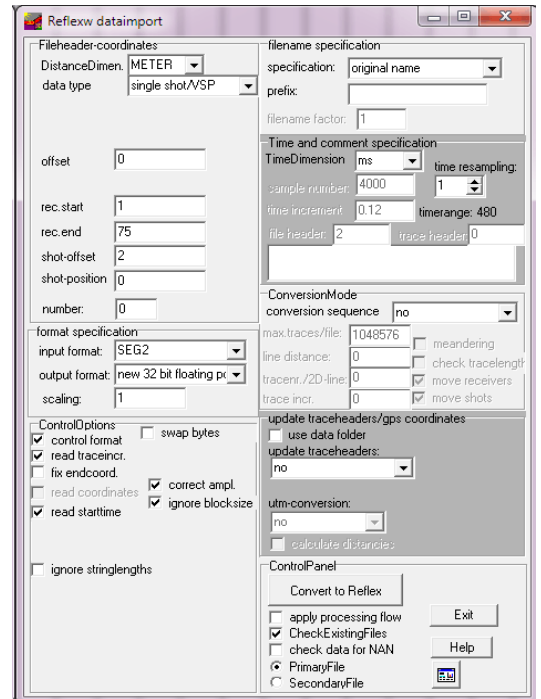


VSP-data processing

VSP-data import and interpretation of equidistant data

1. Import the data using the data type single shot/VSP
2. Enter the geometry for the shot and the receivers
3. Click on ConvertToReflex
4. The traceheader tabella menu opens
5. Click on update from fileheader in order to generate the traceheader geometry from the overall fileheader coordinates.
6. Click on close and save the geometry.

Now the data are ready for interpretation.



edit trace header coordinates for F:\data\vsp\ROHDATA\FRAGMENTED_R_WITH_10MS_D.DAT

trace-nr.	distance	shot-x	shot-y	shot-z	rec.-x	rec.-y	rec.-z	time delay	gain	time collect
1	1	2	0	0	0	1	0	-10.125	1	0
2	3	2	0	0	0	3	0	-10.125	1	0
3	5	2	0	0	0	5	0	-10.125	1	0
4	7	2	0	0	0	7	0	-10.125	1	0
5	9	2	0	0	0	9	0	-10.125	1	0
6	11	2	0	0	0	11	0	-10.125	1	0
7	13	2	0	0	0	13	0	-10.125	1	0
8	15	2	0	0	0	15	0	-10.125	1	0
9	17	2	0	0	0	17	0	-10.125	1	0
10	19	2	0	0	0	19	0	-10.125	1	0
11	21	2	0	0	0	21	0	-10.125	1	0
12	23	2	0	0	0	23	0	-10.125	1	0

TopographyGroupBox

topography (x,z values)

- update shot z-pos.
- update receiver z-pos.
- use x-traceheadercoord.
- apply x-z topography
- get distance along topography

EditGroupBox

apply borehole deviations

3D-view of boreholes

smooth rec. xy-coord.

factor f. smooth: 4

smooth shot coord.

source <-> rec.

rec. -> source

x <-> y y <-> z

project on x

interpolate

interpolate all

fileheader coordinates

data type: single shot/VSP

shot-pos: 0

shot-offset: 2

rec.start: 1

rec.end: 75

ec.offset: 0

non equidistant spread

update only shot coord.

