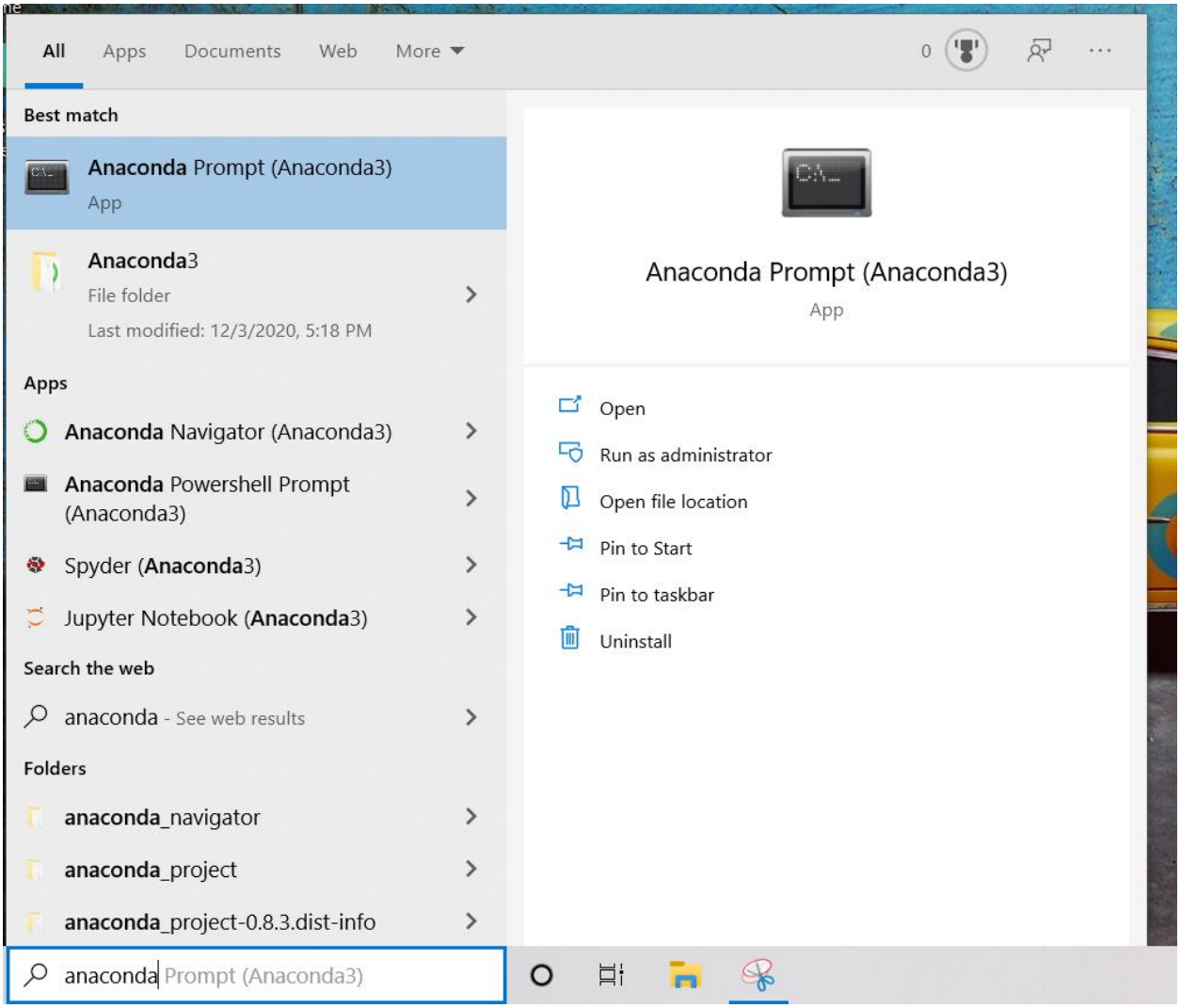
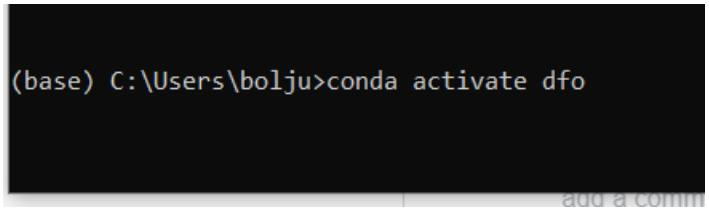
Starting app server

1. Search and start Anaconda Prompt



2. Activate environment: in prompt type "***conda activate dfo***"



3. Go to folder where app files are located. Type ***"cd your/folder"***

```
(dfo) C:\Users\bolju>cd C:\Users\bolju\Desktop\Projects\gecko
```

4. Type ***"python run.py"***

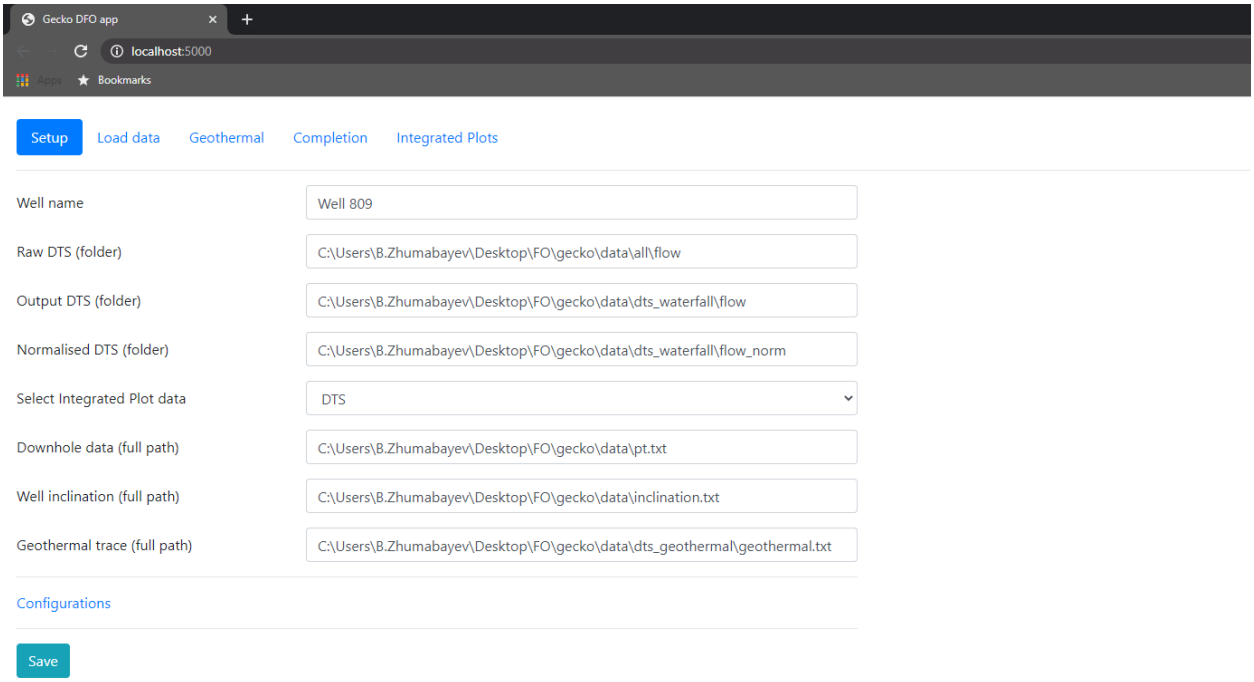
```
(dfo) C:\Users\bolju\Desktop\Projects\gecko>python run.py
```

