

InterPACIFIC Project

Presentation of the active measurements

S. Foti, F. Garofalo

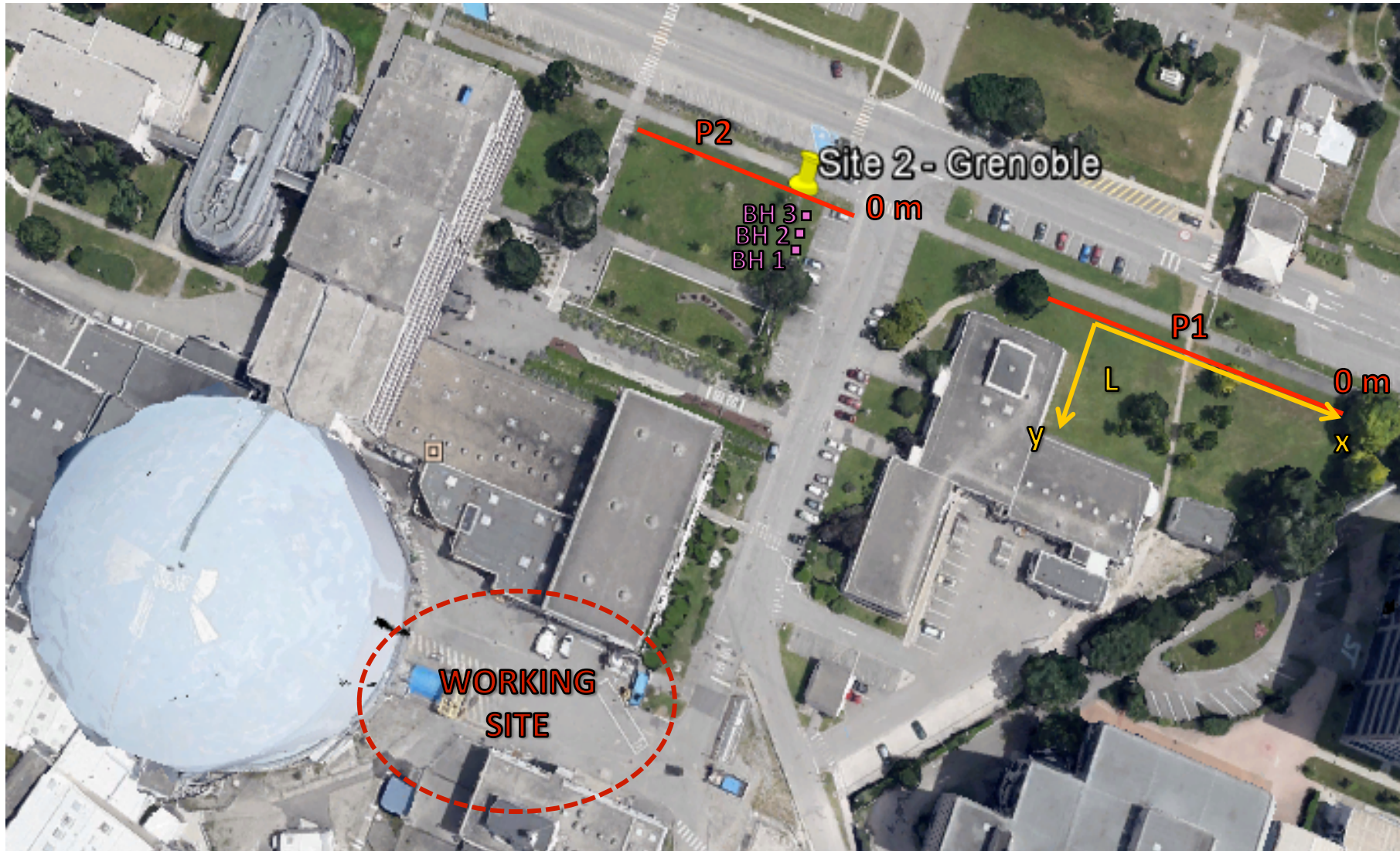
SITE: Grenoble - ILL

Identification code: GRE

DATE of measurements campaign : 25/9/2013

With the contribution on the field of: G. Bianchi, P. Scarcella

In this site, different surveys were performed along different lines: P1, P2 and L (the latter for the ambient noise in L-Shape configuration) as shown in the following figure. In particular all the positions are expressed as relative distance with respect to a given point assumed at 0m as showed in the figure.



In this site, different surveys were performed along the same line using different sources and receiver spacing. All the data are grouped in folder whit GRE code that stands for “Grenoble - ILL”. In particular the folders are:

GRE_AP_P1 - active P-wave data acquired in P1 profile

GRE_AP_P2 - active P-wave data acquired in P2 profile

GRE_NO_P1 - passive data acquired in P1 profile

GRE_NO_L - passive data acquired with L-shape configuration

In each folder the files are in .sg2 format and they are identified by a number that refers to the shot location.

