The FB picking of v2 vs. v1

(2022 - 01 - 12)

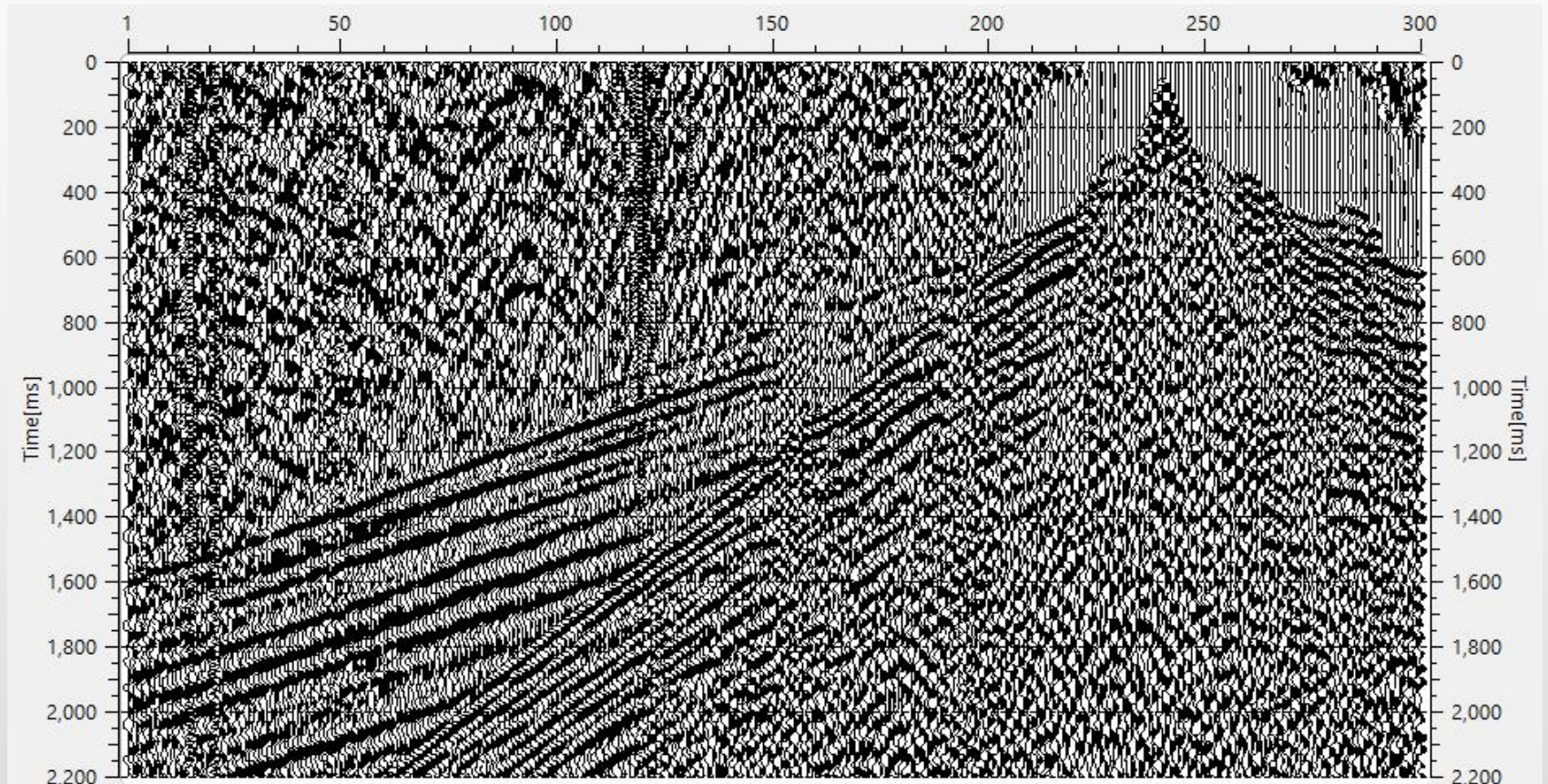WISEDONE Geophysical Technology
Co., Ltd.

About WiseUser v2.0

WiseUser/WiseCloud v2.0 is an important version. The WiseUser of the new version on user end looks similar to the old one, but the server on cloud is a totally new system.
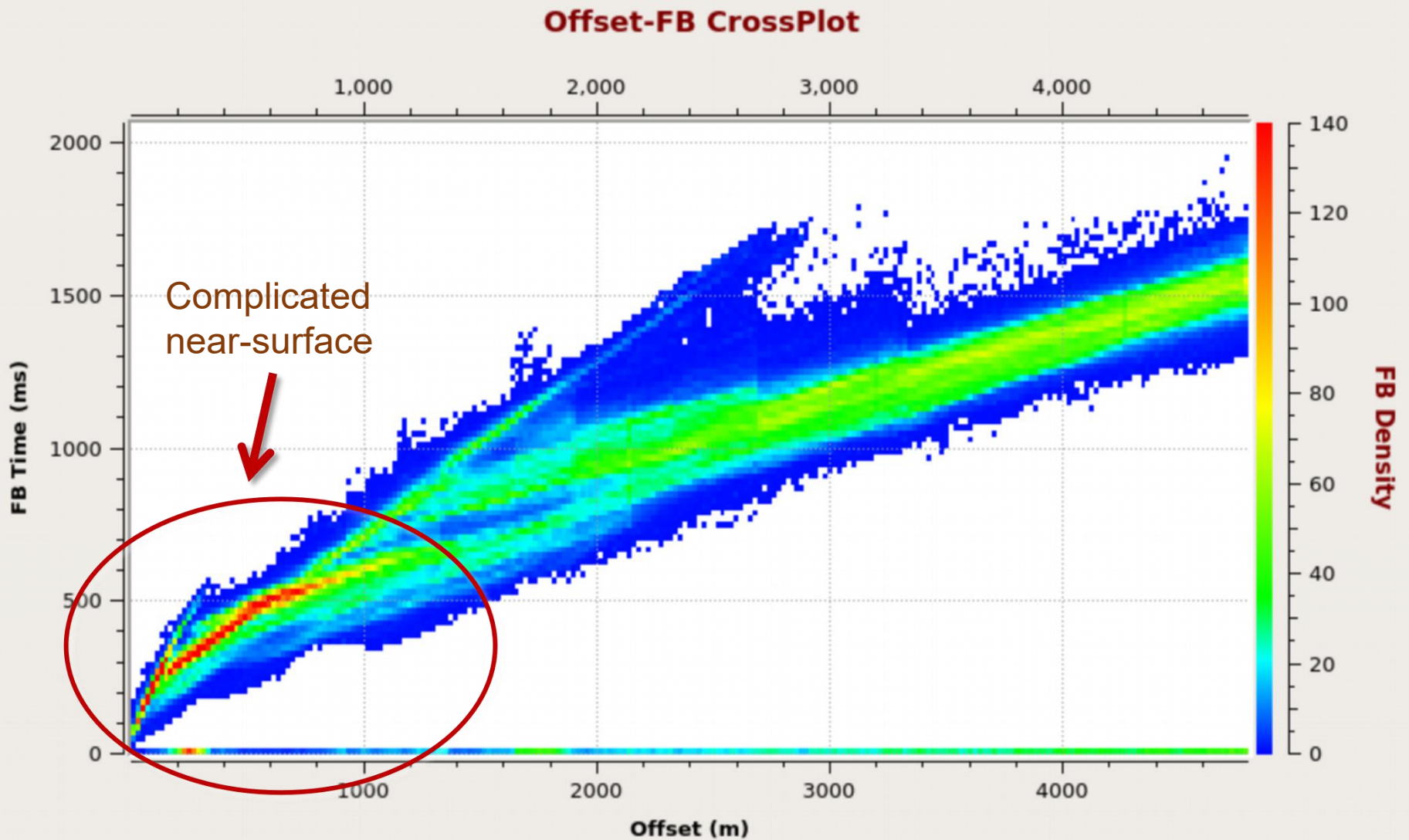
Specifically, the improvement includes:

(1).Virtualization on cloud: each job is executed by a docker container, the stability of the server is much better.

(2).Optimization of constraint model: better result for low SNR data.

(3).Usability for shallow exploration data: with a minimum sample interval of 1 ms, the new version has dramatically improved the picking.

(4).Updating all the modules: the plugins for data processing are higher efficiency.