The result should look like this

```
(dfo2) C:\Users\B.Zhumabayev\Desktop\FO\gecko>python run.py
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 315-335-365
(14192) wsgi starting up on http://127.0.0.1:5000
```

Your server is on!

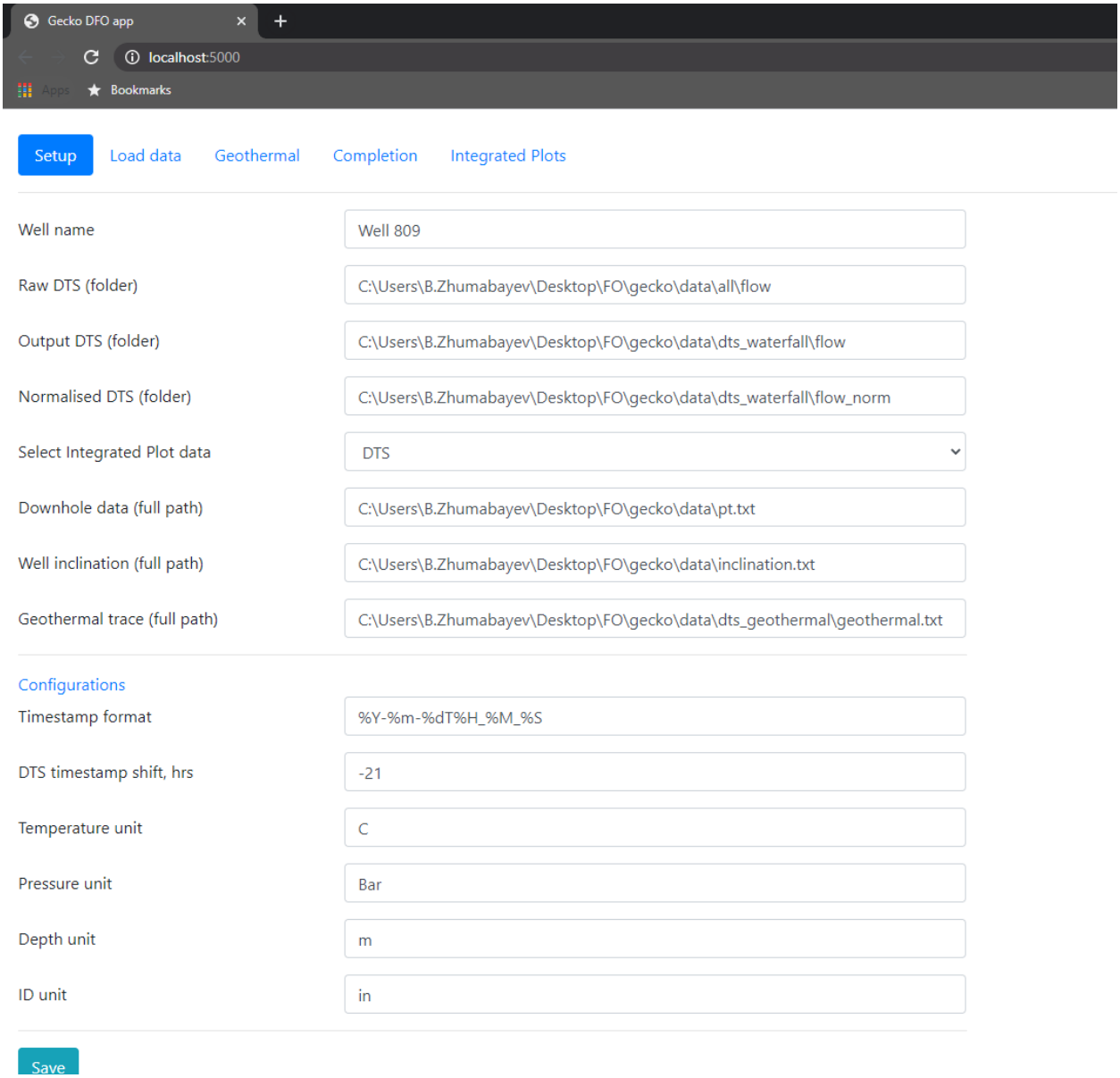
You can now go to http://localhost:5000



Step 1

Configure setup

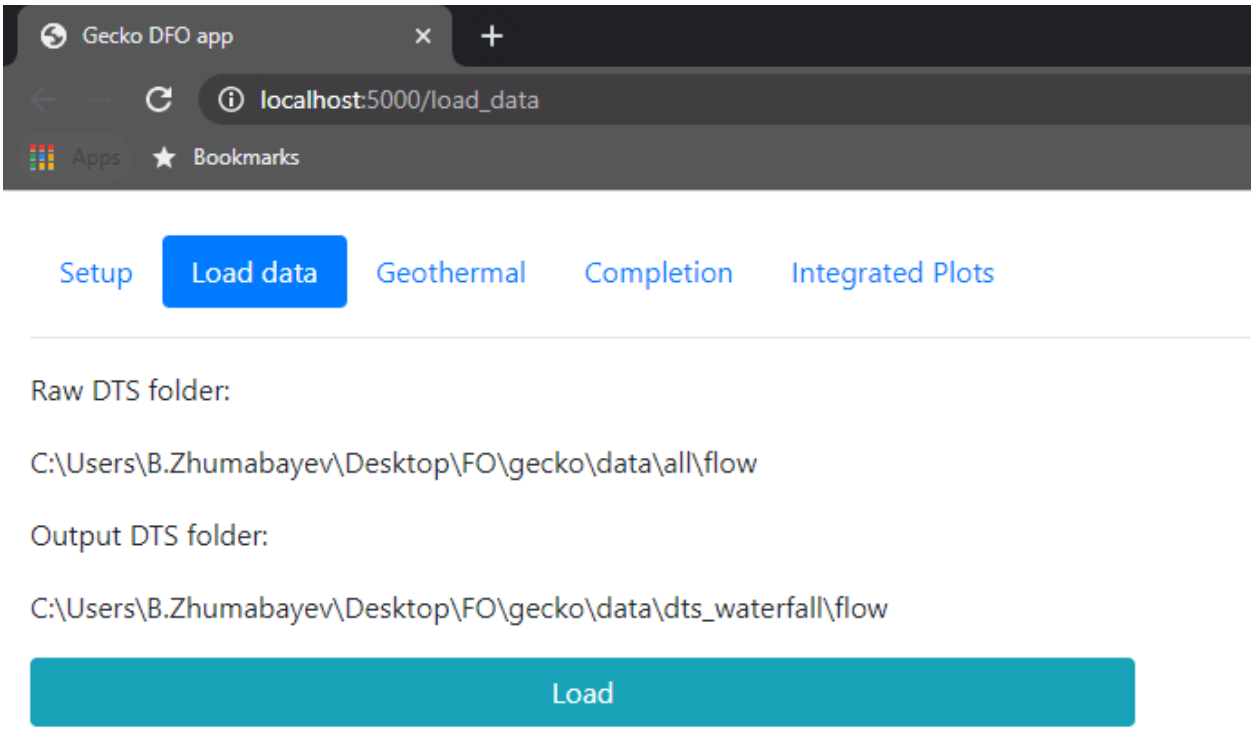
1. Define folder locations and file paths to existing data
2. Configure units and format according to the data available.



