

4. Fault Data

In Petrel, fault data is presented in two formats: **Fault Polygons** and **Fault Sticks** as follows:

a. Fault Polygons

Fault polygons are normally generated in the seismic interpretation station or in a mapping application, and are commonly defined by the hanging wall line and the footwall line for a given surface.

How to Import Fault Polygons file

1. Right click on the **Gulfaks Input** folder then choose **Insert folder**. Rename it to **Fault Polygons (Time)**.
2. Now right-click on the **Fault Polygons (Time)** folder, then **select Import (on Selection)....** The **Import File** form appears as shown in Fig. 7.1. Select **Zmap+ lines (ASCII) (*.*)** from the **Files of type** combo box. And press the **Open** button.

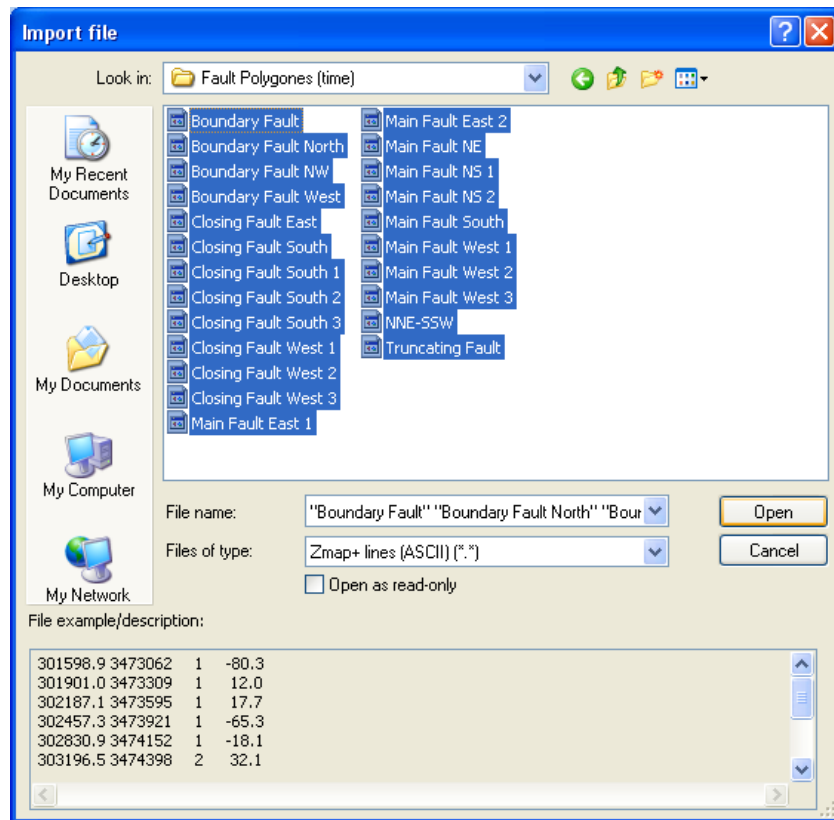


Fig.7.1: The Import File form

3. The **Elevation Time** option and the **Fault polygons** should be selected from the **Domain** and **Line Type** combo boxes, as shown in Fig. 7.2. And press the **Ok for All** button.