Acquisition parameters:

T = Time window

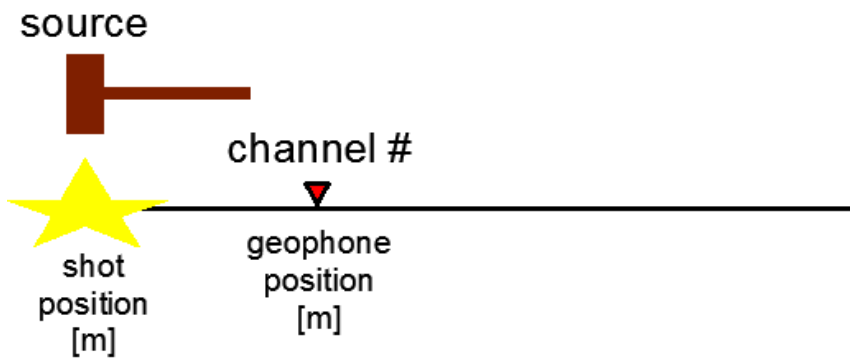
 Δt = Sampling rate

Pretrig = Pre-trigger

 Δx = receiver spacing

Folder	File number	Source type	Num channels	Source [m]	1° ch [m]	Last ch [m]	Δx [m]	T [s]	Δt [ms]	pretrig [s]	note
GRE_AP_P1	100-115	Hammer	48	0	6	76.5	1.5	2	0.25	-0.5	
GRE_AP_P1	116-125	Hammer	48	0.75	6	76.5	1.5	2	0.25	-0.5	
GRE_AP_P1	126-140	Hammer	48	80.5	6	76.5	1.5	2	0.25	-0.5	
GRE_AP_P1	141-150	Hammer	48	41.25	6	76.5	1.5	2	0.25	-0.5	
GRE_AP_P2	200-211	Hammer	48	0	3	50	1	2	0.25	-0.5	
GRE_AP_P2	212-223	Hammer	48	0.5	3	50	1	2	0.25	-0.5	
GRE_AP_P2	224-230	Hammer	48	26.5	3	50	1	2	0.25	-0.5	
GRE_AP_P2	231-240	Hammer	48	54	3	50	1	2	0.25	-0.5	
GRE_NO_P1	160	Ambient noise	48	-	6	76.5	1.5	524	8	0	Piles hammering at the beginning
GRE_NO_L	170-173	Ambient Noise	48	-	X = 0 y = 24	X = 69 y = 0	$\Delta x = 3$ $\Delta y = 1$	524	8	0	The 25° ch is at x = 0, y = 0

LEGEND



Source (for P-waves)



Vertical geophone

File number: # - # .seg2

folder: GRE_AP_P1

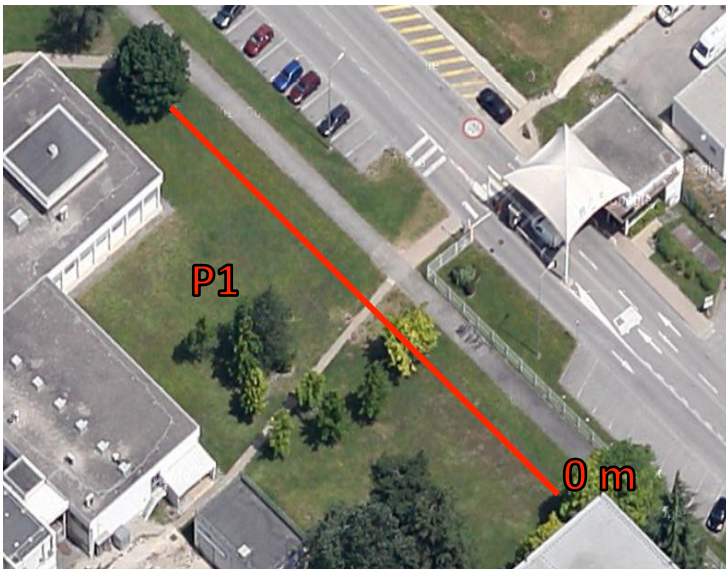
Survey: active P waves in P1

Seismograph: Geode (Geometrics)
Geophones: vertical geophones (4.5 Hz)
Source: 8-Kg sledgehammer

Acquisition parameters:

$T = 2000$ ms
 $\Delta t = 0.25$ ms
Pretrig = -500 ms

$\Delta x = 1.5$ m
Number of channels = 48
1° channel = 6 m
Last channel = 76.5 m

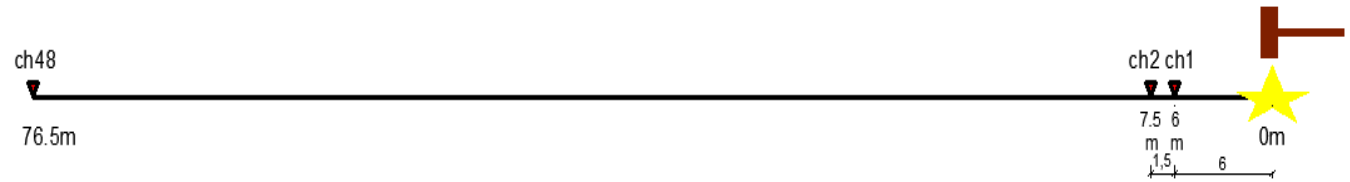


File number	Source Location [m]	note
100 – 115	0	
116 – 125	0.75	
126 – 140	80.5	
141 - 150	41.25	