UpdateGroupBox

load from AsciiFile

save on AsciiFile

update from fileheader

update fileheader

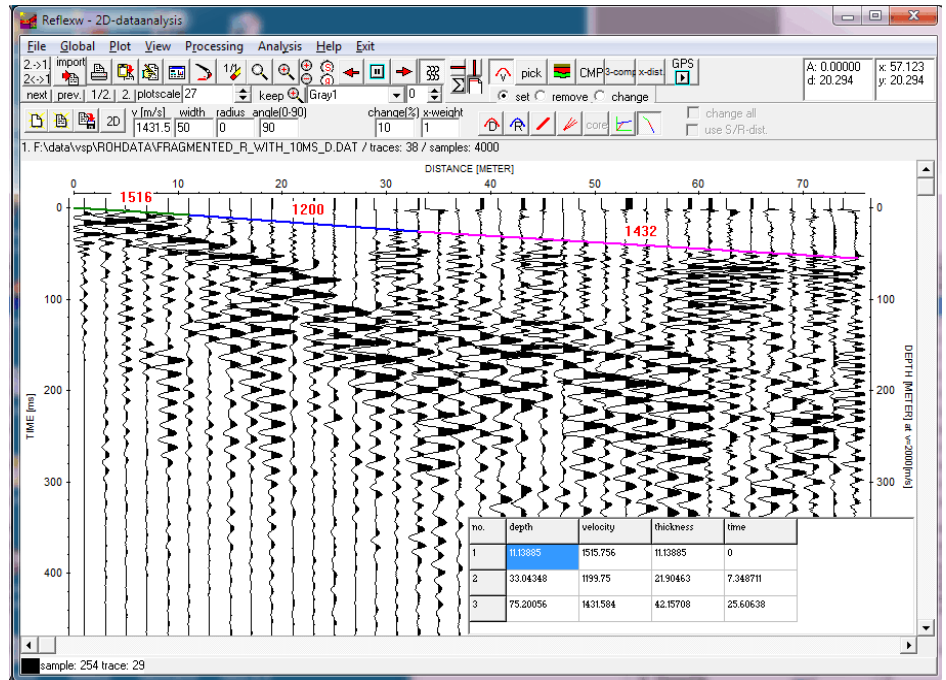
update distancies

reload from file

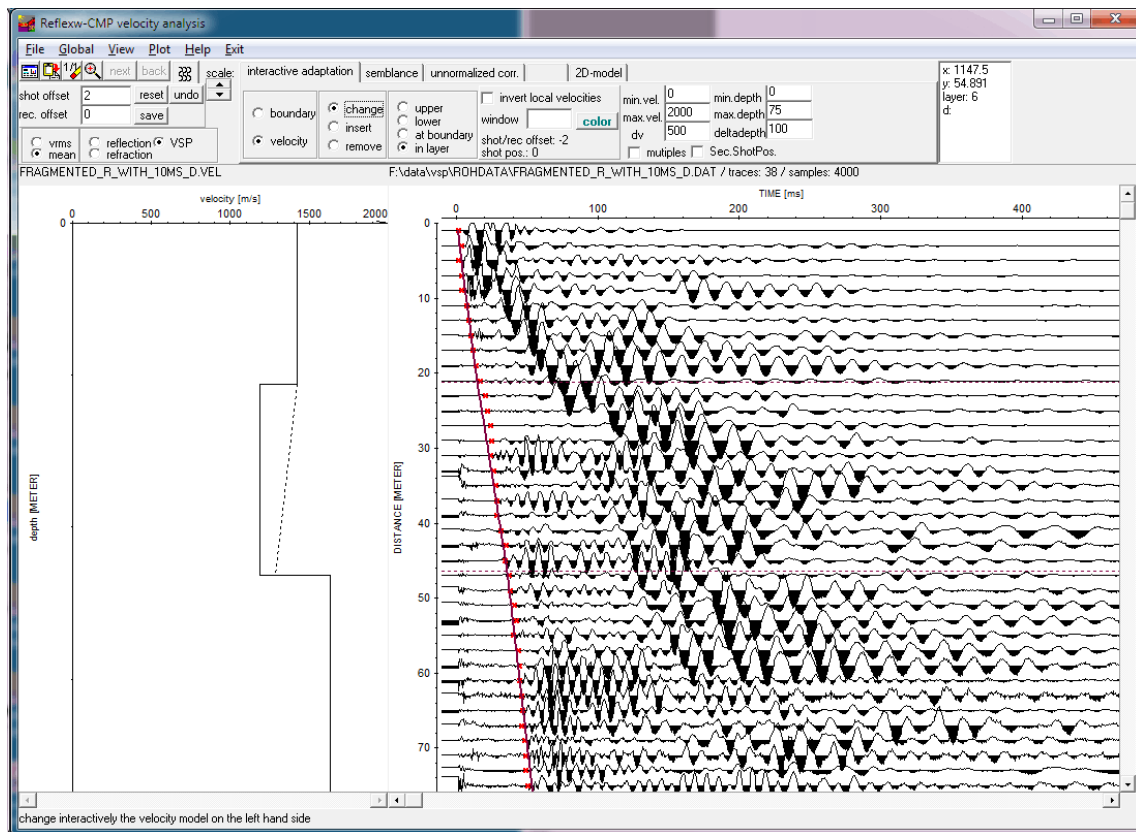
save changes

close

The data may be directly interpreted within the 2D-Dataanalysis module using the interactive velocity adaptation. Activate the VSP adaptation button and adapt the first part. Click on the turning point and adapt the next part and so on. The display may be rotated by 90 degree by activating the plotoption Rotate90Degree.