Data from loess tableland

The test data is a wide-line dataset. The near-surface is very complicated, and the first arrival includes direct wave and refraction signals from more than two sub-surfaces. The SNR is low, especially the middle and far offset traces.
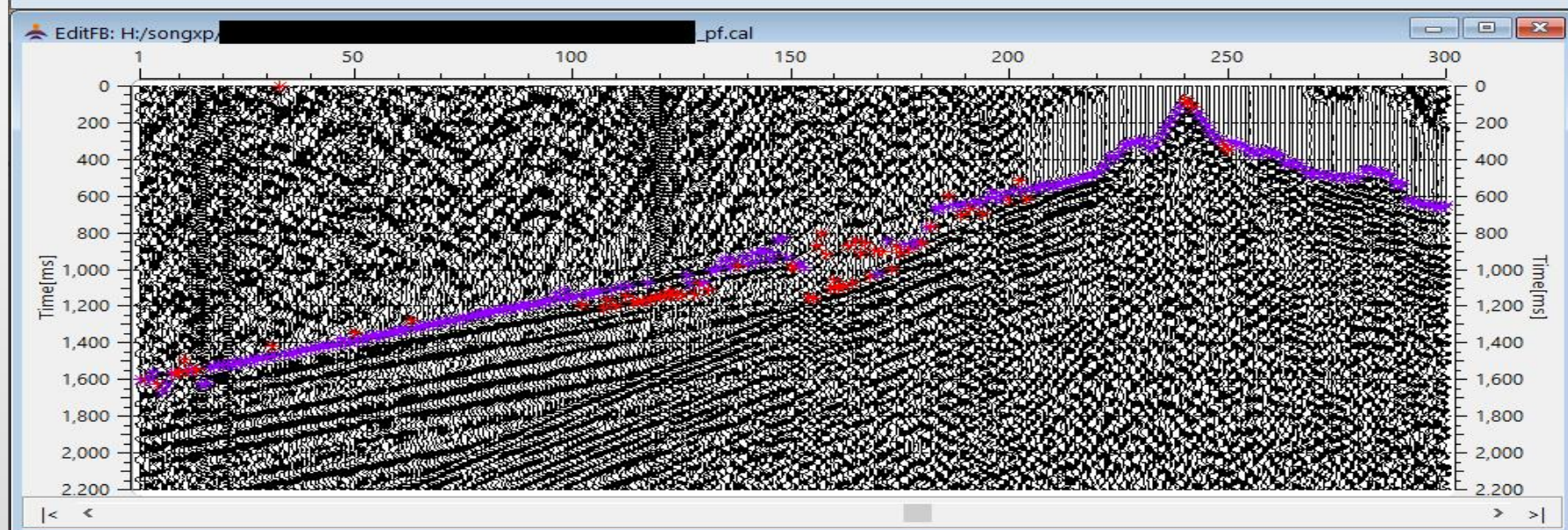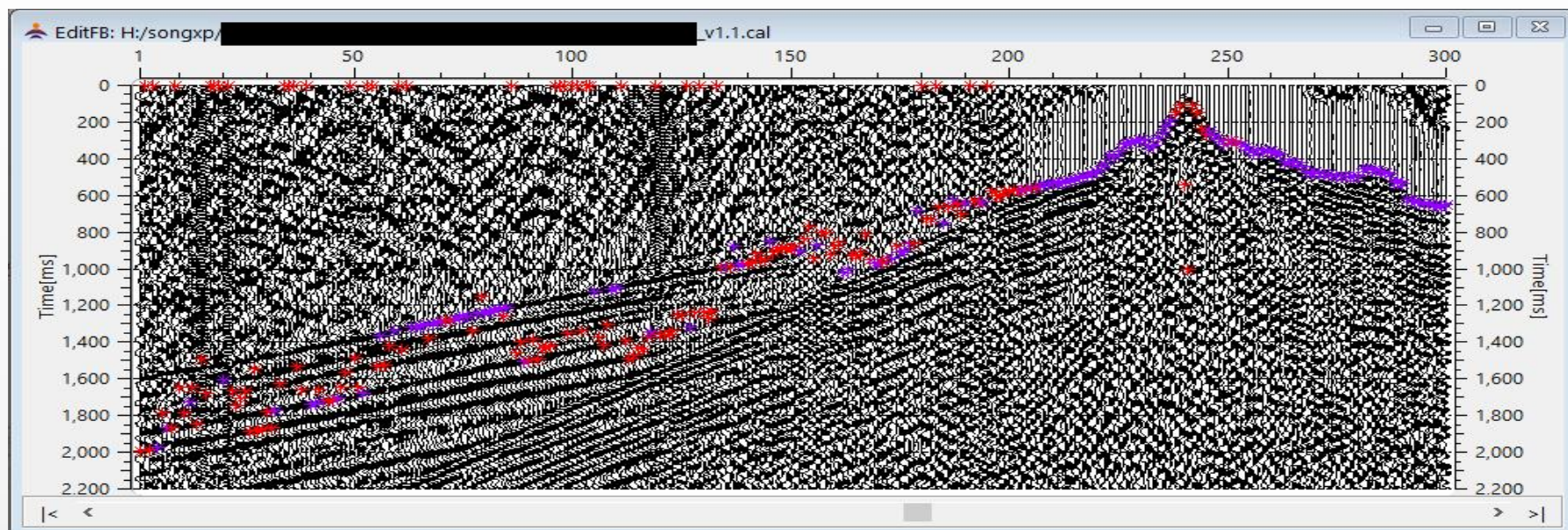
Data from Loess tableland

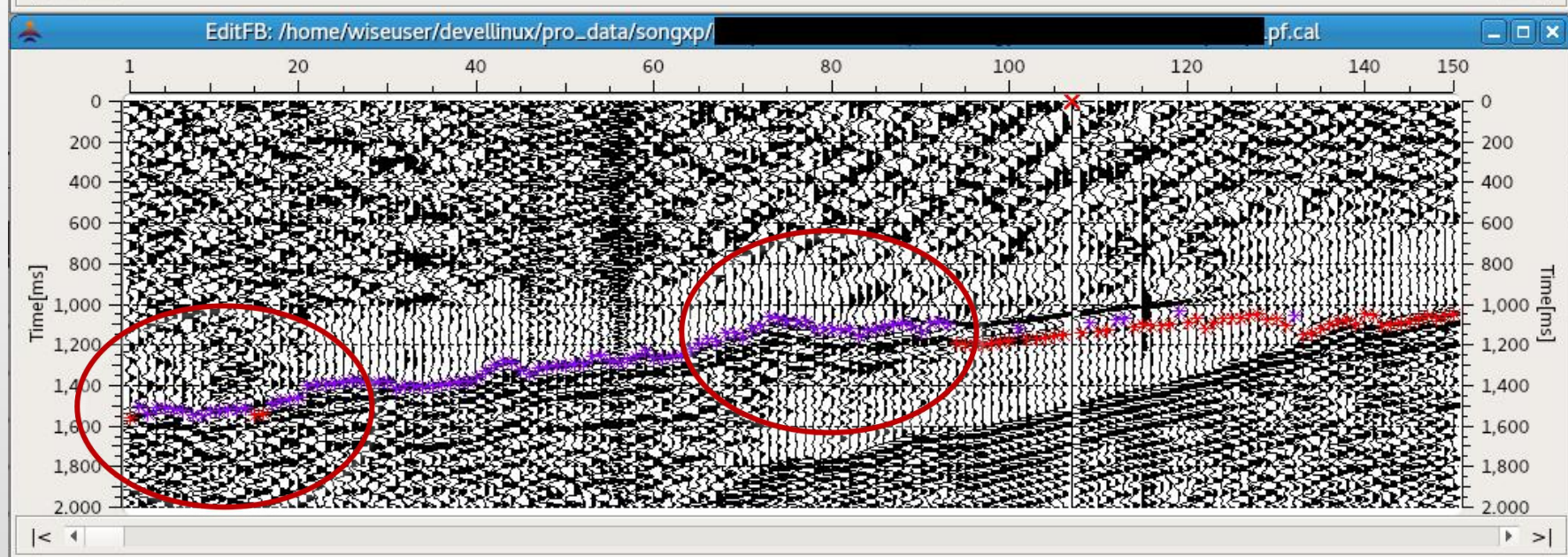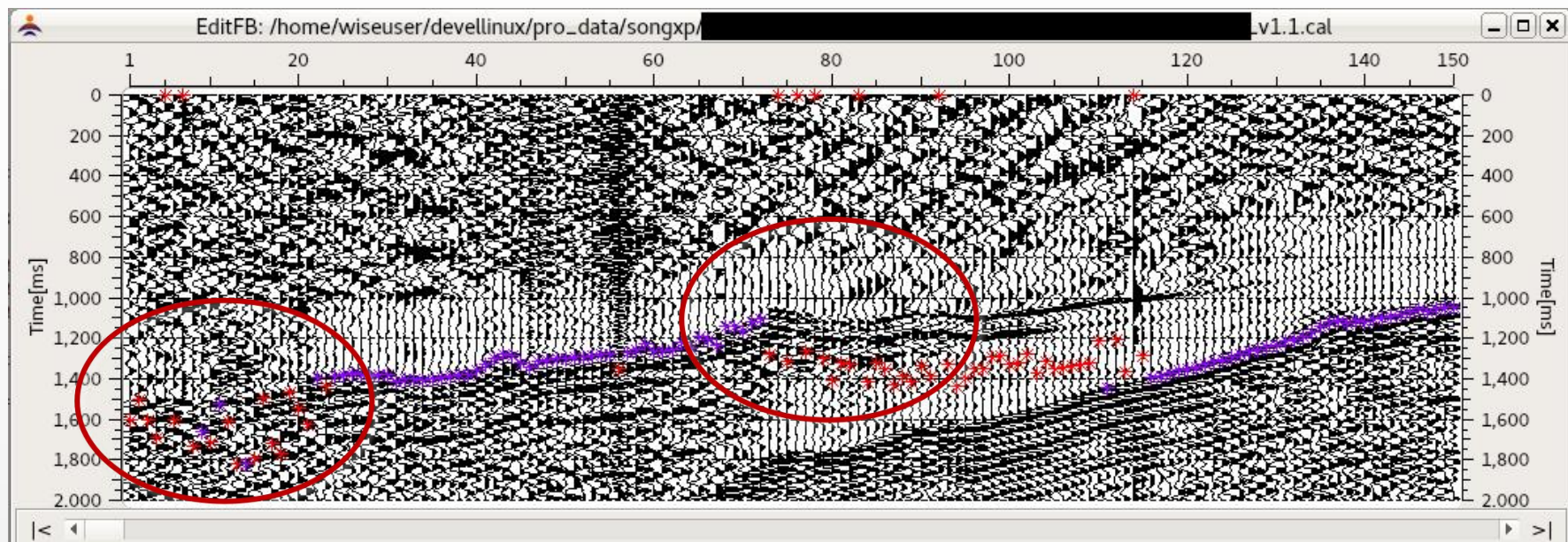**Offset-FB CrossPlot**

