

# B P i a n o e r a t i v o

## COMUNE DI VOLTERRA

**Il Sindaco:** Giacomo Santi

**L'assessore al Governo del Territorio:** Roberto Castiglia

**Il Responsabile del Procedimento:** arch. Alessandro Bonsignori

**Il Garante della Comunicazione:** geom. Vinicio Ceccarelli

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responsabile incaricato: arch. Antonio Mugnai

arch. Roberta Ciccarelli

**Aspetti geologici :**

geol. Emilio Pistilli

**Aspetti idraulici:**

ing. Jacopo Taccini

### INDAGINI GEOLOGICHE DI SUPPORTO ALLA PIANIFICAZIONE DEL TERRITORIO

Allegato <b>2</b>	INDAGINI GEOFISICHE EFFETTUATE NEL 2008 Studio geologico del versante sud di Volterra
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ANTONIO MUGNAI ARCHITETTO

**GEOPROGETTI**  
Studio Associato



# INDAGINE GEOFISICA NEL COMUNE DI VOLTERRA

## RELAZIONE TECNICA

IGeA sas

Dott. Geol. Guglielmo Braccesi

1.0	12/09/08	C:/Documenti/2008/sas 2008/20_08_Comune di Volterra geofisica/ Relazione.doc					
REV.	DATA	DESCRIZIONE	REDATTO	CONTR.	AFFRANTO	AUTOR.	



## PREMESSA

Su incarico del Comune di Volterra, la soc. IGeA s.a.s. di Guglielmo Braccesi e C. è stata incaricata di svolgere un'indagine sismica nel territorio comunale. In totale sono state realizzate 20 linee con acquisizione delle onde P ed Sh, di lunghezza pari a 120 m, delle quali 10 a 24 canali e 10 a 48 canali.

La prova consiste nel produrre sulla superficie del terreno, in prossimità del sito da investigare, sollecitazioni dinamiche verticali per le onde P ed orizzontali per la generazione di onde Sh e nel registrare le vibrazioni prodotte, sempre in corrispondenza della superficie, a distanze note e prefissate mediante sensori a componente rispettivamente verticale ed orizzontale.

L'apparecchiatura utilizzata per questo tipo di prova è composta delle seguenti parti: sistema sorgente; sistema di ricezione; sistema di acquisizione dati; trigger.

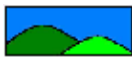
Per le linee a 24 canali, il sistema di ricezione è costituito da 24 geofoni verticali per le onde P e da 24 geofoni orizzontali per le onde Sh, con frequenza propria di 10 Hz, posizionati ad una distanza intergeofonica  $d$  pari a 5 m.

Per le linee a 48 canali il sistema di ricezione è costituito da 48 geofoni verticali per le onde P e da 48 geofoni orizzontali per le onde Sh, con frequenza propria di 10 Hz, posizionati ad una distanza intergeofonica  $d$  pari a 2.5 m.

Il trigger consiste in un circuito elettrico che viene chiuso nell'istante in cui il grave colpisce la base di battuta, consentendo ad un condensatore di scaricare la carica precedentemente immagazzinata e la produzione di un impulso che viene inviato a un sensore collegato al sistema di acquisizione dati; in questo modo è possibile individuare e visualizzare l'esatto istante in cui la sorgente viene attivata e parte la sollecitazione dinamica.

Il sistema di acquisizione dati è un sismografo marca AMBROGEO, modello ECHO 12/24/48, sistema multicanale (12/24/48 canali) in grado di registrare su ciascun canale in forma digitale le forme d'onda e di conservarle su memoria di massa dinamica a 16 bit.

Esso è collegato a ciascuno dei trasduttori di velocità al trigger e consente quindi di registrare in forma numerica e visualizzare come tracce su un apposito monitor le vibrazioni a partire dall'impulso inviato dal trigger.



Le indagini geosismiche sono state realizzate avvalendosi del metodo sismico a rifrazione, che utilizza la determinazione della velocità di propagazione delle onde nel sottosuolo.

Tali onde sono generate, e si propagano nel terreno, quando quest'ultimo è sottoposto a sollecitazioni sia di tipo naturale sia artificiale (esplosioni, mazze battenti, ecc.).

La tecnica di prospezione sismica a rifrazione consiste nella misura dei tempi di primo arrivo delle onde sismiche, generate in un punto in superficie (punto di sparo), in corrispondenza di una molteplicità di punti disposti allineati sulla superficie topografica (geofoni). Lo studio della propagazione delle onde sismiche consente di valutare le proprietà meccaniche e fisiche dei terreni e la compattezza dei terreni da queste attraversati.

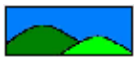
Mediante questo tipo di indagine si può risalire alla probabile composizione litologica di massima dei terreni, al loro grado di fratturazione, alla geometria delle prime unità sottostanti la coltre superficiale, alla profondità cui si trova la roccia in posto ("bedrock"), alla sua forma e talora, in terreni alluvionali, alla profondità della falda freatica.

L'elaborazione dei dati sismici con un completo modello matematico bidimensionale appoggiato da procedure iterative consente di massimizzare la risoluzione e il dettaglio di ricostruzione del modello di velocità attribuito al terreno in esame. Utilizzando quindi le distanze tra il punto di energizzazione e quello di ricezione e i tempi di primo arrivo dei segnali sismici, sono state ricavate le dromocrone (curve tempi-distanze), dalle quali si risale, tramite opportuno programma di calcolo, alle velocità reali nei singoli strati, al loro spessore, profondità, forma ed inclinazione.

Per registrare simultaneamente gli impulsi sismici rilevati dai geofoni è necessario l'utilizzo di una strumentazione elettronica multicanale, a bassissimo rumore interno, ad alta velocità di campionamento, dotata di supporto magnetico per la registrazione dei dati ottenuti dopo opportuna amplificazione, filtraggio e conversione analogico/digitale.

Per registrare le vibrazioni del terreno sono stati utilizzati geofoni del tipo elettromagnetico a bobina mobile con frequenza caratteristica di 10 Hz, che consentono di convertire in segnali elettrici gli spostamenti che avvengono nel terreno. Questi ricevitori erano collegati al sismografo tramite degli appositi cavi multipolari.

Per generare le onde sismiche è stata utilizzata un apposito energizzatore sismico con apparato trigger che trasmette l'impulso al sismografo per consentire una registrazione sincronizzata al tempo 0.



L'acquisizione dei dati è avvenuta dopo le opportune verifiche di corretto funzionamento della strumentazione e del circuito di time-break (tempo 0). Per controllare la qualità dei dati acquisiti ogni energizzazione è stata visualizzata immediatamente ed eventualmente ripetuta o calibrata secondo le amplificazioni volute.

Il software **Rayfract** (Intelligent Resource inc.) supporta l'interpretazione di indagini sia in onde P che in onde S e consente la ricostruzione della geometria dei rifrattori con la sismica a rifrazione tradizionale e la realizzazione di modelli di velocità del sottosuolo con tecniche tomografiche.

La metodologia richiede la presenza di sorgenti di energia posizionate ai due estremi e internamente allo stendimento. Infatti, per poter ricostruire l'andamento dell'interfaccia di strato lungo tutto lo stendimento, è necessario che i segnali provenienti dal singolo rifrattore siano ricevuti da tutti i geofoni messi in opera.

L'interpretazione del grafico distanza-tempi prevede due passaggi:

1. la ricostruzione delle dromocrone relative ai singoli strati;
2. la stima delle velocità e delle profondità di ogni singolo rifrattore.

La ricostruzione delle dromocrone relative ad ogni strato, seguendole, se possibile, da un estremo all'altro dello stendimento, avviene assemblando insieme tratti di dromocrone relative a sorgenti differenti, ma i cui segnali provengono dallo stesso rifrattore. Ciò andrà fatto sia per il tiro diretto che per quello coniugato.

Questo lavoro di ricostruzione è la parte più delicata dell'interpretazione, in quanto l'attribuzione di dromocrone appartenenti ad un rifrattore ad un altro può dare origine a grossolani errori nel modello finale del terreno. Esistono comunque alcune semplici regole che possono guidare l'operatore nella scelta.

Dromocrone appartenenti allo stesso rifrattore devono avere un andamento subparallelo, cioè la distanza verticale fra esse deve rimanere più o meno costante. Le due dromocrone ricostruite per un dato rifrattore, quella relativa al tiro diretto e quella corrispondente al tiro coniugato, dovranno avere tempi di estremità identici, con uno scarto massimo di pochi punti percentuali ( $T_e = T_e'$ ); per tempo di estremità s'intende il tempo di arrivo del segnale associato al rifrattore considerato all'estremità opposta dello stendimento. I tempi intercetti delle dromocrone ricostruite relative al rifrattore considerato devono essere gli stessi.



Le tecniche di inversione dei dati permette di ottenere dei profili 1D "profondità-velocità" dai dati di traveltime, contenuti in un file ASCII e consistenti in triplette offset orizzontale/profondità/velocità.

Il metodo tratta reali situazioni geologiche come gradienti di velocità, incrementi lineari di velocità con la profondità, inversioni di velocità, ecc.

È necessario importare i dati sismici, le informazioni a proposito della geometria e il picking dei traveltime. Per ciascuna delle stazioni CMP viene elaborata una curva dei traveltime che viene automaticamente ripartita in corti segmenti. Ciascuno di questi contiene i primi arrivi criticamente rifratti (con i corrispettivi raggi che ritornano verso la superficie) in un ipotetico strato. Una funzione individuale del gradiente di velocità è determinata per ciascuno di questi strati, sulla base dei primi arrivi misurati.

Le triplette ASCII saranno scritte per ogni ipotetico strato di interfaccia. Il valore di velocità di tali triplette sarà il minimo o la media tra la velocità di fondo dello strato superiore e la velocità della parte alta dello strato inferiore.

I profili sono contenuti in un file ASCII che può poi essere elaborato (con programmi tipo Golden Software Surfer) per produrre mappe delle linee di intervallo di velocità o isolinee di velocità.

Successivamente, con l'inversione 2D si ottimizzano i modelli di velocità ottenuti con il metodo Delta t-V. Questa tecnica si basa sulla modellizzazione del percorso di un fascio di raggi per ogni primo arrivo, a differenza della tomografia convenzionale che utilizza il percorso di un solo raggio sismico per ogni primo arrivo.



IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

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FOGLIO

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IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

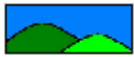
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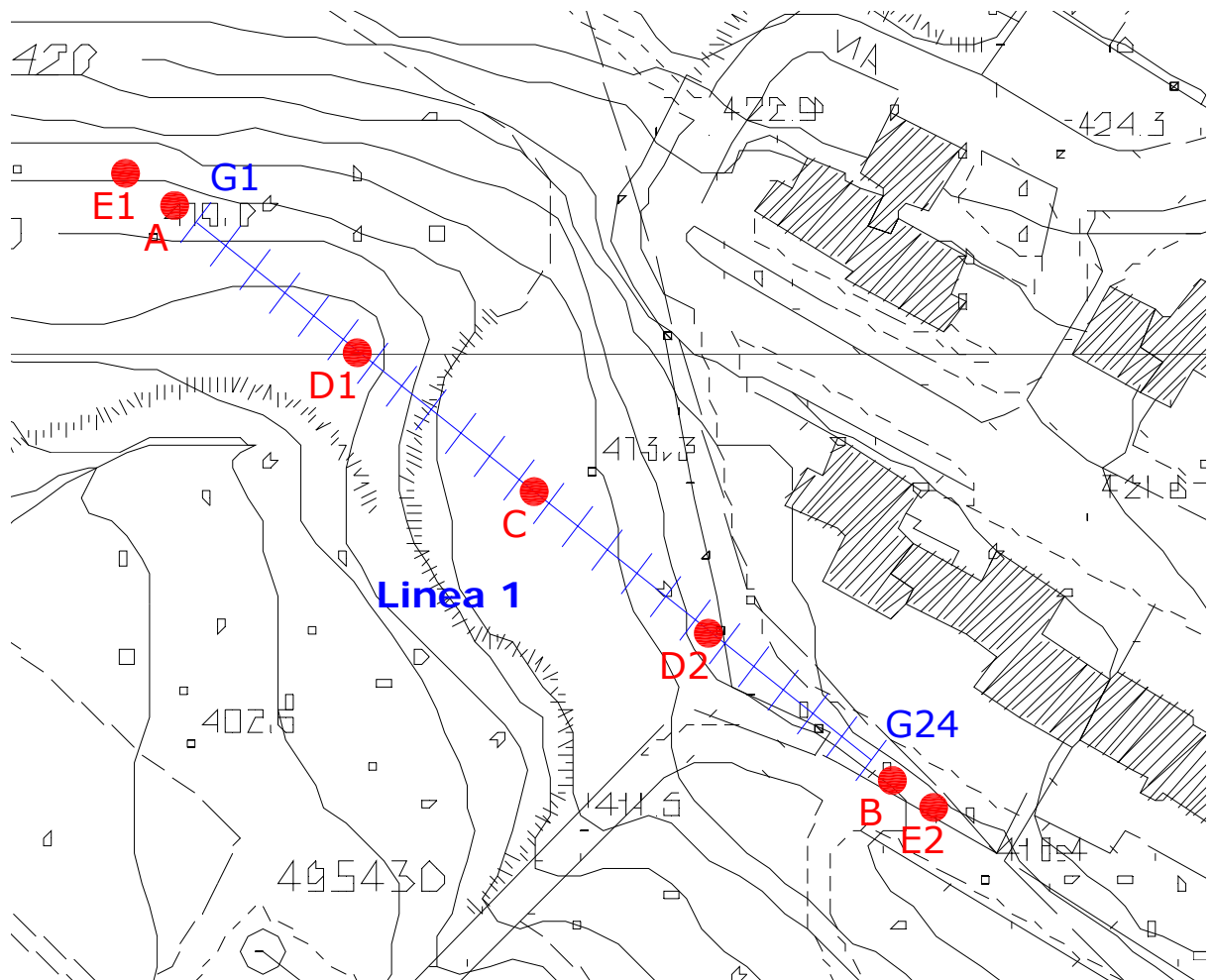
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**LINEA SISMICA 1**



*Ubicazione delle linea - scala 1:1000*



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	411.00
2	5	5	410.00
3	10	5	409.00
4	15	5	408.00
5	20	5	407.50
6	25	5	407.50
7	30	5	408.00
8	35	5	410.00
9	40	5	412.00
10	45	5	412.25
11	50	5	412.50
12	55	5	412.75
13	60	5	413.50
14	65	5	413.75
15	70	5	414.00
16	75	5	414.00
17	80	5	416.00
18	85	5	416.00
19	90	5	417.00
20	95	5	417.00
21	100	5	417.00
22	105	5	417.00
23	110	5	417.00
24	115	5	416.00

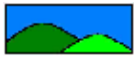
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650420	4806610
<i>Geofono n. 24 (G24)</i>	1650520	4806540



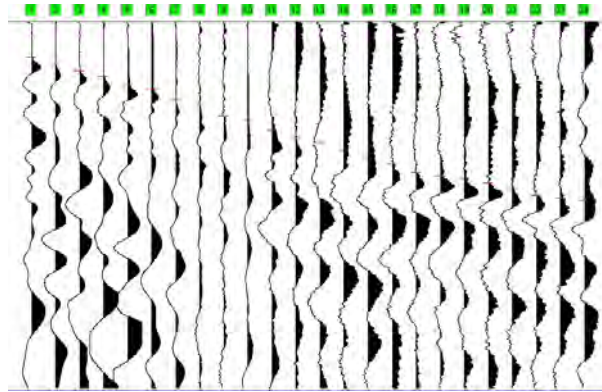
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	412.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	411.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	407.50
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	413.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	417.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	418.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	418.00

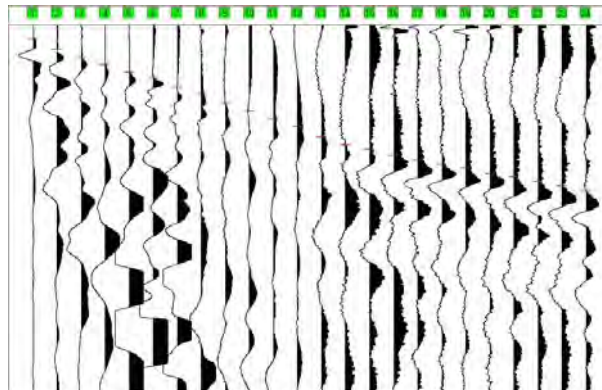


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

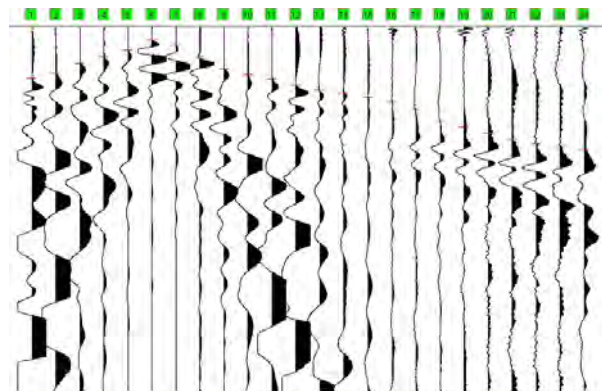
TIRO ESTERNO SX E1

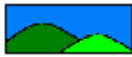


TIRO ESTREMO SX A



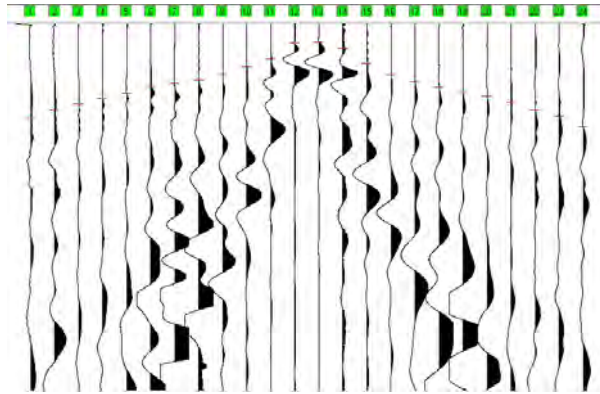
TIRO INTERMEDIO SX D1



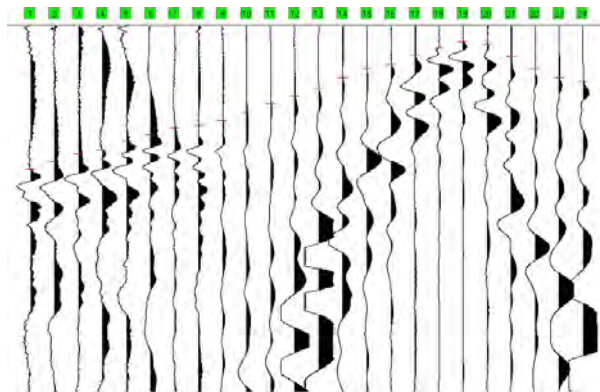


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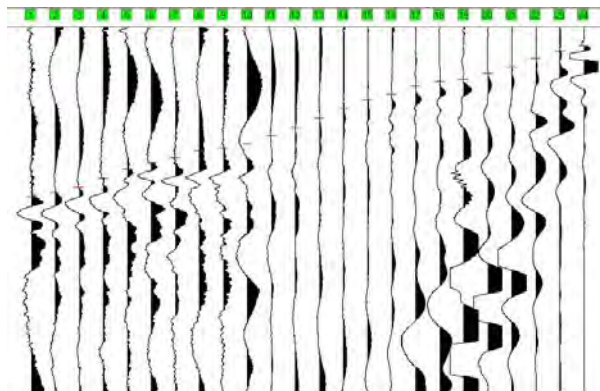
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



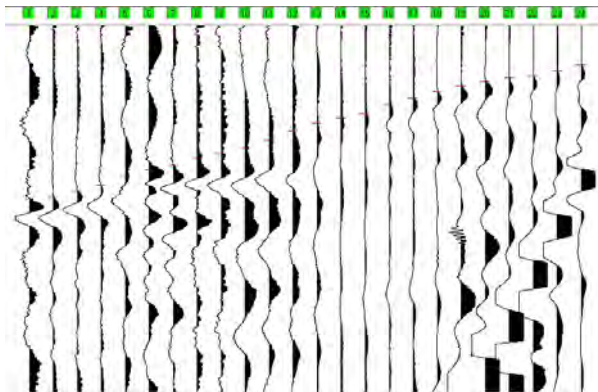
TIRO ESTREMO DX B





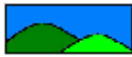
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



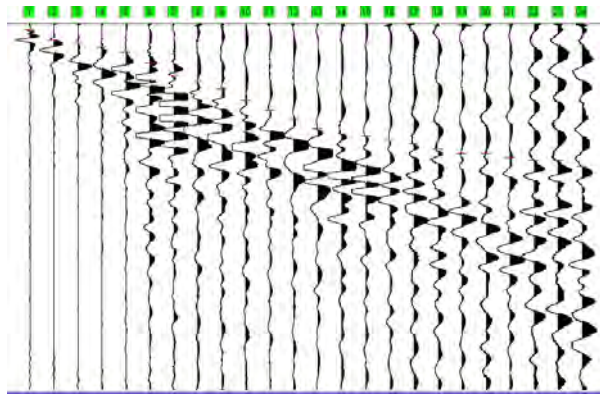
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	19.50	7.10	28.40	52.60	79.70	94.20	96.40
2	23.30	13.10	25.90	47.90	75.60	92.10	95.50
3	27.00	17.80	20.30	44.50	71.30	89.10	92.10
4	30.10	21.60	16.50	41.50	69.20	84.10	88.70
5	34.80	25.90	12.70	38.50	63.70	79.00	84.10
6	37.20	29.30	7.10	34.80	60.70	75.60	80.20
7	43.20	34.40	10.10	33.10	56.80	72.60	77.70
8	46.20	37.80	16.50	31.40	55.10	68.80	73.40
9	52.10	42.70	23.30	28.40	52.60	67.10	71.30
10	54.70	47.50	26.30	23.70	47.90	64.90	68.30
11	59.80	52.20	28.70	19.50	43.20	60.20	63.70
12	64.10	56.00	32.10	10.50	38.90	55.60	58.60
13	67.10	62.00	35.10	10.10	35.10	50.50	54.30
14	71.30	66.20	36.50	13.50	28.70	45.00	51.30
15	75.60	68.80	38.90	22.00	23.70	40.20	48.70
16	79.20	72.20	41.50	28.40	21.60	37.20	44.00
17	83.50	75.10	45.80	32.10	16.50	32.70	40.20
18	85.60	77.30	52.10	35.10	10.40	30.10	36.50
19	86.90	79.40	55.60	38.10	8.80	28.70	33.40
20	89.50	82.40	59.00	40.20	10.10	25.30	31.00
21	92.50	84.10	62.40	43.60	16.90	22.00	28.70
22	96.30	86.50	64.90	47.90	23.70	17.30	27.60
23	98.00	89.10	66.60	51.30	28.70	13.10	25.00
24	99.30	92.10	67.90	57.30	31.00	10.10	21.60