folder: GRE_AP_P1
Survey: active P waves in P1

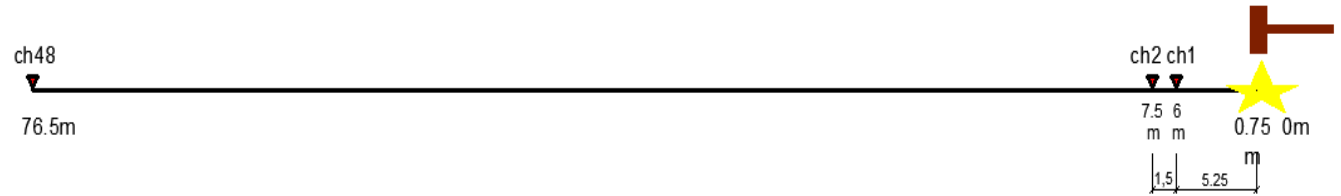
File number:100 – 115

Shot: 0 m

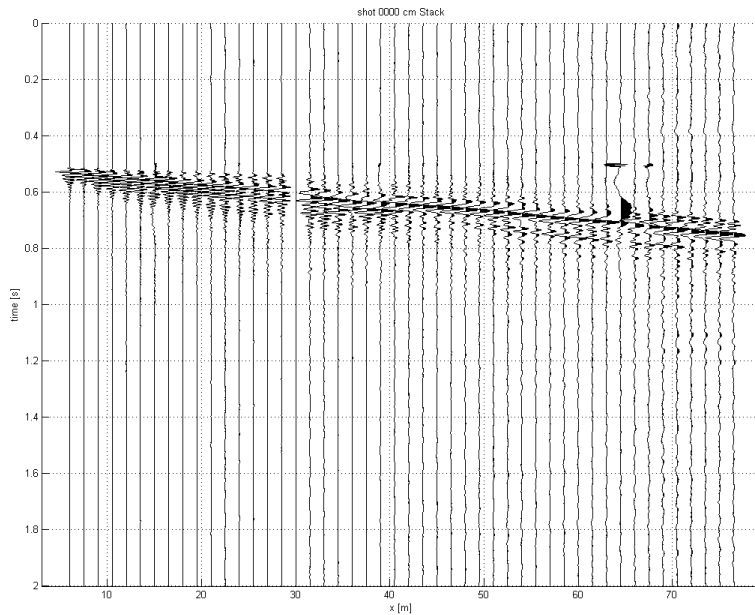


File number:116 – 125

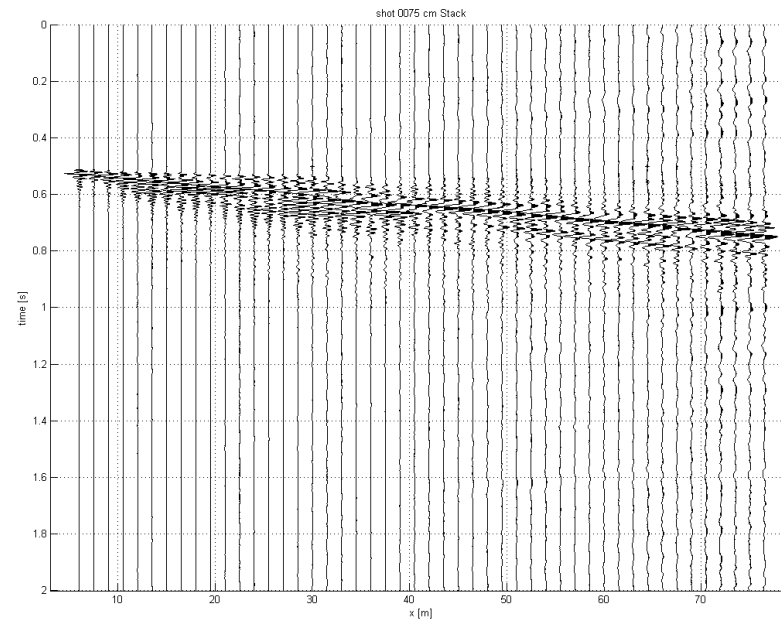
Shot: 0.5 m



Shot: 0 m



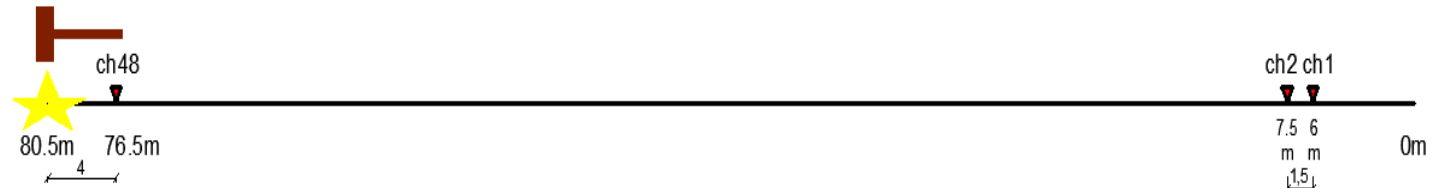
Shot: 0.5 m



folder: GRE_AP_P1
Survey: active P waves in P1

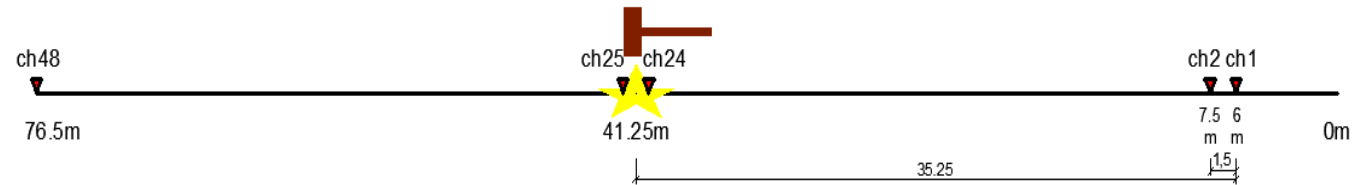
File number:126 – 140

Shot: 80.5 m

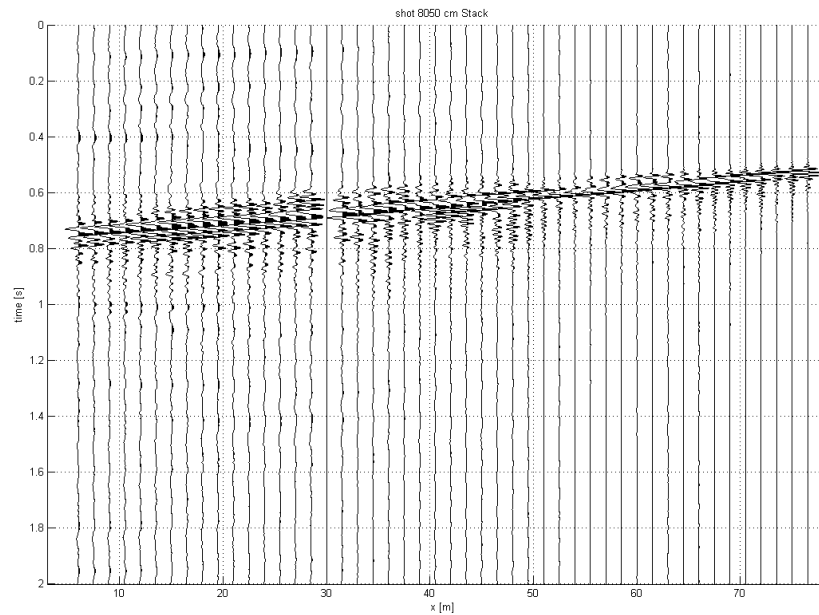


File number:141 – 150

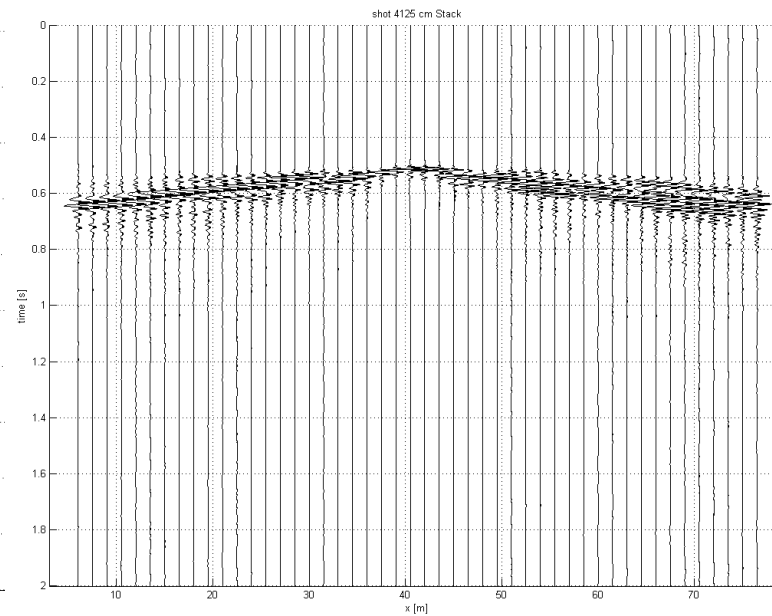
Shot: 41.25 m



Shot: 80.5 m



Shot: 41.25 m



folder: GRE_AP_P2

Survey: active P waves in P2

Seismograph: Geode (Geometrics)

Geophones: vertical geophones (4.5 Hz)

Source: 8-Kg sledgehammer

Acquisition parameters:

T = 2000 ms

$\Delta x = 1$ m

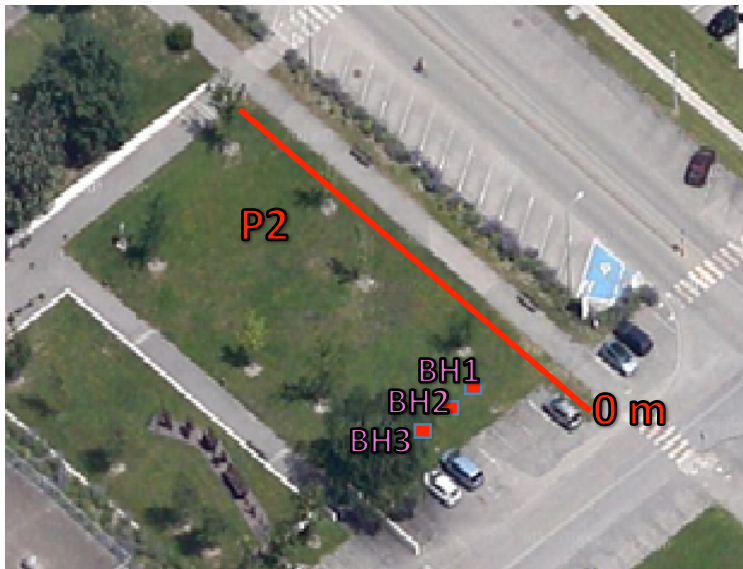
$\Delta t = 0.25$ ms

Number of channels = 48

Pretrig = -500 ms

1° channel = 3 m

Last channel = 50 m

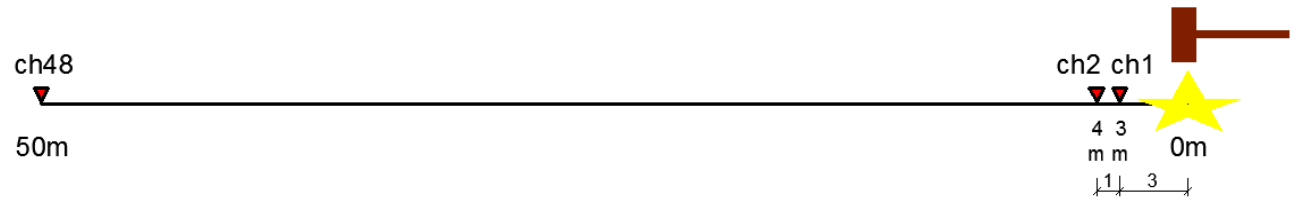


File number	Source Location [m]	note
200 – 211	0	
212 – 223	0.5	
224 – 230	26.5	
231 - 240	54	

