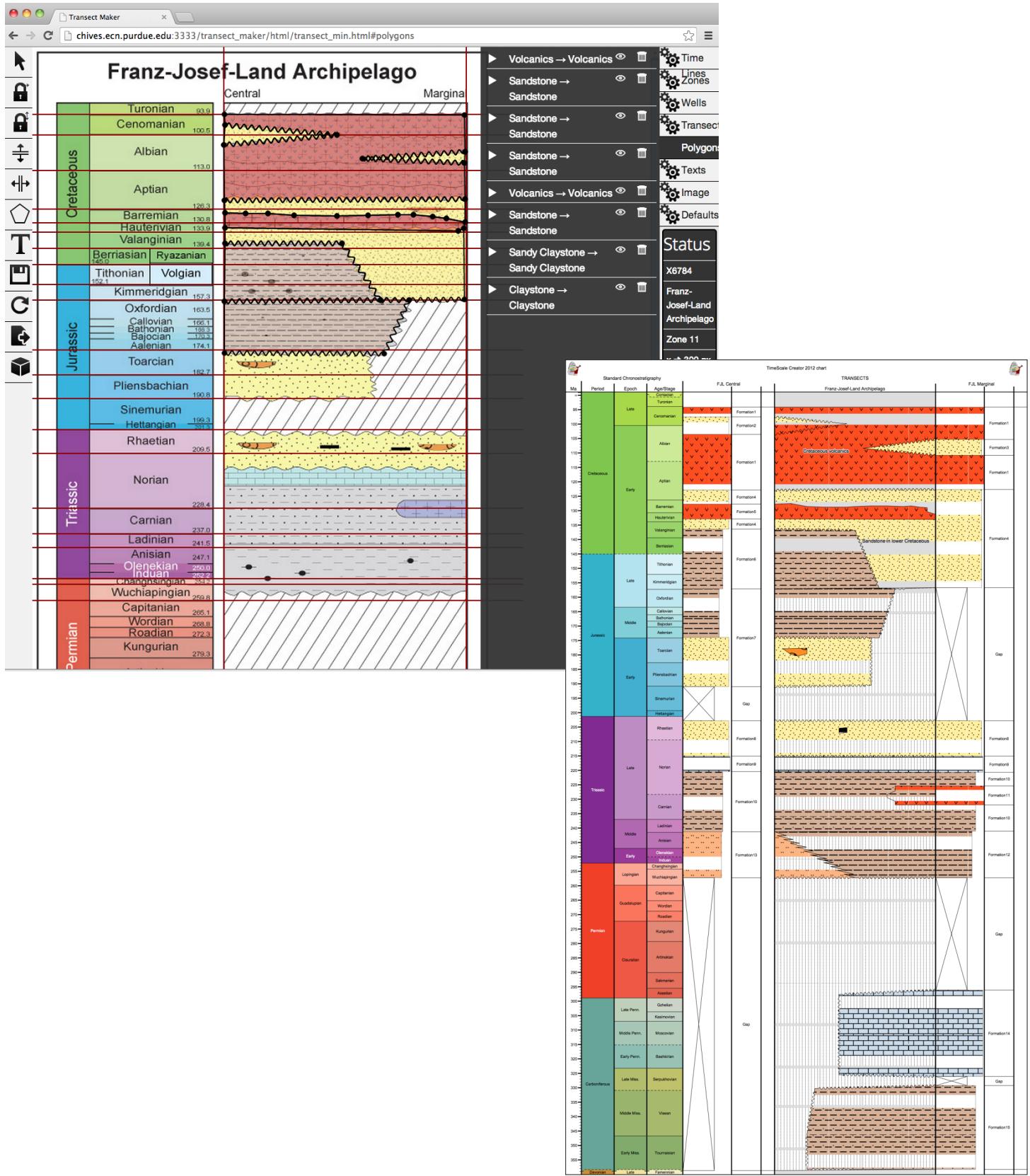


Transect Maker for TimeScale Creator

Nag Varun Chunduru



Transect Maker

Tools



Pointer Tool - Doesn't really do anything. Clicking the pointer tool will unselect any of the other tools that are active.



Lock in X Direction - Selecting this will lock the mouse to move only in horizontal direction. The y position is chosen based on the last point added to the polygon so that the next point will be straight across the previous point or the current point that is being



dragged. This will help in drawing straight horizontal lines. Key Shortcut



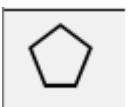
Lock in Y Direction - Selecting this will lock the mouse to move only in vertical direction. The x position is chosen based on the last point of the polygon or the current point that is being dragged. This will help in drawing straight down. Key Shortcut



Add Timeline - After selecting this whenever the user **double clicks** on the canvas a timeline will be added.



Add Well - Similar to the timeline. After selecting this whenever the user **double clicks** on the canvas a well will be dropped.



Polygon Tool - Selecting this will enable polygon mode. Icon change to . After the plus icons show up click on the icon will start a new polygon. Double clicking on the canvas will add new points to the polygon and the user can generate his desired shape.



Text Tool - Selecting this tool will start a text mode. When the canvas is double clicked the text is added with a random name at the location of the click.



Quick Save - Clicking on this will save the changes to the local storage. While working on the projects user can “**Quickly Save**” his changes by clicking  icon. This will override any of the previously saved changes with the current change. This information is retained by the browser and when the user visits the app again he can reload the changes quickly.



Reload - Clicking on this will load the changes from the local storage.



Export - Click on this will open a new view that will display the output of the transect make in time scale format. A tabular view is for the user to quickly verify the changes and the text view is for the user to quickly copy the output and paste it in a text file on his machine.