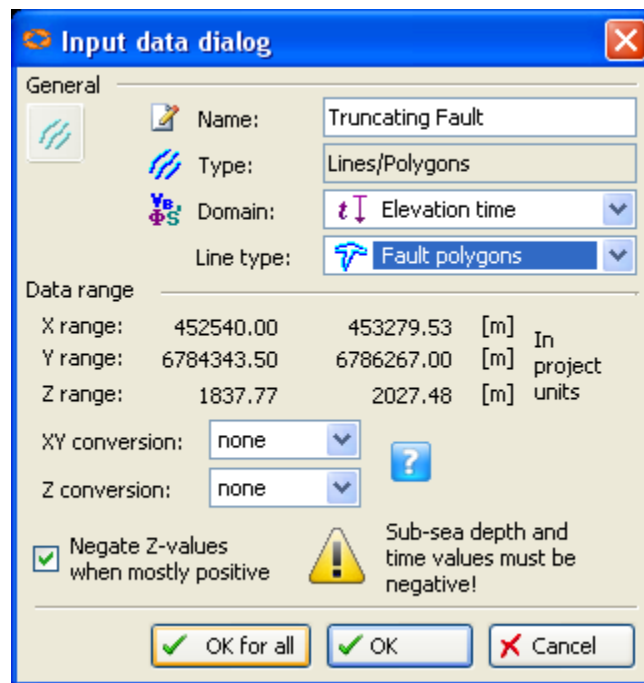


Fig. 7.2: The Input data dialog

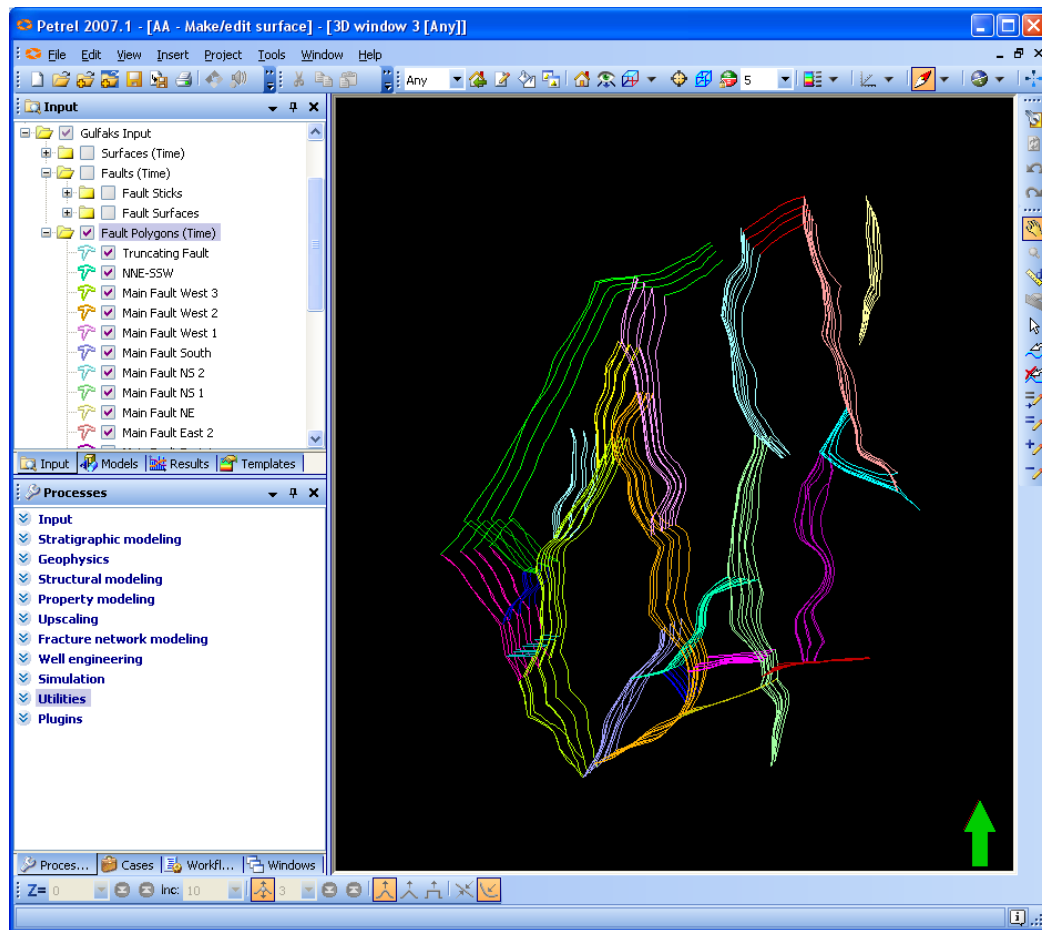


Fig.7.3: The **Fault Polygons** displayed in a 3D window

b. Fault Sticks

Fault sticks may be created from within Petrel. Their files can be edited with any text editor such as Notepad as shown in Fig. 7.4.

