

**InterPACIFIC Project**  
**Presentation of the active measurements**

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**SITE: MIRANDOLA**

**Identification code: MIR**

**DATE of measurements campaign : 9/9/2013 – 10/9/2013**

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

In this site, different surveys were performed along the same line L1 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 the folder MIR that stands for “Mirandola”. In particular the folders are:

MIR\_AP\_100cm - active P-wave data acquired with 1 m receiver spacing

MIR\_AP\_200cm - active P-wave data acquired with 2 m receiver spacing

MIR\_AS\_200cm - active SH-wave data acquired with 1 m receiver spacing

MIR\_NO\_200cm - passive data acquired with 2 m receiver spacing

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

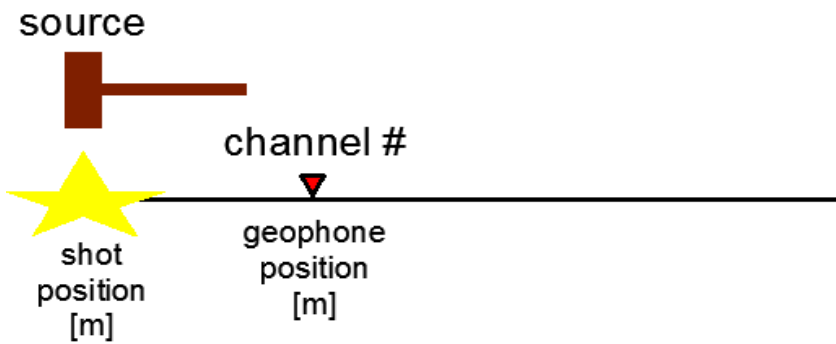
 $\Delta t$ = Sampling rate

Pretrig= Pre-trigger

 $\Delta x$ = receiver spacing

Folder	File number	Source type	Num channels	Source [m]	1° ch [m]	Last ch [m]	$\Delta x$ [m]	T [s]	$\Delta t$ [ms]	pretrig [s]	note
MIR_AS_200cm	112-121	Iron beam	24	34	36	82	2	2	0.25	-0.5	
MIR_AS_200cm	122-135	Iron beam	24	84	36	82	2	2	0.25	-0.5	
MIR_AP_100cm	300-309	Hammer	48	10	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	310-319	Hammer	48	22	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	320-329	Hammer	48	22.5	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	330-339	Hammer	48	36.5	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	340-349	Hammer	48	48.5	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	350-359	Hammer	48	60.5	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	360-371	Hammer	48	74.5	25	72	1	2	0.25	-0.5	
MIR_AP_100cm	372-382	Hammer	48	75	25	72	1	2	0.25	-0.5	
MIR AP 100cm	383-392	Hammer	48	87	25	72	1	2	0.25	-0.5	
MIR_AP_200cm	400-419	Hammer	48	122	14	108	2	2	0.25	-0.25	
MIR_AP_200cm	420-439	Hammer	48	112	14	108	2	2	0.25	-0.25	
MIR_AP_200cm	440-459	Hammer	48	112.5	14	108	2	2	0.25	-0.25	The shot location recorded in the files is wrong
MIR_AP_200cm	460-469	Hammer	48	85	14	108	2	2	0.25	-0.25	
MIR_AP_200cm	470-479	Hammer	48	61	14	108	2	2	0.25	-0.25	
MIR_AP_200cm	480-489	Hammer	48	37	14	108	2	2	0.25	-0.25	
MIR_AP_200cm	490-499	Hammer	48	10.5	14	108	2	2	0.25	-0.25	
MIR AP 200cm	500-509	Hammer	48	10	14	108	2	2	0.25	-0.25	
MIR NO 200cm	510-511	Noise	48	-	14	108	2	524	8	0	

## LEGEND



 Source (for SH-waves)

 Source (for P-waves)

 Horizontal geophone

 Vertical geophone

**folder: MIR\_AS\_200cm**

**Survey: active SH waves – Line 1**

Seismograph: Geode (Geometrics)

Geophones: swyphones

Source: iron beam

Acquisition parameters:

T = 2000 ms

$\Delta t = 0.25$  ms

Pretrig= -500 ms

$\Delta x = 2$  m

Number of channels = 24

1° channel = 36 m

Last channel = 82 m

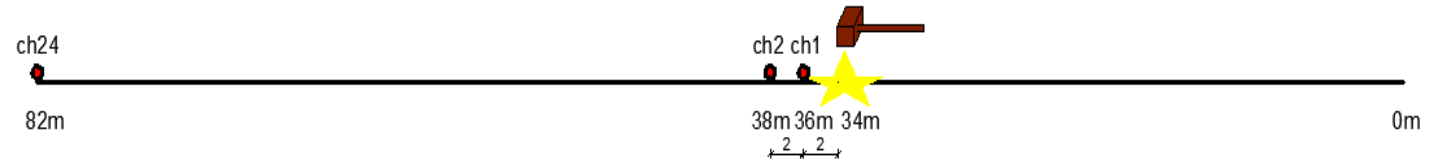
NOTE: -

File number	Shot location [m]	note
112 - 121	34	
122 - 135	84	

**folder: MIR\_AS\_200cm**  
**Survey: active SH waves – Line 1**

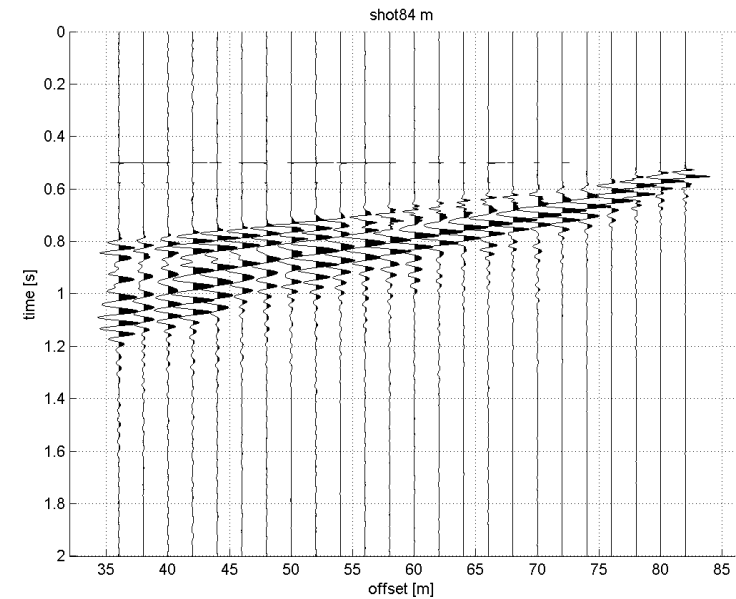
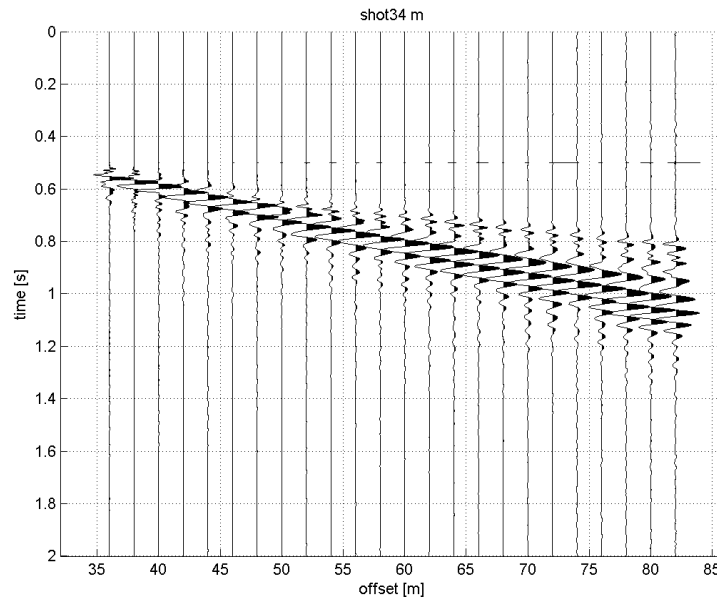
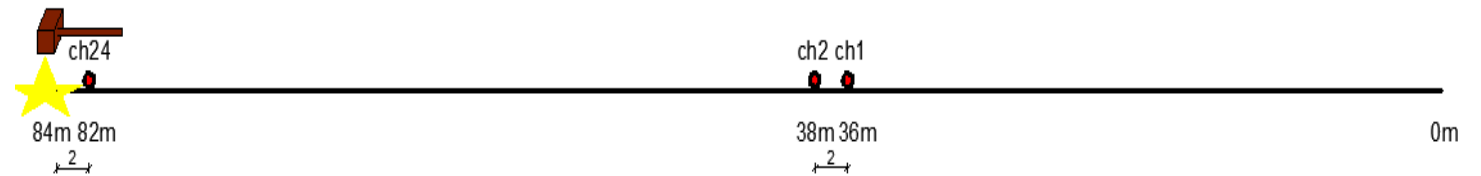
**File number:112 – 121**

Shot: 34 m



**File number:122 – 135**

Shot: 84 m



**folder: MIR\_AP\_100cm**  
**Survey: active P waves – Line 1**

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

$\Delta x = 1$  m

Number of channels = 48

1° channel = 25 m

Last channel = 72 m

**NOTE:** farmer with tractor in the  
neighbouring field

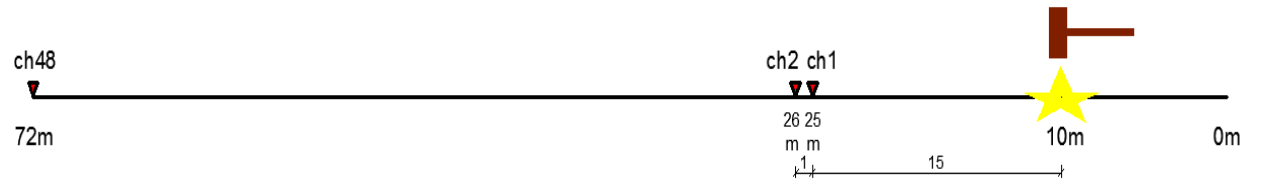
File number	Shot location [m]	note
300 - 309	10	
310 - 319	22	
320 - 329	22.5	
330 - 339	36.5	
340 - 349	48.5	
350 - 359	60.5	
360 - 371	74.5	
372 - 382	75	
383 - 392	87	