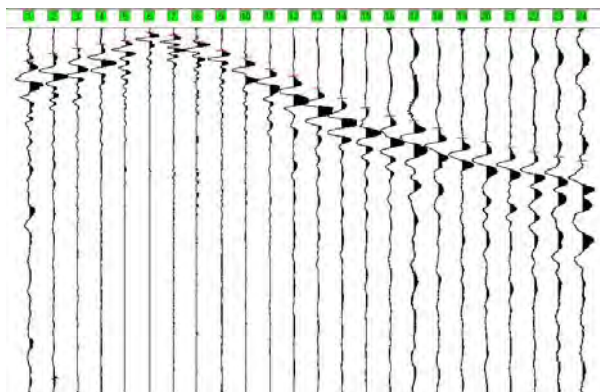


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

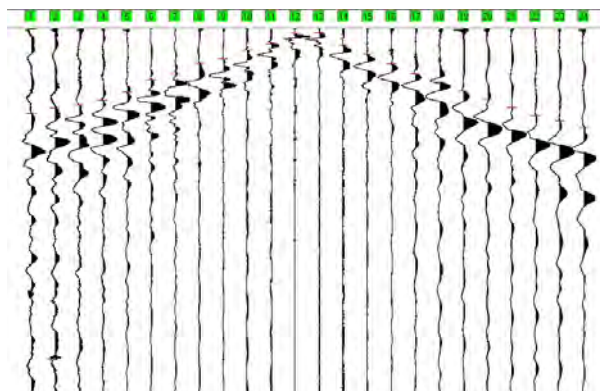
TIRO ESTREMO SX A

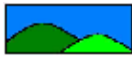


TIRO INTERMEDIO SX D1



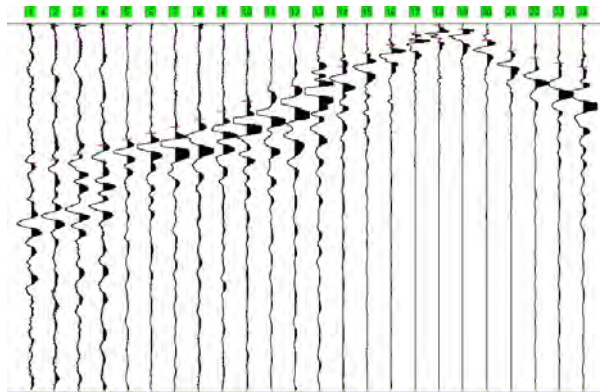
TIRO CENTRALE C



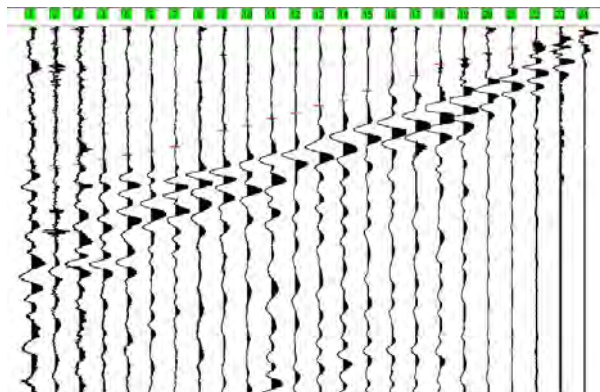


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

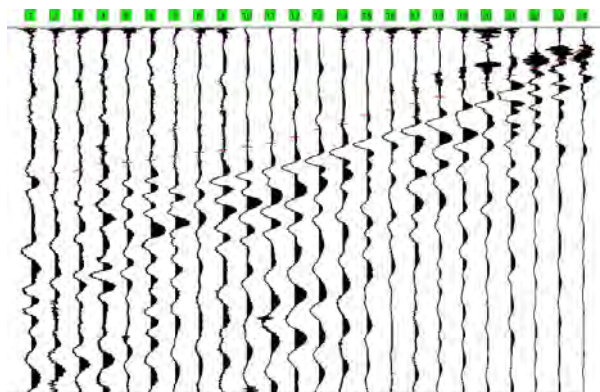
TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B



TIRO ESTERNO DX E2



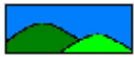




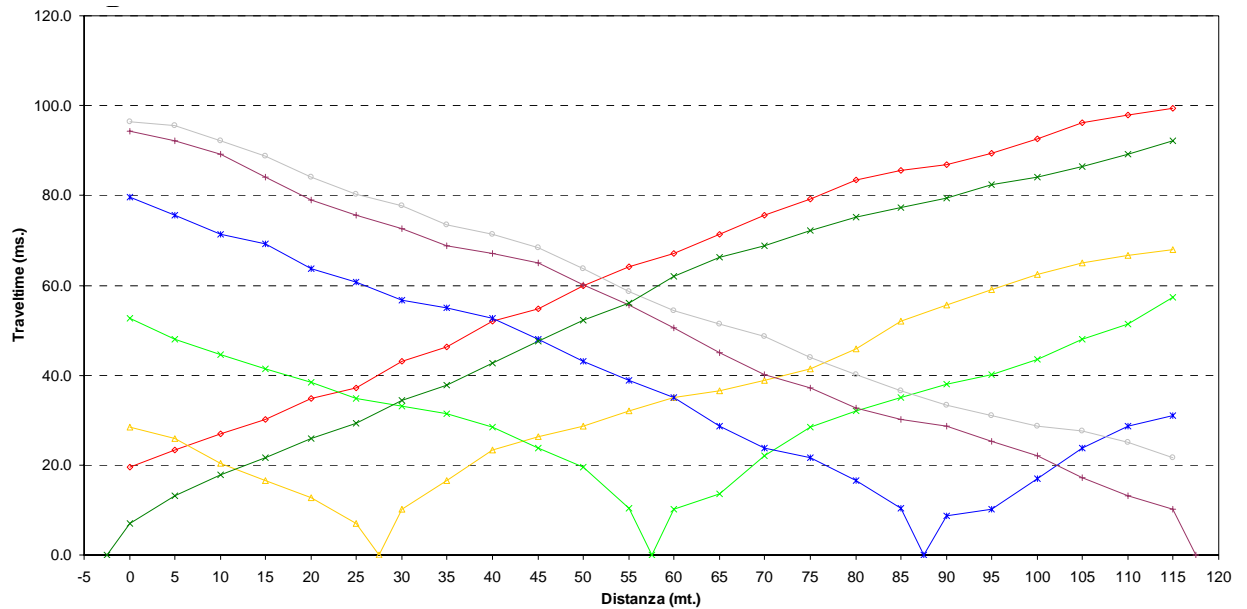
## TEMPI DI PROPAGAZIONE ONDE Sh

**Tempo di arrivo**

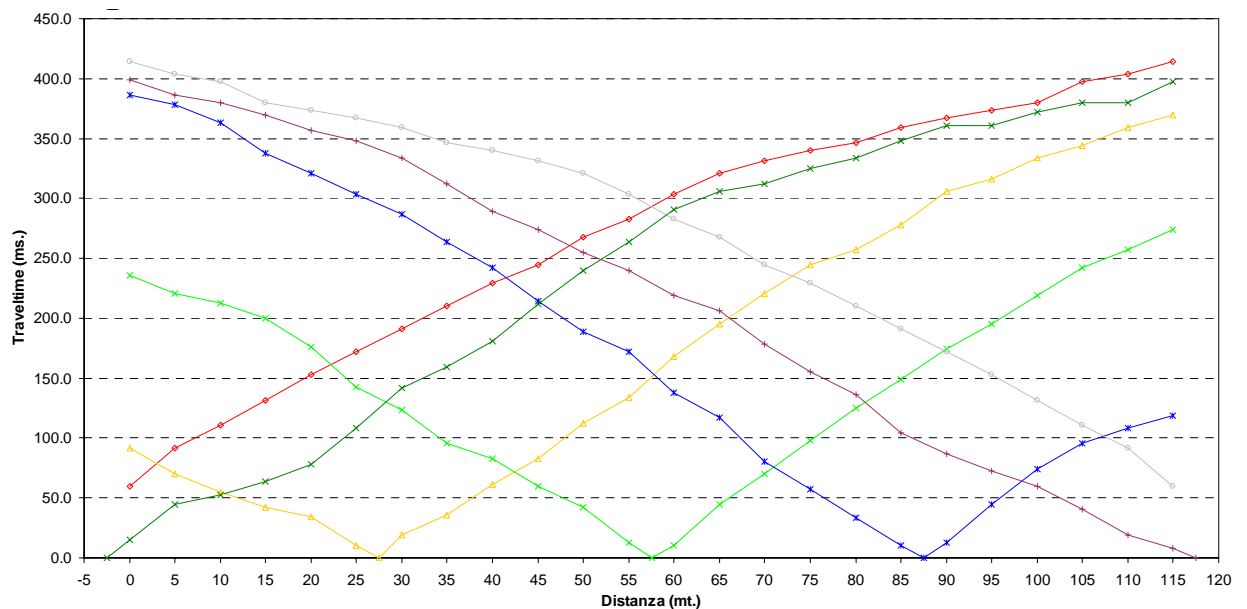
<b>geofono</b>	<b>E1</b>	<b>A</b>	<b>D1</b>	<b>C</b>	<b>D2</b>	<b>B</b>	<b>E2</b>
<b>1</b>	59.40	14.80	91.30	235.70	386.50	399.20	414.10
<b>2</b>	91.30	44.40	70.00	220.80	378.00	386.50	403.50
<b>3</b>	110.40	52.90	55.20	212.30	363.10	380.10	397.10
<b>4</b>	131.60	63.70	42.40	199.60	337.60	369.50	380.10
<b>5</b>	152.90	78.40	33.90	176.20	320.60	356.70	373.70
<b>6</b>	172.00	108.30	10.60	142.20	303.60	348.20	367.40
<b>7</b>	191.10	142.10	19.10	123.10	286.70	333.40	358.90
<b>8</b>	210.20	159.10	36.10	95.50	263.30	312.10	346.10
<b>9</b>	229.30	180.50	61.50	82.80	242.10	288.80	339.70
<b>10</b>	244.20	212.20	82.80	59.40	214.40	273.90	331.30
<b>11</b>	267.50	239.80	112.50	42.40	189.00	254.80	320.60
<b>12</b>	282.40	263.30	133.70	12.70	172.00	239.90	303.60
<b>13</b>	303.60	290.90	167.70	10.60	138.00	218.70	282.40
<b>14</b>	320.60	305.80	195.30	44.50	116.80	206.00	267.50
<b>15</b>	331.30	312.00	220.80	70.00	80.70	178.30	244.20
<b>16</b>	339.70	324.90	244.20	97.60	57.30	155.00	229.30
<b>17</b>	346.10	333.40	256.90	125.30	33.30	135.90	210.20
<b>18</b>	358.90	348.10	278.20	148.60	10.40	104.00	191.10
<b>19</b>	367.40	361.00	305.80	174.10	12.70	87.00	172.00
<b>20</b>	373.70	361.00	316.40	195.30	44.50	72.20	152.90
<b>21</b>	380.10	371.60	333.40	218.70	74.30	59.40	131.60
<b>22</b>	397.10	380.10	344.00	242.10	95.50	40.30	110.40
<b>23</b>	403.50	380.10	358.90	256.90	108.30	19.10	91.30
<b>24</b>	414.10	397.10	369.50	273.90	118.90	8.30	59.40



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





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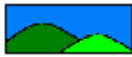
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 19