Main Fault West 1 - Notepad

File Edit Format View Help

453929.710521	6784453.098452	1	1687.900769
454042.882787	6784470.595145	1	1740.990548
454156.055054	6784488.091837	1	1794.080327
454269.227321	6784505.588530	1	1847.170106
454382.399587	6784523.085222	1	1900.259885
454495.571854	6784540.581914	1	1953.349665
454608.744121	6784558.078607	1	2006.439444
454721.916387	6784575.575299	1	2059.529223
454835.088654	6784593.071992	1	2112.619002
454948.260921	6784610.568684	1	2165.708781
453972.495012	6784551.731866	2	1715.687860
454077.161331	6784569.018909	2	1762.620374
454181.827651	6784586.305952	2	1809.552888
454286.493970	6784603.592995	2	1856.485402
454391.160289	6784620.880038	2	1903.417916
454495.826609	6784638.167081	2	1950.350430
454600.492928	6784655.454124	2	1997.282944
454705.159247	6784672.741167	2	2044.215459

Fig.7.4: The Fault Sticks data file open in a Notepad window

How to Import Fault Sticks file

1. Right click on the **Gulfaks Input** folder then choose **Insert folder**. Rename it to **Faults (time)**. And right click on this folder then choose **Insert folder**. Rename it to **Fault Sticks**.

- Now right-click on the **Fault Sticks** folder, then select **Import (on Selection)....** The **Import File** form appears as shown in Fig. 7.5. Select **Zmap+ lines (ASCII) (*.*)** from the **Files of type** combo box. And press the **Open** button.

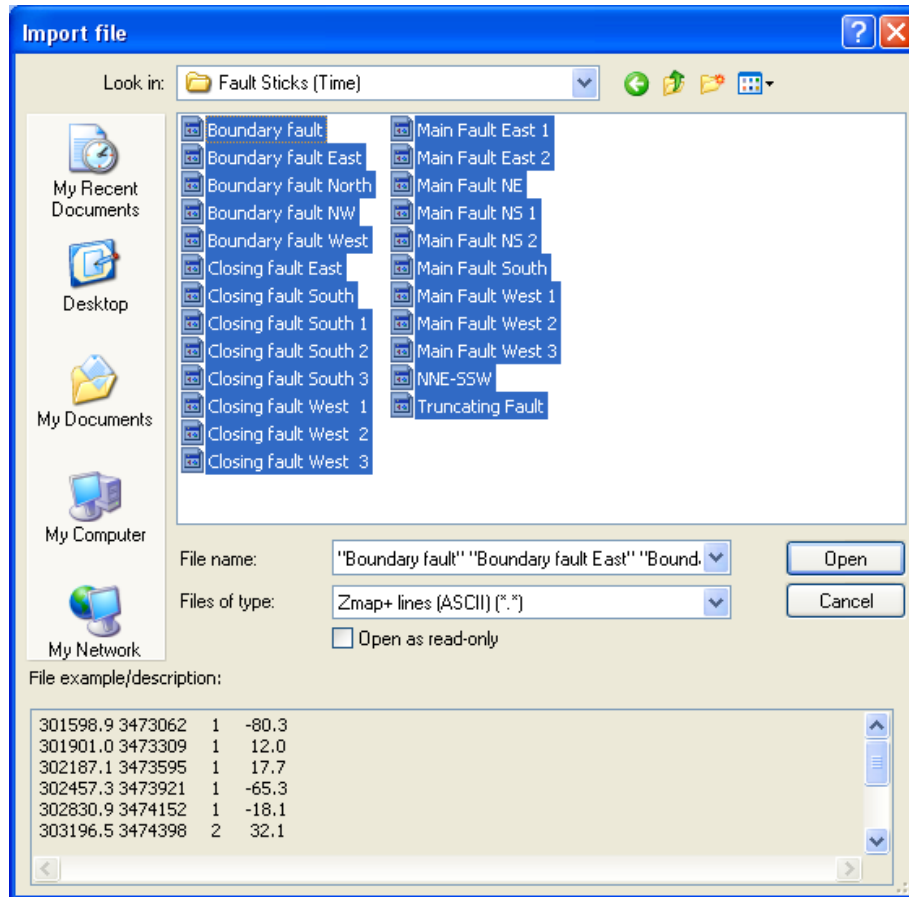


Fig.7.5: The Import File form

3. The **Elevation Time** option and the **Fault sticks** should be selected from the **Domain** and **Line Type** combo boxes, as shown in Fig. 7.6. And press the **Ok for All** button.