Complicated near-surface

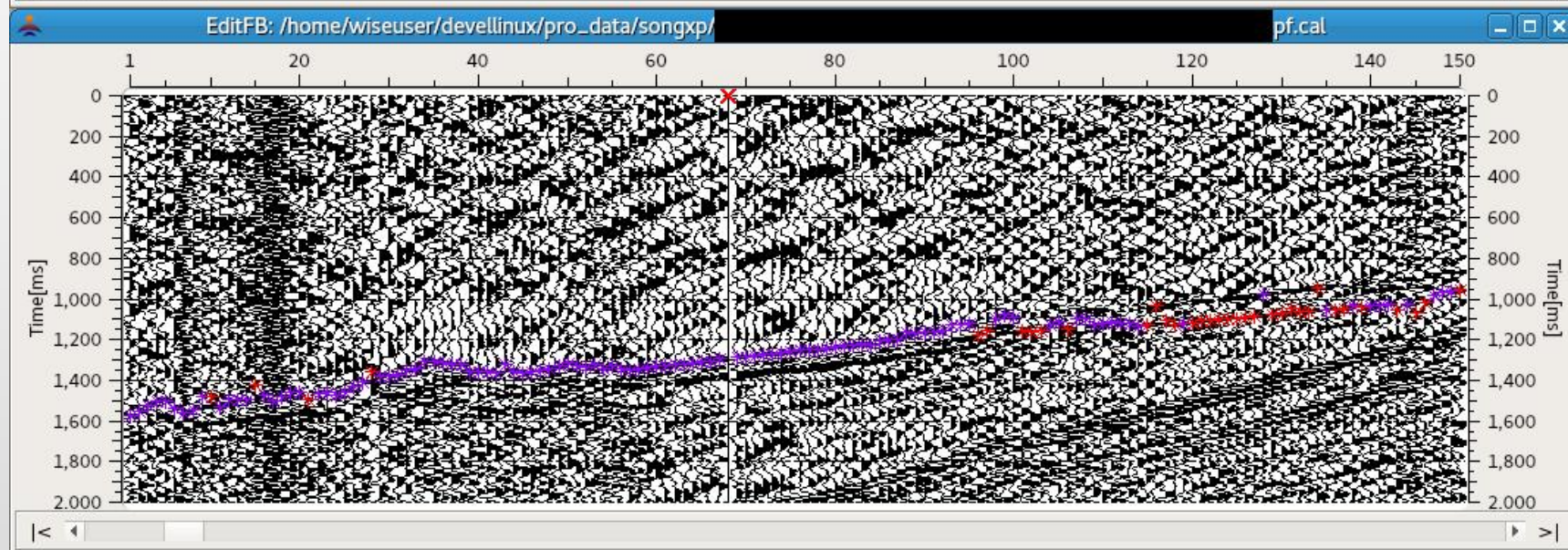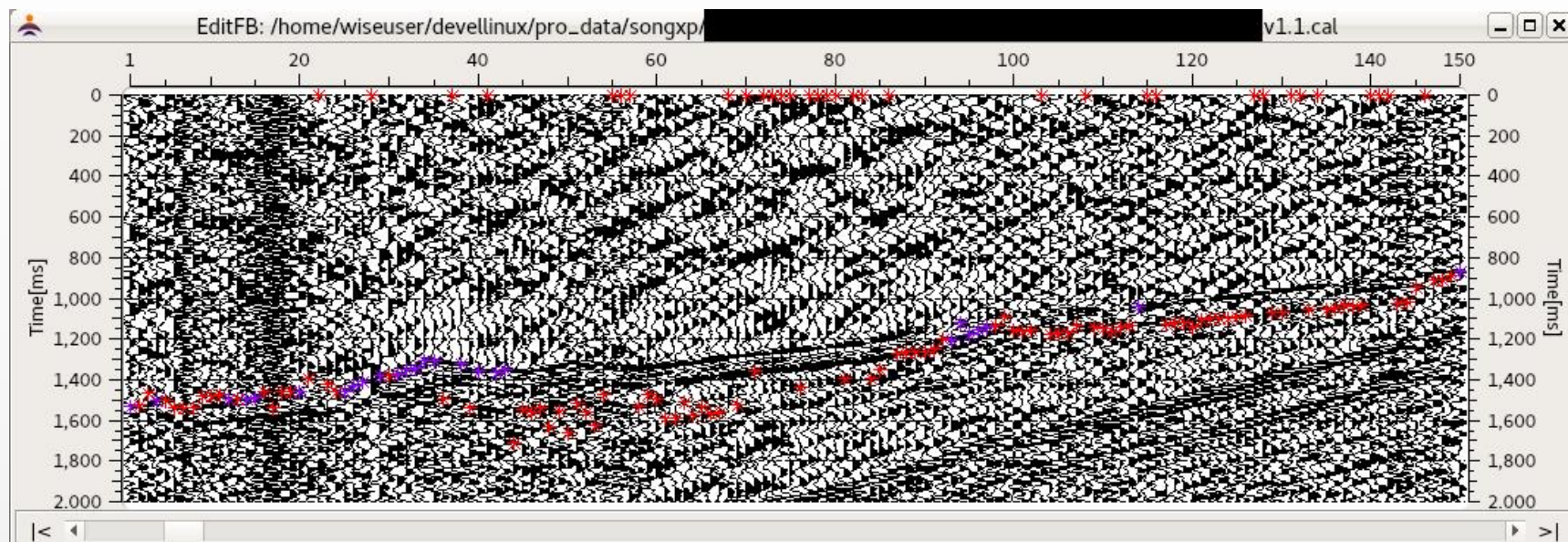# Loess tableland——v1(up) vs. v2(down)---shot1

