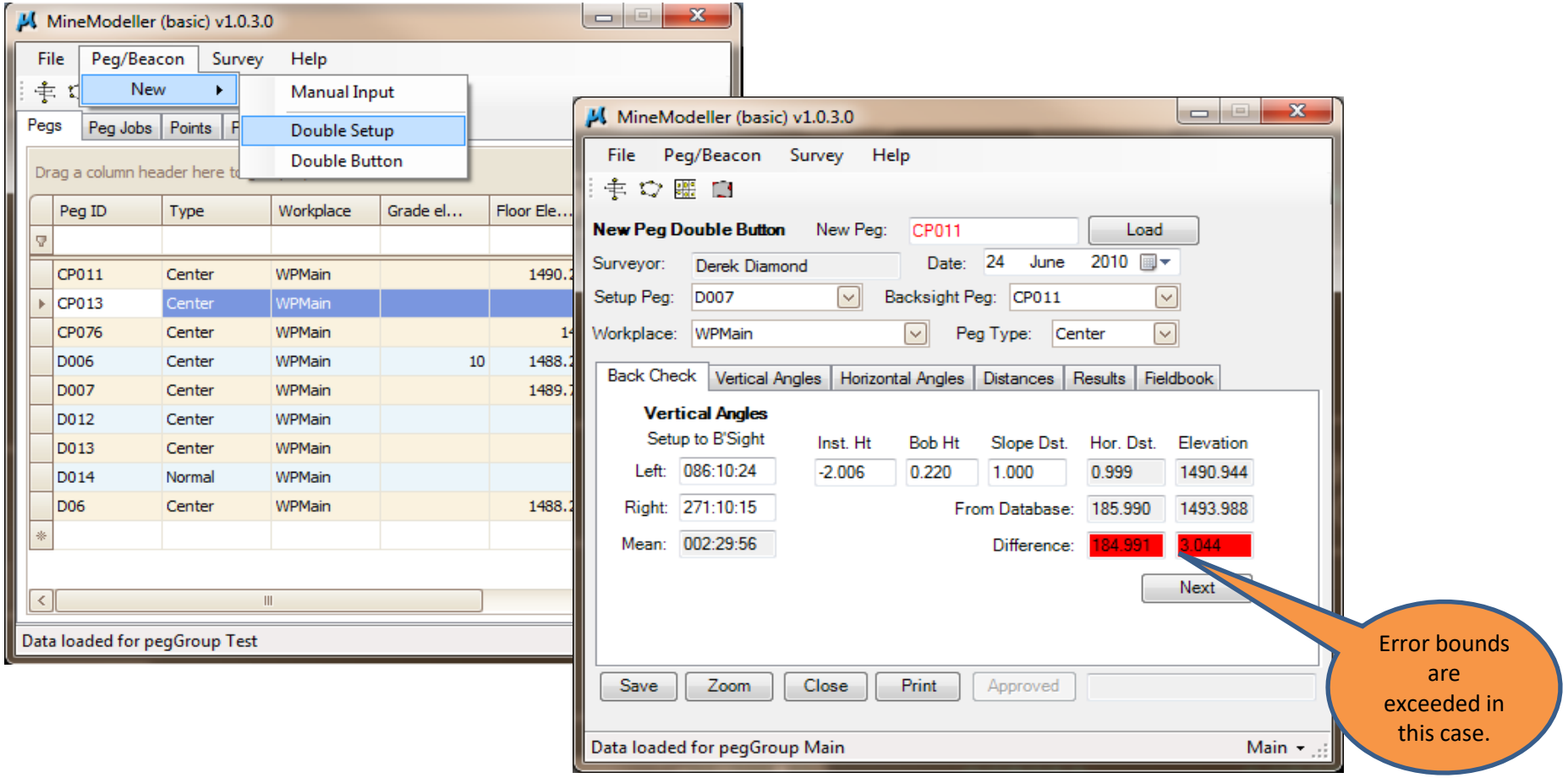
Reading from devices

Pegs can be manually captured, imported from a file or surveyed using the double button or double set up methods. The field book is included and gives an electronic recording of the field book page. With the roof height the floor elevation can be calculated and the data saved.