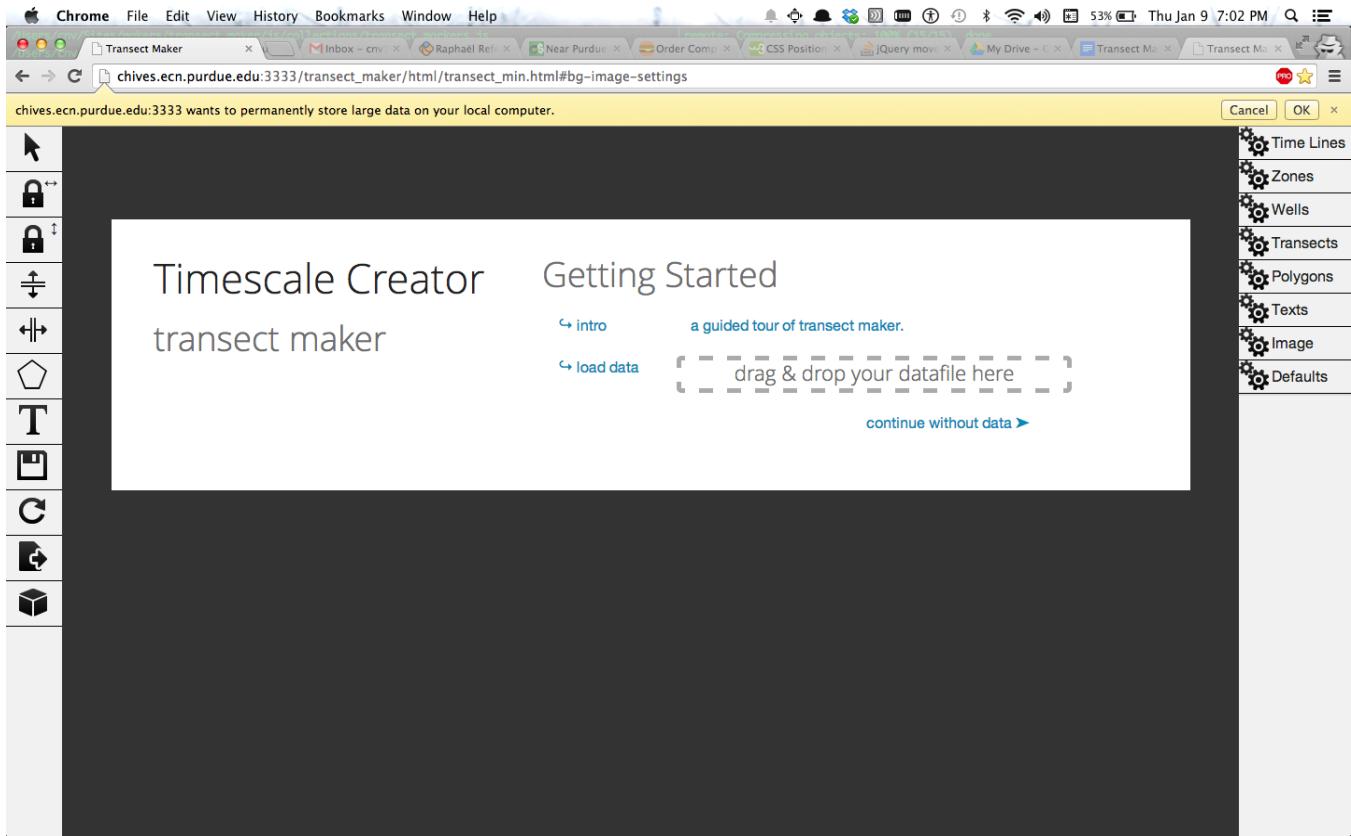


Sandbox - This application creates a sandboxed HTML5 file system on the client’s machine. Selecting this will open the view displaying directories in the user’s file system. User can save the current project or load any of the previous projects quickly into the maker as the files are stored permanently. The files can also be downloaded on the user machine as well.

Getting Started...

Browser Requirements : Google Chrome

Step 1 - On opening the URL the app will ask for user's permission to create a space aka sandbox on clients system. By accepting it, user will have the ability to store projects in this sandbox and load them when required.

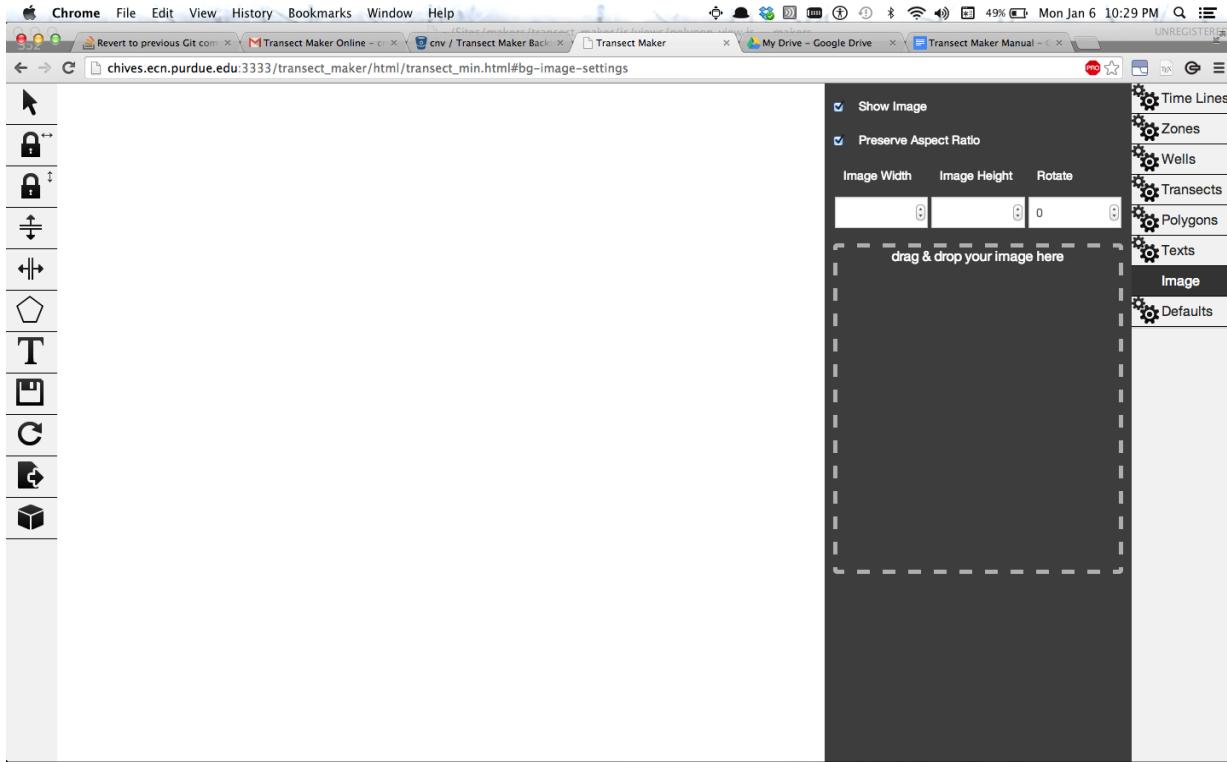


User can drag the previously obtained datafile into drag & drop box or can continue without loading any data.

The datafile needs to be a **json** file that was previously generated by the transect maker. If it is any other file format the data will not be loaded.

Continue Without Data

If user wants to start a new project he can simply click “continue without data” on the intro view. This will take the user to an empty page. User can add image by selecting image on the right hand setting bar and then drag and drop his image. Image can be of any format (png/gif/jpeg). User can resize his image or rotate it according to his needs



Resize before you put in timelines and wells. Later resizing does not keep the timelines in the same space.