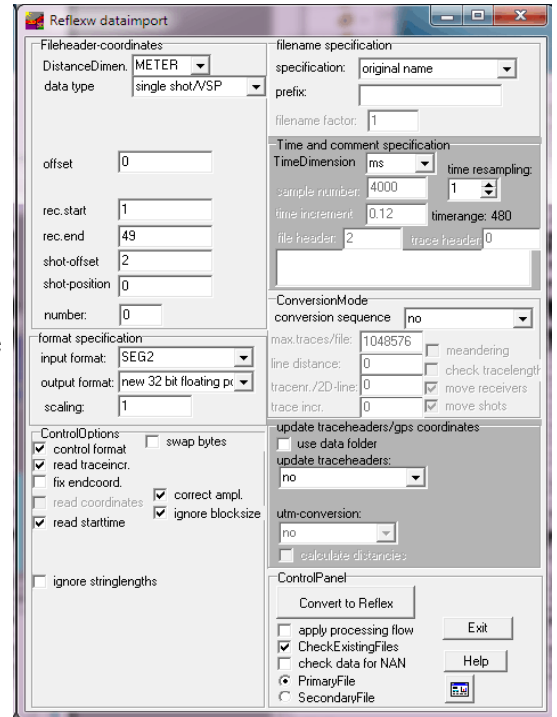
Another possibility is given within the CMP velocity analysis module. Here you can load the data together with the picked onsets and generate a 1D-model. Activate VSP and load the data and/or the picks. Now you can manually generate a model which fits the first arrivals.



VSP-data import and interpretation of the non equidistant data

1. Import the data using the data type single shot/VSP
2. Enter the geometry even for the non equidistant data shot.....
3. Click on ConvertToReflex
4. The traceheader tabella menu opens
5. Click on update from fileheader in order to generate the traceheader geometry from the overall fileheader coordinates.
6. Change manually the correct recy-coordinates for the shots 31 to 49 (increment of 2 m)
7. Click on update distancies
8. Click on close and save the geometry.

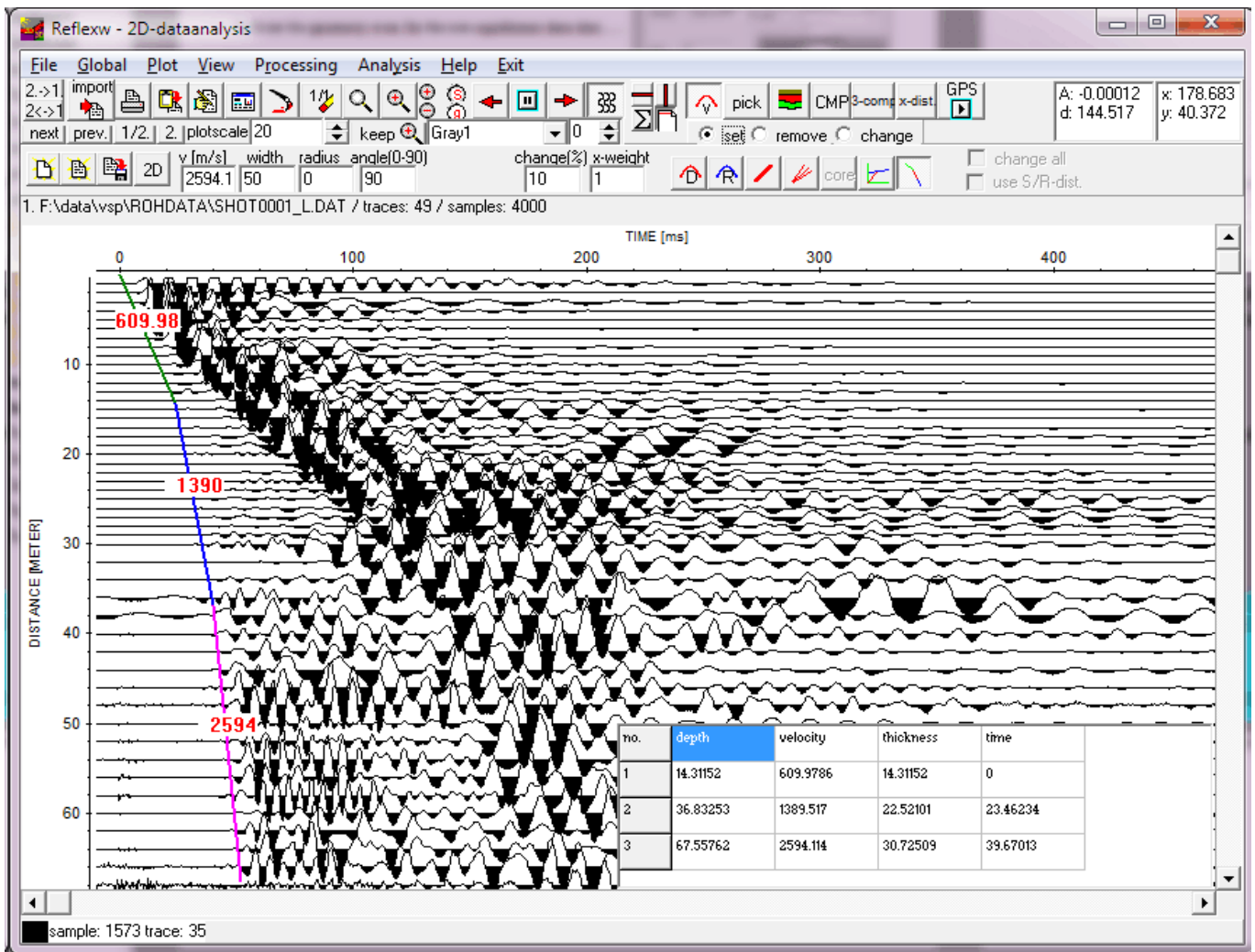
Now the data are ready for interpretation.