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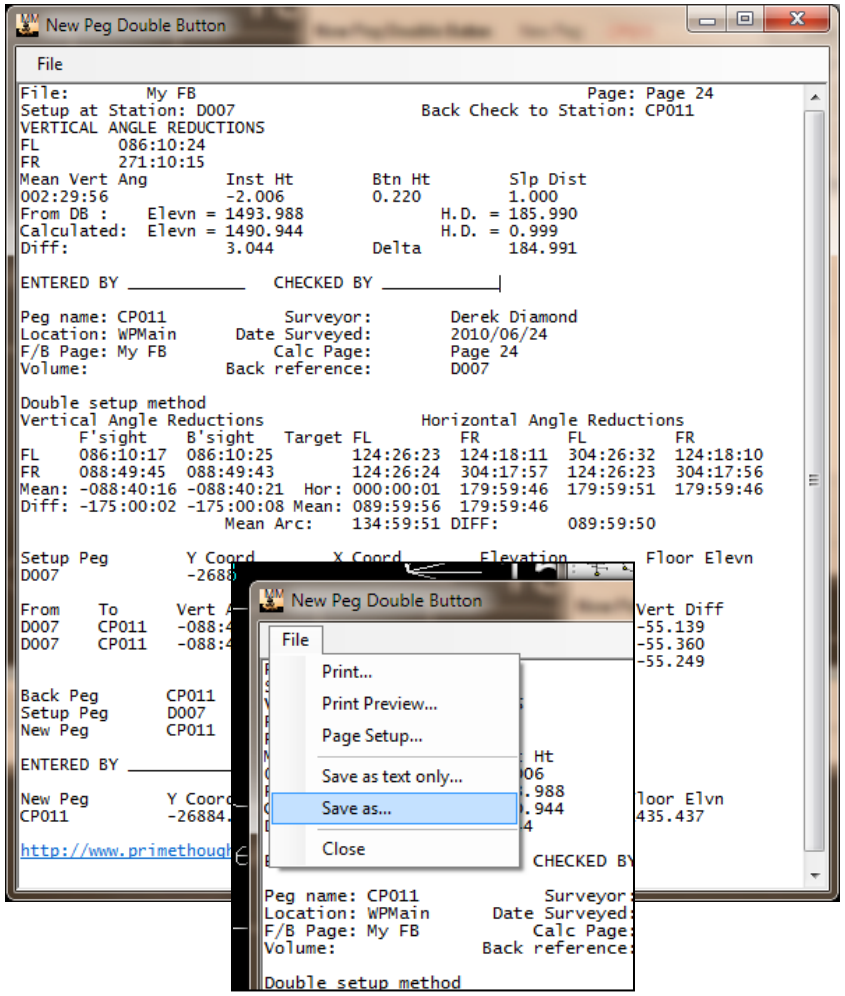
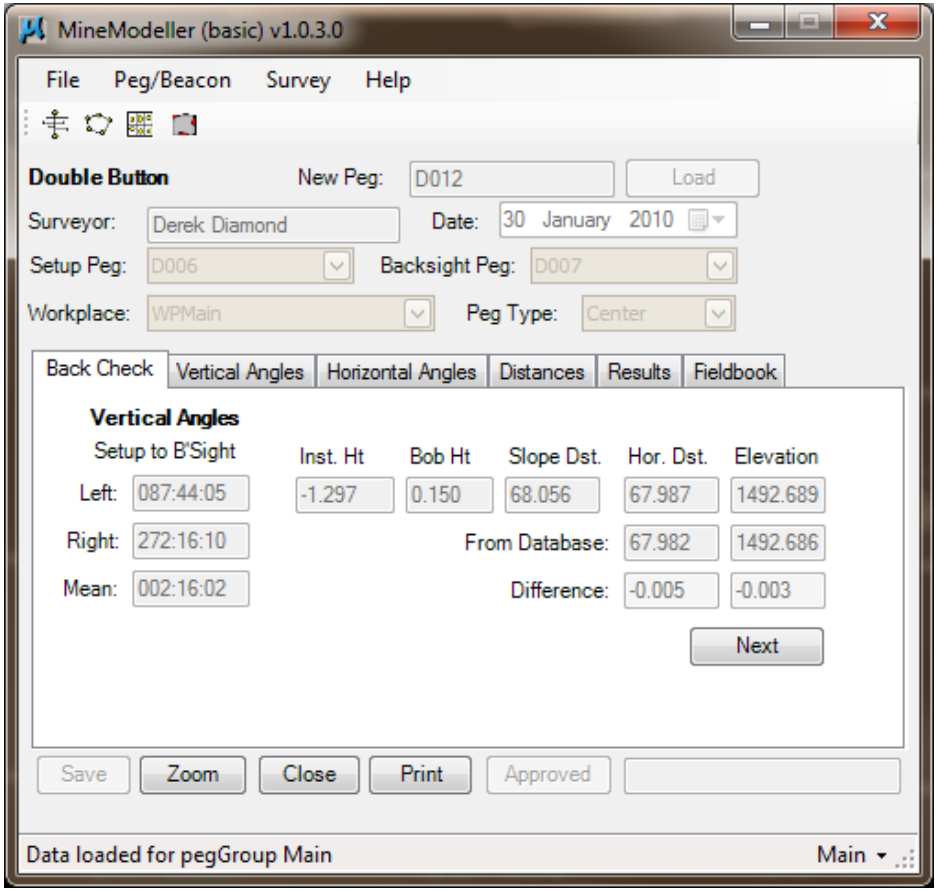
Printing & historical reports

With customisable templates, you can set up how you want your prints to look and also can save a particular print. You can also look at historical surveys, as you can see the data cannot be edited for an old survey.





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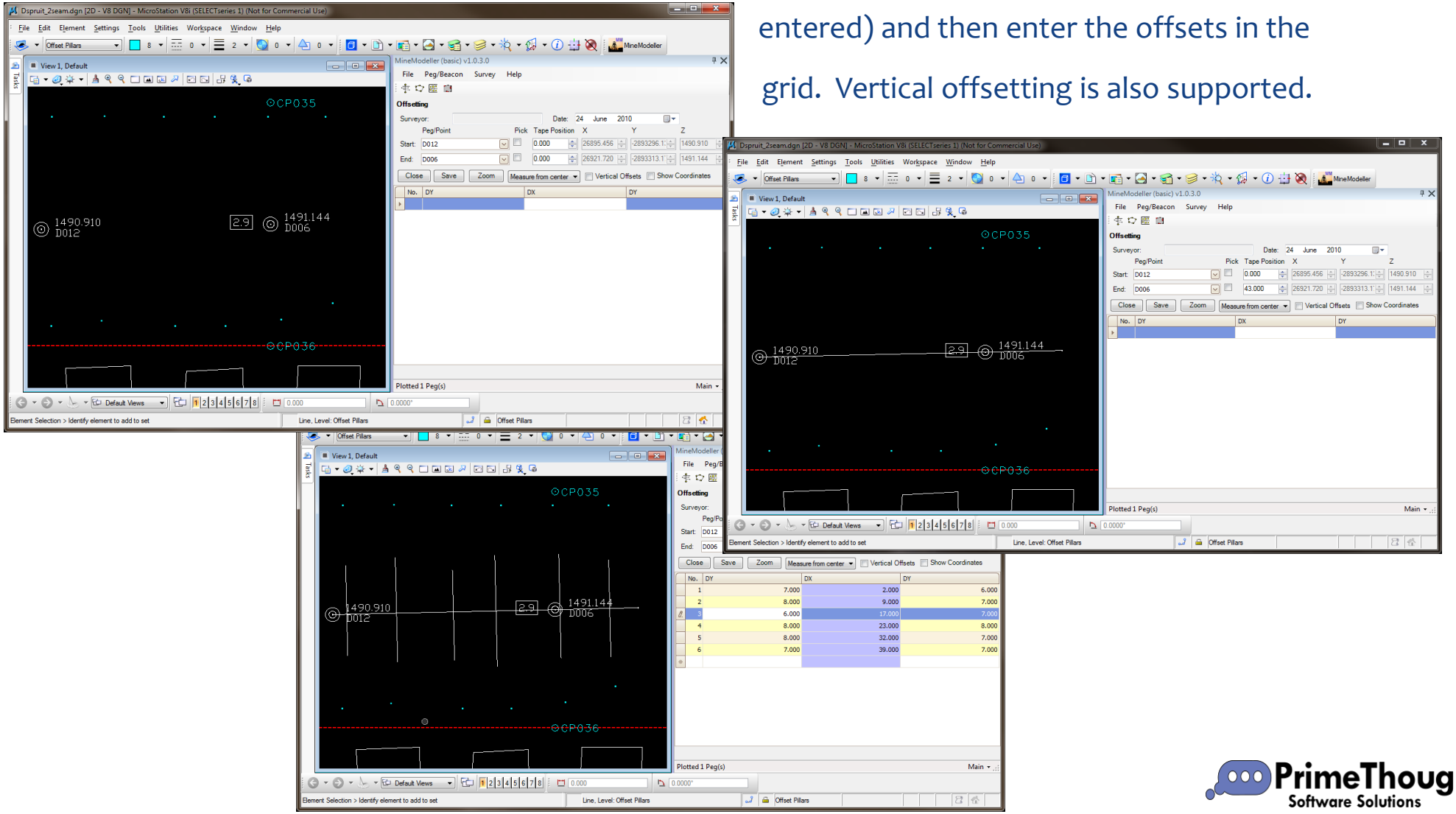
Offsetting