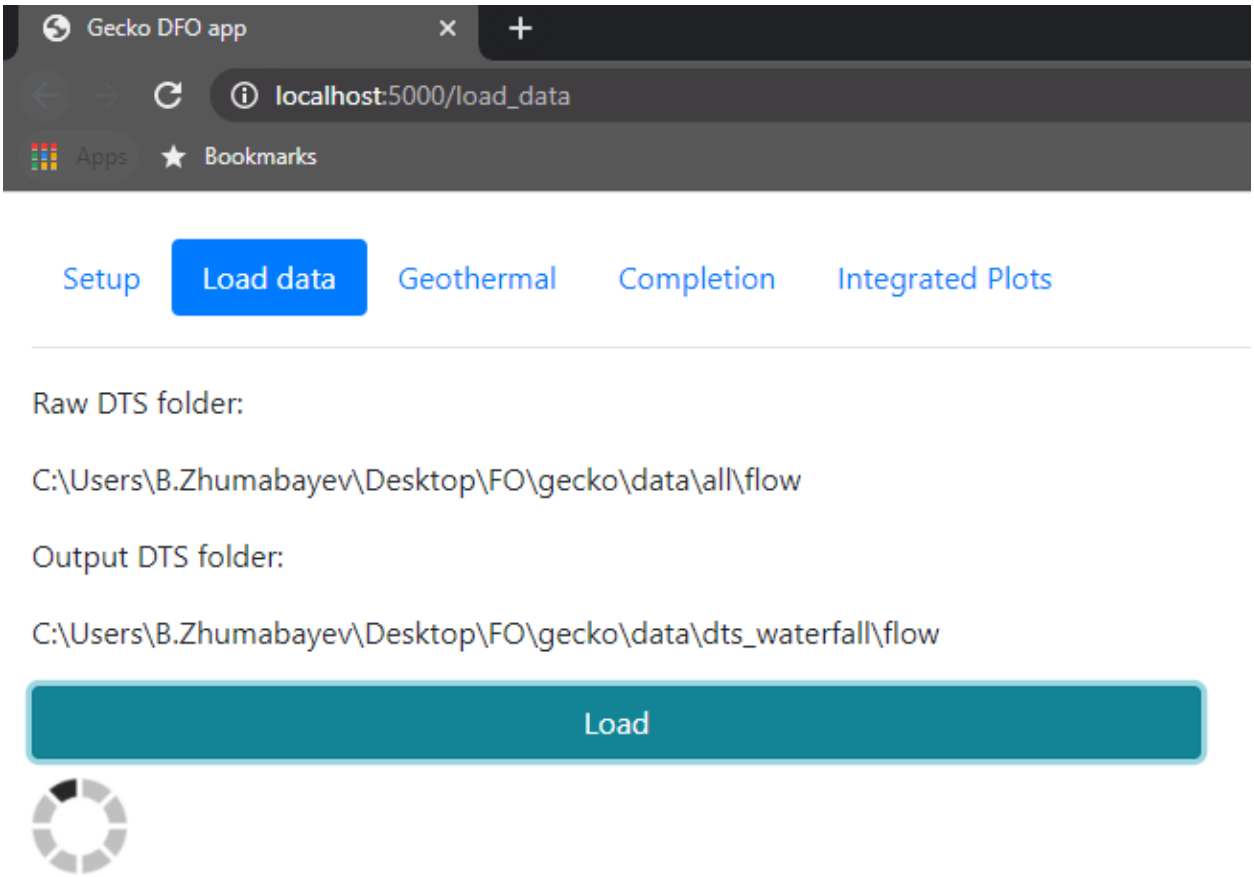
Step 2

Load .las DTS files. Raw, output and normalized DTS data folder is specified in Setup.

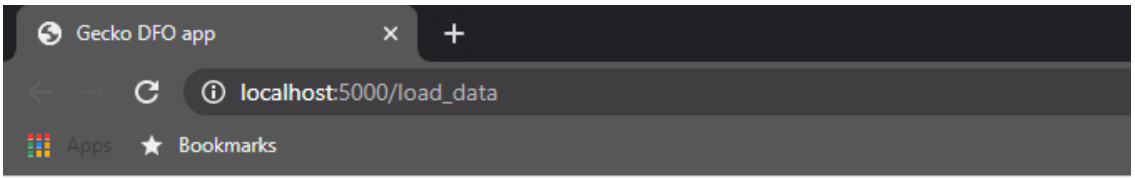
Check if folder are correct on the load page



Press the button



As a result you will get some statistics about the data



Setup | Load data | Geothermal | Completion | Integrated Plots

Raw DTS folder:

C:\Users\B.Zhumabayev\Desktop\FO\gecko\data\all\flow

Output DTS folder:

C:\Users\B.Zhumabayev\Desktop\FO\gecko\data\dts_waterfall\flow

Load

Timestamp intervals histogram

Bins, minutes	Frequency
12	521
84.085	1
228.255	1

Timestamp min max

Timestamp min: 2017-11-29T20_42_17

Timestamp max: 2017-12-04T11_05_51

Depths intervals

Depth min, m: 130.099

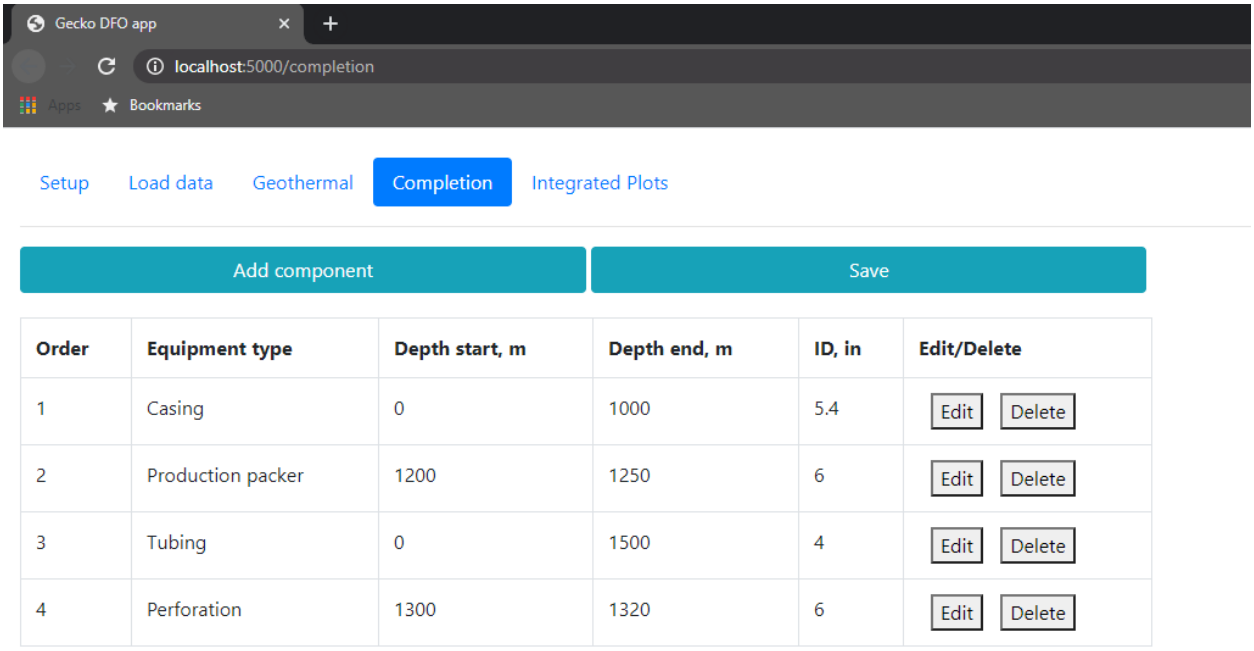
Depth max, m: 1956.299