**folder: MIR\_AP\_100cm**  
**Survey: active P waves – Line 1**

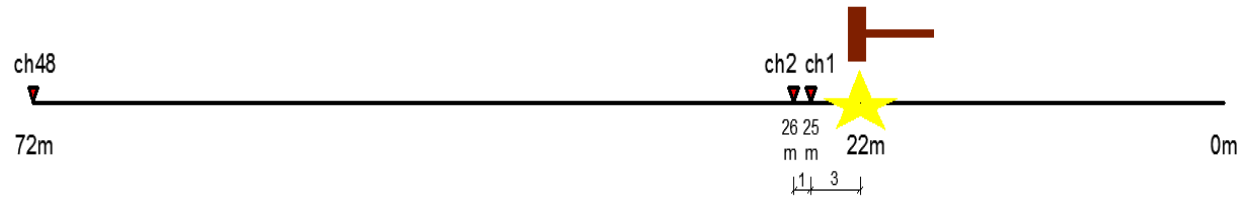
**File number:300 – 309**

**Shot: 10 m**

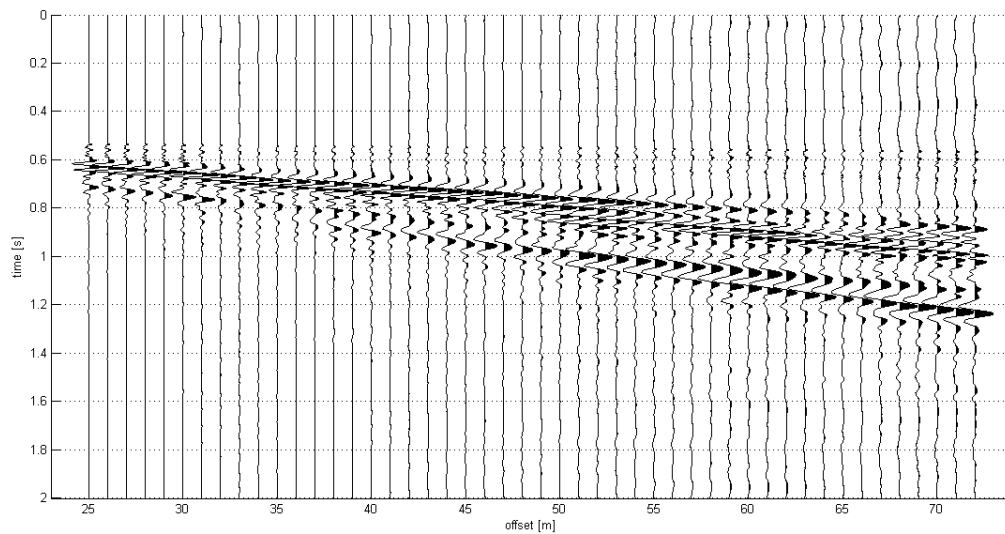


**File number:310 – 319**

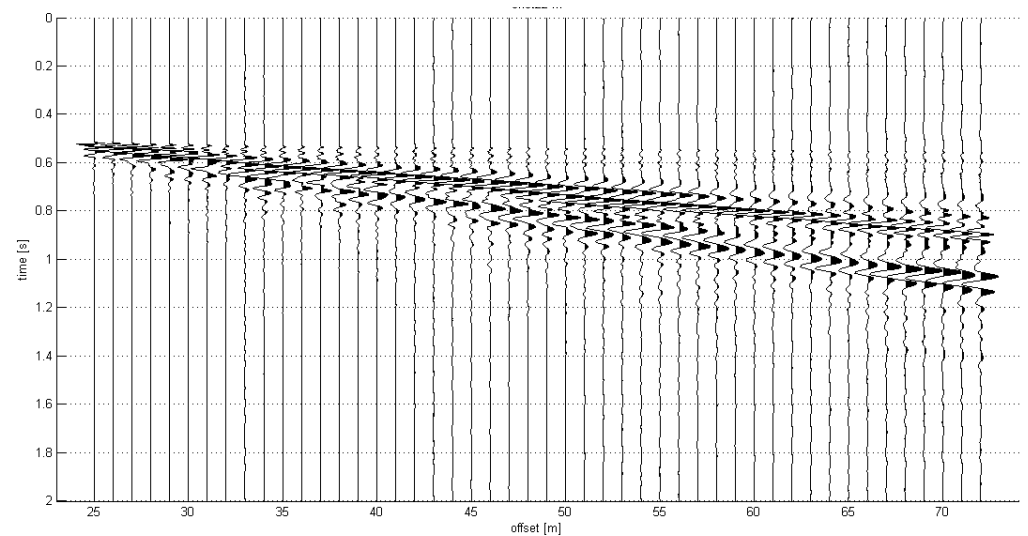
**Shot: 22 m**



**Shot: 10 m**



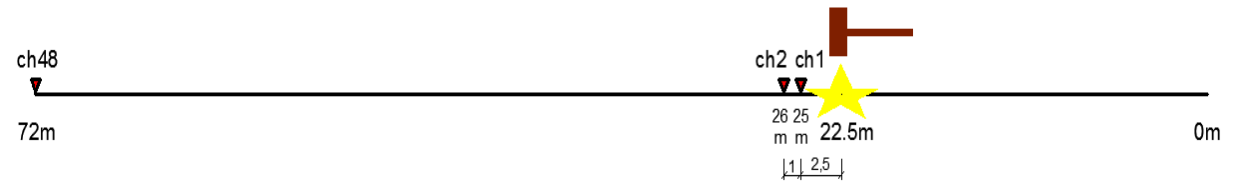
**Shot: 22 m**



**folder: MIR\_AP\_100cm**  
**Survey: active P waves – Line 1**

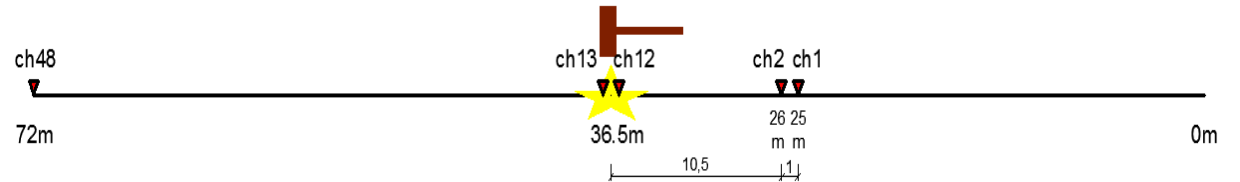
**File number:320 – 329**

Shot: 22.5 m

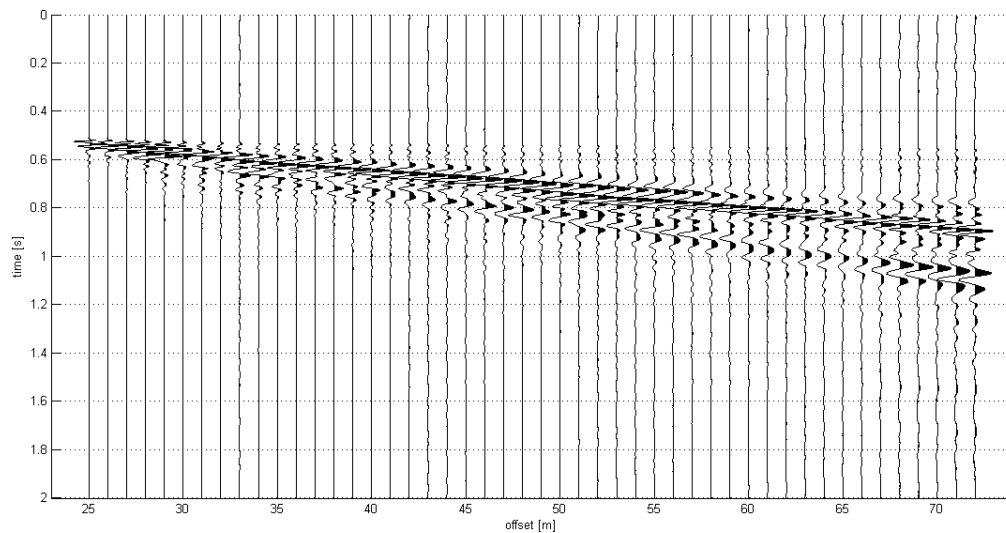