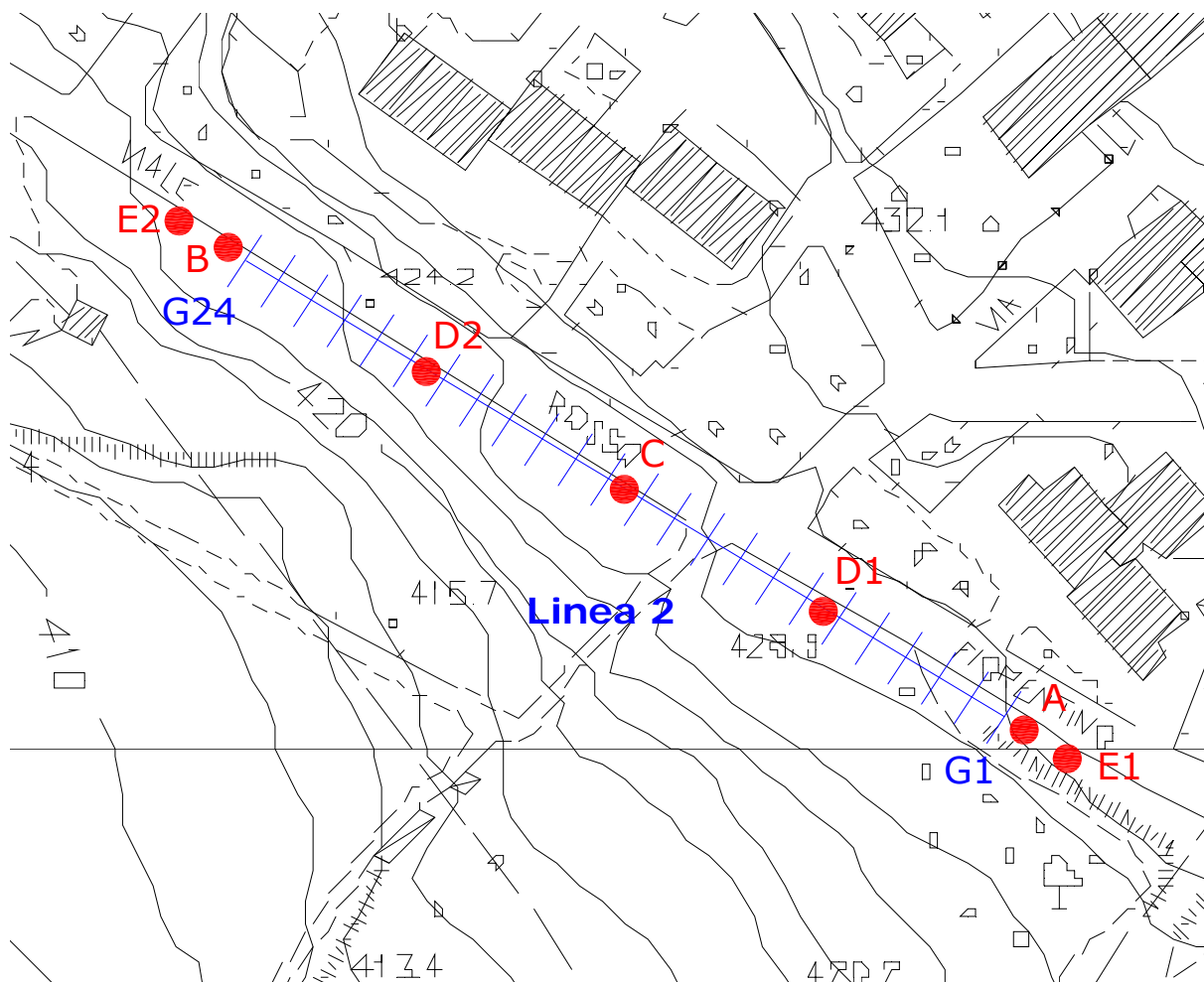


**DOCUMENTAZIONE FOTOGRAFICA LINEA 1**





### LINEA SISMICA 2



Ubicazione delle linea - scala 1: 1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	430.00
2	5	5	429.00
3	10	5	429.00
4	15	5	429.00
5	20	5	429.00
6	25	5	429.00
7	30	5	429.00
8	35	5	429.00
9	40	5	429.00
10	45	5	428.00
11	50	5	427.90
12	55	5	427.80
13	60	5	427.50
14	65	5	427.20
15	70	5	426.80
16	75	5	426.50
17	80	5	426.00
18	85	5	425.50
19	90	5	424.80
20	95	5	424.40
21	100	5	424.00
22	105	5	423.60
23	110	5	423.40
24	115	5	423.00

## COORDINATE GAUSS BOAGA DI G1 E G24

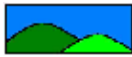
<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650742	4806400
<i>Geofono n. 24 (G24)</i>	1650638	4806460



## PUNTI DI ENERGIZZAZIONE

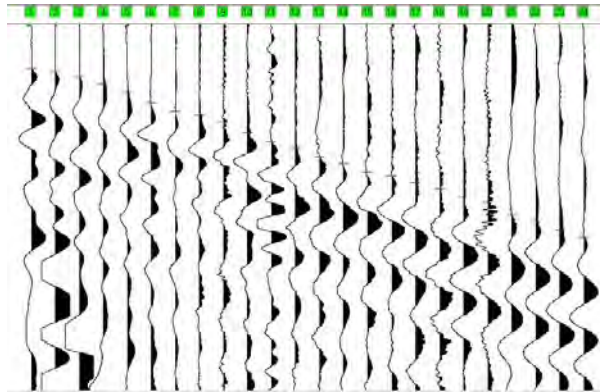
<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparato A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	431.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	430.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	429.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	427.70
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	425.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	422.60
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	422.00



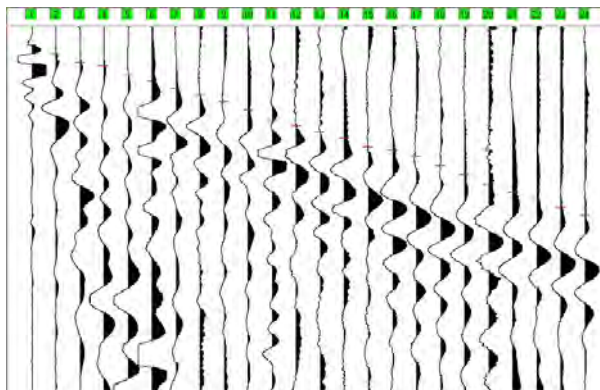


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

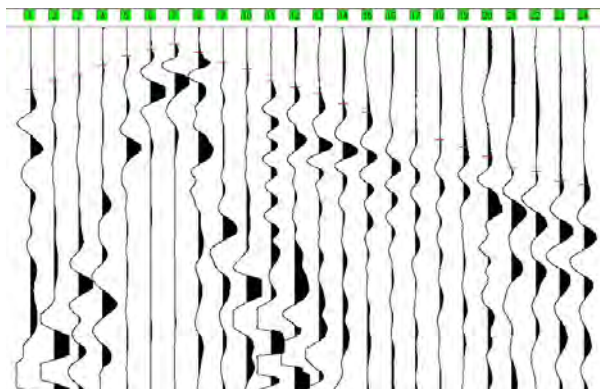
TIRO ESTERNO SX E1

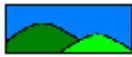


TIRO ESTREMO SX A



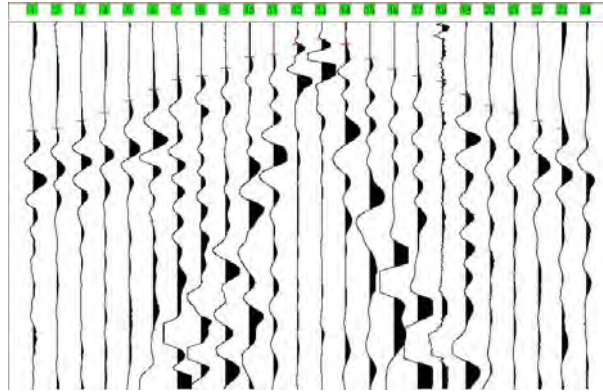
TIRO INTERMEDIO SX D1



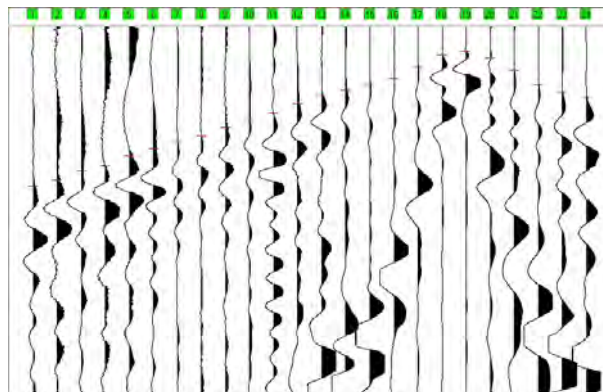


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

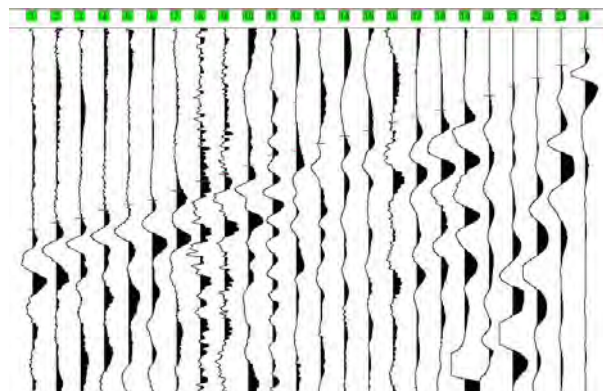
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



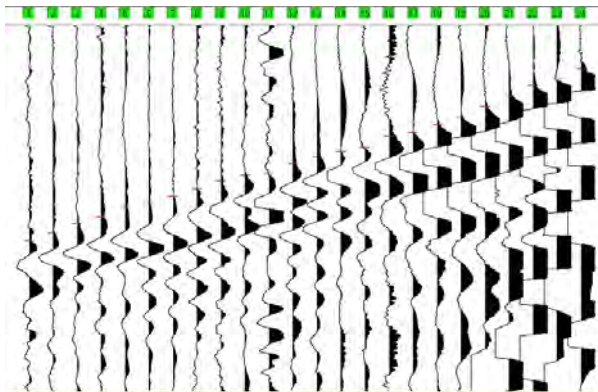
TIRO ESTREMO DX B





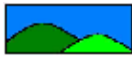
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



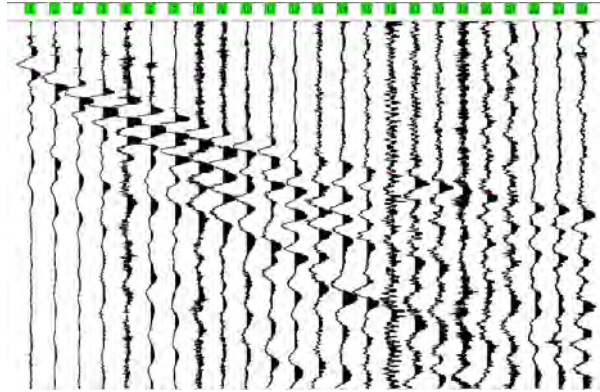
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	24.60	10.10	34.40	60.30	88.60	111.70	119.60
2	26.30	15.20	29.70	58.60	85.20	108.30	115.50
3	29.30	19.90	26.30	54.70	80.20	105.70	110.40
4	33.10	21.60	21.20	50.10	77.30	101.00	106.60
5	37.80	26.70	15.70	43.70	71.70	98.00	101.50
6	43.70	30.10	11.80	37.30	67.90	95.50	99.30
7	48.40	34.40	8.90	31.80	64.10	90.40	95.10
8	50.50	38.20	13.50	29.70	60.70	84.90	90.80
9	54.30	41.60	19.10	25.40	56.00	81.10	86.60
10	60.30	46.20	22.90	19.10	51.80	76.40	83.20
11	65.40	51.80	29.70	17.80	47.90	70.90	81.90
12	68.80	55.20	33.10	11.80	42.80	67.90	76.80
13	73.90	58.60	36.90	9.30	38.20	64.10	73.00
14	77.70	62.00	42.40	11.80	35.20	59.80	70.00
15	82.40	67.10	47.10	19.90	31.80	56.90	67.90
16	84.50	68.80	52.60	25.90	28.80	52.20	61.50
17	88.30	72.20	57.70	29.70	22.10	49.20	59.40
18	91.70	77.30	62.40	32.70	10.40	45.40	55.20
19	96.40	82.40	66.60	39.90	11.20	40.70	51.30
20	99.30	87.90	71.70	45.80	17.40	37.30	45.00
21	106.60	92.10	78.50	50.10	24.20	32.20	39.00
22	110.00	95.90	80.20	54.70	32.20	27.60	33.10
23	114.60	100.60	85.70	59.00	36.10	20.30	29.70
24	118.90	104.90	87.40	64.50	39.00	11.40	23.70