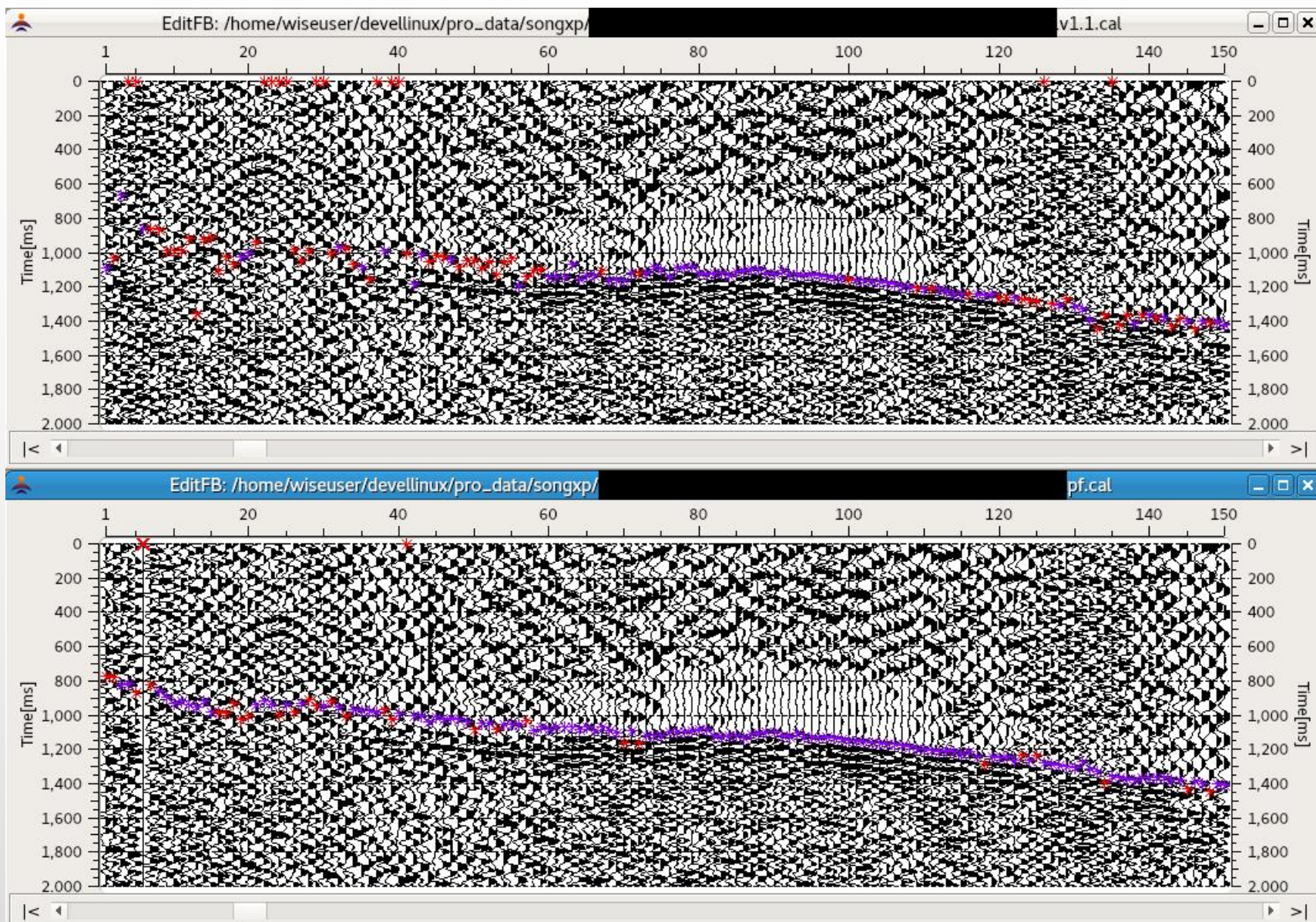# Loess tableland——v1(up) vs. v2(down)---shot2
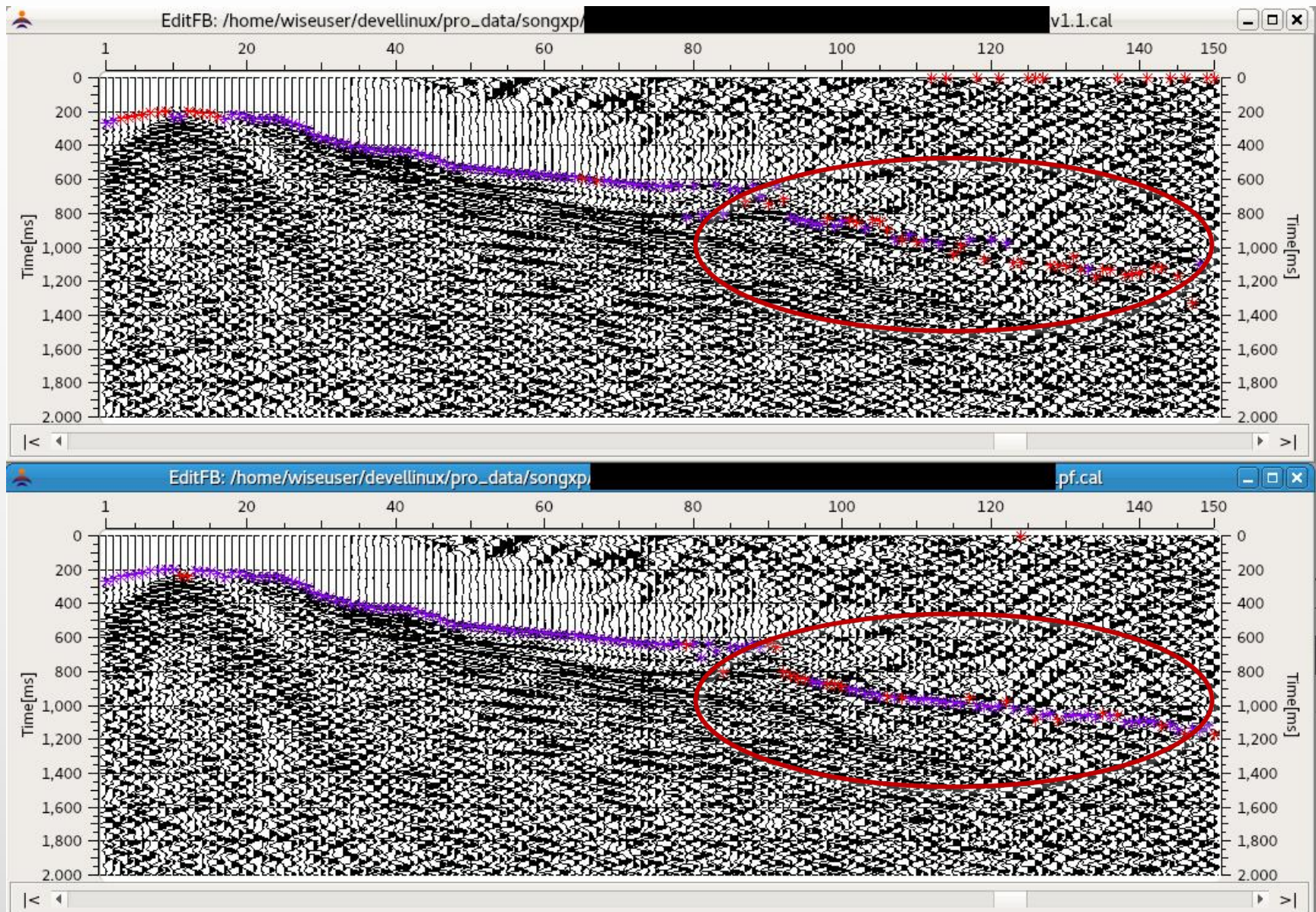
Loess tableland——v1(up) vs. v2(down)---shot3