You can choose offsetting pegs in a dropdown or by using a pick checkbox. Then you can zoom to the area in graphics, draw the tape (drawn automatically when the tape position and length is entered) and then enter the offsets in the grid. Vertical offsetting is also supported.



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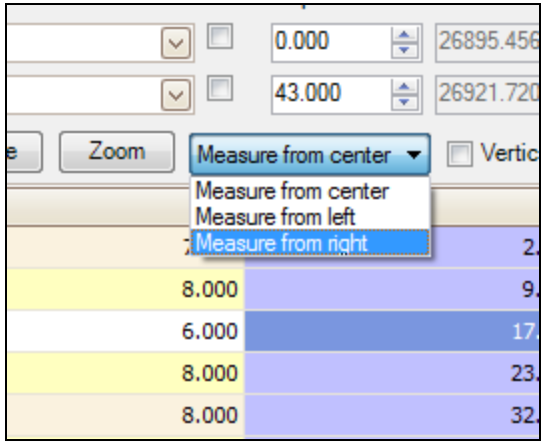
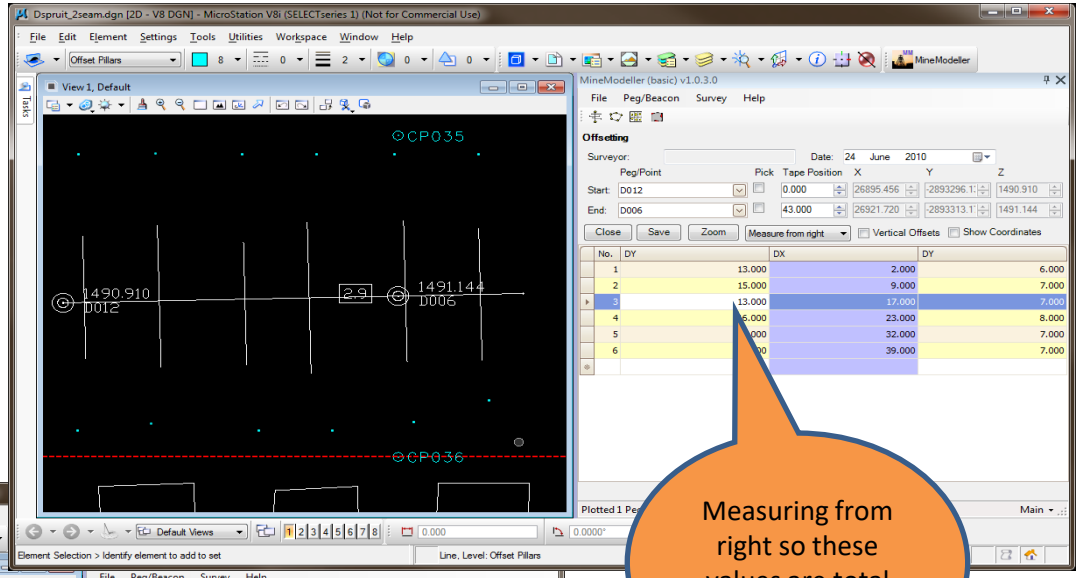
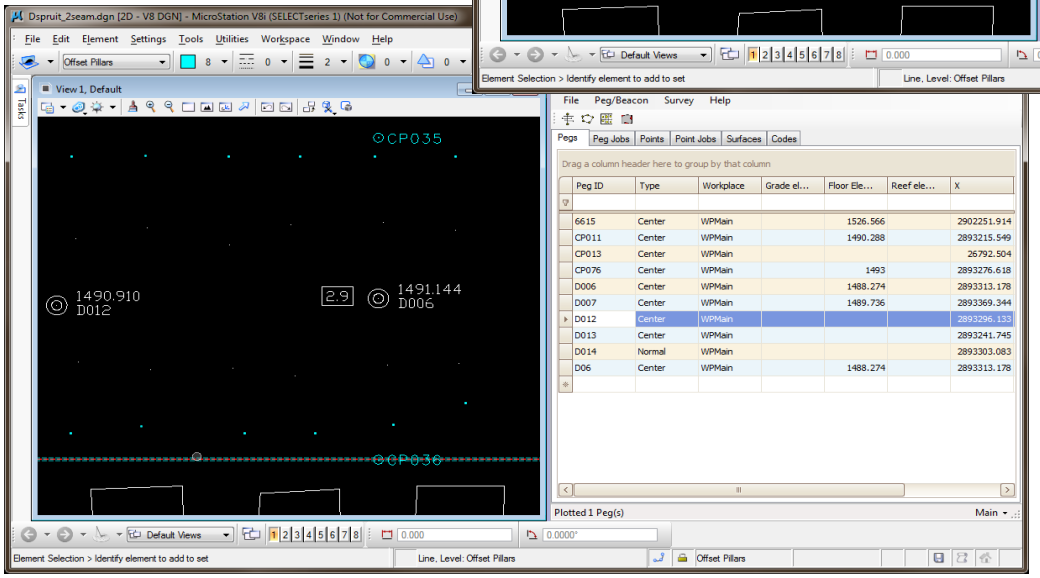
More about offsetting

Measurements can be entered from the left, from the right or from the center. Once you are happy with the data, saving creates the offset points and removes the construction.