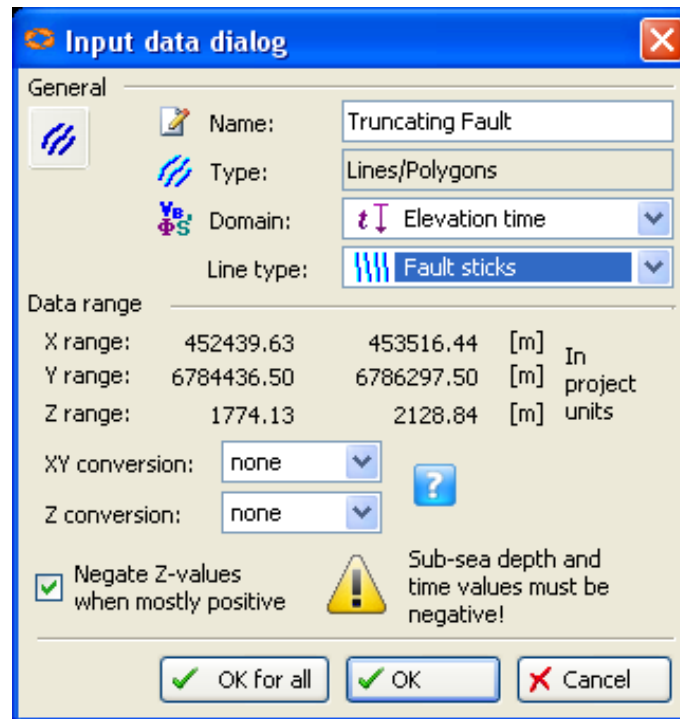


Fig.7.6: The Input Data Dialog

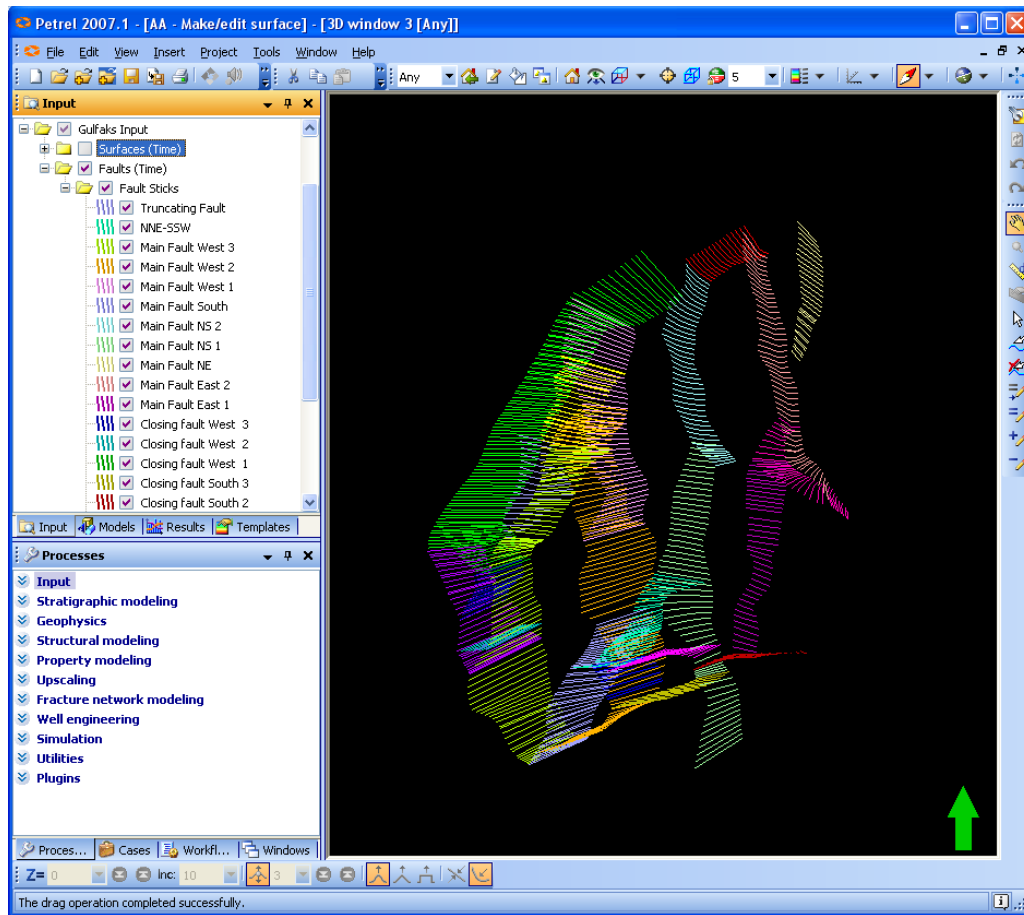


Fig.7.7: The Fault Sticks displayed in a 3D window