Loess tableland——v1(up) vs. v2(down)---shot4

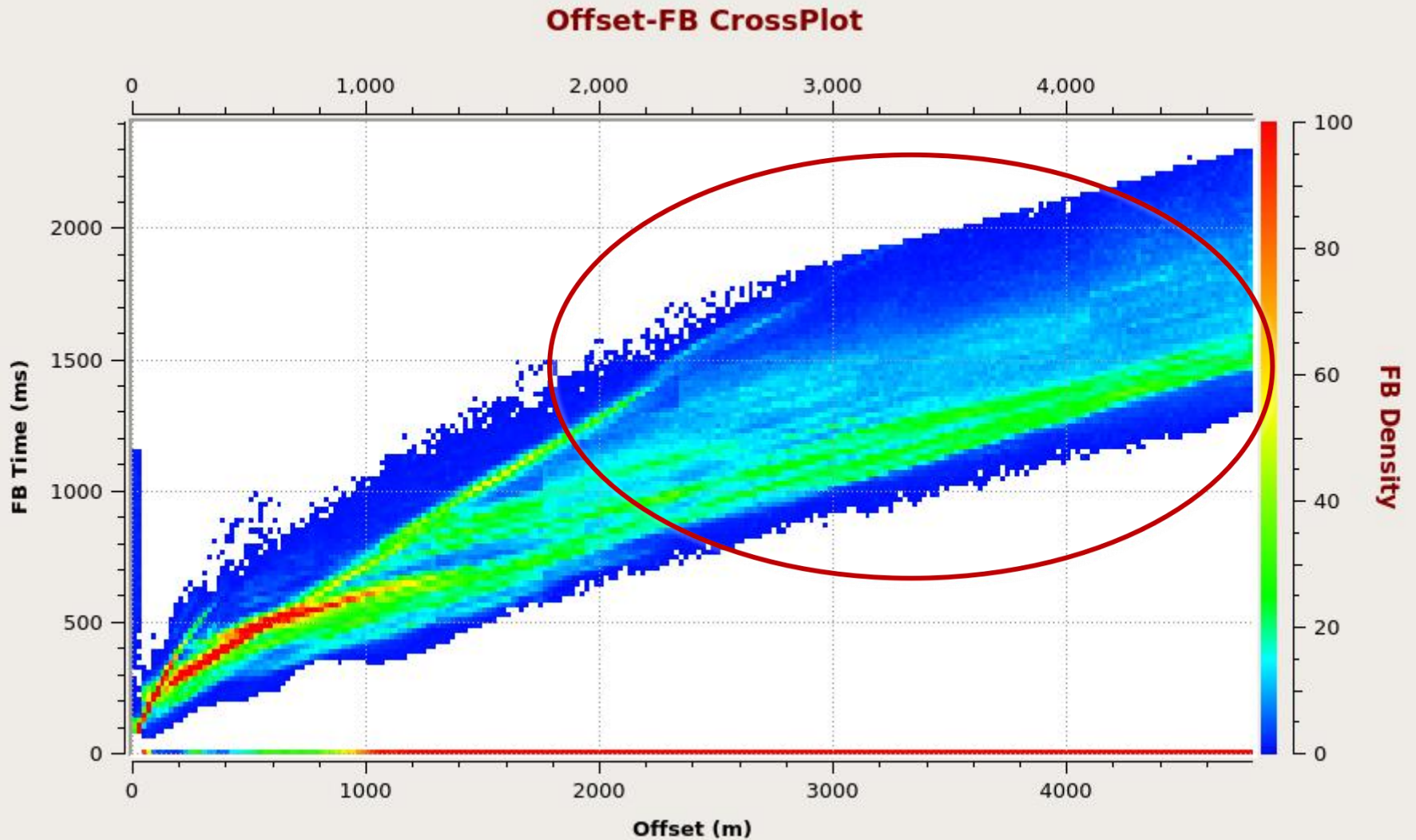# Loess tableland——v1(up) vs. v2(down)---shot5
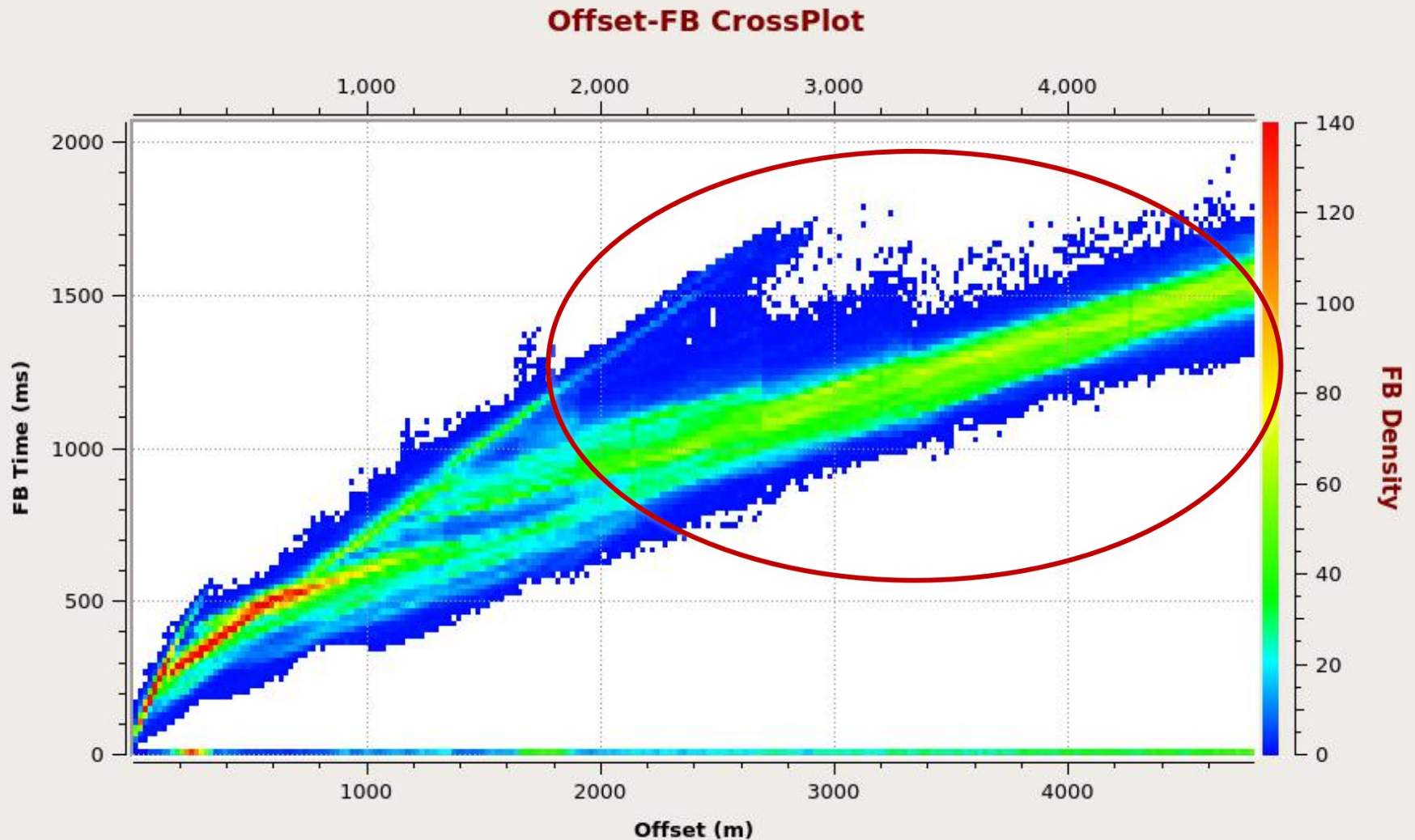
Loess tableland——v1 crossplot