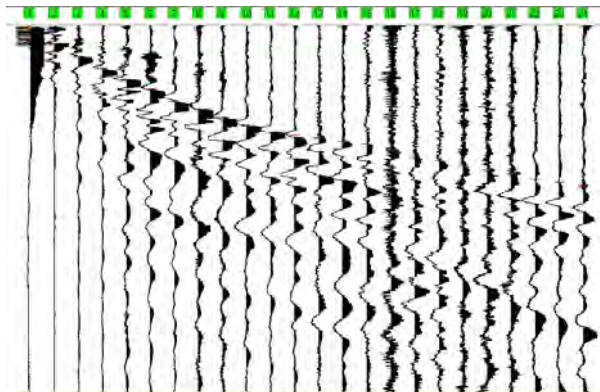


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

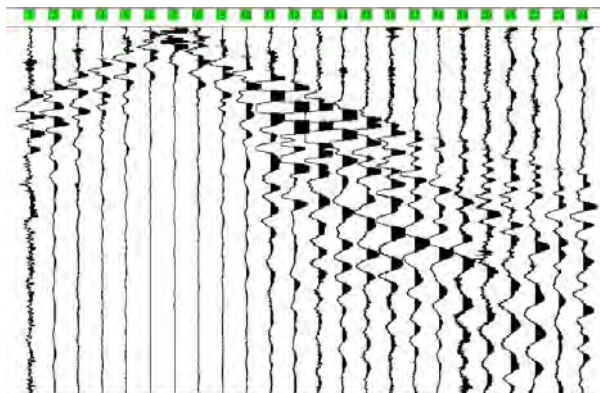
TIRO ESTERNO SX E1

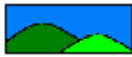


TIRO ESTREMO SX A



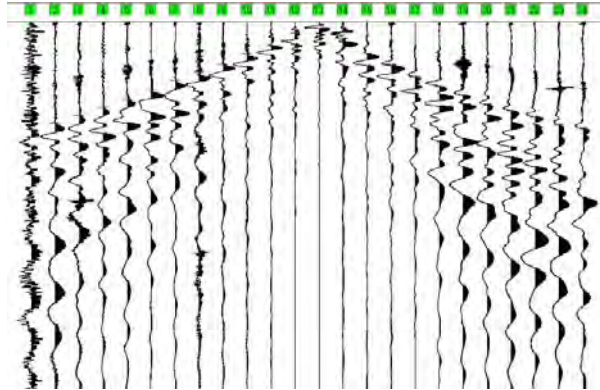
TIRO INTERMEDIO SX D1



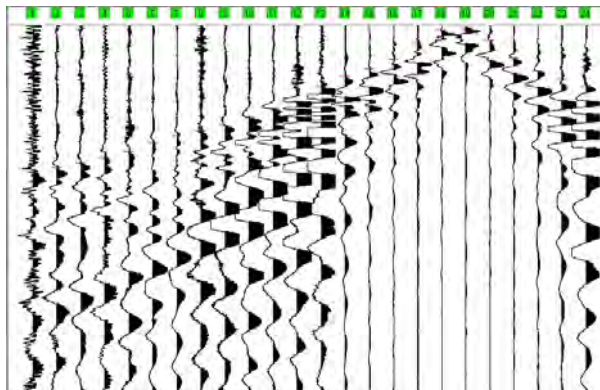


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

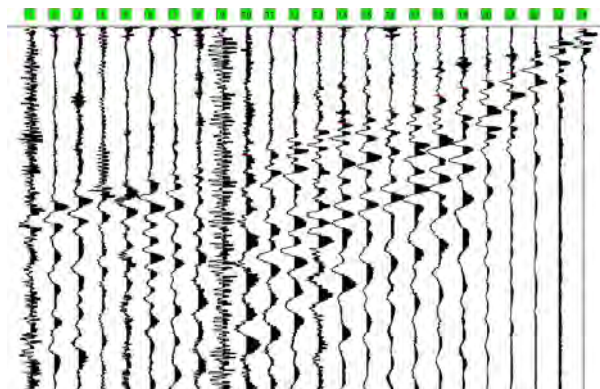
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



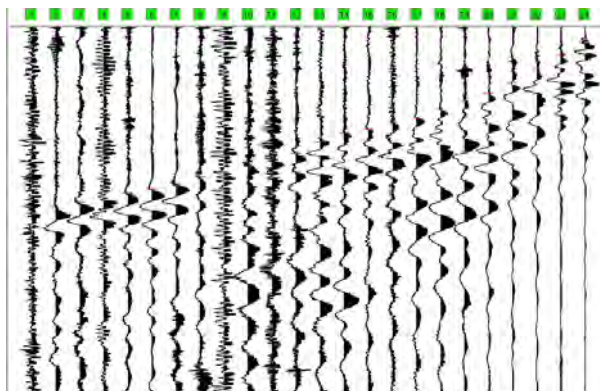
TIRO ESTREMO DX B





## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

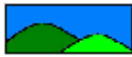
## TIRO ESTERNO DX E2



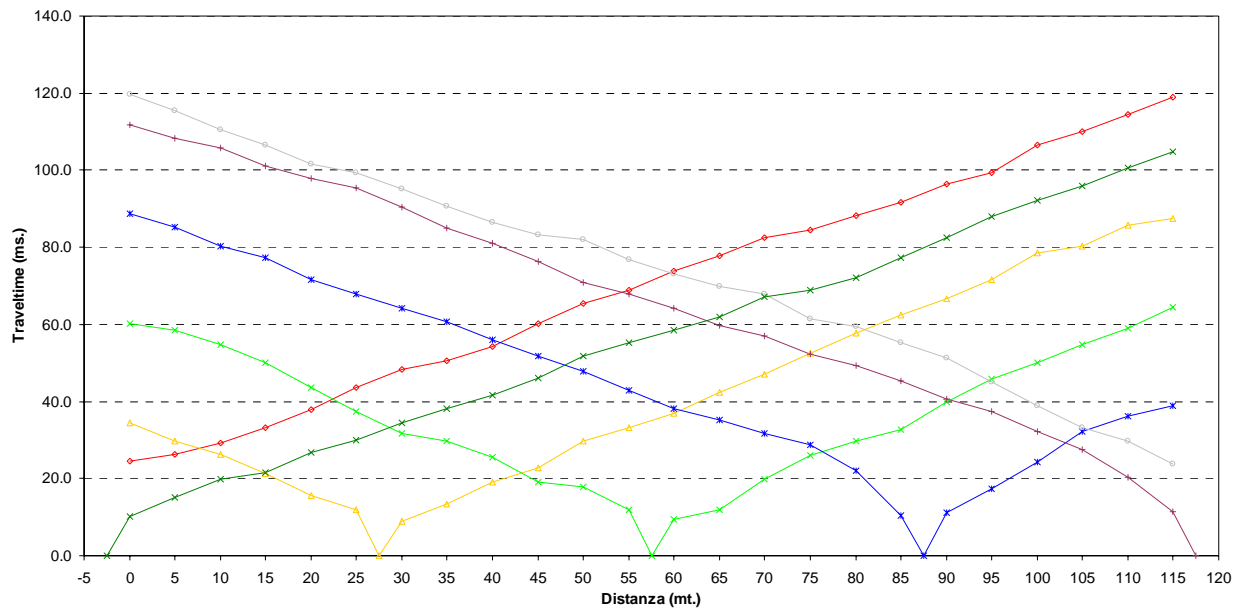
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

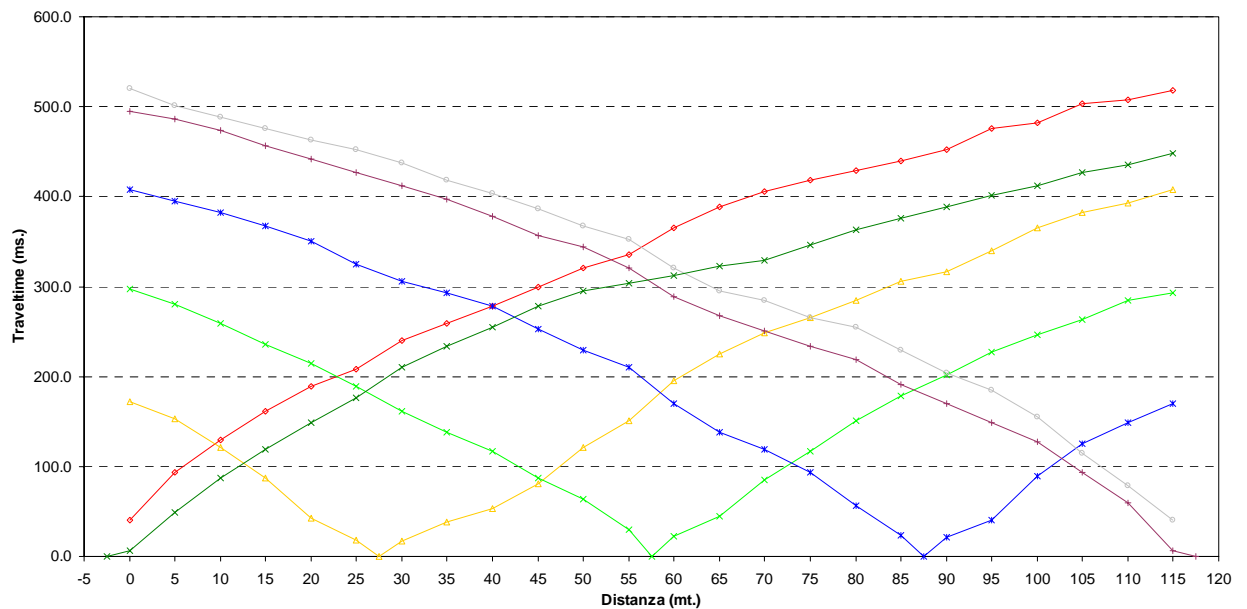
geofono	E1	A	D1	C	D2	B	E2
1	40.30	6.30	172.00	297.30	407.70	494.80	520.30
2	93.40	48.80	152.90	280.30	395.00	486.30	501.20
3	129.50	87.00	121.00	259.00	382.20	473.50	488.40
4	161.40	118.90	87.00	235.70	367.40	456.60	475.70
5	189.00	148.60	42.40	214.40	350.40	441.70	462.90
6	208.10	176.20	18.50	189.00	324.90	426.80	452.30
7	239.80	210.20	16.50	161.40	305.80	412.00	437.40
8	258.90	233.60	38.50	138.00	293.00	397.10	418.30
9	278.20	254.80	53.00	116.80	278.20	378.00	403.50
10	299.40	278.20	80.70	87.00	252.70	356.70	386.50
11	320.50	295.20	121.00	63.70	229.30	344.00	367.40
12	335.50	303.60	150.70	29.70	210.20	320.60	352.50
13	365.10	312.10	195.30	22.60	169.80	288.80	320.60
14	388.60	322.80	225.10	44.50	138.00	267.50	295.20
15	405.60	329.10	248.40	84.90	118.90	250.60	284.40
16	418.20	346.10	265.40	116.80	93.40	233.60	265.40
17	428.80	363.10	284.50	150.70	56.40	218.70	254.80
18	439.60	375.90	305.80	178.30	23.30	191.10	229.30
19	452.30	388.60	316.40	201.70	21.50	169.80	203.70
20	475.70	401.30	339.70	227.20	40.30	148.60	184.70
21	482.00	412.00	365.20	246.30	89.10	127.40	155.00
22	503.30	426.80	382.20	263.30	125.30	93.40	114.50
23	507.50	435.30	392.80	284.50	148.60	59.40	78.40
24	518.10	448.10	407.70	293.00	169.80	6.30	40.30

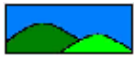


### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





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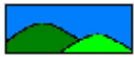
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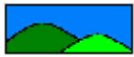
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32