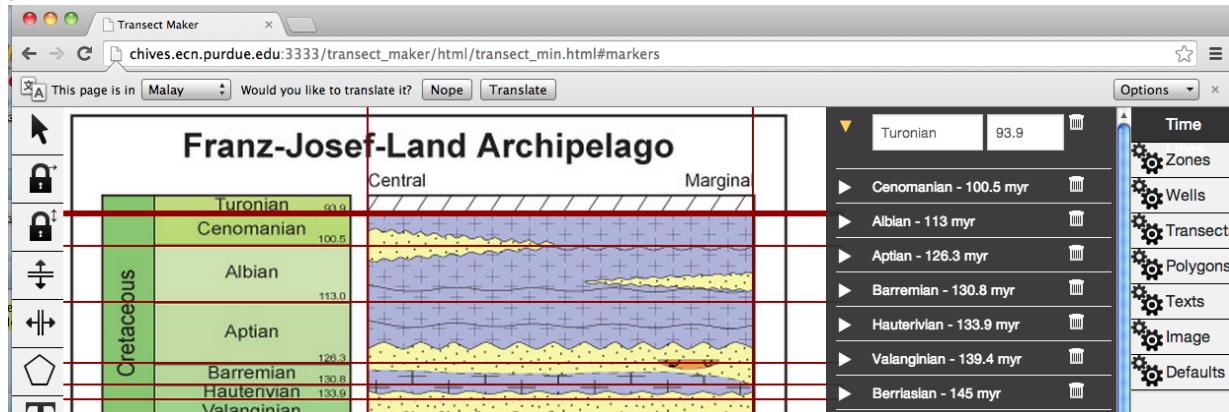
To scroll down you have to use the wheel on the mouse, there is no scroll bar on screen.

Adding or Editing information to transect elements (Timelines / Zones / Wells / Transects / Polygons / Texts)

To start drawing polygons. User has to create timelines and wells first. And then create polygons. Each of the properties of the transect elements can be edited in right hand sided settings list. User can start editing the field by clicking on the corresponding name. In order to close the input fields after the information is updated - press enter or esc key. This will update the info to the appropriate element.

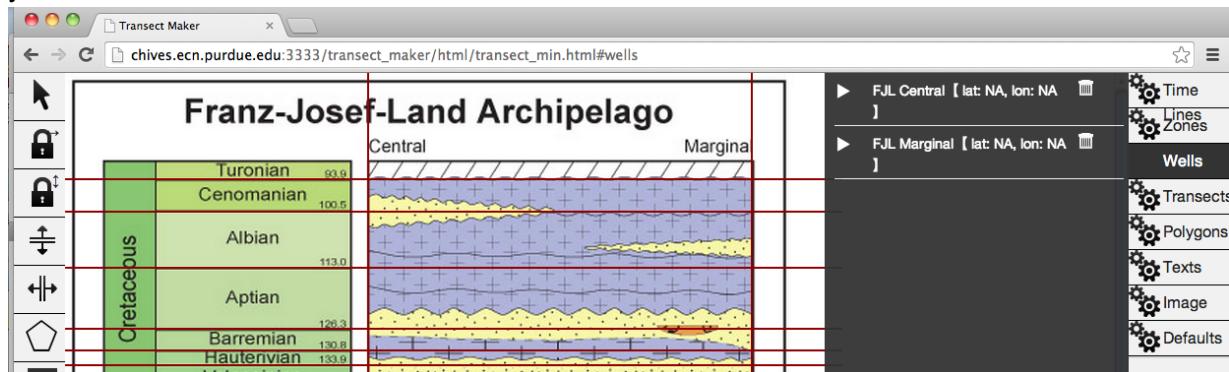
Add Timelines:

Open **Time** Tab on right hand side, this will give you the window where you add information for your timelines.



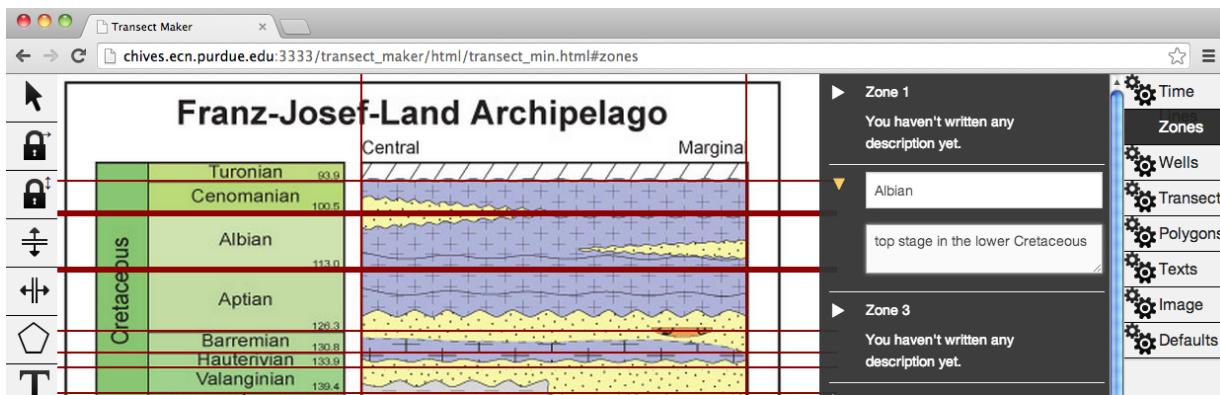
Click **timeline** button on left tool bar and double-click a zone or stage which you want to use as a timeline. On the right a new timeline is added, you can change the name and add the age in myr. Hit **enter** after each entry. Continue until all your timelines are done.

Open **Wells** Tab on right hand side, this will give you the window where you add information for your wells.



Next click **well** button and double-click where you want a new well. You need at least 2 wells to make a transect.

Open **Zones** Tab on right hand side, this will give you the window where you add information for your zones which is the interval between two of your timelines. If you hover the cursor over the zone, the corresponding two timelines will appear bold. Type in zone name and **hit return** (important, otherwise the name will not record)



Save one copy into the Sandbox storage, so you don't have to redo the timelines and wells, if you mess up the polygons.