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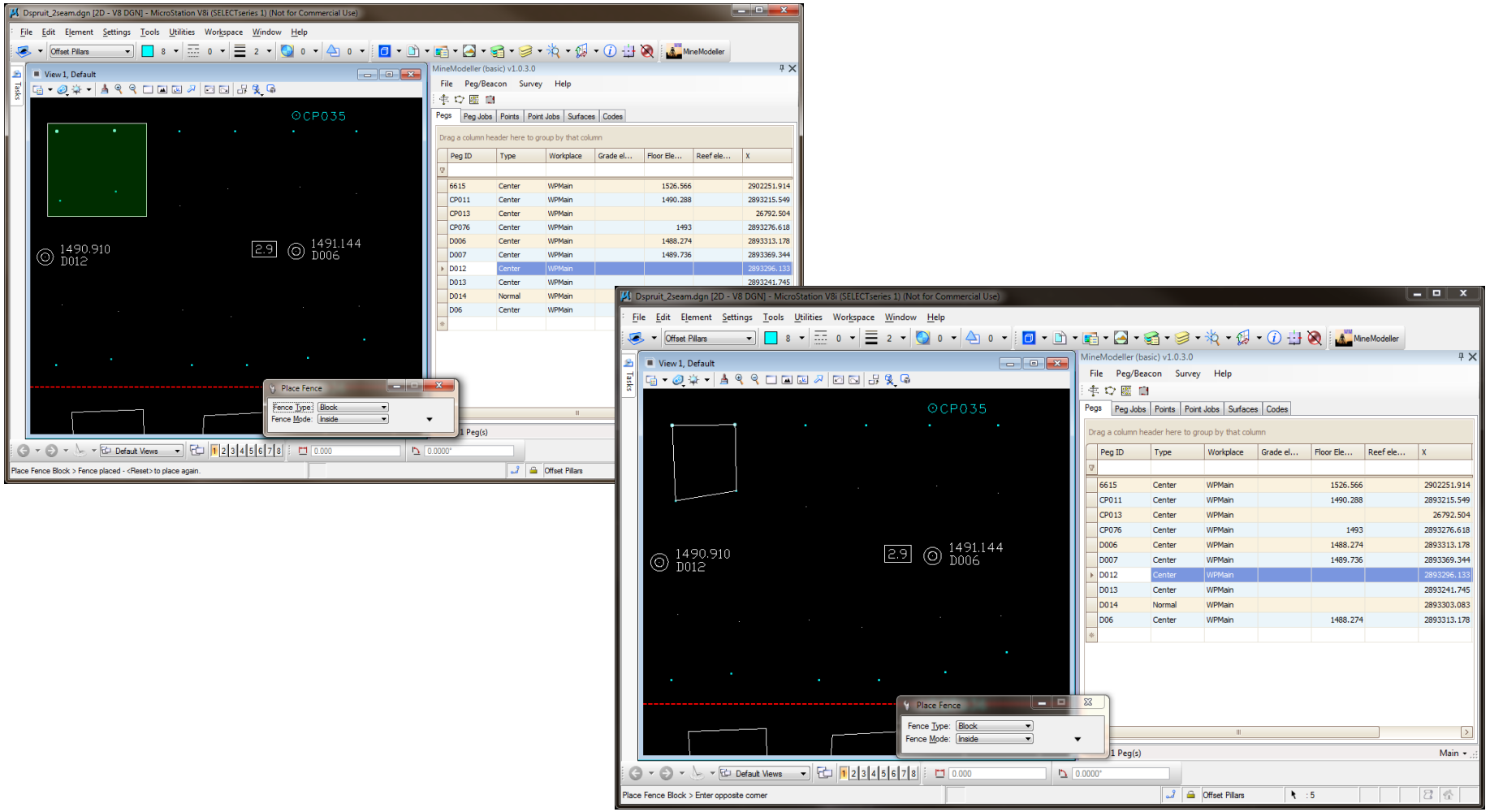
Pillar Creation: One by One Method

Once offsetting has been done you can create pillars by using the pillar tool. You can create pillars one by one as the following shows:



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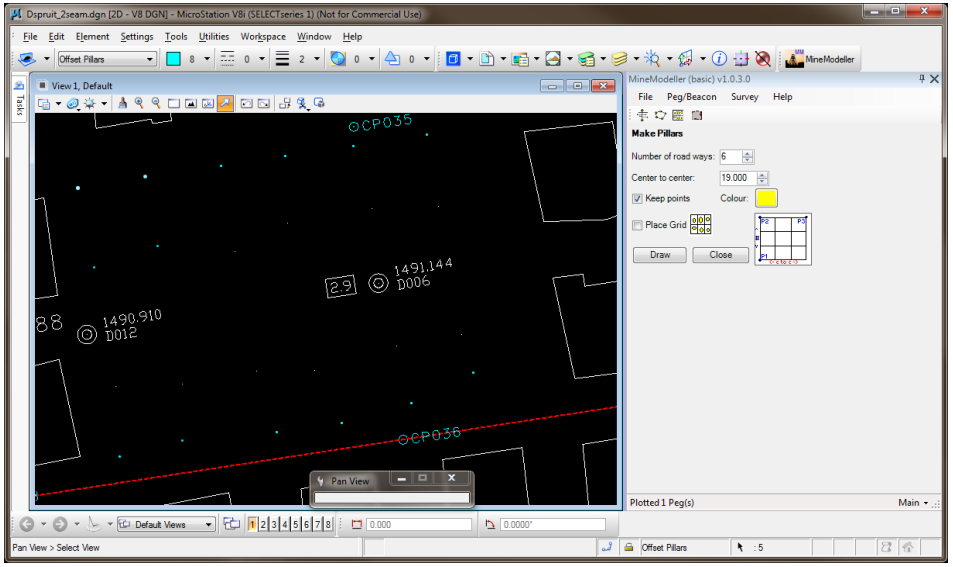
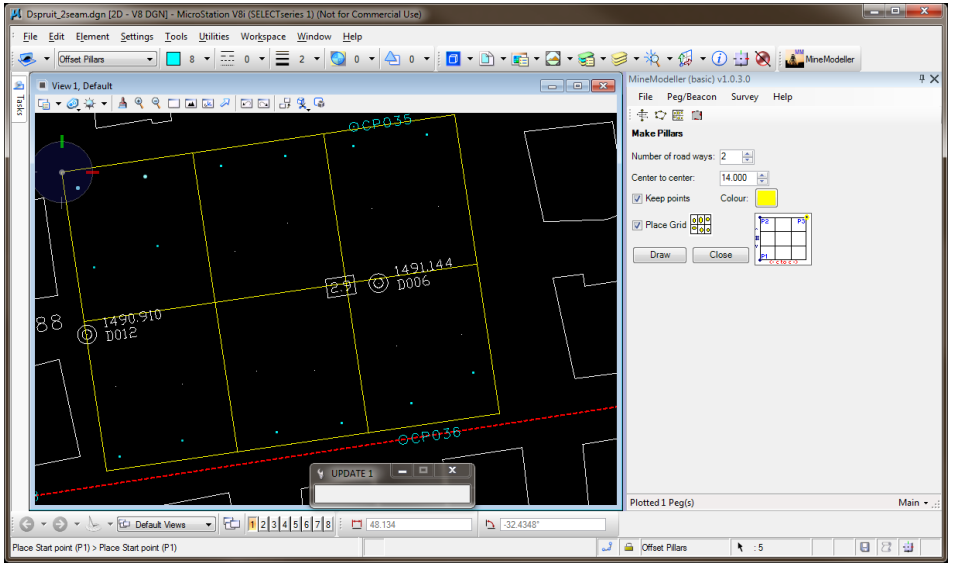
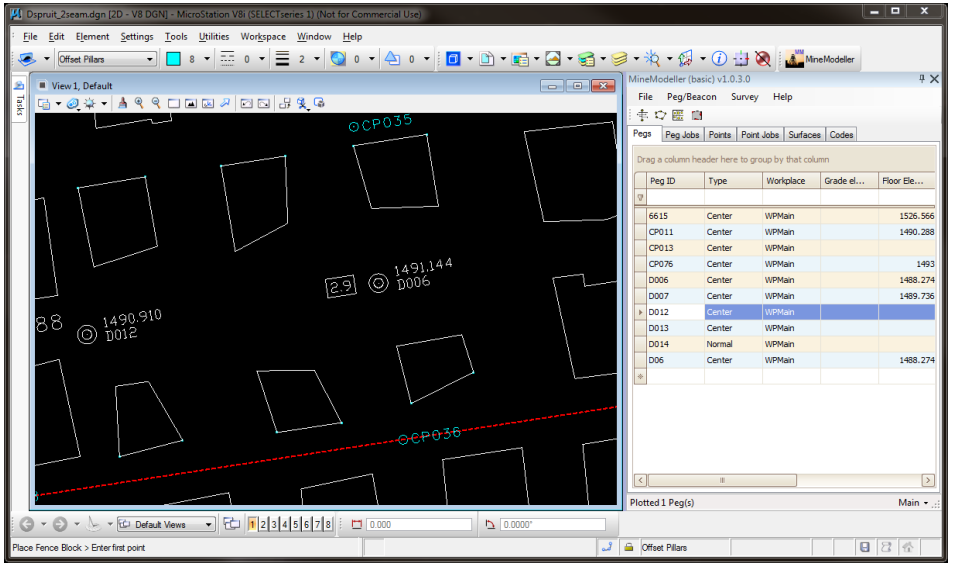
Pillar Creation: Grid method

You can also use a grid to create multiple pillars simultaneously if the pillars are in semi rectangular layout.