Percentage of correct picking: 48%

Offset-FB CrossPlot

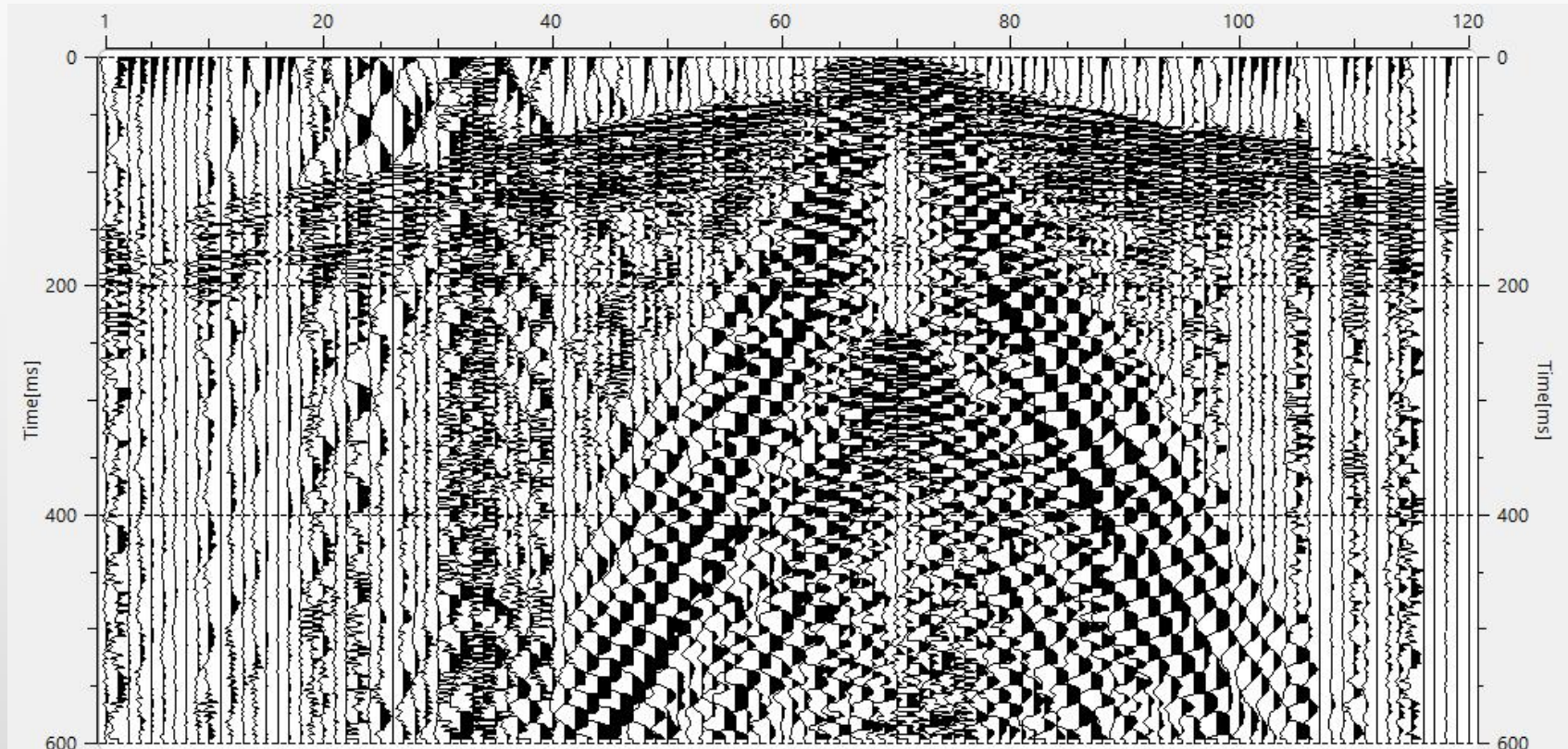# Loess tableland——v2 crossplot

Percentage of correct picking: 77%

Data from shallow exploration

2D survey, 120 channels, group interval 3m, mechanical hammer source, trace length 600ms, sample interval 2ms.
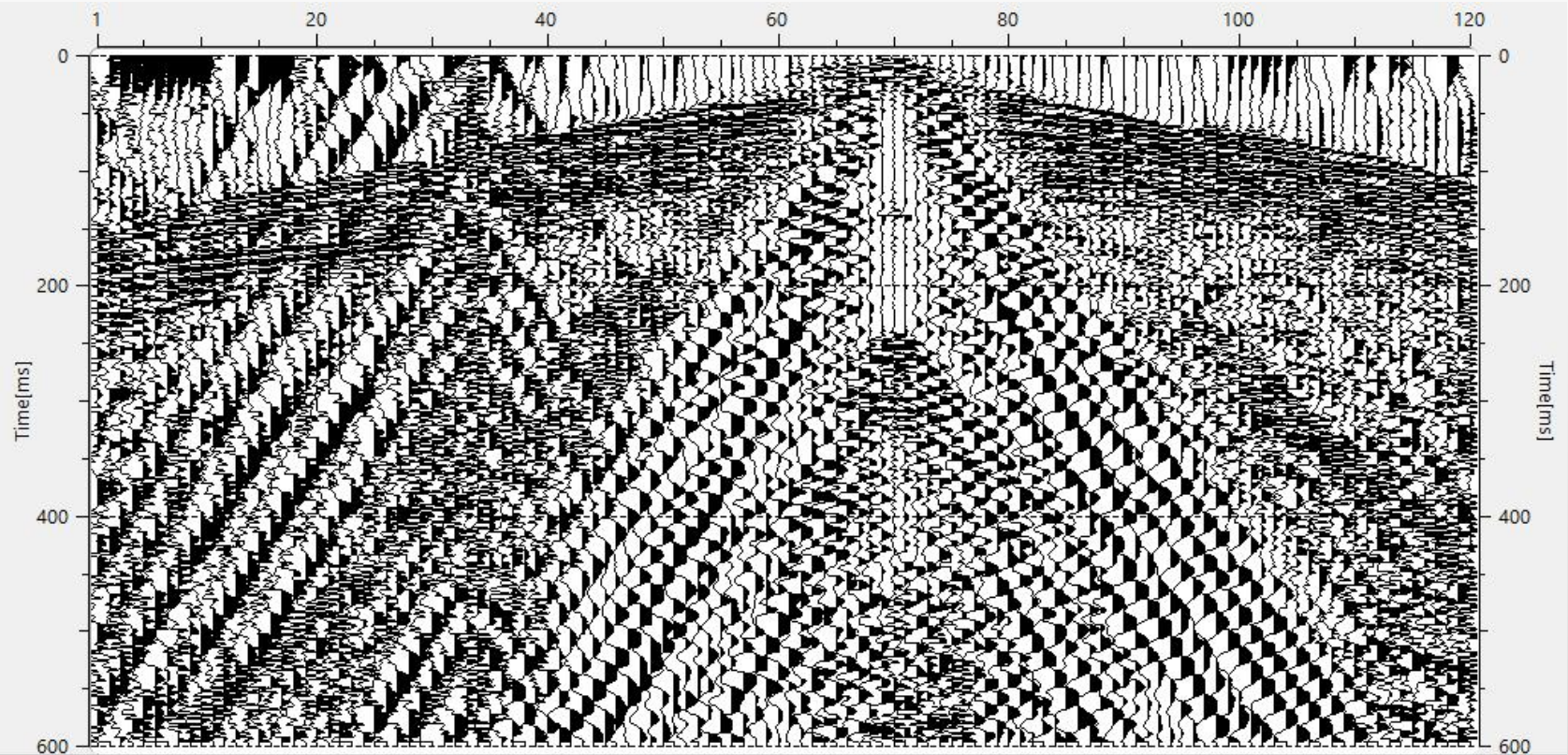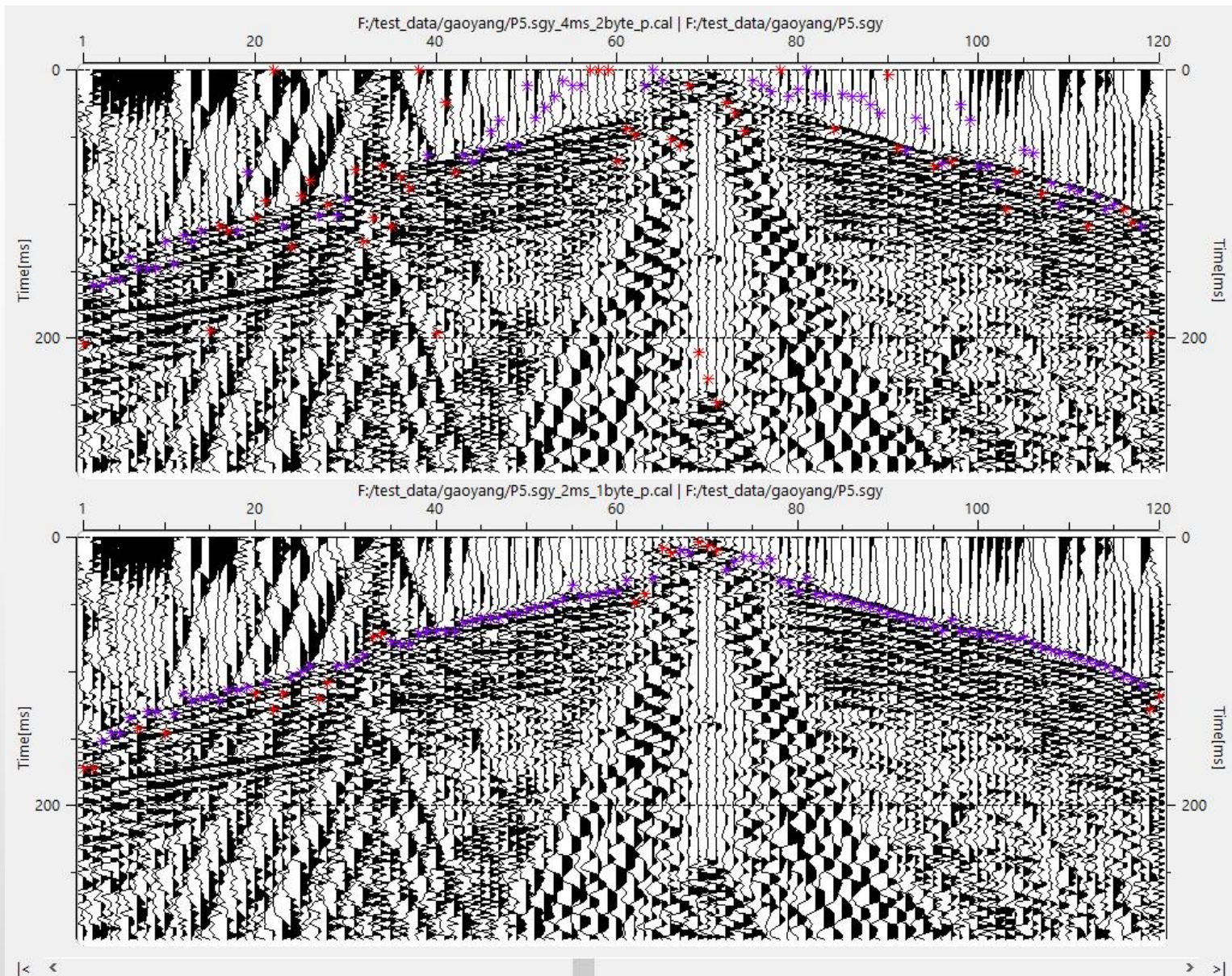
The following figure shows a raw shot record.