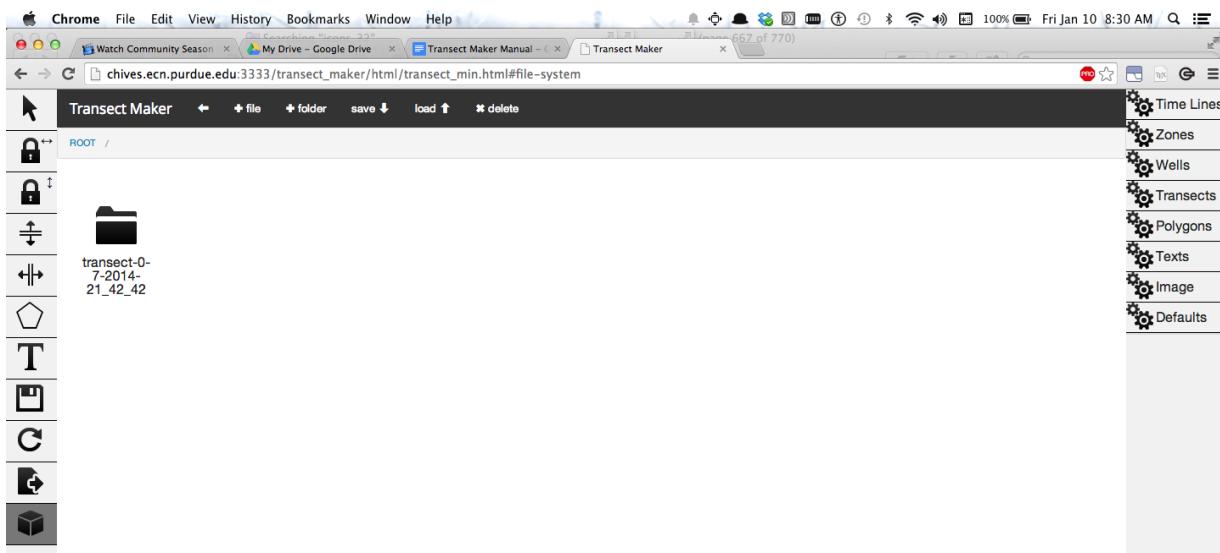
How to save to the Sandbox:

Sandbox

This application creates a sandbox filesystem on the user's system to store data permanently. When working on a project user can save his project or a version of the project in his sandbox

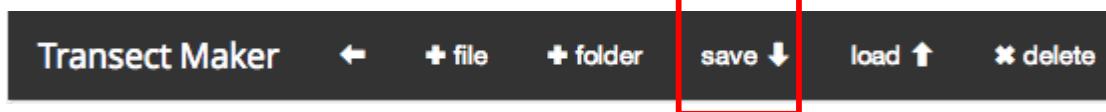
and can later visit it again. In order to save the project click on . This will open up the users sandbox and display any directories or files previously saved or created.

Sandbox View



User can save the project by simply clicking on “**save**” in the menu bar. This will create a new directory called “transect” attached with the time stamp.

Sandbox Menubar



User can rename the directory by simply clicking on the text and edit it.



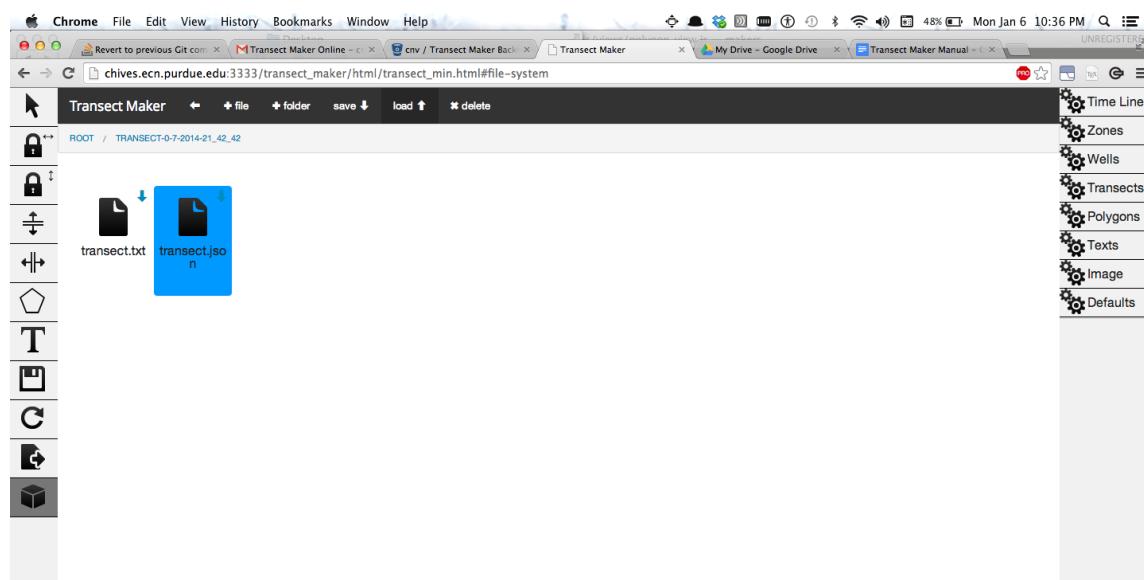
User can also navigate the directory by double clicking on it. This opens the folder to show 2 files called transect.txt and transect.json. User should rename them. After renaming the files go to the parent directory by clicking “”, then open the folder again and select the file which should be downloaded. This needs to be done, because the server takes awhile to recognize the name change. This will be fixed in the future.

User can go to the parent directory by clicking “” in the menubar.

User can download the generated files by clicking on the on the right top corner of the file.

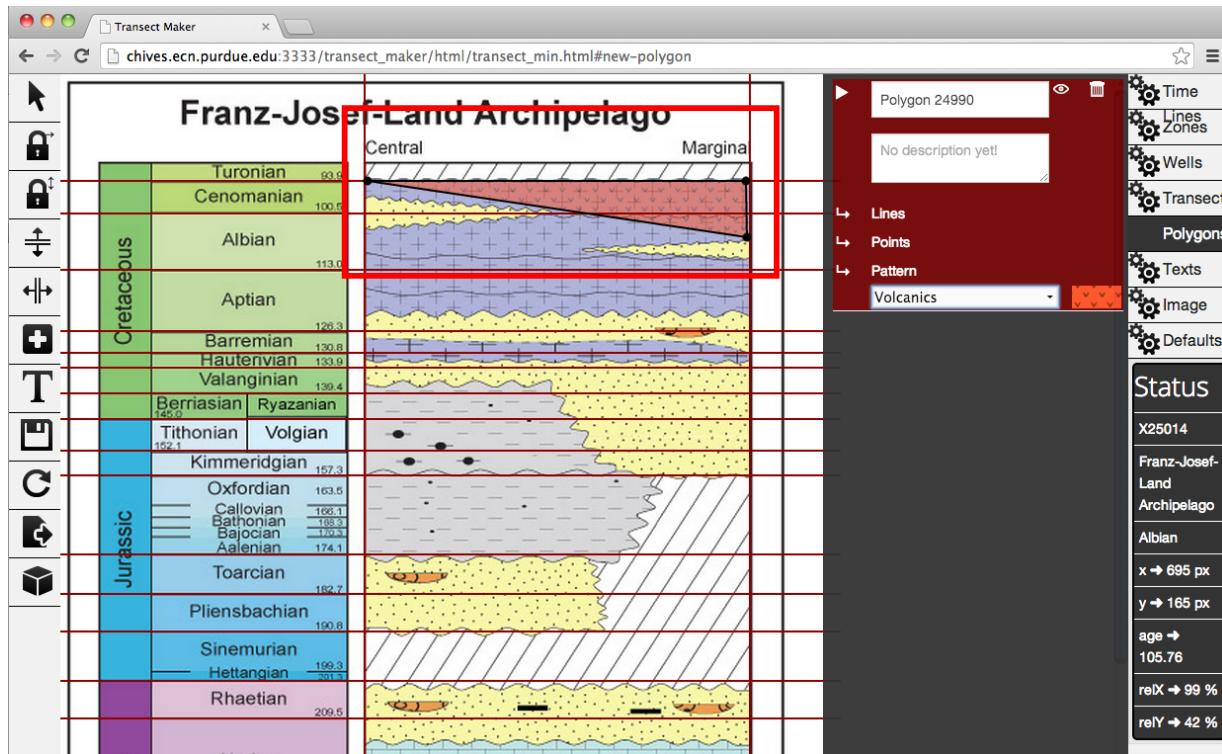
To delete a directory or a file - Select the directory/ file by clicking on it and click “**delete**” in the menu bar.