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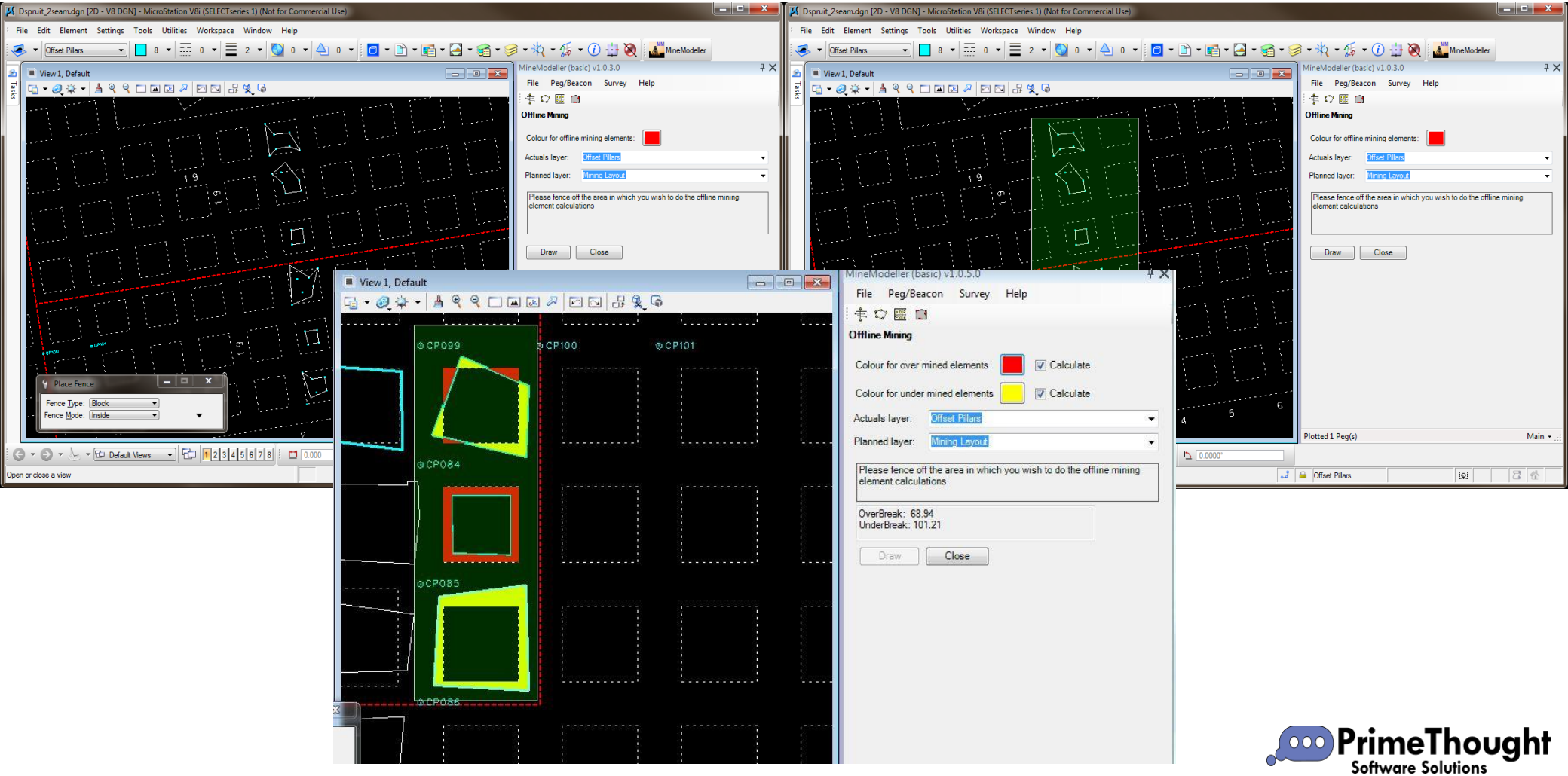
Offline Mining Calculation

Offline mining of pillars' calculations can be a tedious operation in Microstation. For each pillar we need to calculate the over mined and under mined area. This is usually done by tracing the over mined bits into shapes, pillar by pillar. With the offline mining tool this can be done automatically.



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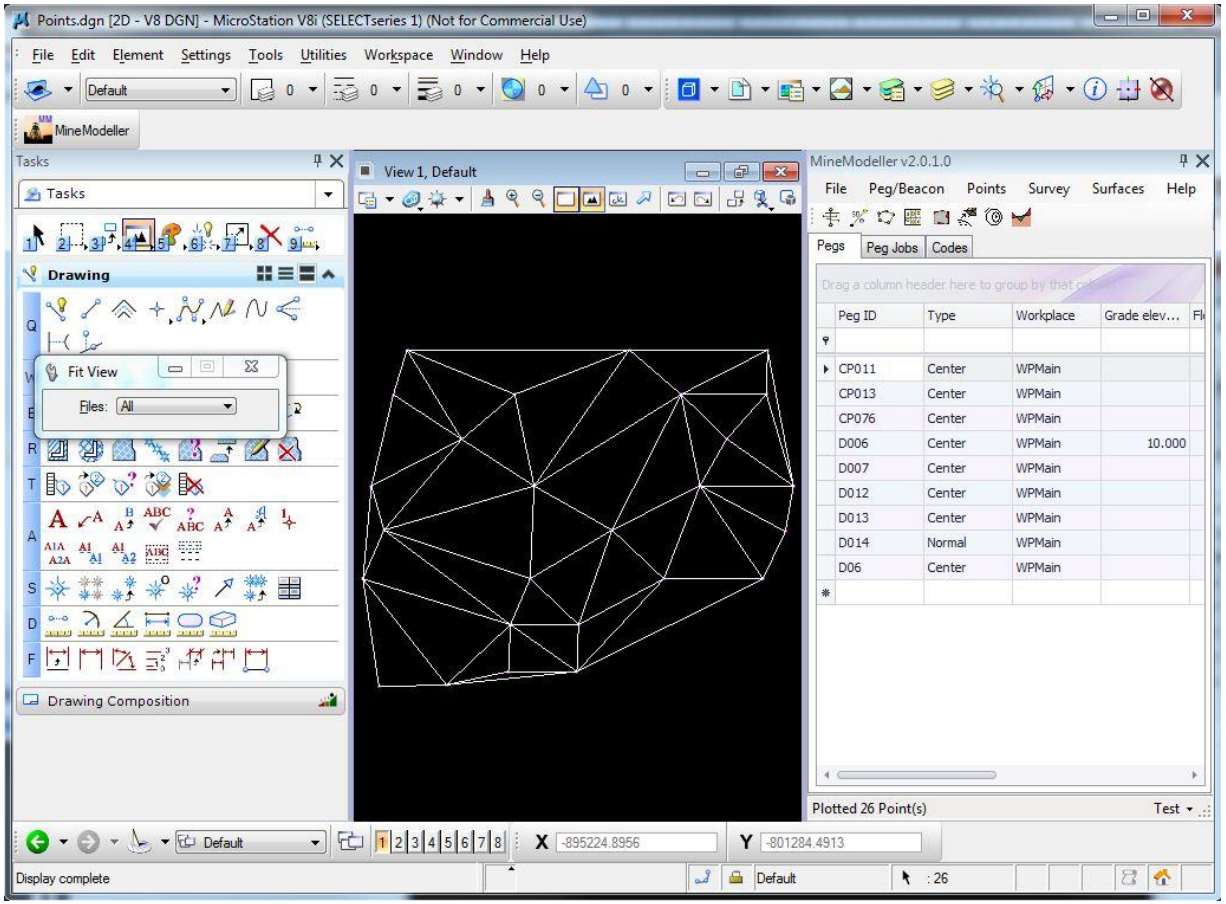
Surface Building

Surfaces can be built from survey points and other elements with break lines as needed.

You can import points from CSV files for creating surfaces.