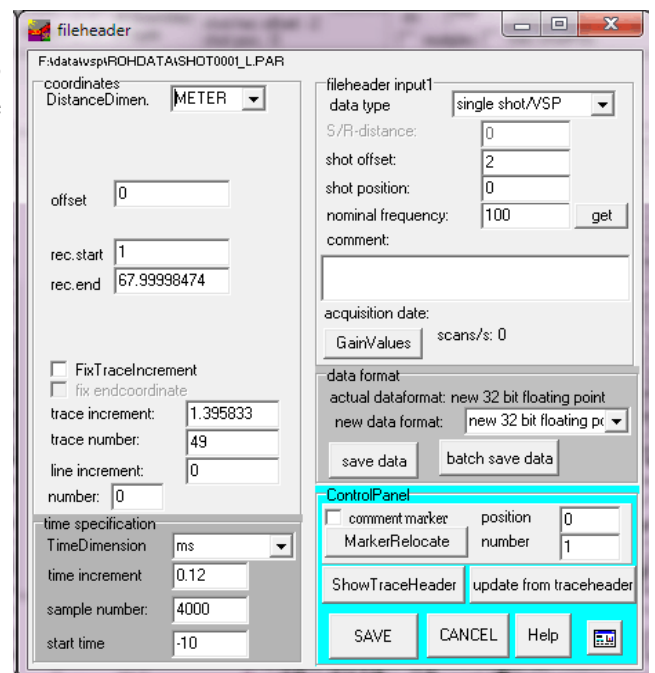
trace-nr.	distance	shot-x	shot-y	shot-z	rec.-x	rec.-y	rec.-z	time delay	gain	time collect
38	46	2	0	0	0	46	0	-10	1	0
39	48	2	0	0	0	48	0	-10	1	0
40	50	2	0	0	0	50	0	-10	1	0
41	52	2	0	0	0	52	0	-10	1	0
42	54	2	0	0	0	54	0	-10	1	0
43	56	2	0	0	0	56	0	-10	1	0
44	58	2	0	0	0	58	0	-10	1	0
45	60	2	0	0	0	60	0	-10	1	0
46	62	2	0	0	0	62	0	-10	1	0
47	64	2	0	0	0	64	0	-10	1	0
48	66	2	0	0	0	66	0	-10	1	0
49	68	2	0	0	0	68	0	-10	1	0

TopographyGroupBox	EditGroupBox	fileheader coordinates	UpdateGroupBox
<input type="checkbox"/> topography (x,z values) <input checked="" type="checkbox"/> update shot z-pos. <input checked="" type="checkbox"/> update receiver z-pos. <input checked="" type="checkbox"/> use x-traceheadercoord. <input type="checkbox"/> apply x-z topography <input type="checkbox"/> get distance along topography	<input type="checkbox"/> apply borehole deviations <input type="checkbox"/> 3D-view of boreholes <input type="checkbox"/> smooth rec. xy-coord. factor f.smooth: 4 <input type="checkbox"/> smooth shot coord.	source <-> rec. rec. -> source x <-> y y <-> z <input type="checkbox"/> project on x <input type="checkbox"/> interpolate <input type="checkbox"/> interpolate all	load from AsciiFile save on AsciiFile update from fileheader update fileheader update distancies reload from file save changes close

Again the data may be directly interpreted within the 2D-Dataanalysis module using the interactive velocity adaptation. Activate for this purpose the plotoption TraceHeaderDis. in order to display the non equidistant data.



The rec.end coordinate should be set to 68 m in order to have the correct distance scale. This is needed within the CMP-velocity analysis module (see next page).



Another possibility is given within the CMP velocity analysis module. Here you can load the data together with the picked onsets and generate a 1D-model. The plotoption TraceHeaderDis. must be activated. Activate VSP and load the data and/or the picks. Now you can manually generate a model which fits the first arrivals.