folder: GRE_AP_P2
Survey: active P waves in P2

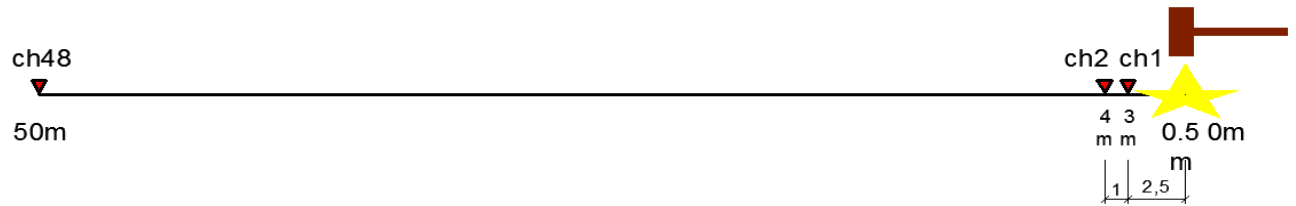
File number:200 – 211

Shot: 0 m

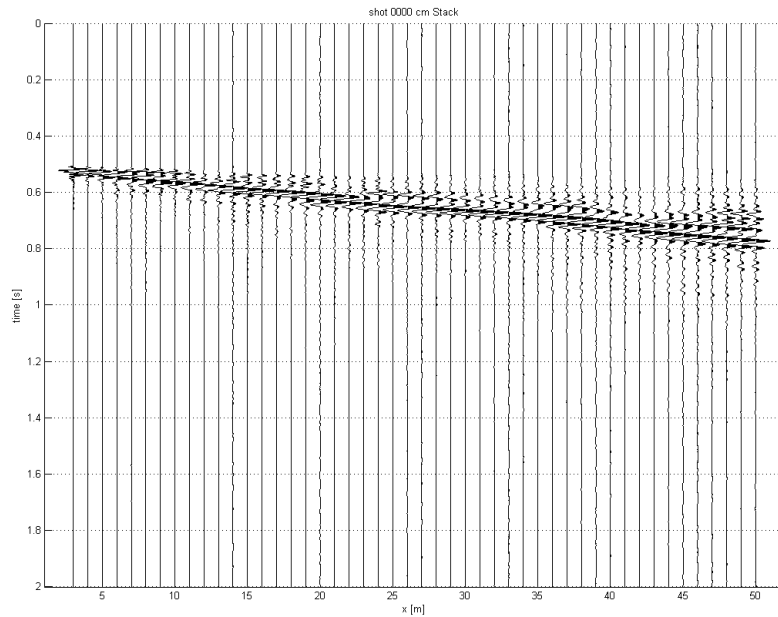


File number:212 – 223

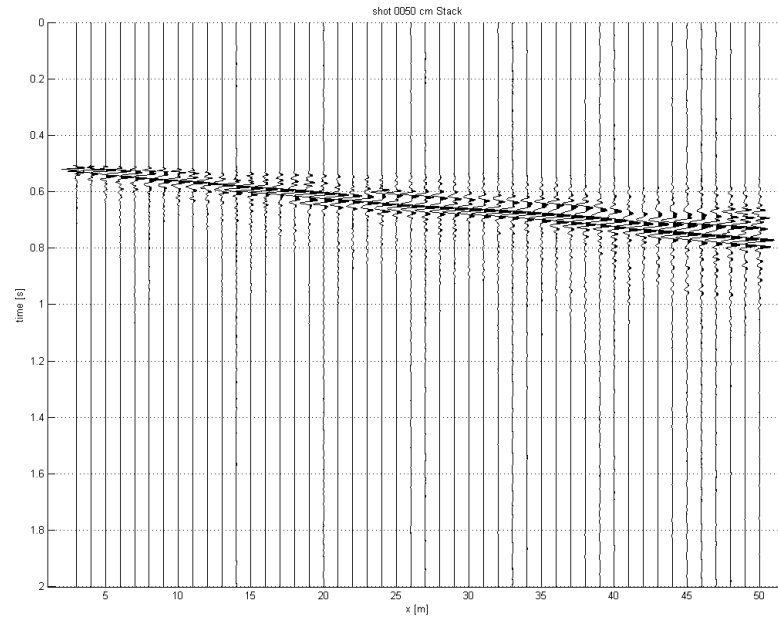
Shot: 0.5 m



Shot: 0 m



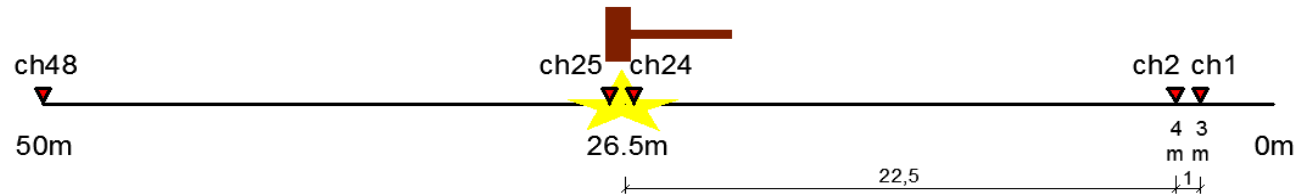
Shot: 0.5 m



folder: GRE_AP_P2