Data from shallow exploration

The following figure shows the same shot as the last slice with AGC.
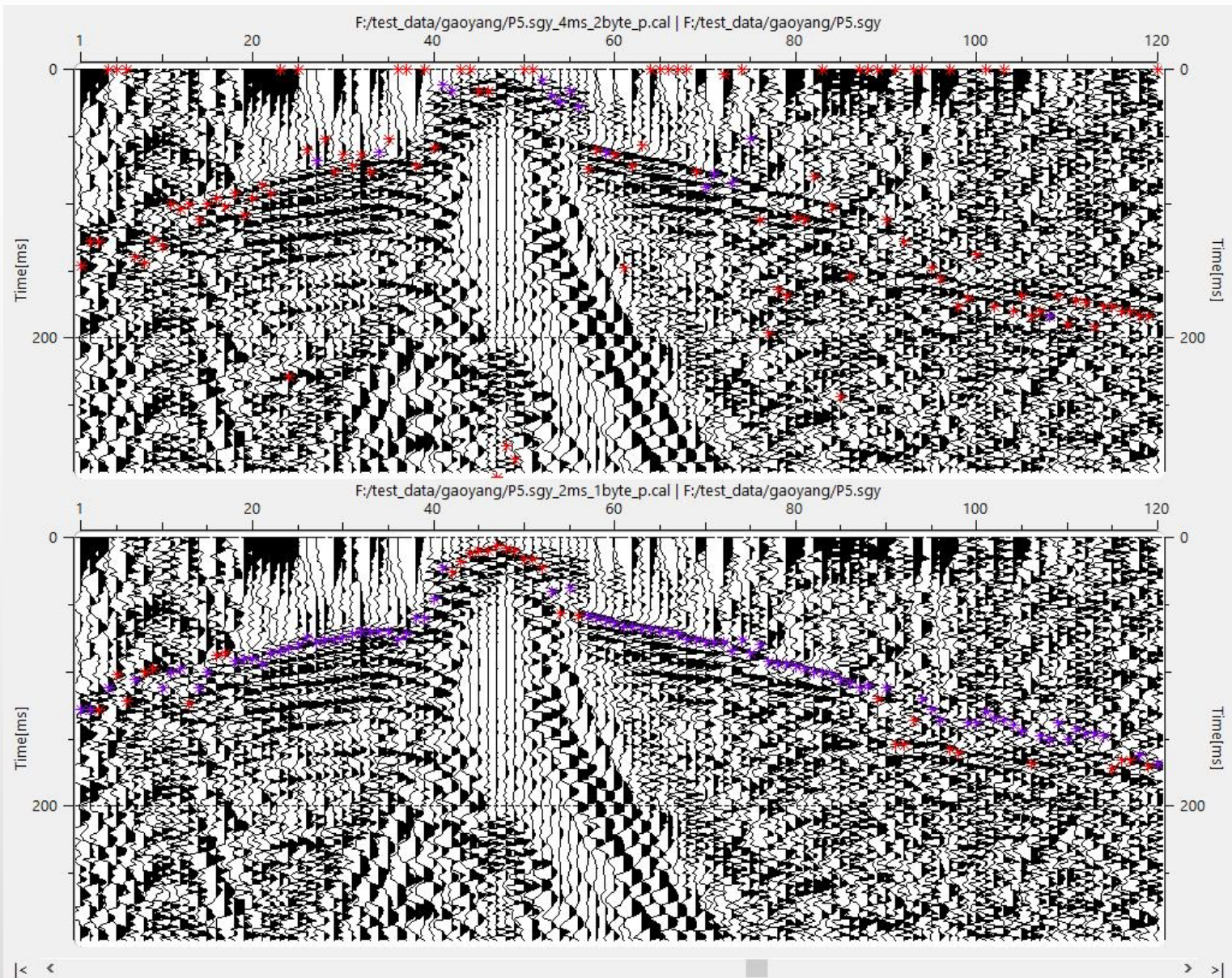
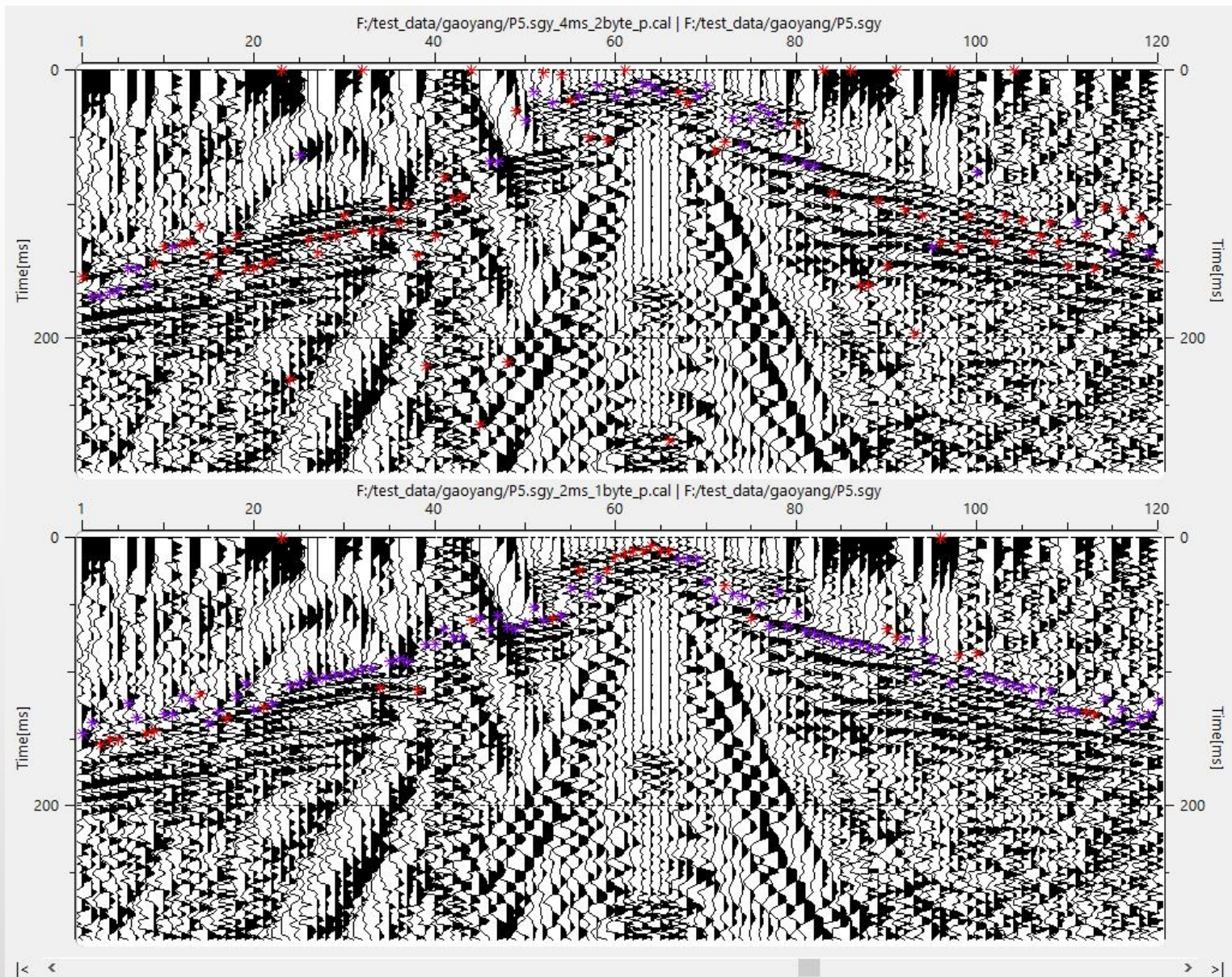# Shallow exploration——v1(up) vs. v2(down)---FFID325