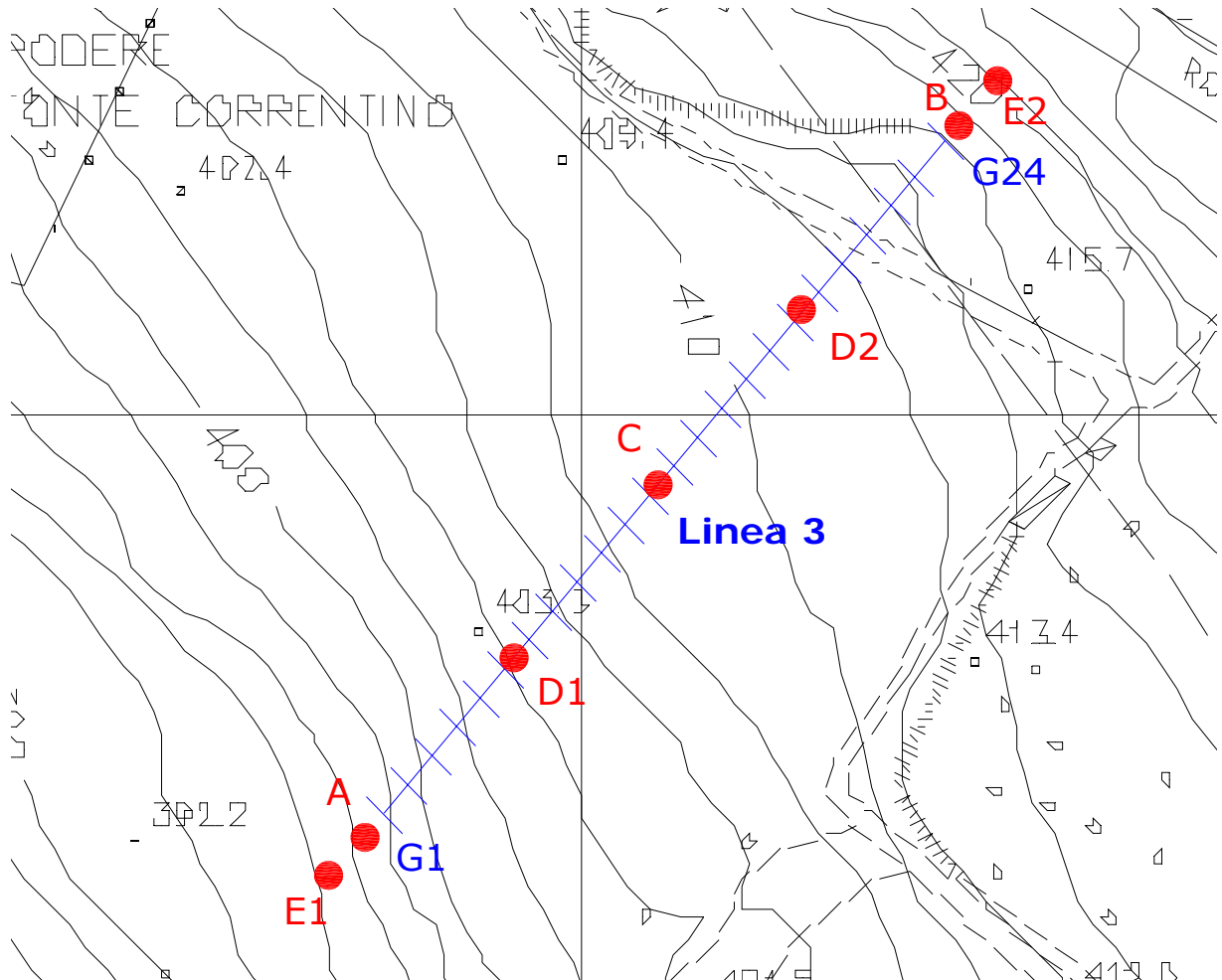


**DOCUMENTAZIONE FOTOGRAFICA LINEA 2**





**LINEA SISMICA 3**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	398.00
2	5	5	399.00
3	10	5	400.00
4	15	5	402.00
5	20	5	403.00
6	25	5	404.00
7	30	5	405.00
8	35	5	406.00
9	40	5	407.00
10	45	5	408.00
11	50	5	408.20
12	55	5	408.50
13	60	5	409.00
14	65	5	409.30
15	70	5	409.70
16	75	5	410.00
17	80	5	410.50
18	85	5	411.00
19	90	5	411.70
20	95	5	412.00
21	100	5	412.70
22	105	5	413.30
23	110	5	414.00
24	115	5	416.00

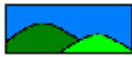
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650560	4806340
<i>Geofono n. 24 (G24)</i>	1650640	4806430



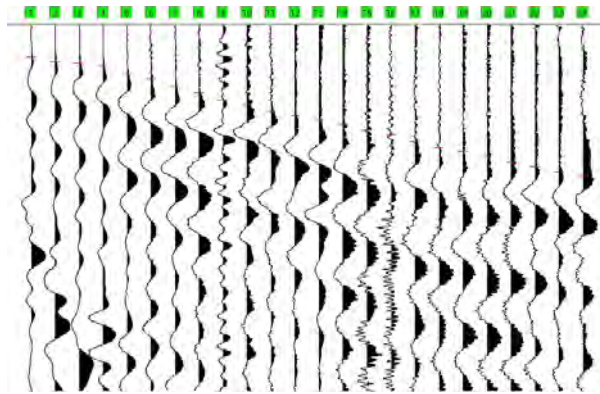
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	394.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	396.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	404.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	408.70
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	411.30
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	418.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	420.00

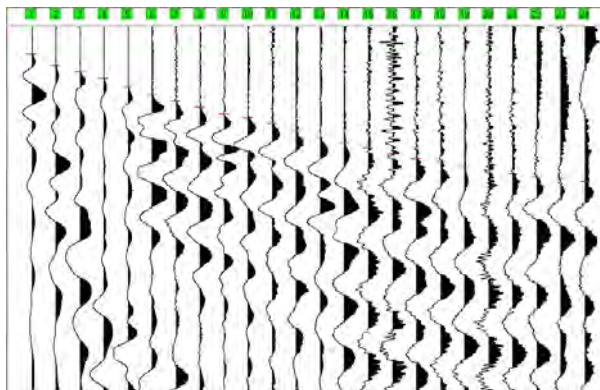


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

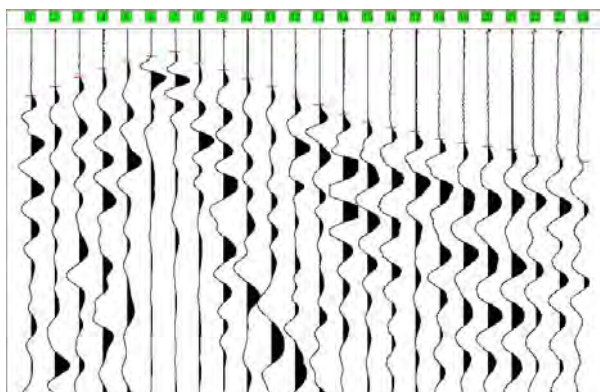
TIRO ESTERNO SX E1

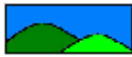


TIRO ESTREMO SX A



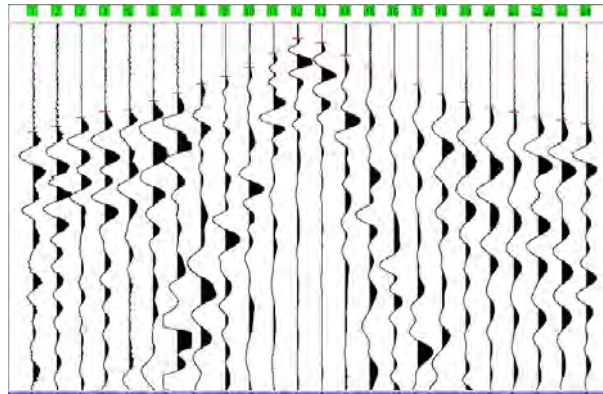
TIRO INTERMEDIO SX D1



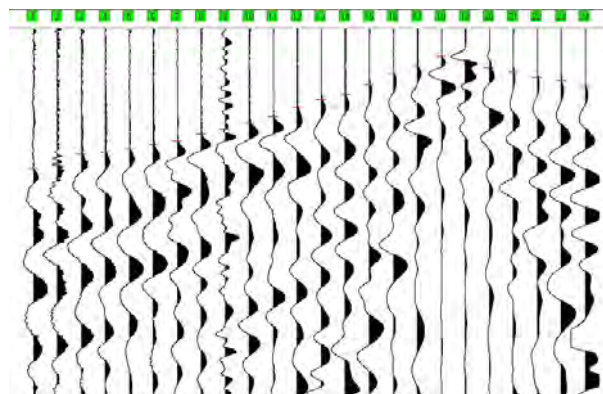


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

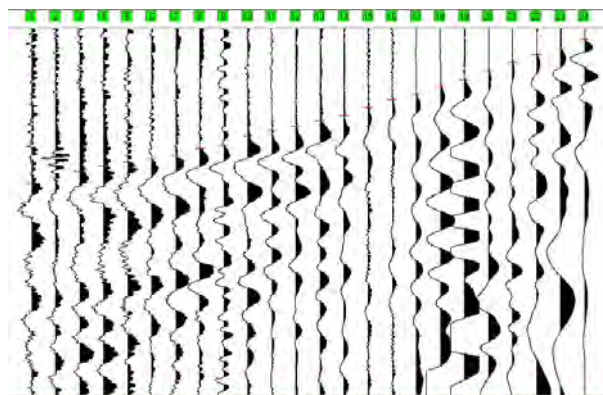
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



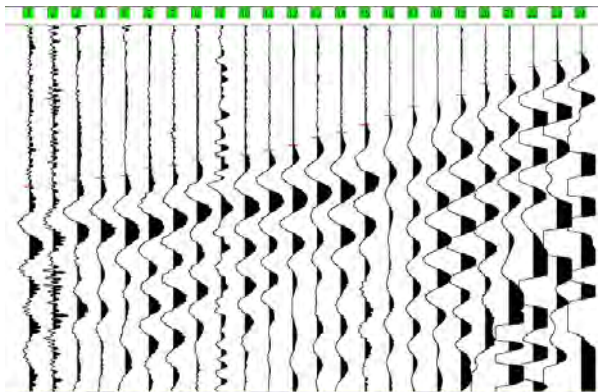
TIRO ESTREMO DX B





## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2

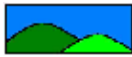


## TEMPI DI PROPAGAZIONE ONDE P

## Tempo di arrivo

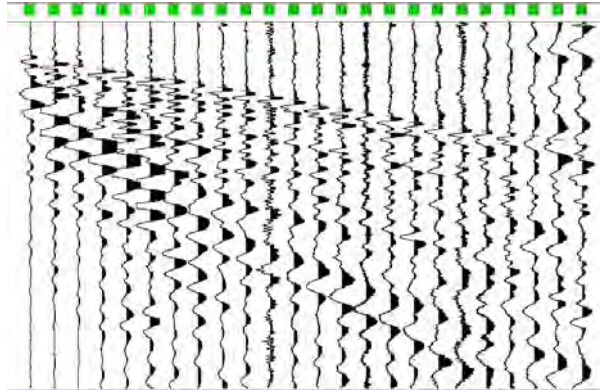
geofono	E1	A	D1	C	D2	B	E2
1	4.50	15.20	36.80	60.20	77.70	86.20	90.00
2	16.20	21.60	31.70	57.30	74.70	83.20	88.30
3	21.20	25.20	26.70	52.10	69.60	79.40	86.20
4	22.90	28.70	22.00	48.70	68.80	76.40	84.90
5	27.00	33.80	17.80	47.50	67.10	74.30	83.60
6	29.70	38.10	12.40	42.80	64.50	72.60	79.80
7	34.40	41.50	9.30	38.60	62.40	70.50	77.70
8	37.80	44.90	18.50	33.50	58.60	66.60	74.70
9	41.90	48.70	22.50	29.30	56.00	64.90	73.00
10	44.50	50.90	27.00	24.20	52.60	59.80	71.70
11	47.90	54.30	31.40	16.10	48.80	56.90	69.60
12	50.40	57.70	36.50	8.00	43.70	54.30	66.60
13	53.00	62.00	41.90	10.40	39.50	51.30	62.40
14	55.60	64.90	47.00	17.80	36.50	48.40	59.40
15	58.50	67.90	51.30	23.30	31.00	43.70	55.20
16	61.10	70.90	54.70	28.80	24.60	39.50	50.10
17	64.90	73.90	56.80	33.90	20.40	36.90	44.50
18	68.30	75.60	61.10	39.00	10.70	31.80	42.30
19	70.50	78.50	63.20	43.70	12.30	28.40	38.60
20	73.00	80.20	65.40	46.20	21.60	23.30	32.70
21	76.40	82.40	67.10	49.20	23.70	18.60	27.10
22	79.00	84.10	70.50	51.80	27.10	14.40	22.90
23	81.90	84.90	72.20	53.50	28.80	11.00	19.50
24	84.50	86.60	73.90	55.60	31.80	5.80	15.20