Depth interval, m: 0.20000000000001705

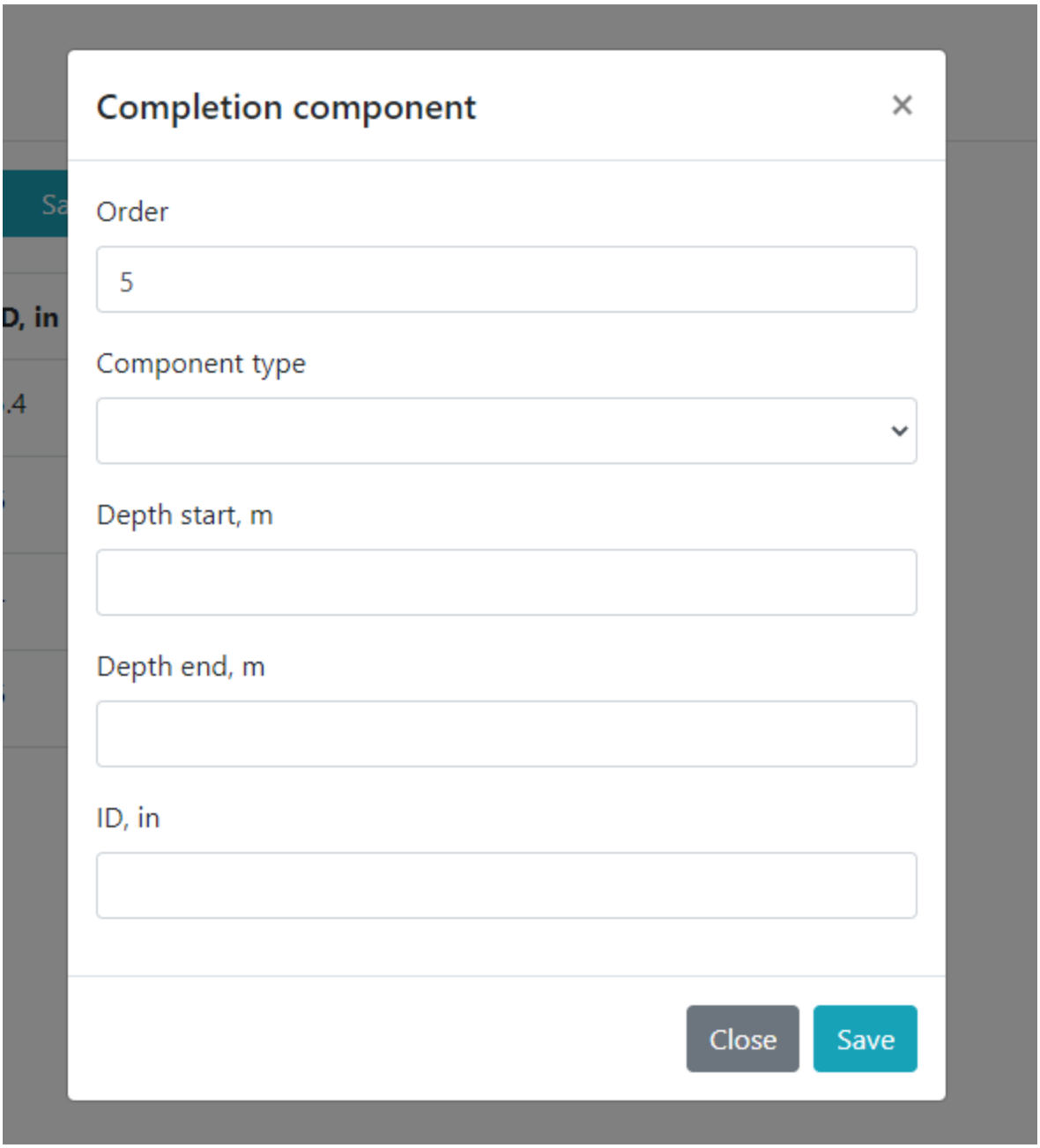
Trace depth count: 9132

Step 3

Build completion using this page



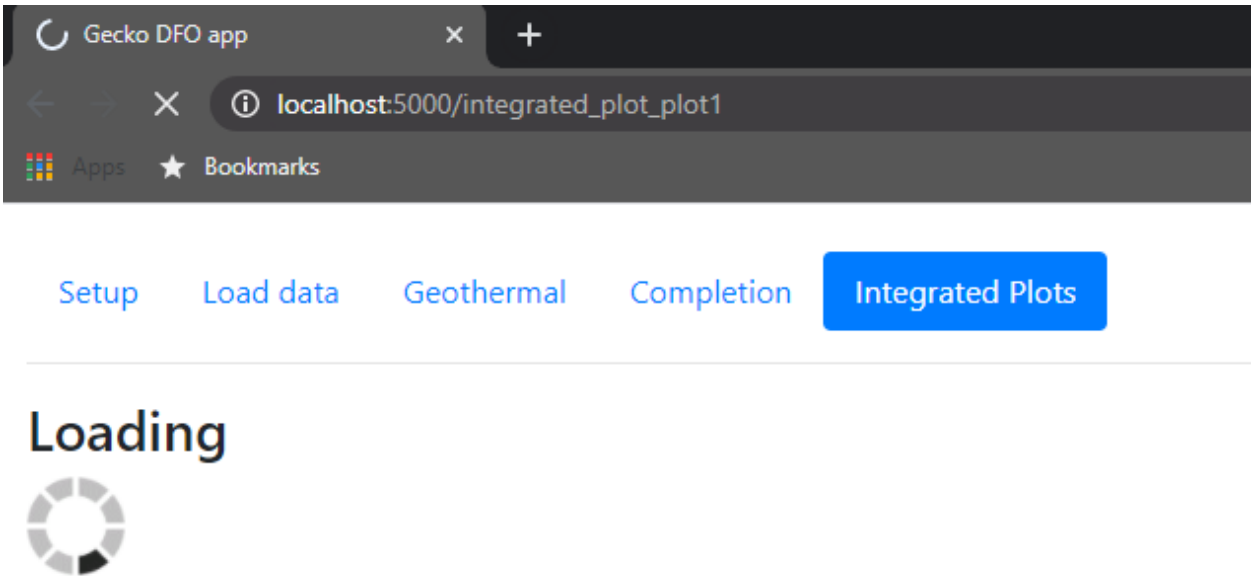
You can add/edit/delete completion elements as required



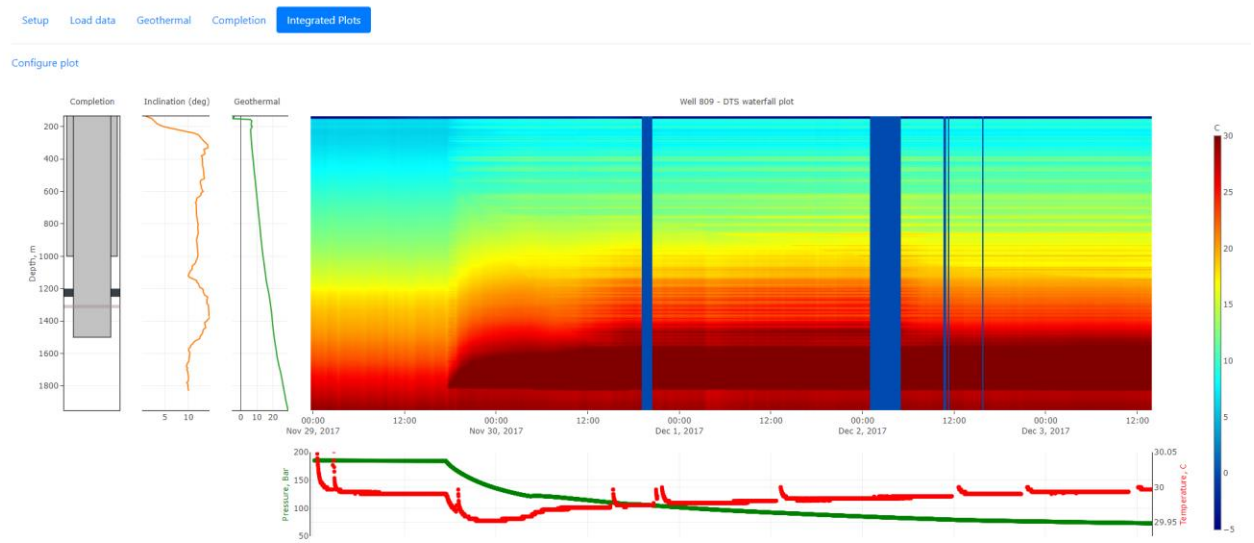
Once done don’t forget to save by clicking on save button.