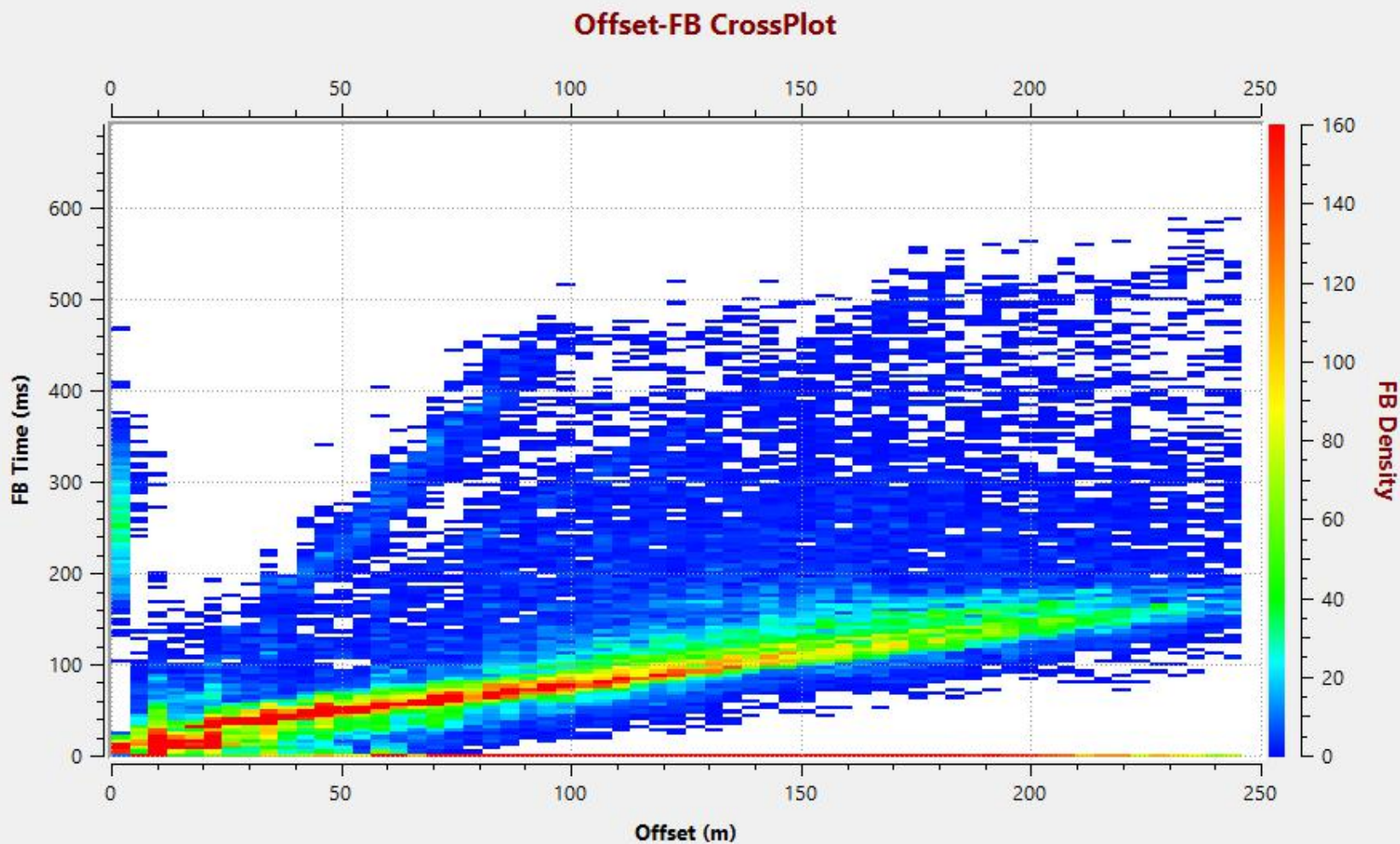
Shallow exploration——v1(up) vs. v2(down)---FFID437
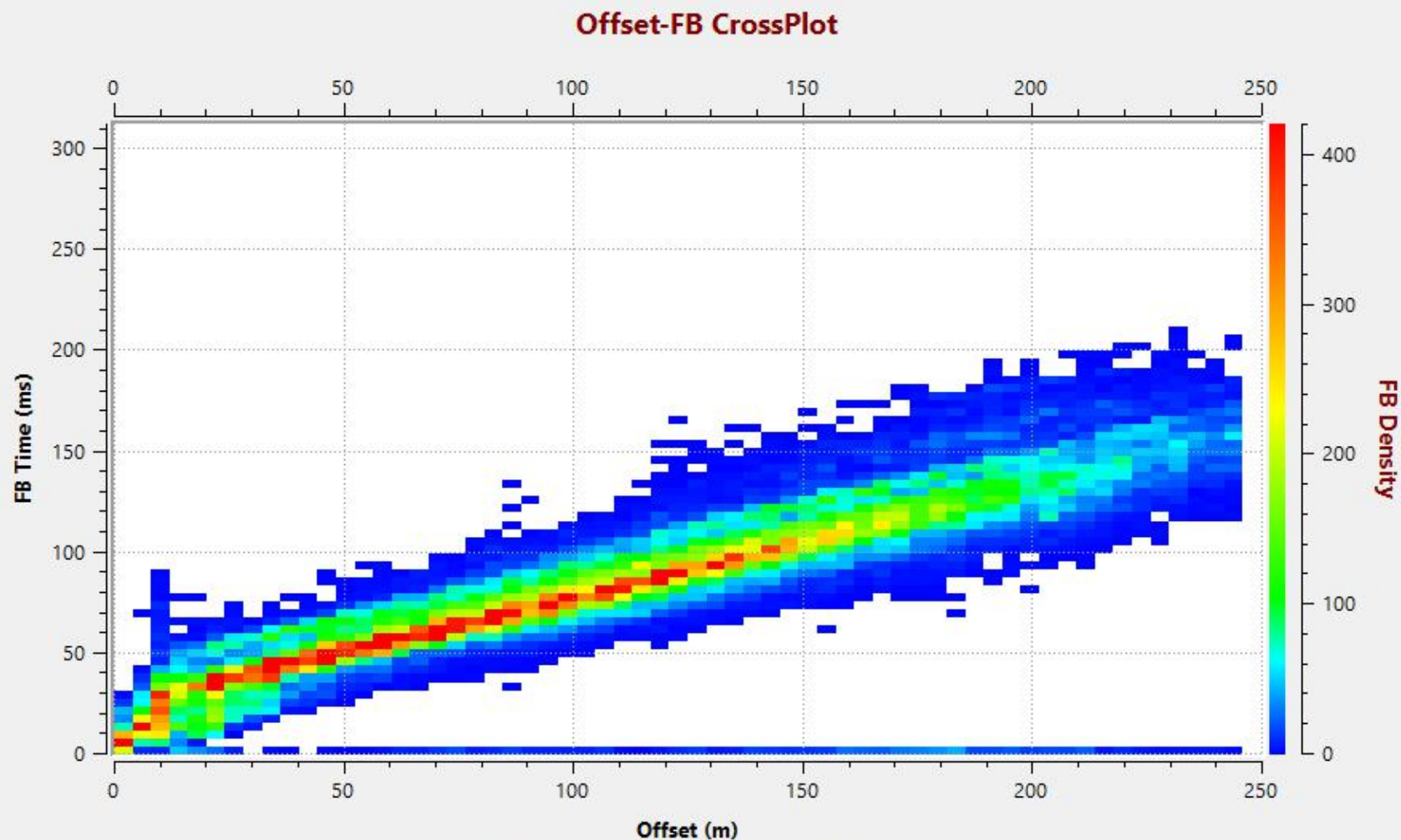
Shallow exploration——v1(up) vs. v2(down)---FFID470

Shallow exploration——v1 crossplot

Shallow exploration——v2 crossplot