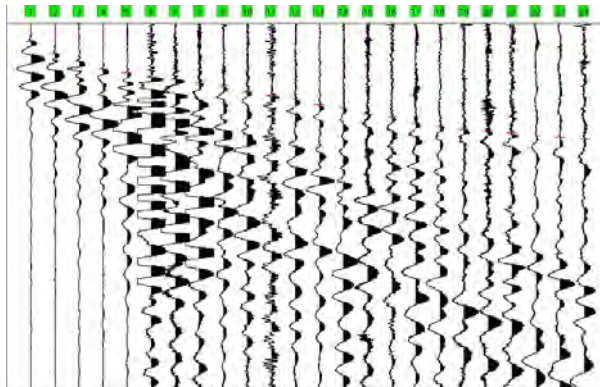


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

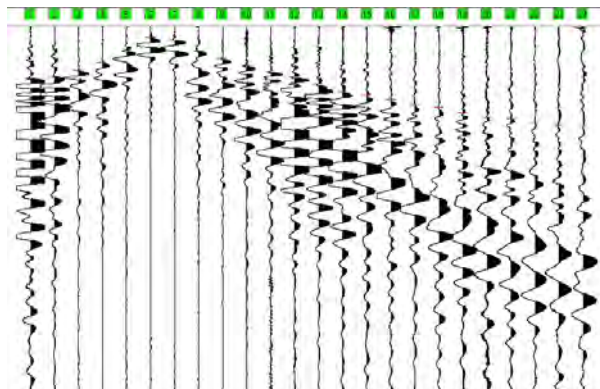
TIRO ESTERNO SX E1

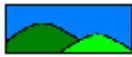


TIRO ESTREMO SX A



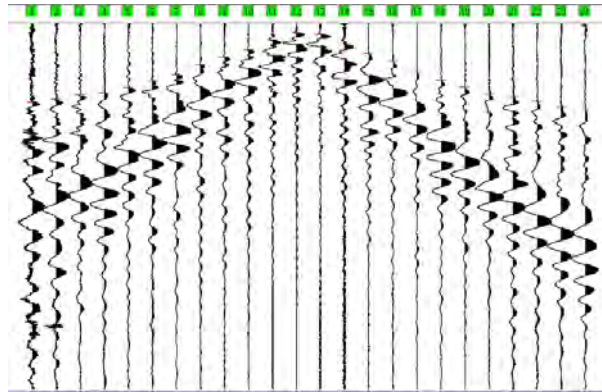
TIRO INTERMEDIO SX D1



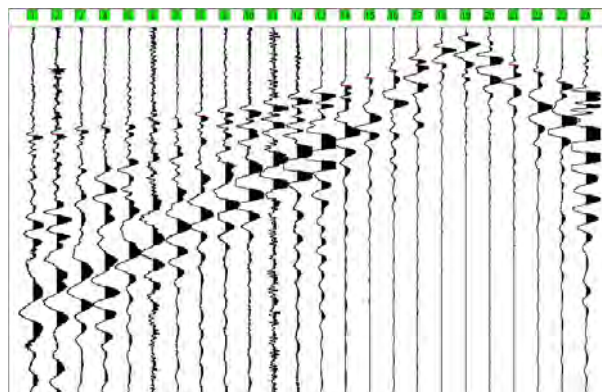


ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

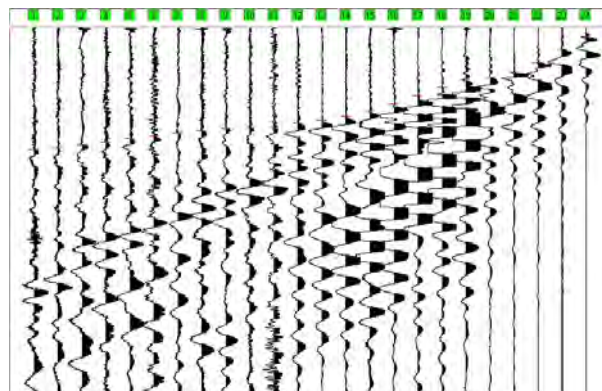
TIRO CENTRALE C

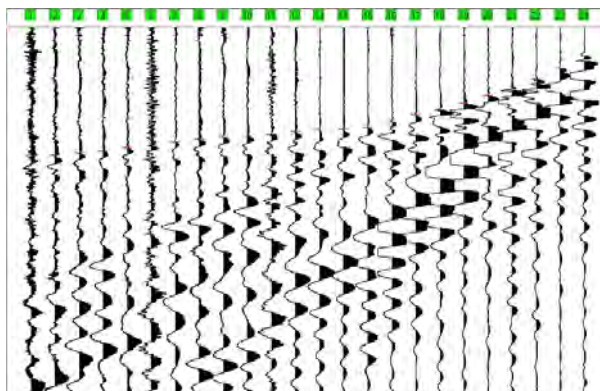


TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B

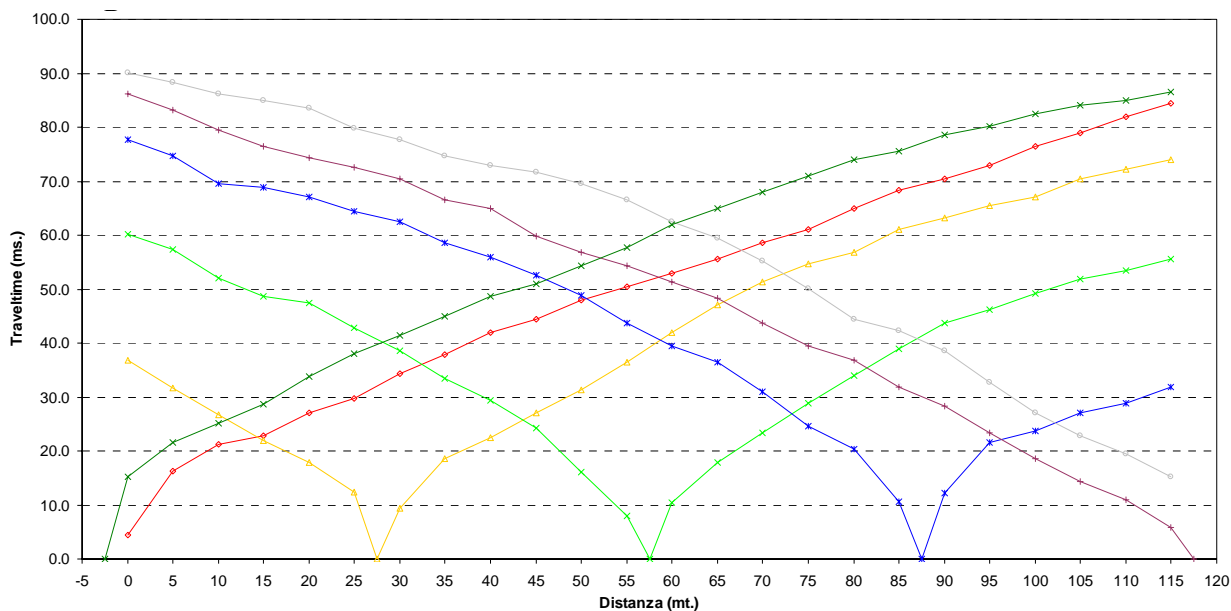


**ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA****TIRO ESTERNO DX E2****TEMPI DI PROPAGAZIONE ONDE Sh****Tempo di arrivo**

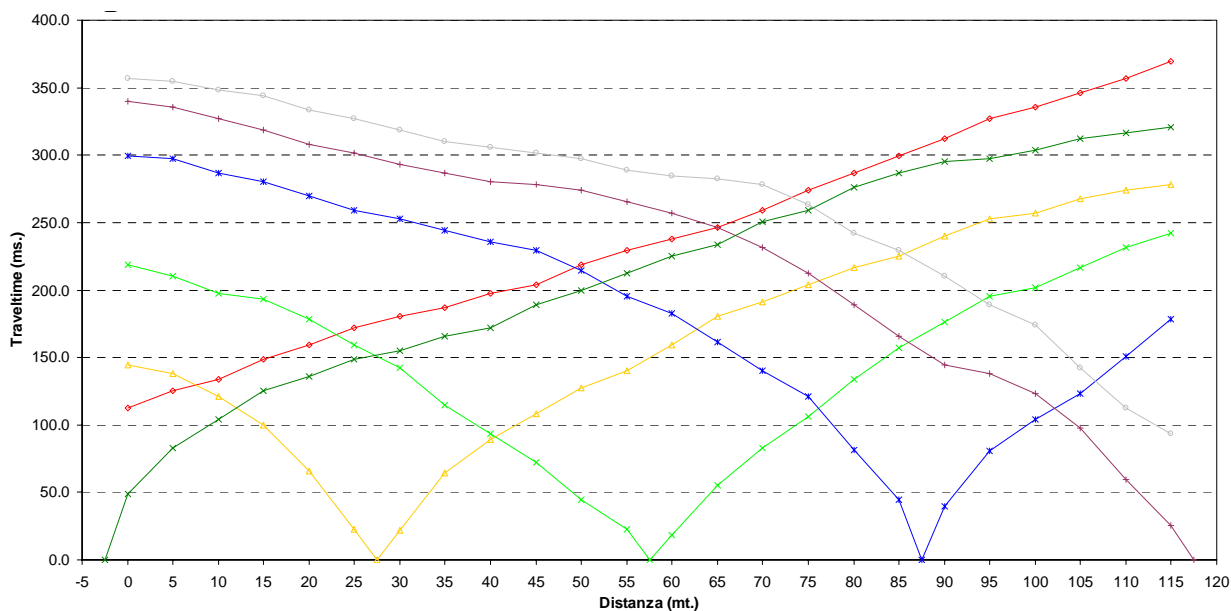
geofono	E1	A	D1	C	D2	B	E2
1	112.80	48.80	144.40	218.70	299.40	339.70	356.70
2	125.50	82.80	138.00	210.20	297.30	335.50	354.60
3	134.00	104.00	121.00	197.50	286.70	327.00	348.20
4	148.90	125.30	99.80	193.20	280.30	318.50	344.00
5	159.50	135.90	65.80	178.20	269.70	307.90	333.40
6	172.10	148.60	23.00	159.10	259.00	301.50	327.00
7	180.60	155.00	22.10	142.10	252.70	293.00	318.50
8	187.10	165.60	64.30	114.50	244.20	286.70	310.00
9	197.60	172.00	89.00	93.40	235.70	280.30	305.80
10	204.10	189.00	108.30	72.20	229.30	278.20	301.50
11	219.00	199.60	127.40	44.40	214.40	273.90	297.30
12	229.60	212.30	140.10	22.40	195.30	265.40	288.80
13	238.10	225.10	159.20	18.40	182.60	256.90	284.50
14	246.60	233.60	180.50	55.20	161.40	246.30	282.40
15	259.30	250.60	191.10	82.80	140.10	231.40	278.20
16	274.20	258.90	203.80	106.10	121.00	212.30	263.30
17	286.80	276.00	216.60	133.70	81.50	189.00	242.10
18	299.70	286.70	225.10	157.10	44.30	165.60	229.30
19	312.40	295.20	239.90	176.20	39.60	144.40	210.20
20	327.30	297.30	252.70	195.30	80.70	138.00	189.00
21	335.80	303.50	256.90	201.70	104.00	123.10	174.10
22	346.40	312.00	267.50	216.60	123.10	97.60	142.20
23	357.00	316.40	273.90	231.40	150.70	59.40	112.50
24	369.70	320.50	278.20	242.10	178.30	25.40	93.40



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

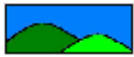
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 44



IGEA S.A.S.