Step 4

Go to Integrated Plot page to see what the data looks like



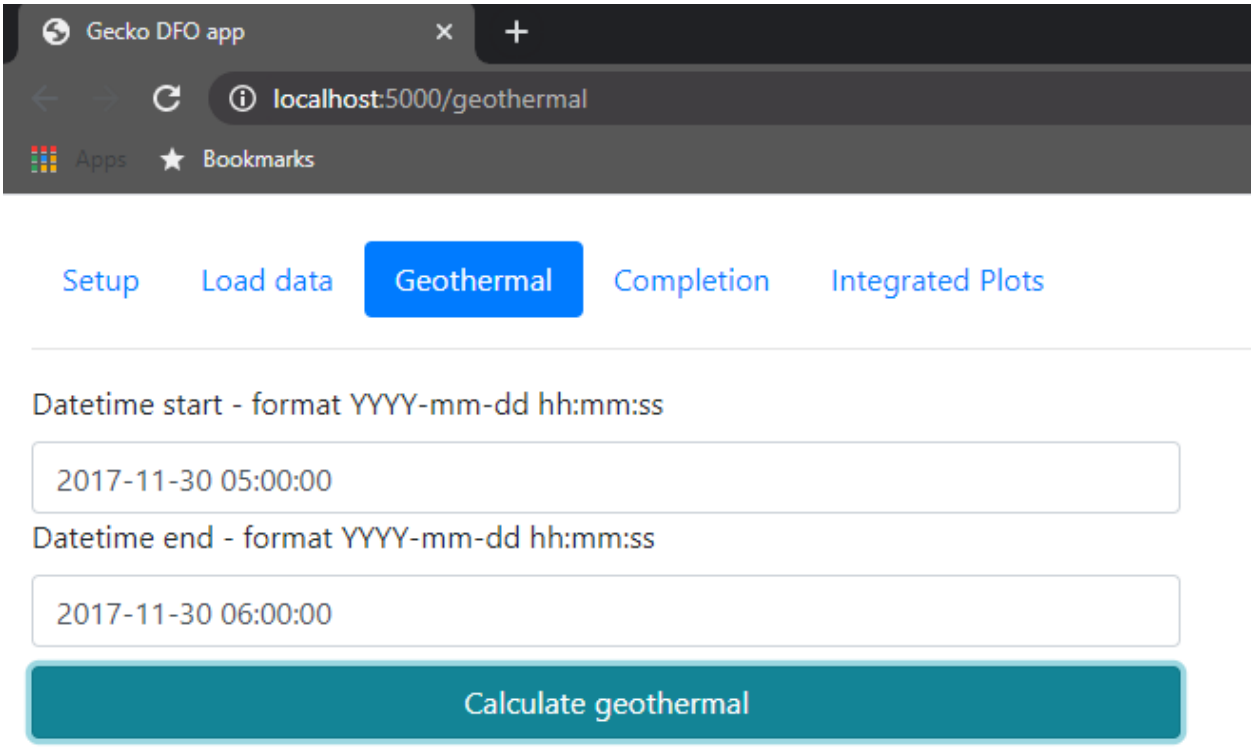
Once loaded will look like this



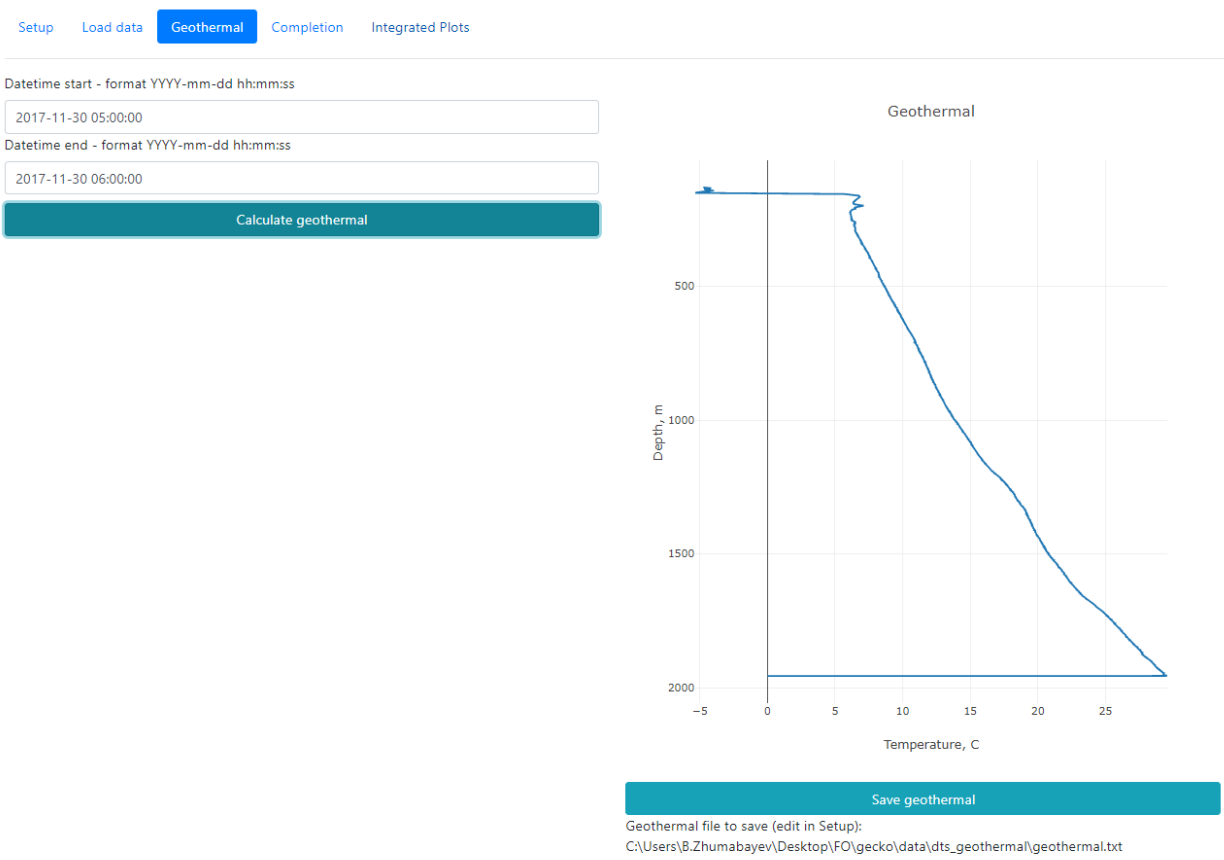
Step 5

Calculate geothermal trace to then apply it to DTS data

Choose period to average traces. Note that this is simple averaging.



Once it's calculated plot on the right will appear to show the final trace.



In case you are confident in geothermal, save it

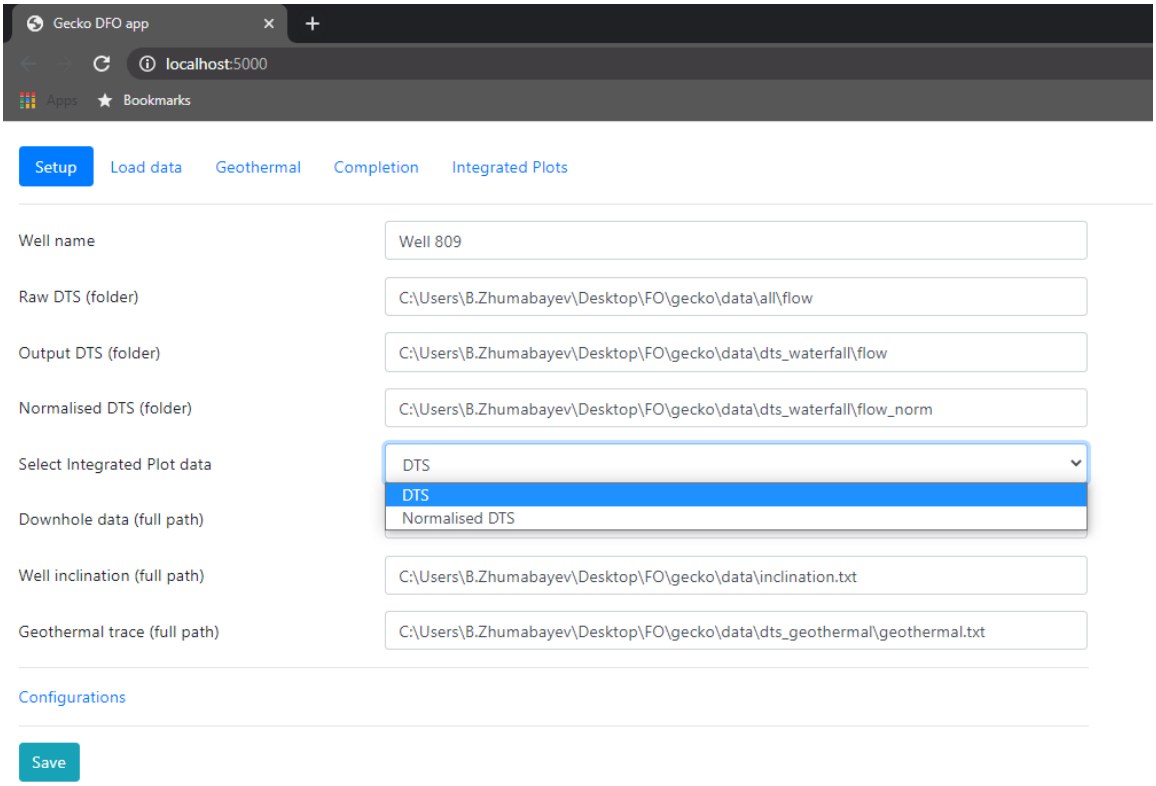
After saving, a button will become visible that will allows to calculate normalized DTS, which is simple DTS-geothermal.