**File number:330 – 339**

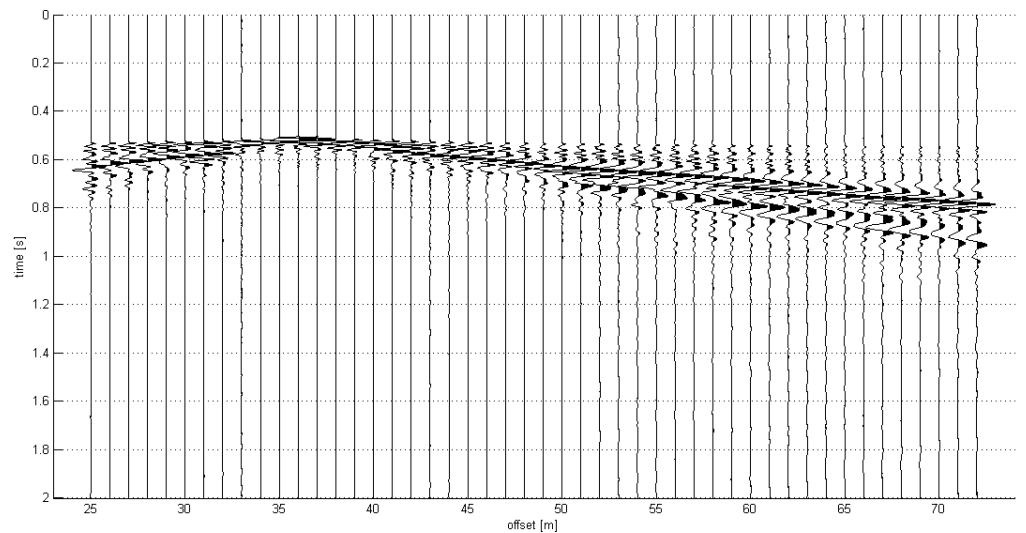
Shot: 36.5 m



Shot: 22.5 m



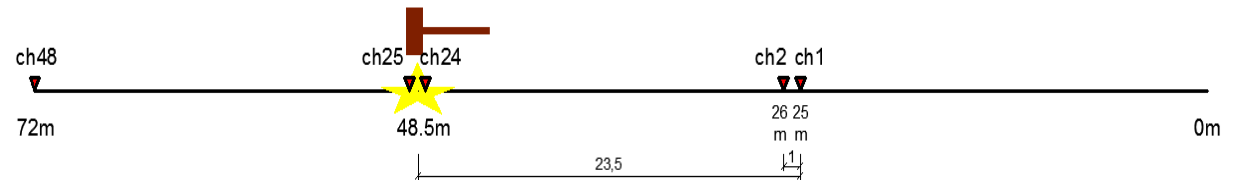
Shot: 36.5 m



**folder: MIR\_AP\_100cm**  
**Survey: active P waves – Line 1**

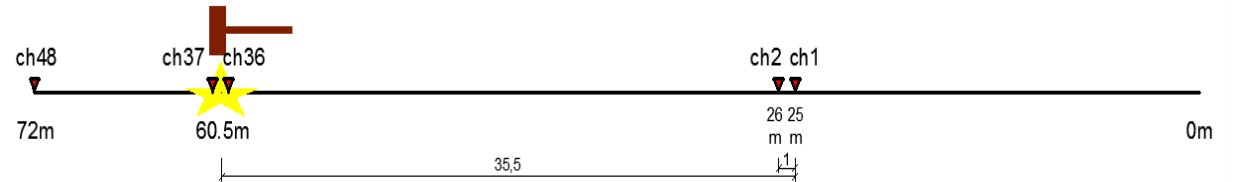
**File number:340 – 349**

Shot: 48.5 m

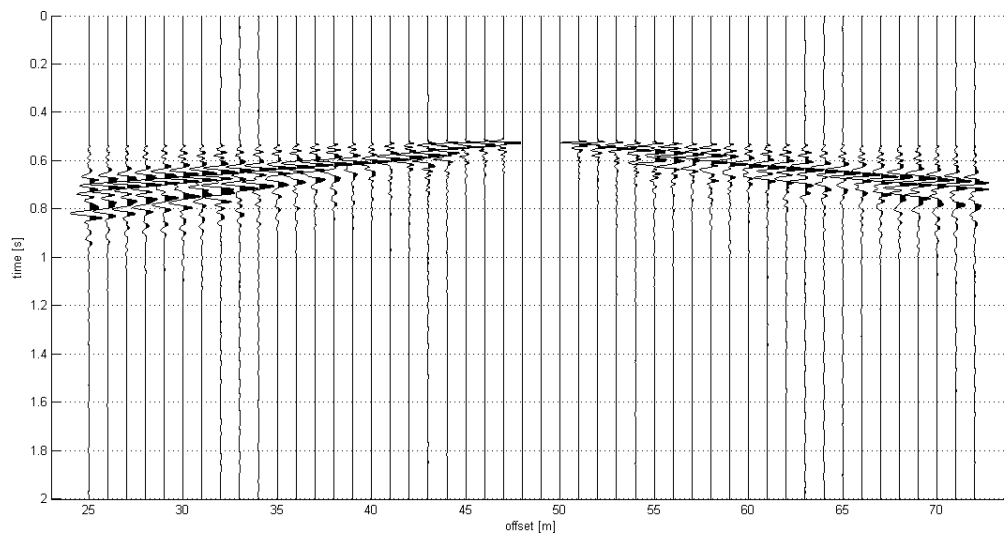


**File number:350 – 359**

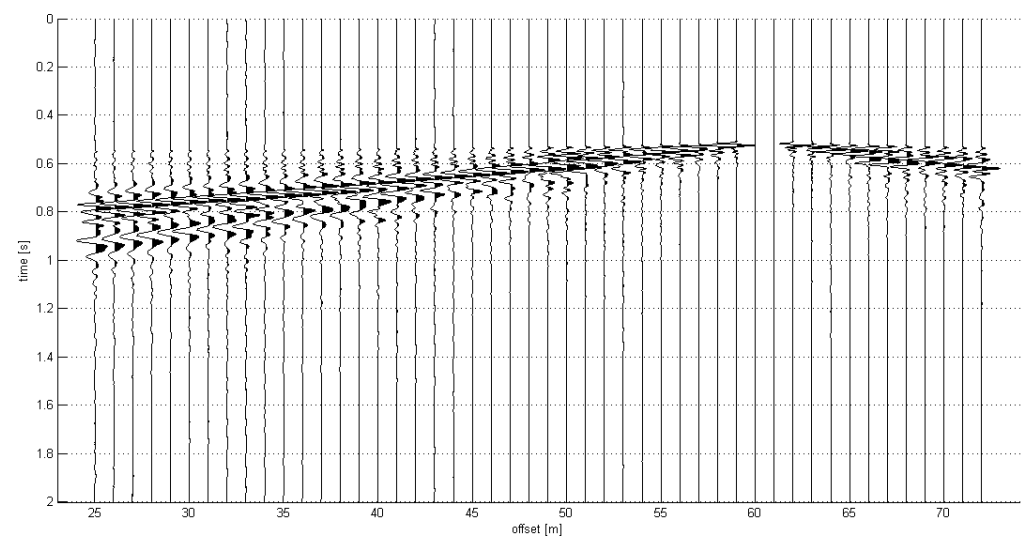
Shot: 60.5 m



Shot: 48.5 m



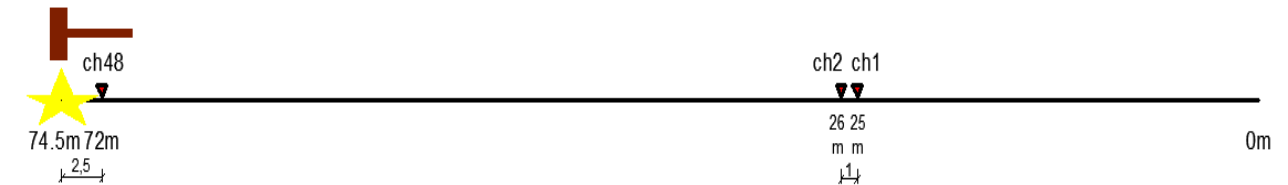
Shot: 60.5 m



**folder: MIR\_AP\_100cm**  
**Survey: active P waves – Line 1**

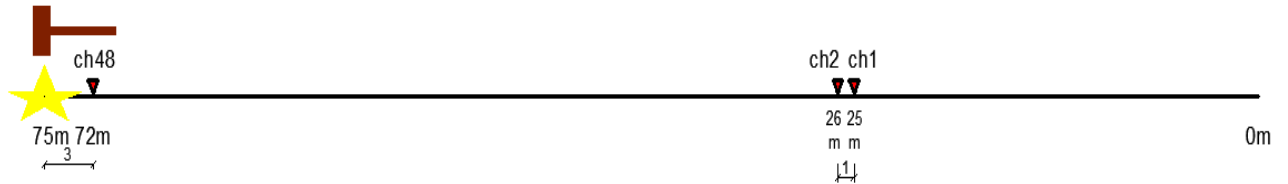