Survey: active P waves in P2

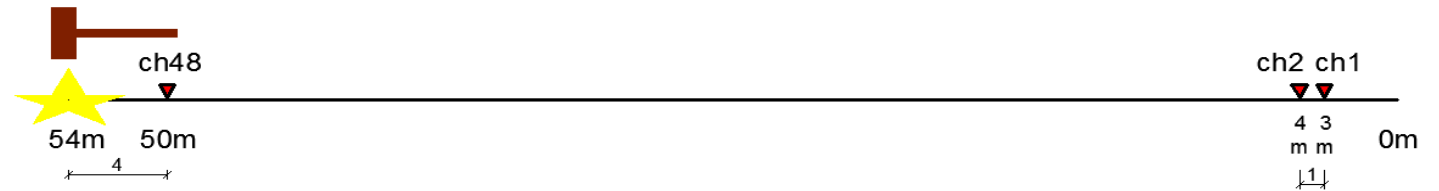
File number:224 – 230

Shot: 26.5 m

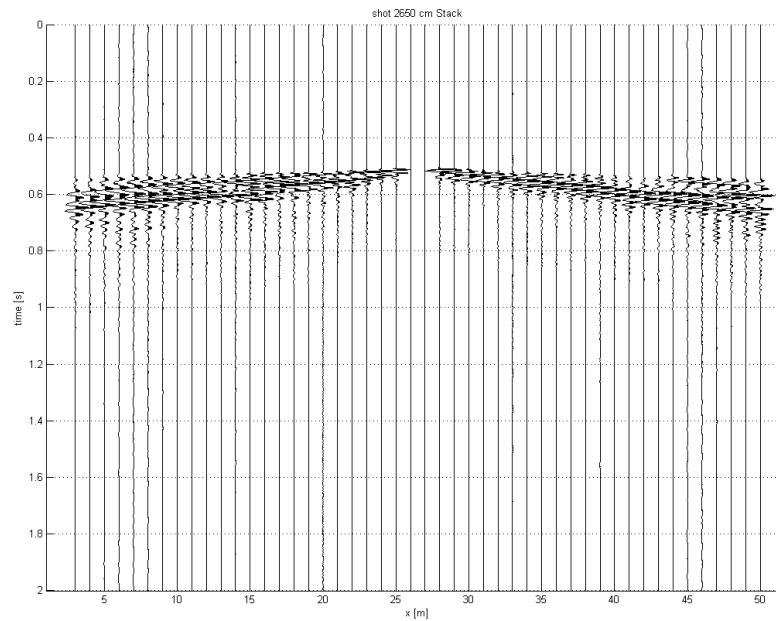


File number:231 – 240

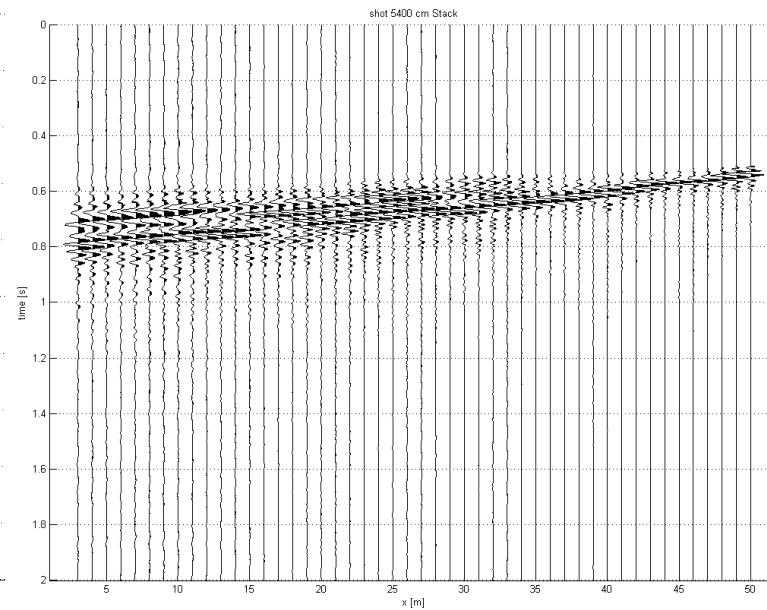
Shot: 54 m



Shot: 26.5 m



Shot: 54 m



folder: GRE_NO_P1

Survey: passive measurements in P1

Seismograph: Geode (Geometrics)