User can load the data from saved projects, by first selecting the correct folder and then loading the appropriate json file. Single click on the file selects it. User can then click on “**load**”



How to draw Polygons:

Open **Polygon** Tab on right hand side, this will give you the window where you add information and patterns for your polygons.



Draw Polygon:

Click **polygon** icon  when it changes to , then click the plus sign and start your first polygon by double-clicking for the first point. Select further points by double-clicking. The polygon will close itself, therefore you don't have to draw the last segment.

You can not put the points directly onto the well lines, therefore chose your points slightly inside the transect. Once your polygon is finished, you can pull the points to the outside of the transect and let go of the mouse and then they snap all back to the well lines. This assures straight borders for your transect.

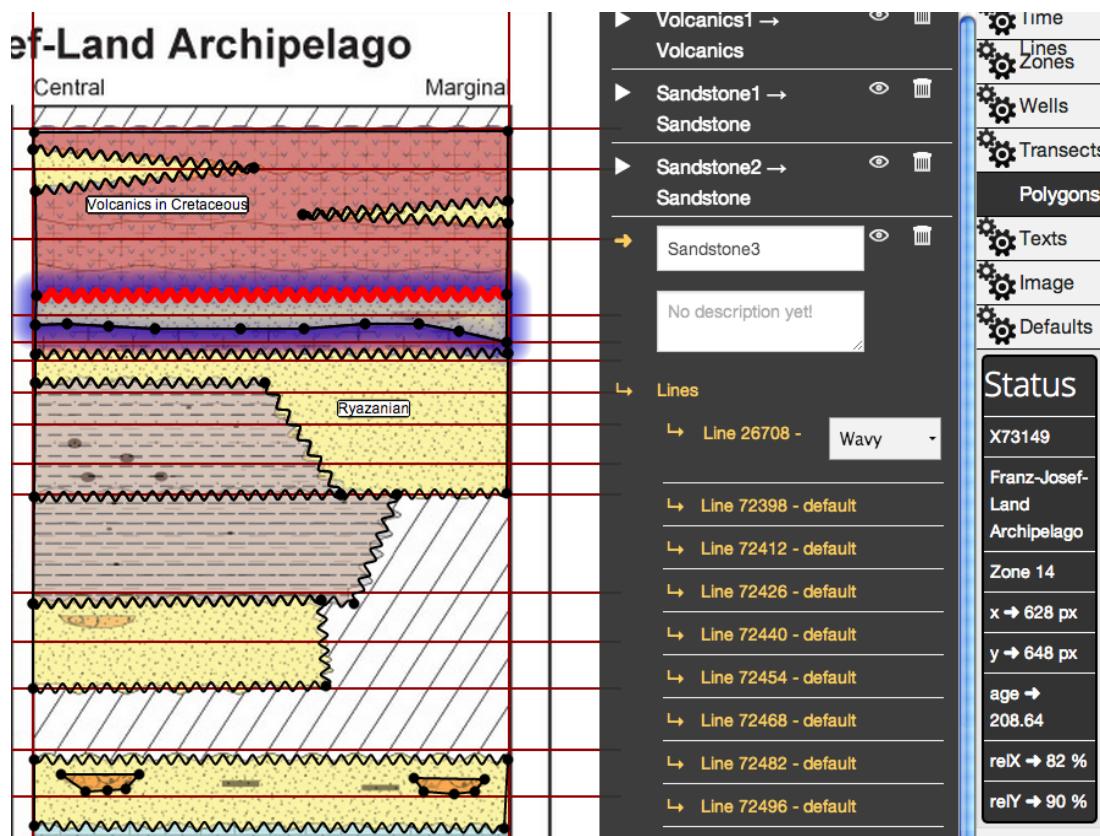
For straight lines you can use the horizontal  and vertical locks .

Lock in X Direction - Selecting this will lock the mouse to move only in horizontal direction. The y position is chosen based on the last point added to the polygon so that the next point will be straight across the previous point or the current point that is being dragged. This will help in drawing straight horizontal lines.

Lock in Y Direction - Selecting this will lock the mouse to move only in vertical direction. The x position is chosen based on the last point of the polygon or the current point that is being dragged. This will help in drawing straight down.

If your second polygon uses some of the same lines as the first, then a red dot will appear and you click only once instead of the double-click. You do that for all the dots which are used by both polygons. All individual dots need to be double-clicked to be added.