**File number:360 – 371**

**Shot: 74.5 m**

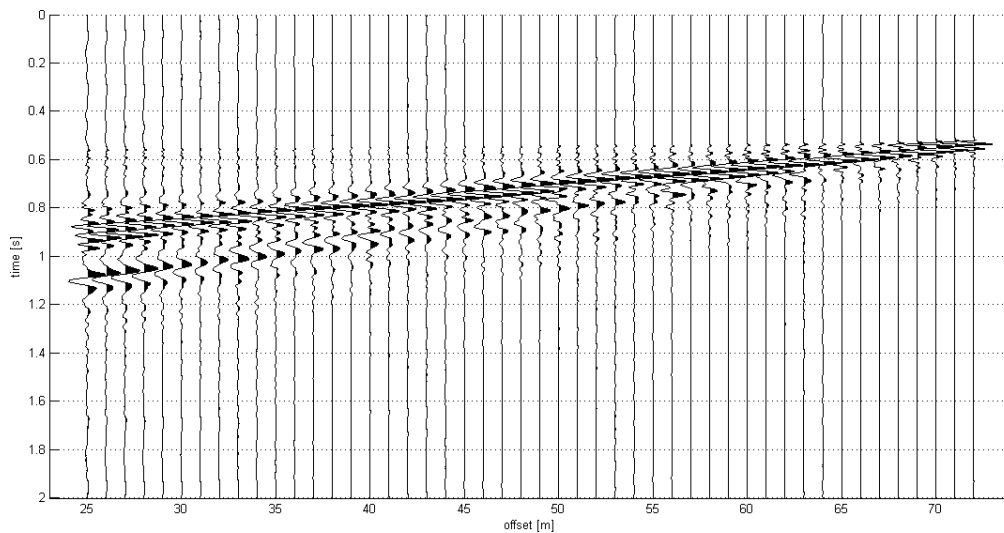


**File number:372 – 382**

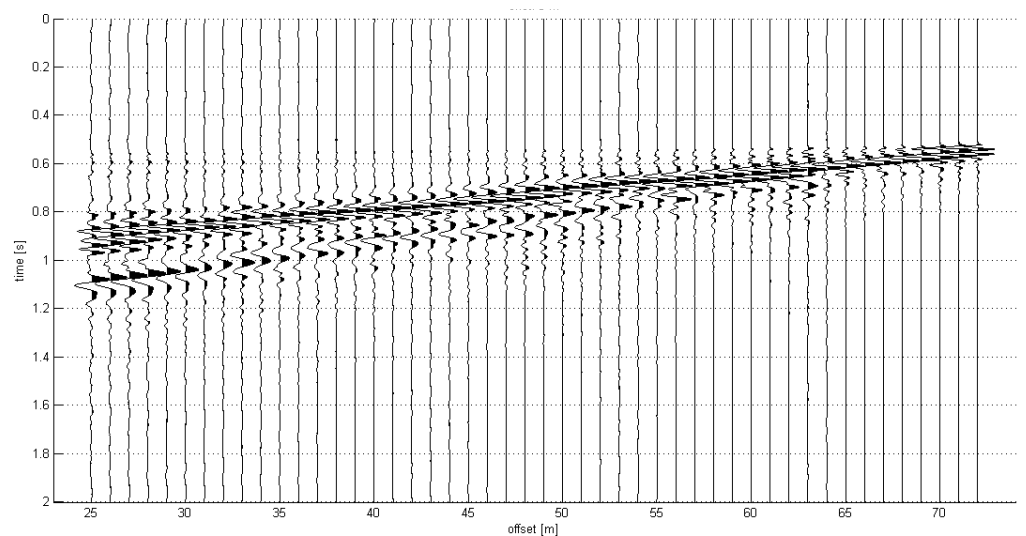
**Shot: 75 m**



**Shot: 74.5 m**



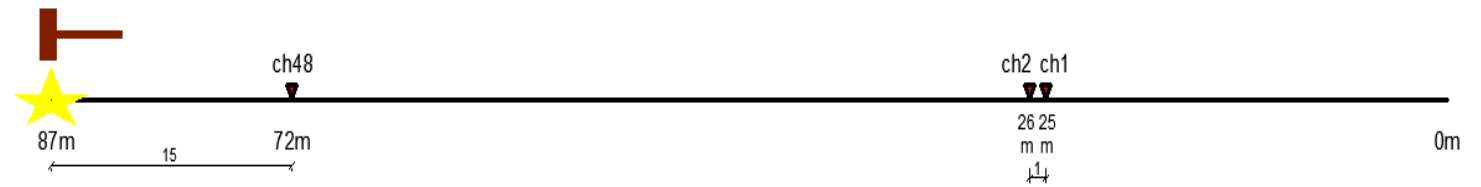
**Shot: 75 m**



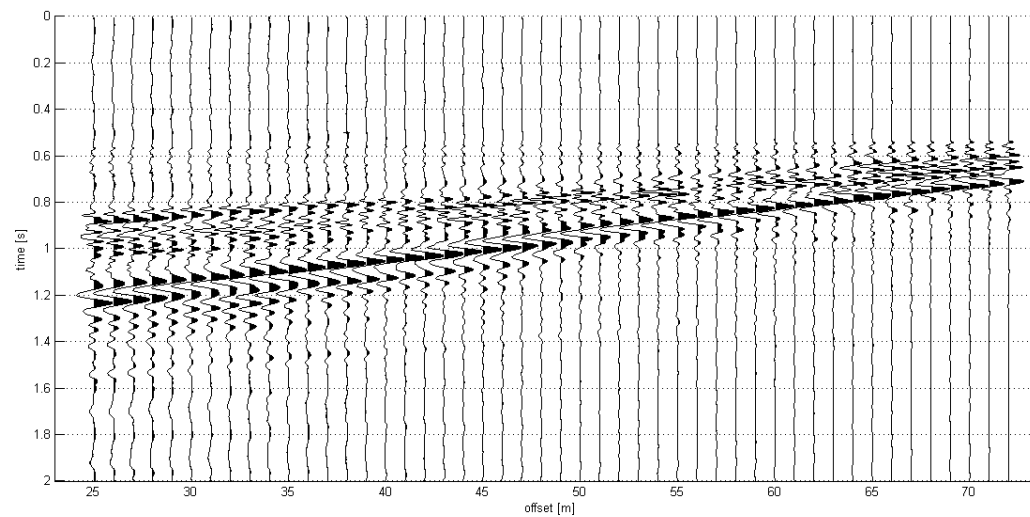
folder: MIR\_AP\_100cm  
Survey: active P waves – Line 1

File number:383 – 392

Shot: 87 m



Shot: 87 m



**folder: MIR\_AP\_200cm**  
**Survey: active P waves – Line 1**

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

$\Delta x = 2$  m

Number of channels = 48