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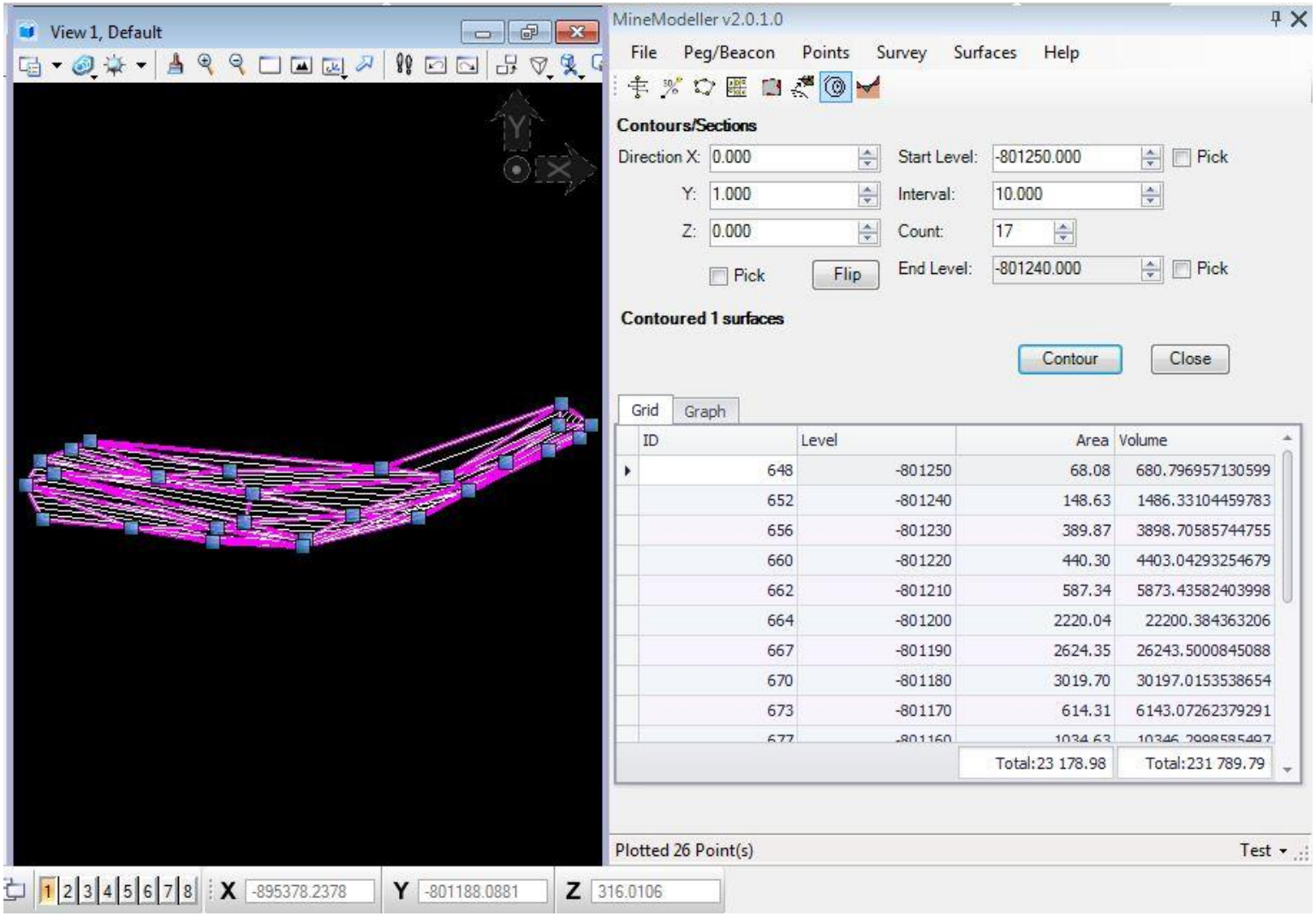
Contour / Section Selected

Contours or sections can be generated with MineModeller. MineModeller can generate colour filled contours as well.



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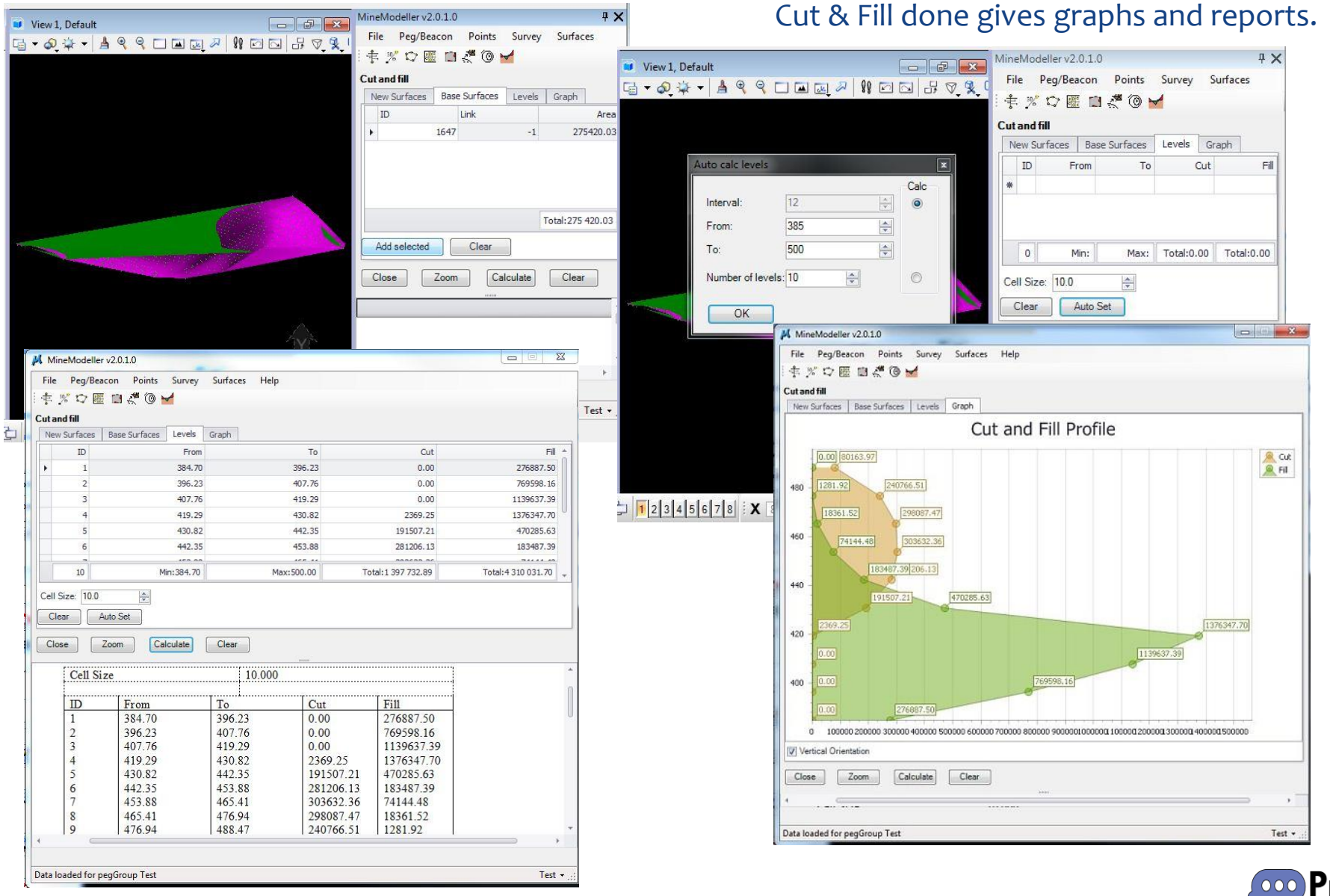
Cut & Fill