Geophones: vertical geophones (4.5 Hz)

Source: Ambient Noise

Acquisition parameters:

$T = 524 \text{ s}$

$\Delta x = 1.5 \text{ m}$

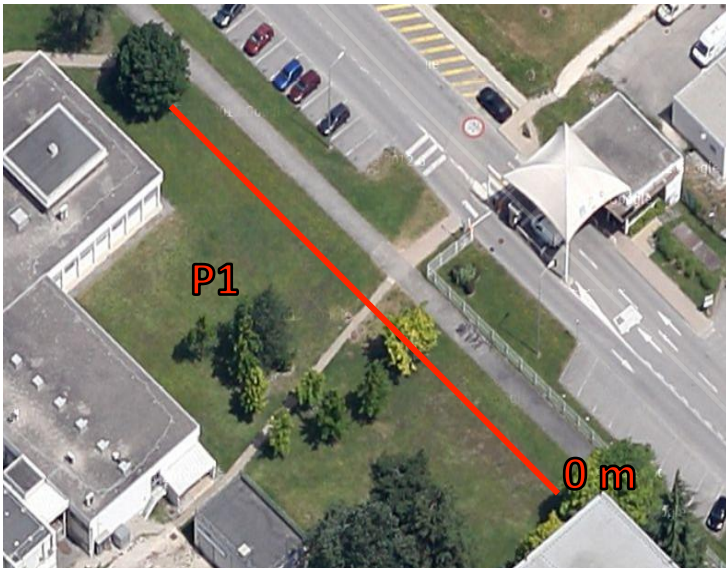
$\Delta t = 8 \text{ ms}$

Number of channels = 48

Pretrig = 0 ms

1° channel = 6 m

Last channel = 76.5 m

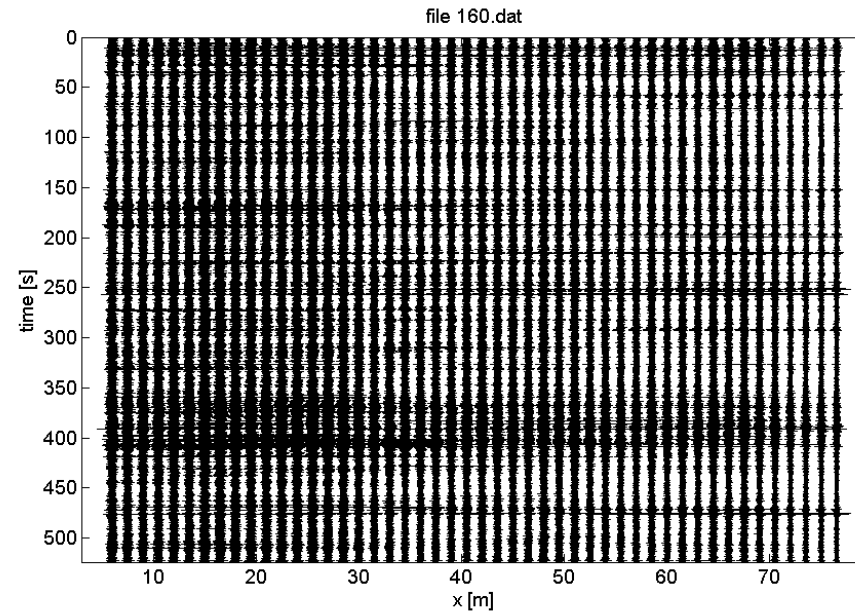
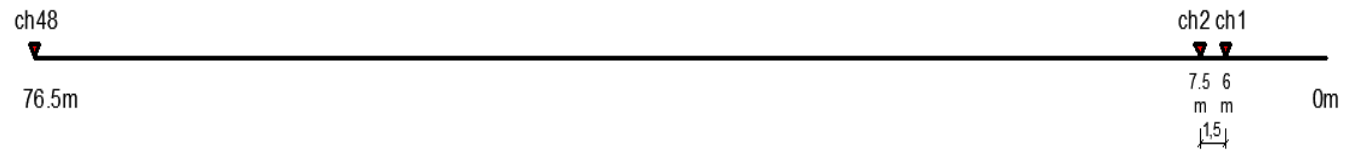


File number	Source Location [m]	note
160	-	

folder: GRE_NO_P1

Survey: passive measurements in P1

File number:160



folder: GRE_NO_L

Survey: passive measurements in L-shape configuration

Seismograph: Geode (Geometrics)

Geophones: vertical geophones (4.5 Hz)

Source: Ambient Noise

Acquisition parameters:

$T = 524$ s

$\Delta t = 8$ ms

Pretrig= 0 ms

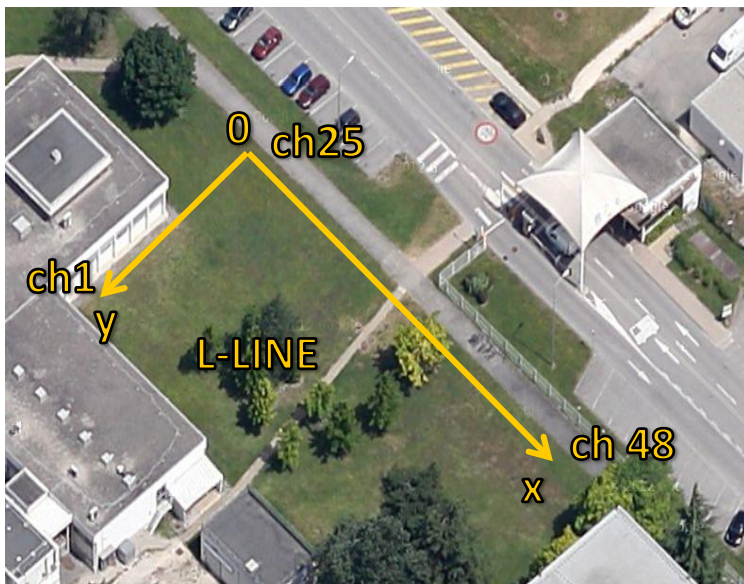
$\Delta x = 3$ m $\Delta y = 1$ m

Number of channels = 48

1° channel: $x = 0$ m, $y = 24$ m

25° channel: $x = 0$ m, $y = 0$ m

48° channel: $x = 69$ m, $y = 0$ m



File number	Source Location [m]	note
170	-	Pile hamming in the firs minutes
171	-	
172	-	
173	-	

SURVEY: Noise L - LINE

T = 524s

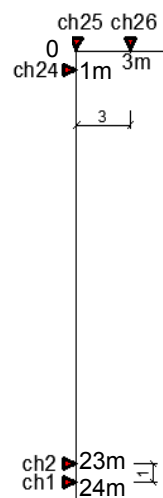
$\Delta t = 8$ ms

Pretrig = 0 s

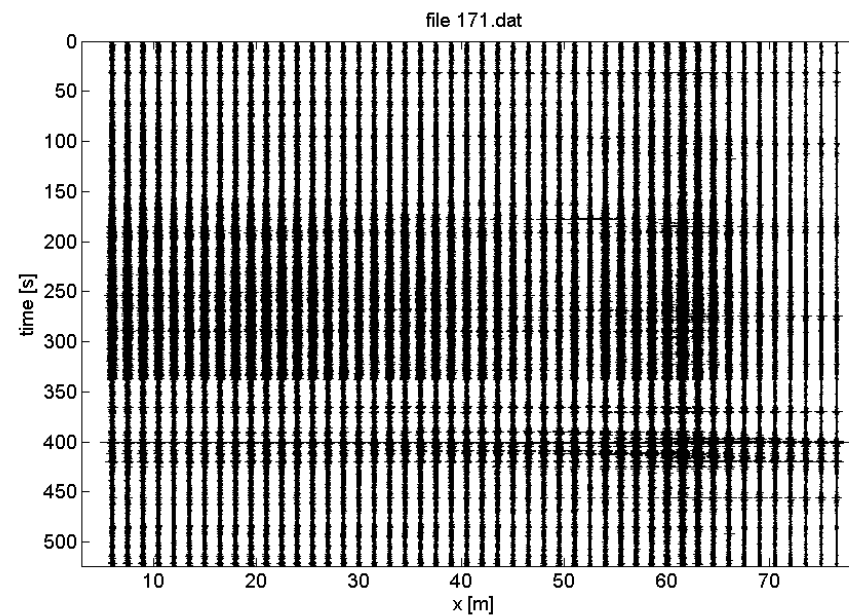
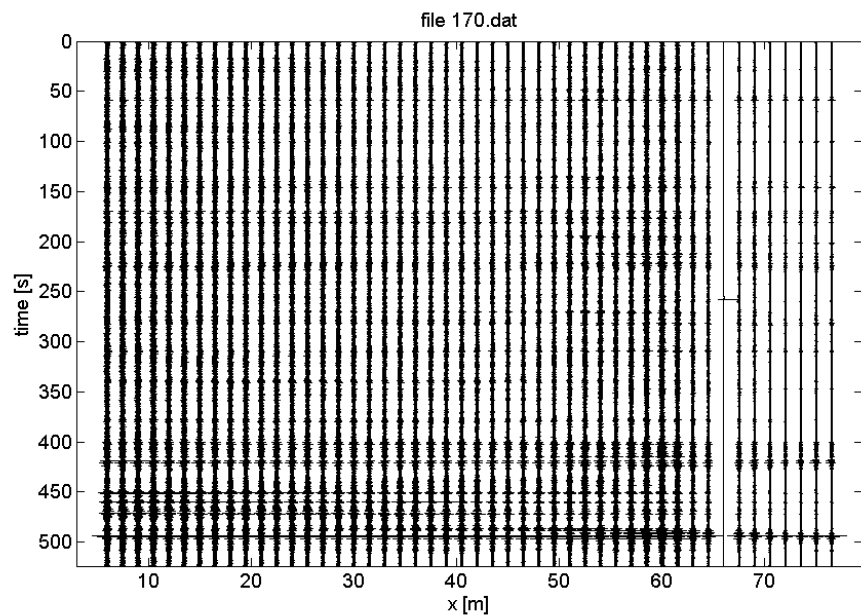
$\Delta x = 3$ m

File number: 170 – 173

$\Delta x = 1$ m



ch48
69m



SURVEY: Noise L - LINE

T = 524s

$\Delta t = 8$ ms

Pretrig = 0 s

File number: 170 – 173