1° channel = 14 m

Last channel = 108 m

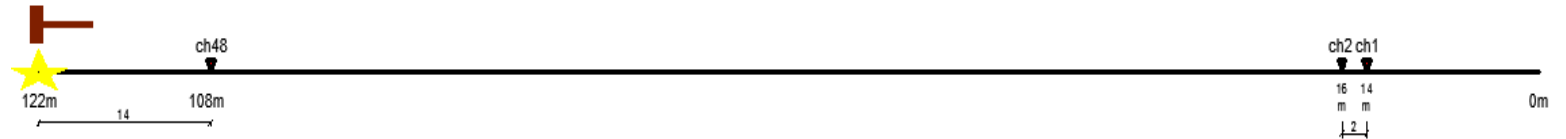
**NOTE:** farmer with tractor in the  
neighbouring field

File number	Shot location [m]	note
400 – 419	122	
420 – 439	112	
440 – 459	112.5	The shot location recorded in the files is wrong
460 – 469	85	
470 – 479	61	
480 – 489	37	
490 – 499	10.5	
500 – 509	10	

**folder: MIR\_AP\_200cm**  
**Survey: active P waves – Line 1**

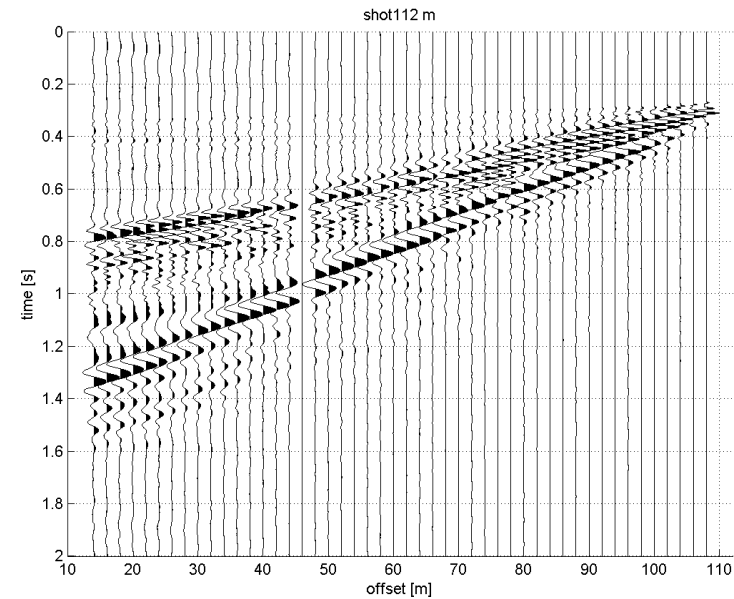
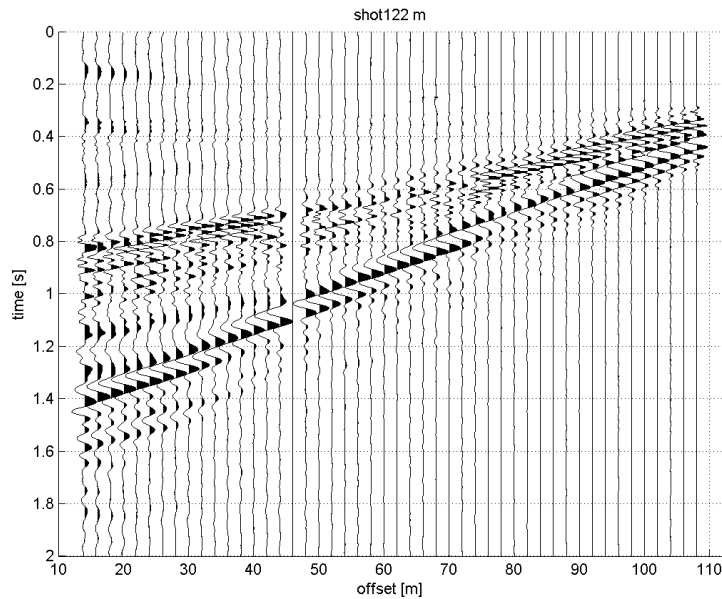
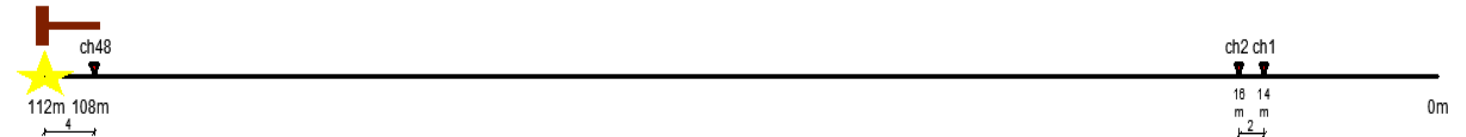
**File number:400 – 419**