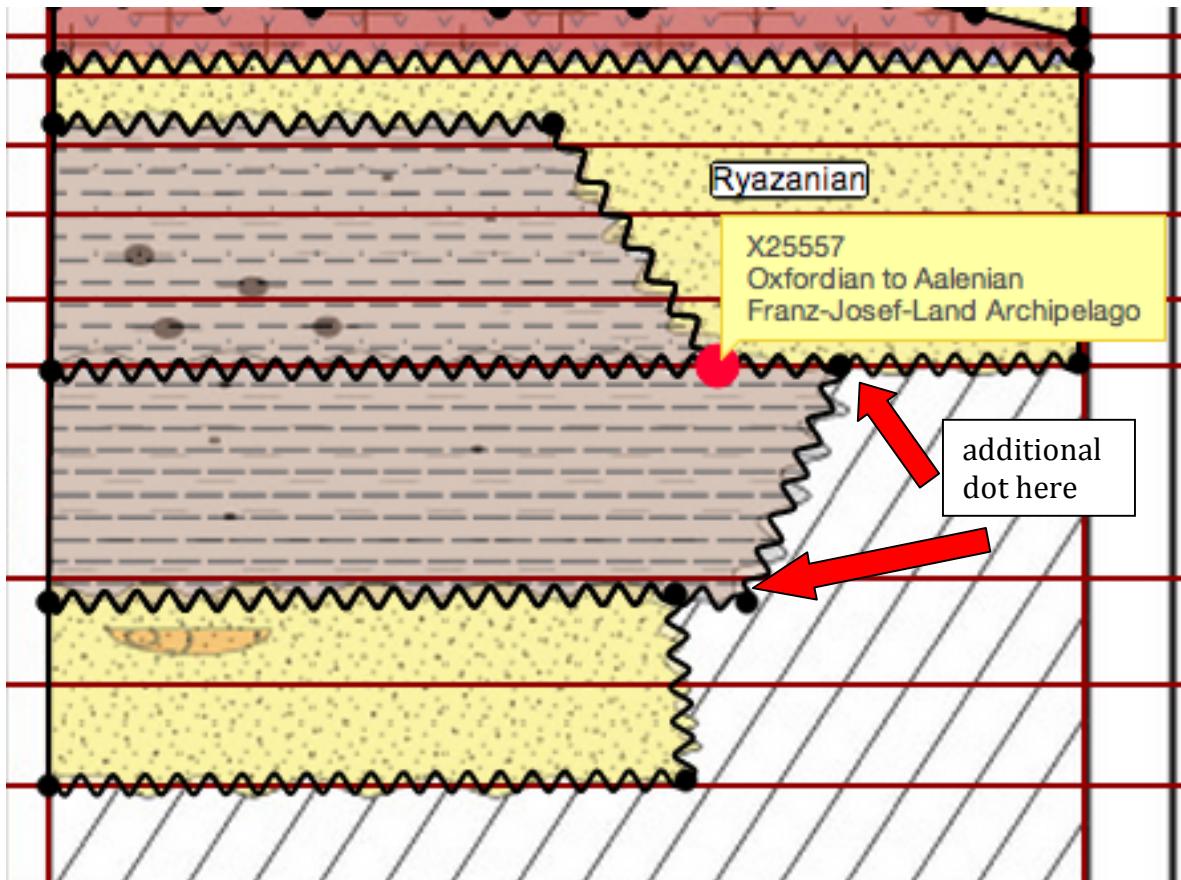
You can add a name in the polygon window for each polygon and choose a pattern. If you click on lines, then you can change the line style for each line between straight (default), wavy and lapping. If a line is used by more than one polygon, then you only need to change the line style in one polygon, the other one adjusts automatically.



To minimize the Lines folder just click on the word **Lines**. To minimize the whole polygon entry click on the orange arrow next to the polygon name

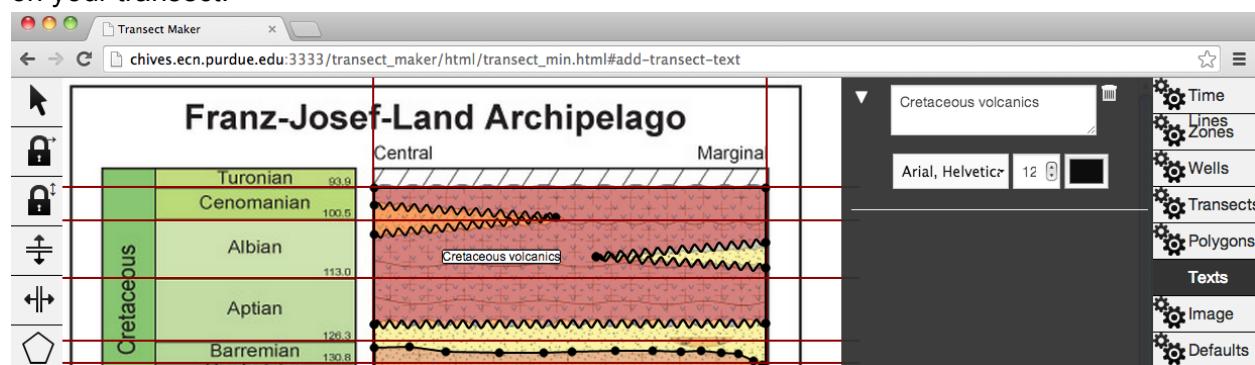
Special case: Triple junction

The line at the base of the Ryazanian Sandstone cannot be drawn as one line, because it is partly used by the top line of the underlying claystone. Therefore, each segment needs to have a point selected, otherwise the wavy lines won't work



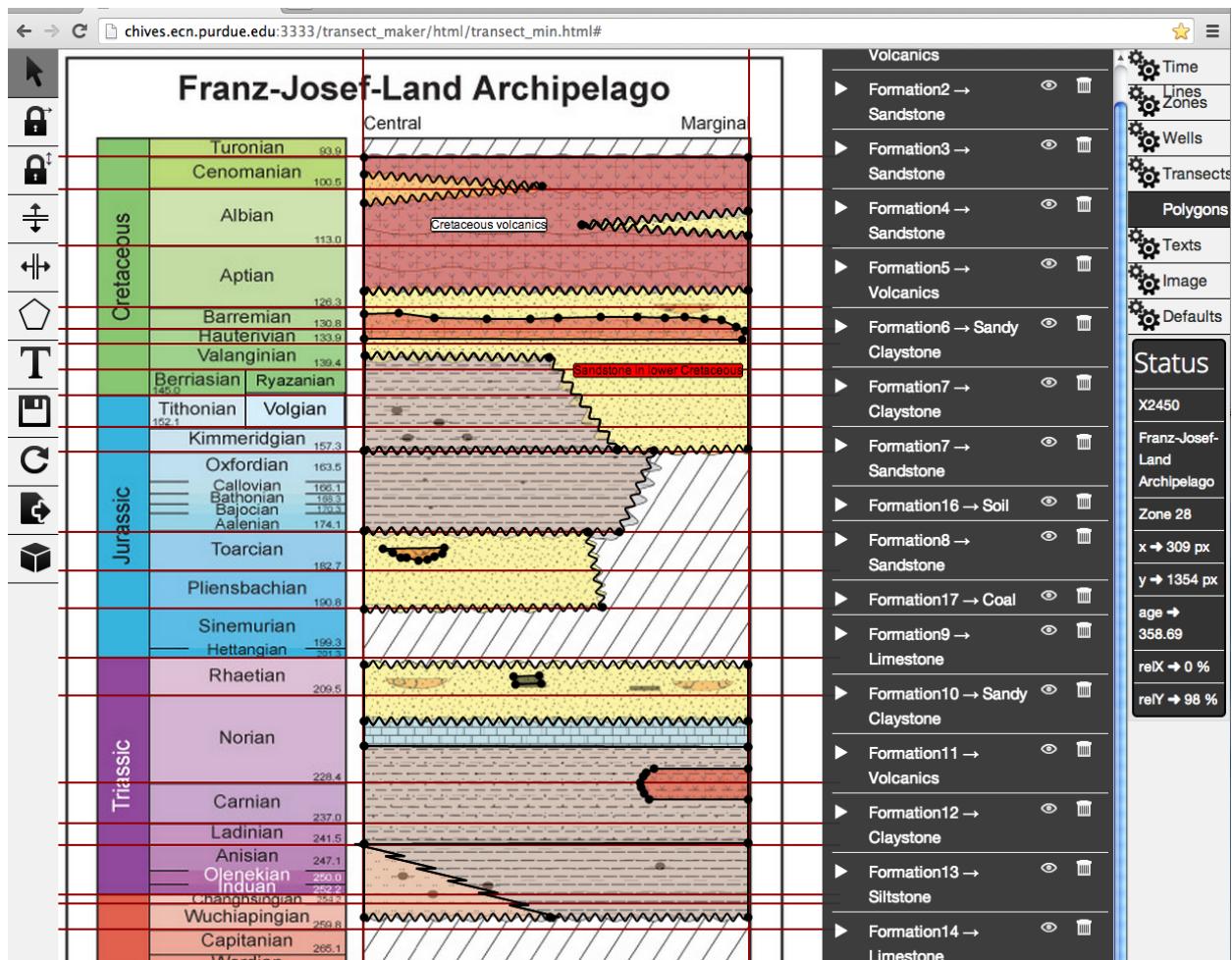
Add Text boxes to transect:

Open **Text** Tab on right hand side, this will give you the window where you add text to display on your transect.



Click **T** icon, start your text by double-clicking into the polygone, where you want to place the text. Go to the Text field on the right and type the text. You can select the font and size. You can then move the textbox to its final location in the polygon.

Finished transect:

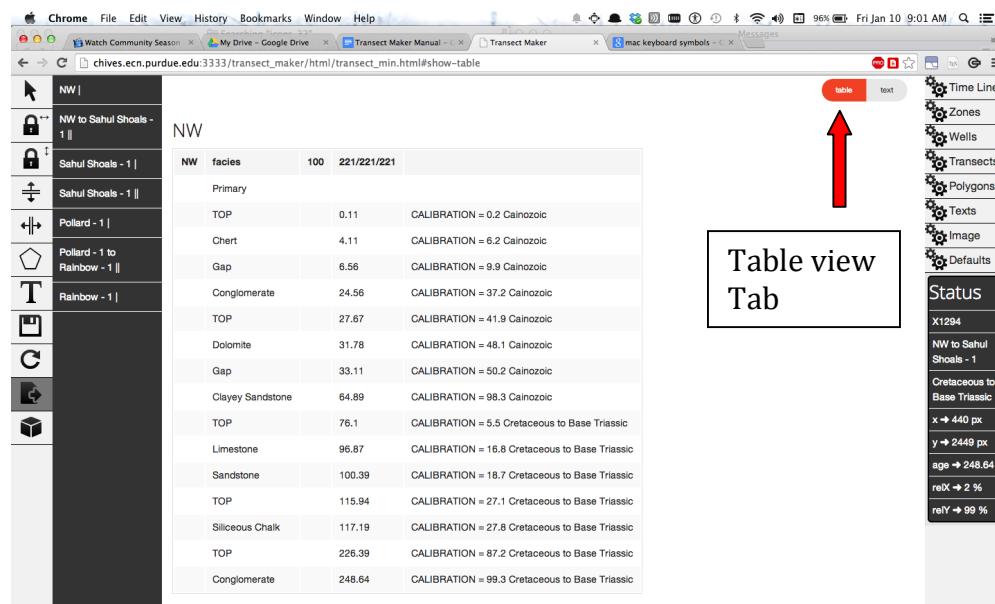


Export Data

User can export the data in timescale creator format either by saving the project to sandbox and

downloading the text file or use **quick export** . The **Export Tab** will open up the view containing the tab-separated timescale creator format. User can choose to view the table to quickly verify the output and use the text view to copy the output.

Make sure you have closed the right hand side tabs by again clicking on the tab, otherwise you won't see the full screen and the button to switch from **table** to **text** view



The screenshot shows the Transect Maker interface with the 'Table view Tab' selected. The main area displays a geological table for the 'NW' transect. The table includes columns for facies, thickness, and calibration. A red arrow points to the 'table' button at the top right of the main area. The right sidebar shows various project settings and status information.

facies	100	221/221/221
Primary		
TOP	0.11	CALIBRATION = 0.2 Cainozoic
Chert	4.11	CALIBRATION = 6.2 Cainozoic
Gap	6.56	CALIBRATION = 9.9 Cainozoic
Conglomerate	24.56	CALIBRATION = 37.2 Cainozoic
TOP	27.67	CALIBRATION = 41.9 Cainozoic
Dolomite	31.78	CALIBRATION = 48.1 Cainozoic
Gap	33.11	CALIBRATION = 59.2 Cainozoic
Clayey Sandstone	64.89	CALIBRATION = 98.3 Cainozoic
TOP	76.1	CALIBRATION = 5.5 Cretaceous to Base Triassic
Limestone	96.87	CALIBRATION = 16.8 Cretaceous to Base Triassic
Sandstone	100.39	CALIBRATION = 18.7 Cretaceous to Base Triassic
TOP	115.94	CALIBRATION = 27.1 Cretaceous to Base Triassic
Siliceous Chalk	117.19	CALIBRATION = 27.8 Cretaceous to Base Triassic
TOP	226.39	CALIBRATION = 87.2 Cretaceous to Base Triassic
Conglomerate	248.64	CALIBRATION = 99.3 Cretaceous to Base Triassic



The screenshot shows the Transect Maker interface with the 'Text view Tab' selected. The main area displays the same geological data in a tab-separated text format. A red arrow points to the 'text' button at the top right of the main area. The right sidebar remains the same as in the previous screenshot.

```
NW facies 100 221/221/221
TOP 0.11 CALIBRATION = 0.2 % up the Cainozoic
Chert 4.11 CALIBRATION = 6.2 % up the Cainozoic
Gap 6.56 CALIBRATION = 9.9 % up the Cainozoic
Conglomerate 24.56 CALIBRATION = 37.2 % up the Cainozoic
TOP 27.67 CALIBRATION = 41.9 % up the Cainozoic
Dolomite 31.78 CALIBRATION = 48.1 % up the Cainozoic
Gap 33.11 CALIBRATION = 59.2 % up the Cainozoic
Clayey Sandstone 64.89 CALIBRATION = 98.3 % up the Cainozoic
TOP 76.1 CALIBRATION = 5.5 % up the Cretaceous to Base Triassic
Limestone 96.87 CALIBRATION = 16.8 % up the Cretaceous to Base Triassic
Sandstone 100.39 CALIBRATION = 18.7 % up the Cretaceous to Base Triassic
TOP 115.94 CALIBRATION = 27.1 % up the Cretaceous to Base Triassic
Siliceous Chalk 117.19 CALIBRATION = 27.8 % up the Cretaceous to Base Triassic
TOP 226.39 CALIBRATION = 87.2 % up the Cretaceous to Base Triassic
Conglomerate 248.64 CALIBRATION = 99.3 % up the Cretaceous to Base Triassic

NW to Sahul Shoals - 1 transect 500 221/221/221
0 5 35 70 80 85 95 100
0.11 X1681 X1685 X1679
4.11 X1683 X1685 X1753
6.56 X1751 X1753 X1793
24.56 X1791 X1859 X1861
27.67 X1843 X1845 X1847
27.78 X1851 X1851 X1851
31.11 X1855 X1853 X1861
31.78 X1855 X1859 X1861
32.67 X1857 X1859 X1861
33.11 X1857 X1859 X1861
64.89 X1949 X1951 X1951
67.14 X1991 X1999 X1999
74.51 X1993 X1995 X2067
76.1 X2069 X2073 X2073
96.87 X2071 X2073 X2191
100.39 X2189 X2191 X2191
115.94 X2245 X2243 X2247
116.17 X2247 X2247 X2247
117.19 X2297 X2299 X2299
117.31 X2297 X2343 X2343
220.23 X2343 X2345 X2345
224.91 X2345 X2341 X2341
225.25 X2341 X2341 X2341
```