Cut & Fill done gives graphs and reports.



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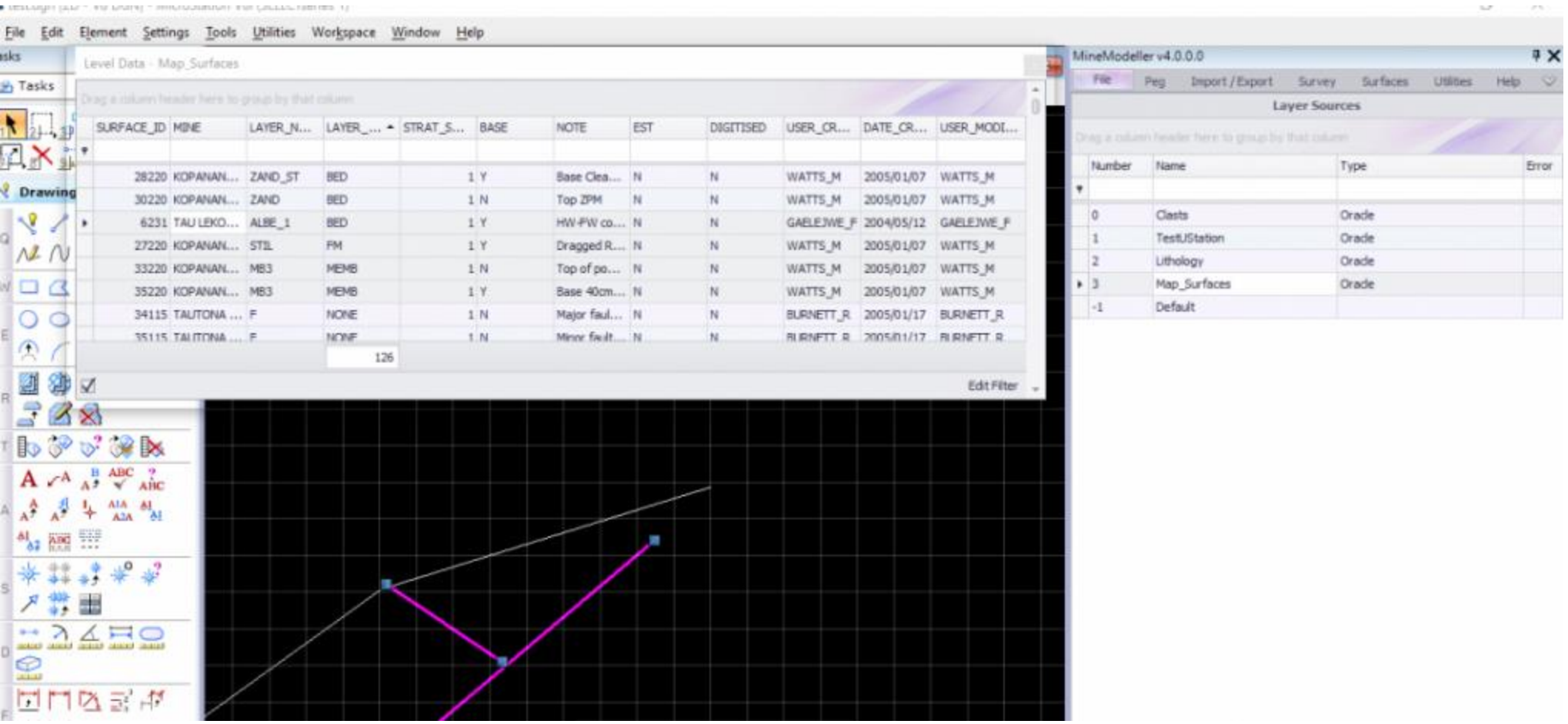
Save to databases

You can now also use Minemodller to synchronize with Oracle or SQL Server spatial data.

Each layer in the below screenshot is linking to a separate spatial query.



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Foundation software needed

Foundation Software needed:

FOR THE DATABASE SERVER:

- Windows Server 2003 R2 or above
- Microsoft SQL Server 2005, 2008 or above or Oracle 9.x or above or SQLite

FOR THE CLIENT MACHINES:

- Bentley Microstation V8i or above (if purchasing MineModeller, not needed for SurveyXL)
- Microsoft Windows XP or above

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THANK YOU

Visit primethought.biz for more information

or email

sales@primethought.biz