Shot: 122 m



**File number:420 – 439**

Shot: 112 m



**folder: MIR\_AP\_200cm**  
**Survey: active P waves – Line 1**

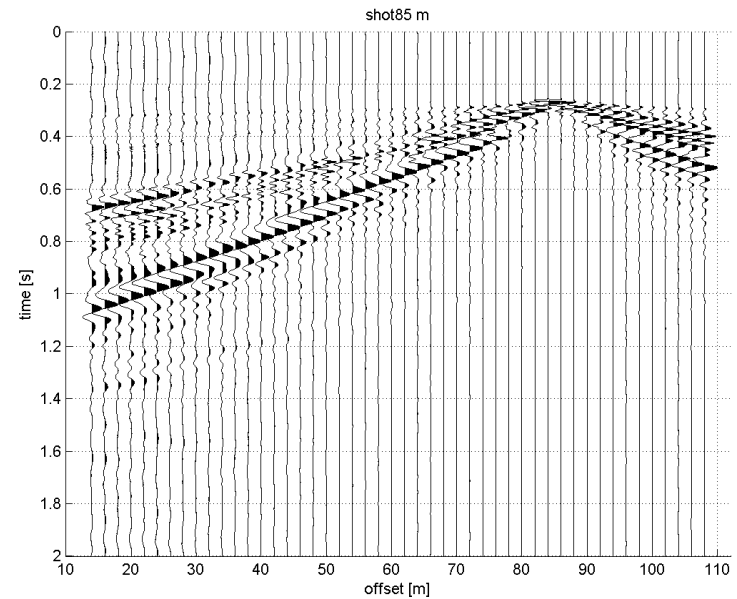
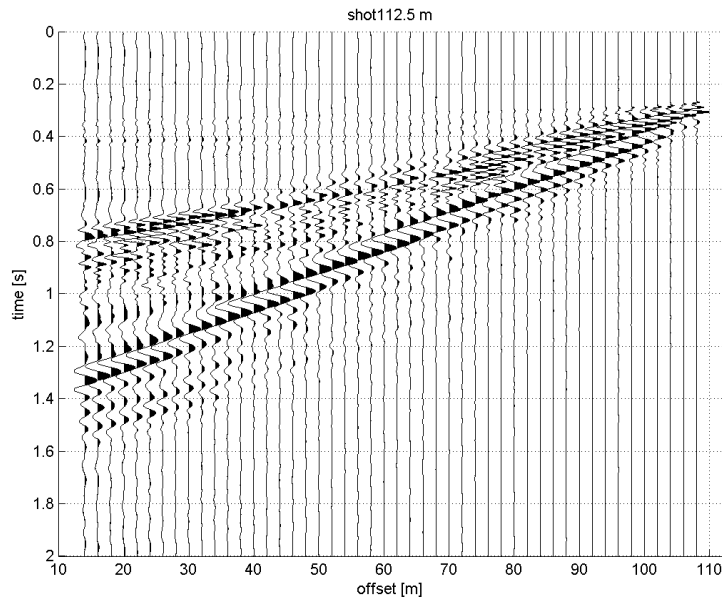
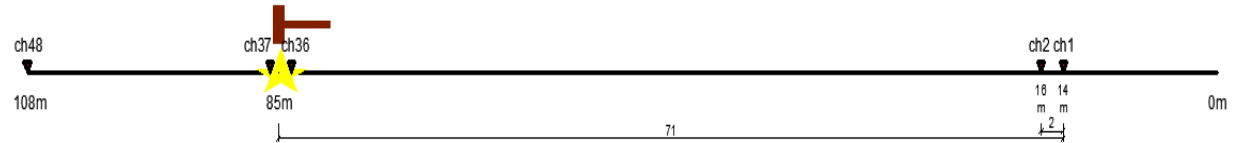
**File number:440 – 459**

Shot: 112.5 m

Warning: the shot location recorded in the files is wrong

**File number:460 – 469**

Shot: 85 m

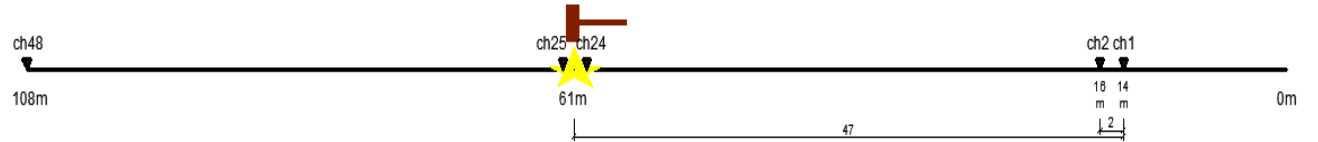




**folder: MIR\_AP\_200cm**  
**Survey: active P waves – Line 1**

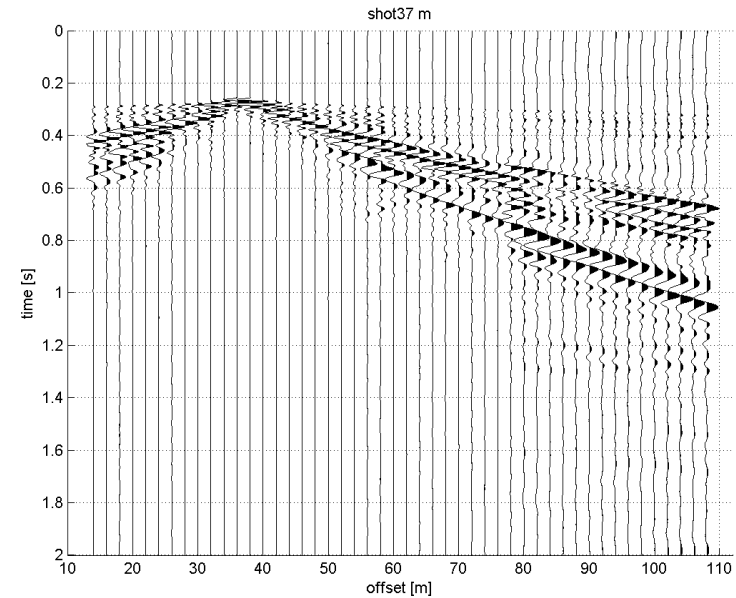
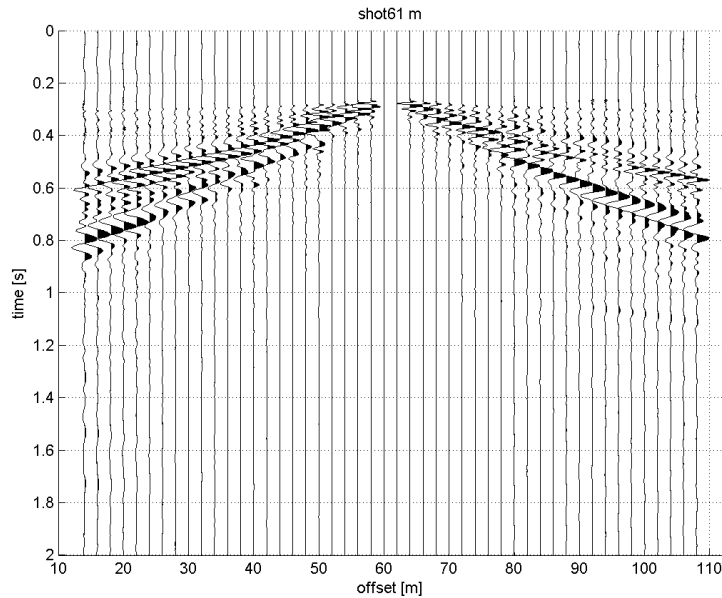
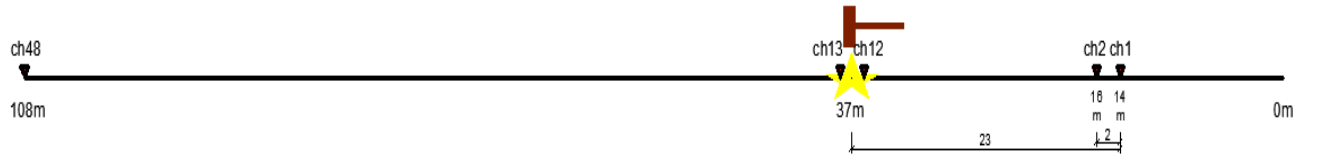
**File number:470 – 479**