Once you click on calculate DTS-geothermal button, it calculated normalized DTS and saves it to the folder you specified in Setup page.

Step 6

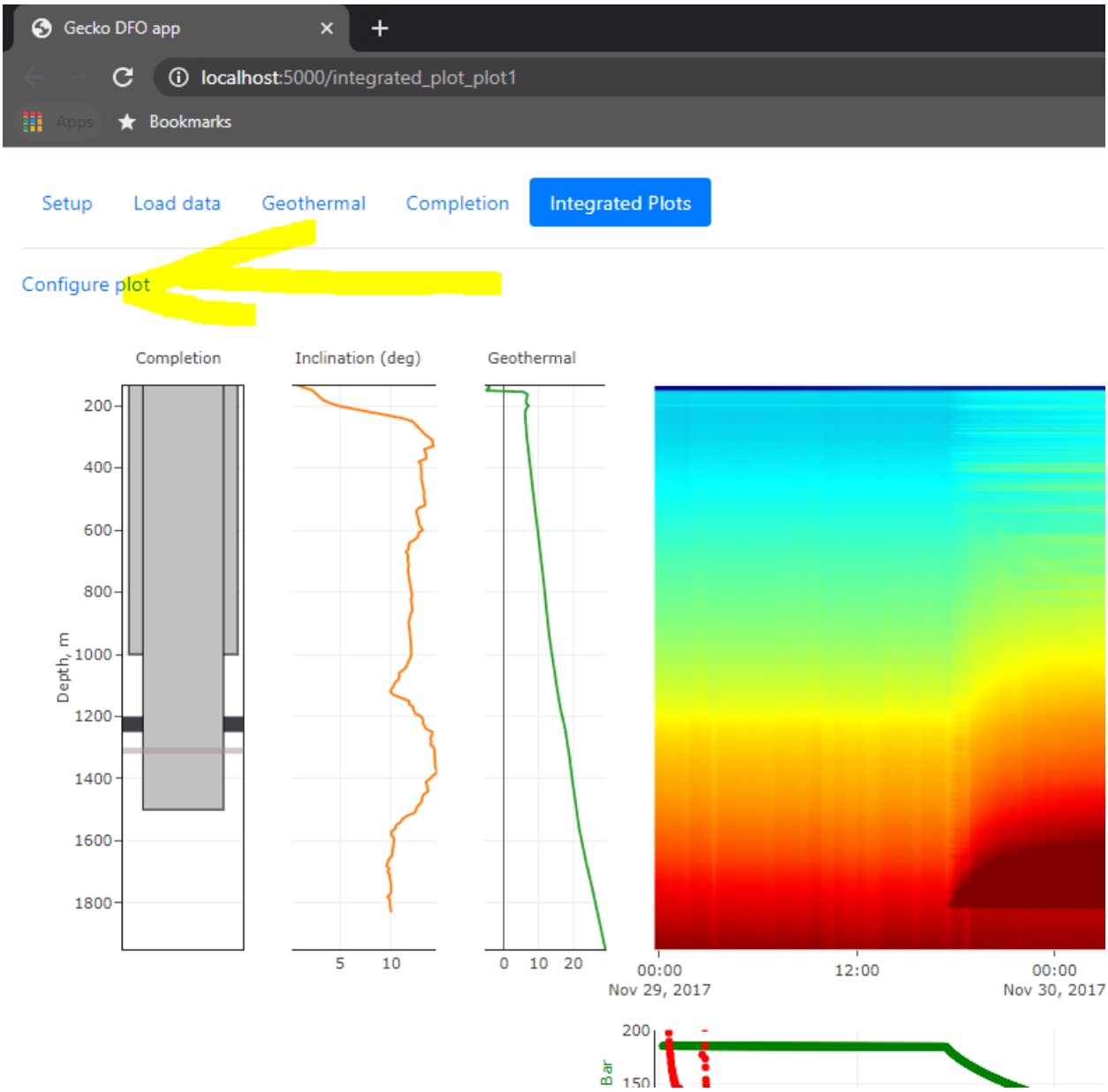
Go back to Setup

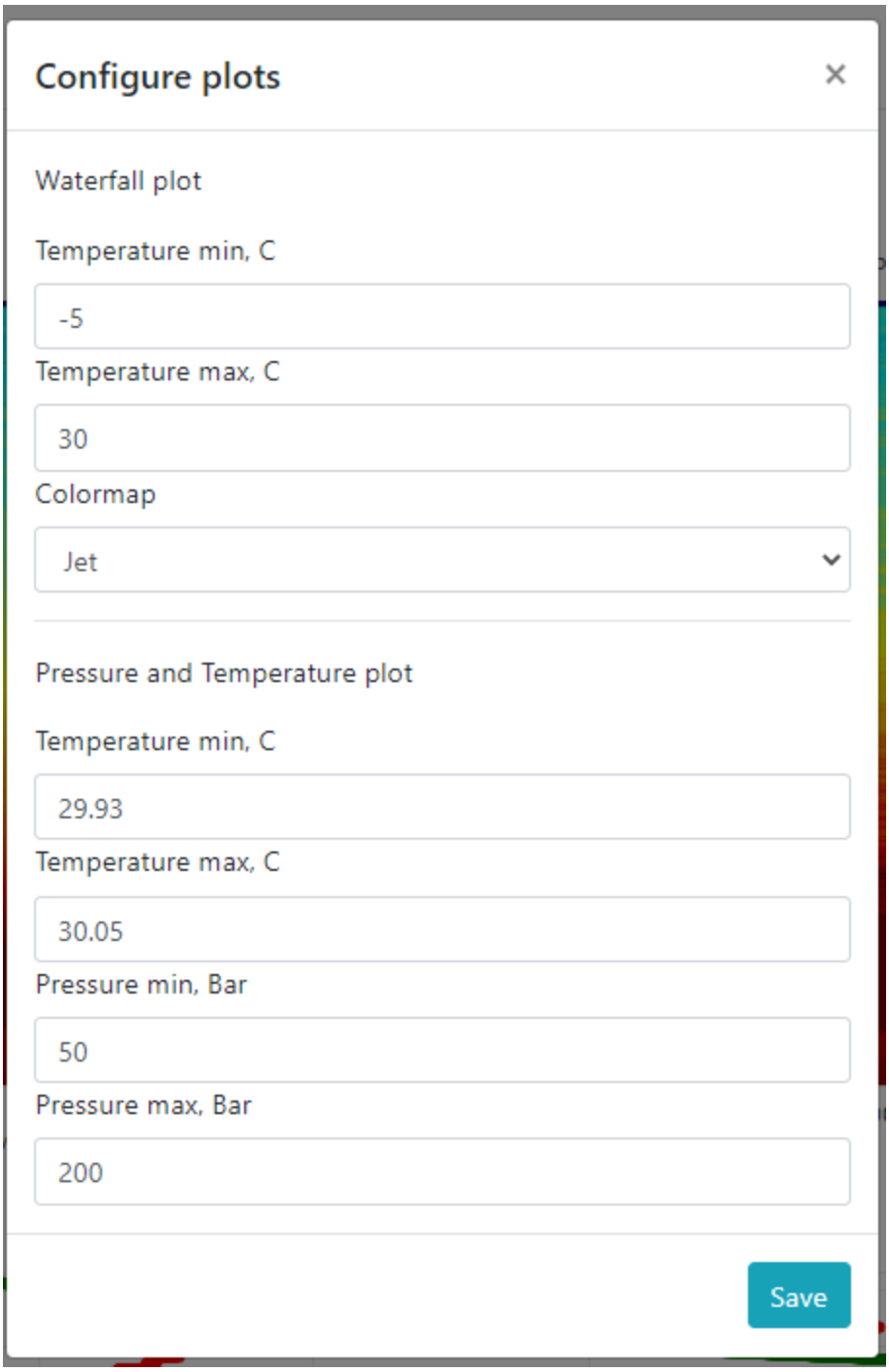
You can now select between DTS and normalized DTS for integrated plotting



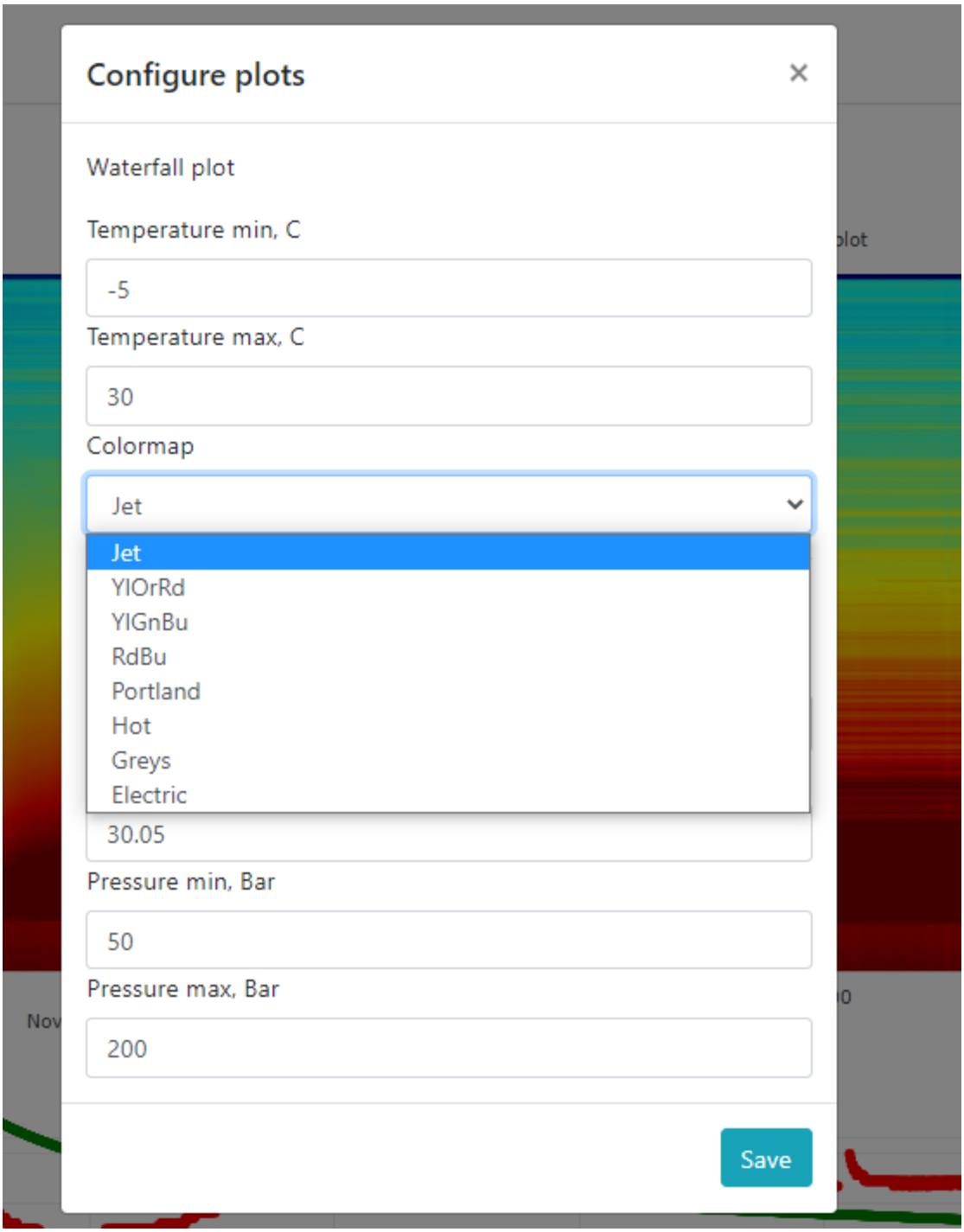
Step 7

Go to Integrated plot. On the left top corner there is a button to configure plot settings to improve visualization


Gecko DFO app
localhost:5000/integrated_plot_plot1
Apps
Bookmarks
Setup
Load data
Geothermal
Completion
Integrated Plots
Configure plot
Completion
Inclination (deg)
Geothermal
Depth, m
200
400
600
800
1000
1200
1400
1600
1800
5
10
0
10
20
00:00
Nov 29, 2017
12:00
00:00
Nov 30, 2017
Bar
200
150



There are multiple options for Colormaps that can be helpful in testing visualization of certain events taking place


Configure plots
Waterfall plot
Temperature min, C
-5
Temperature max, C
30
Colormap
Jet
Jet
YlOrRd
YlGnBu
RdBu
Portland
Hot
Greys
Electric
30.05
Pressure min, Bar
50
Pressure max, Bar
200
Save