You can quickly swipe the whole text view and copy it into a text editor and save as .txt and then load the file into TSCreator.

Saving your file:

Quick Save



Quick Save - Clicking on this will save the changes to the local storage. While working on the projects user can “**Quickly Save**” his changes by clicking icon. This will override any of the previously saved changes with the current change. This information is retained by the browser and when the user visits the app again he can reload the changes quickly.

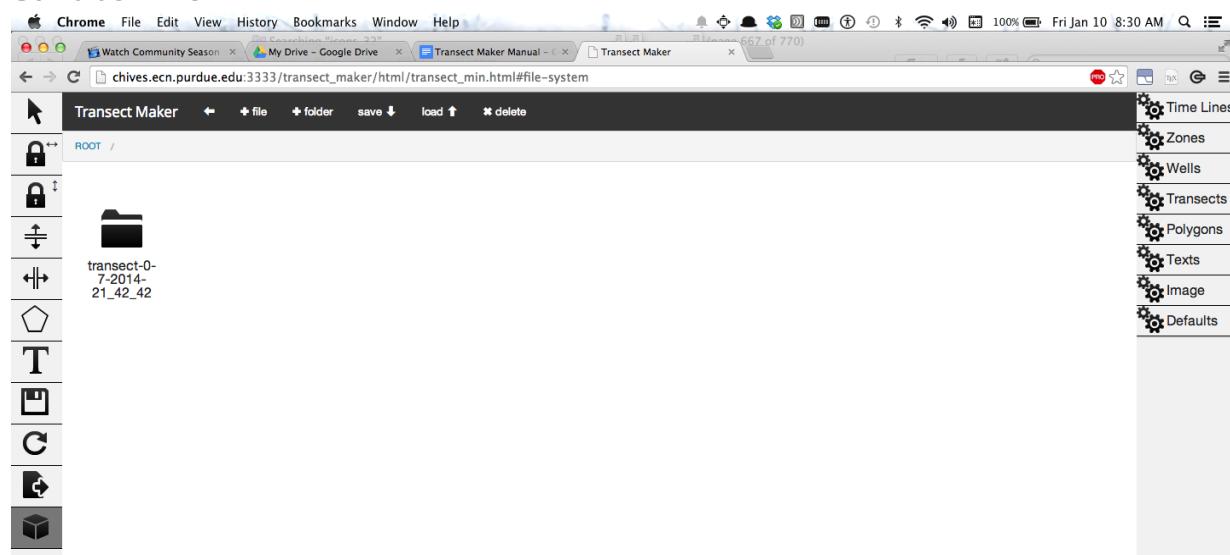
Reload data from the local storage if data exists in the local storage by clicking on .

Sandbox

This application creates a sandbox filesystem on the user’s system to store data permanently. When working on a project user can save his project or a version of the project in his sandbox

and can later visit it again. In order to save the project click on . This will open up the users sandbox and display any directories or files previously saved or created.

Sandbox View



User can save the project by simply clicking on “**save**” in the menu bar. This will create a new directory called transect attached with the time stamp.

Sandbox Menubar



User can rename the directory by simply clicking on the text and edit it.



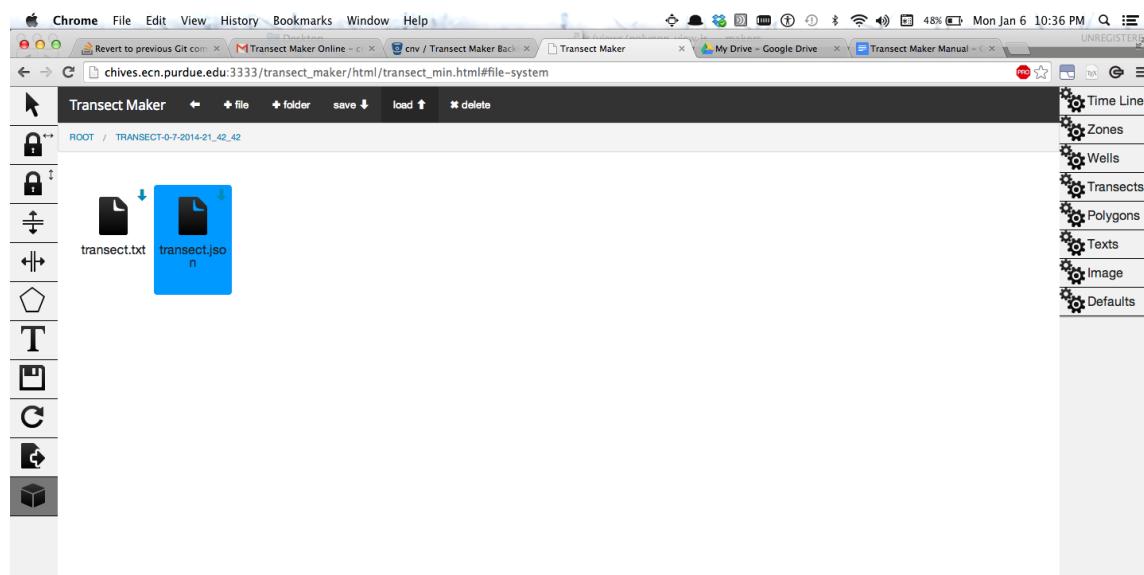
User can also navigate the directory by double clicking on it.

User can go the parent directory by clicking “**◀**” in the menubar.

To delete a directory or a file - Select the directory/ file by clicking on it and click “**delete**” in the menu bar.

User can download the generated files by clicking on the **⬇️** on the right top corner of the file.

User can load the data from saved projects, by first selecting the correct folder and then loading the appropriate json file. Single click on the file selects it. User can then click on “**load**”



Drag & Drop

After user downloads the file he can share it with other users and they can load the data by drag dropping it into the introductory screen.

The data file needs to be a **json** file that was previously generated by the transect maker. If it is any other file format the data will not be loaded.