Shot: 61 m



**File number:480 – 489**

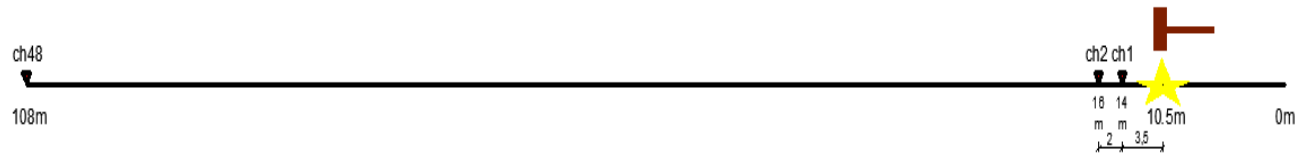
Shot: 37 m



**folder: MIR\_AP\_200cm**  
**Survey: active P waves – Line 1**

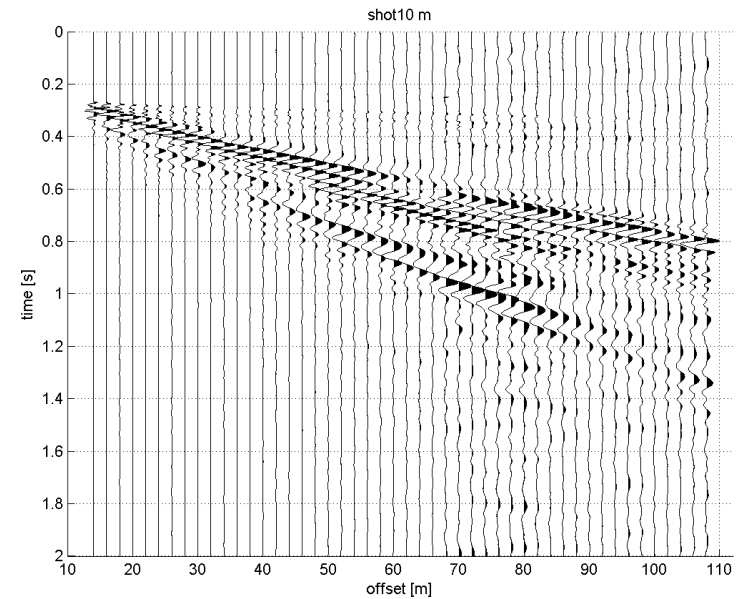
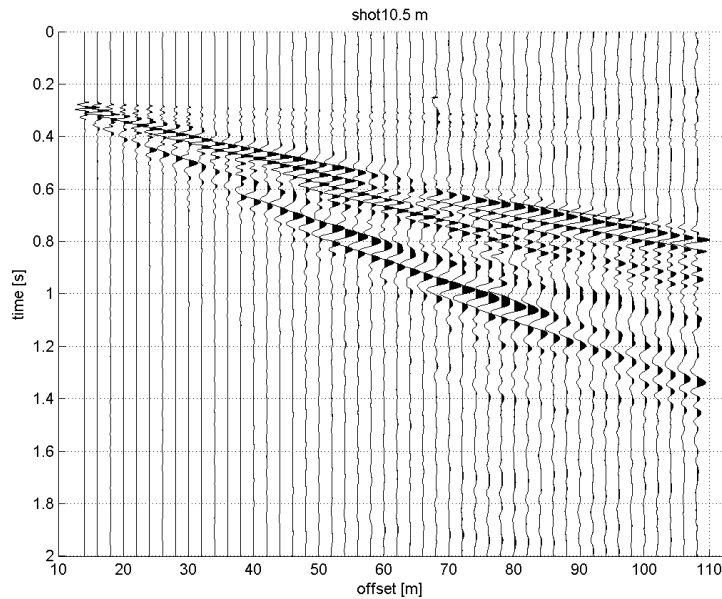
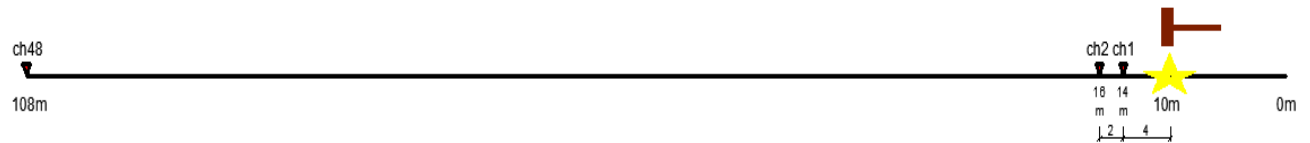
**File number:490 – 499**

Shot: 10.5 m



**File number:500 – 509**

Shot: 10 m



**folder: MIR\_NO\_200cm**  
**Survey: Ambient Noise – Line 1**

Seismograph: Geode (Geometrics)  
Geophones: vertical geophones (4.5 Hz)  
Source: Ambient Noise

Acquisition parameters:

T = 524 s

$\Delta t$  = 8 ms

Pretrig = 0 ms

$\Delta x$  = 2 m

Number of channels = 48

1<sup>o</sup> channel = 14 m

Last channel = 108 m

File number	Shot location [m]	note
510 – 511	-	

**NOTE:** farmer with tractor in the  
neighbouring field

# folder: MIR\_NO\_200cm

## Survey: Ambient Noise – Line 1

File number:510 – 511