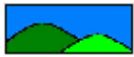
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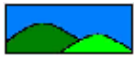
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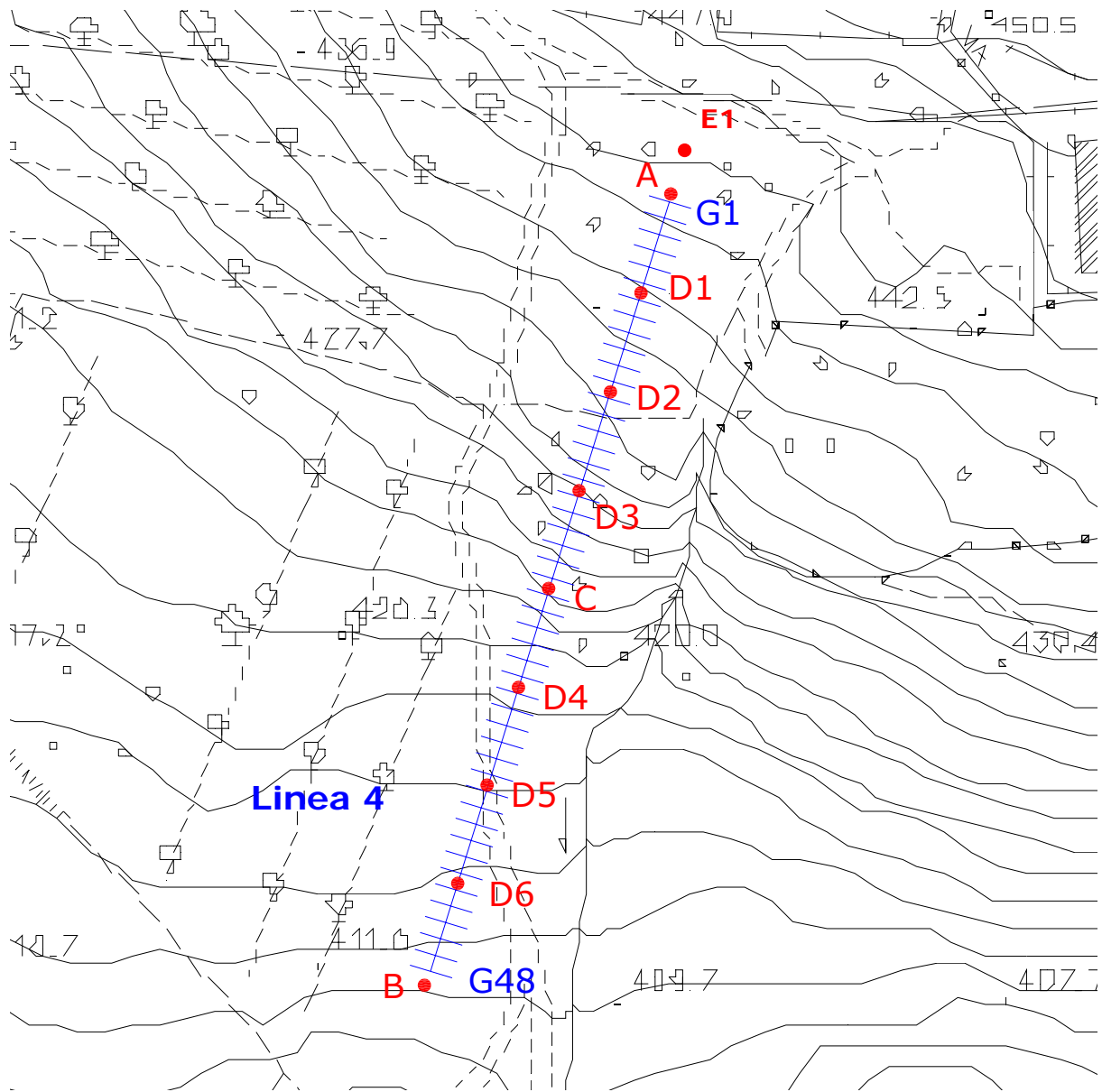


### DOCUMENTAZIONE FOTOGRAFICA LINEA 3





### LINEA SISMICA 4



Ubicazione delle linea - scala 1:1000





## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	430.50
2	2.5	2.5	430.00
3	5	2.5	429.50
4	7.5	2.5	429.00
5	10	2.5	428.70
6	12.5	2.5	428.40
7	15	2.5	427.50
8	17.5	2.5	427.00
9	20	2.5	426.20
10	22.5	2.5	425.80
11	25	2.5	425.00
12	27.5	2.5	424.80
13	30	2.5	424.40
14	32.5	2.5	424.00
15	35	2.5	423.00
16	37.5	2.5	423.00
17	40	2.5	422.00
18	42.5	2.5	421.00
19	45	2.5	419.80
20	47.5	2.5	419.00
21	50	2.5	418.00
22	52.5	2.5	417.00
23	55	2.5	416.00
24	57.5	2.5	415.00
25	60	2.5	414.00
26	62.5	2.5	412.00
27	65	2.5	411.00
28	67.5	2.5	410.00
29	70	2.5	409.60
30	72.5	2.5	409.00
31	75	2.5	408.20
32	77.5	2.5	408.00
33	80	2.5	407.50
34	82.5	2.5	407.00
35	85	2.5	406.50



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	406.30
37	90	2.5	406.00
38	92.5	2.5	405.00
39	95	2.5	405.00
40	97.5	2.5	404.60
41	100	2.5	404.20
42	102.5	2.5	404.00
43	105	2.5	403.50
44	107.5	2.5	403.00
45	110	2.5	402.50
46	112.5	2.5	402.00
47	115	2.5	401.60
48	117.5	2.5	401.40

## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650330	4806740
<i>Geofono n. 48 (G48)</i>	1650290	4806430



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	433.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	431.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	428.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	424.60
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	420.00
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	414.20
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	408.50
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	406.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	403.70
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	400.00

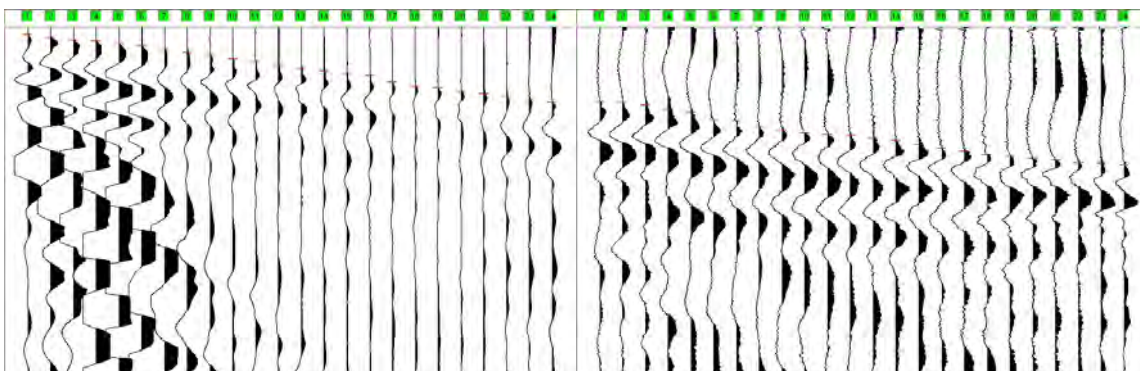


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

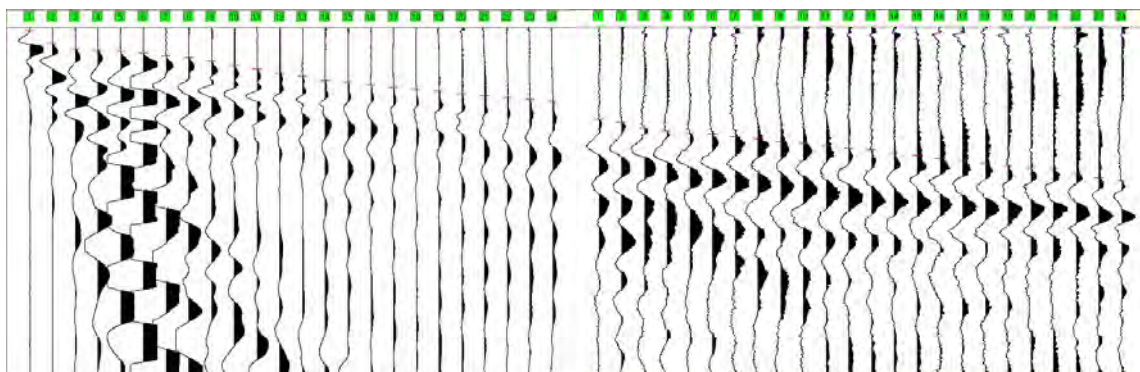
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

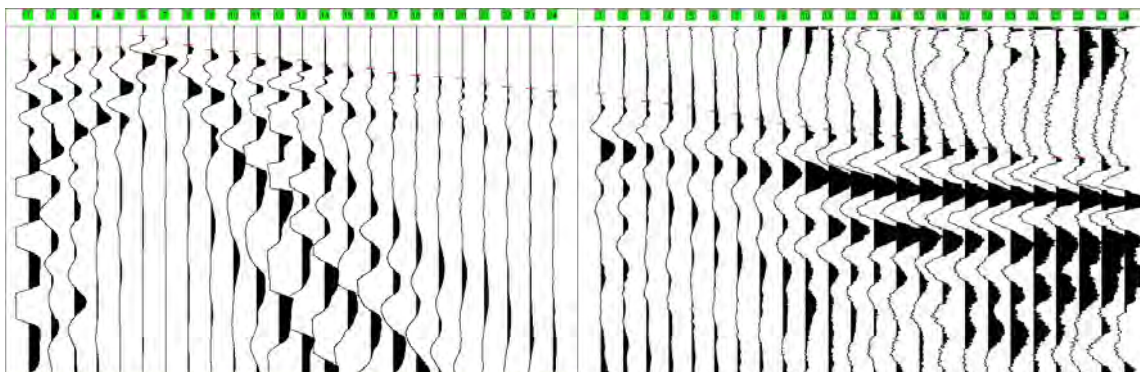
Catena geofonica 25-48

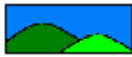


TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



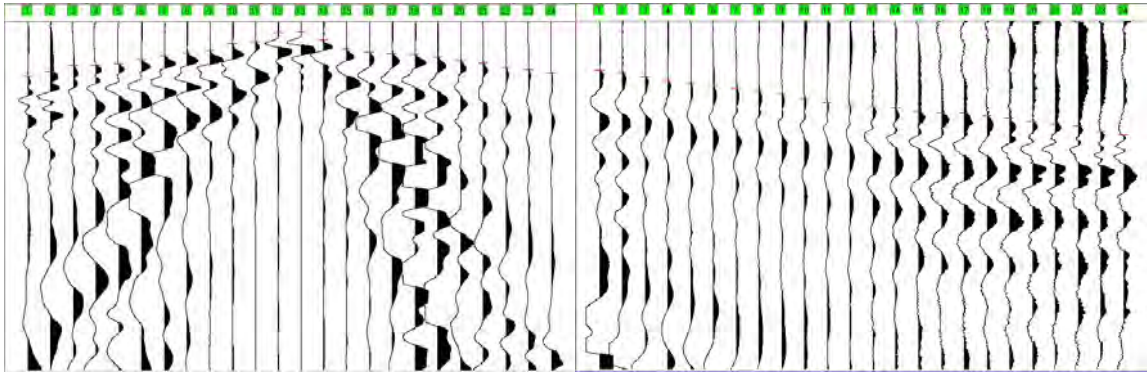


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

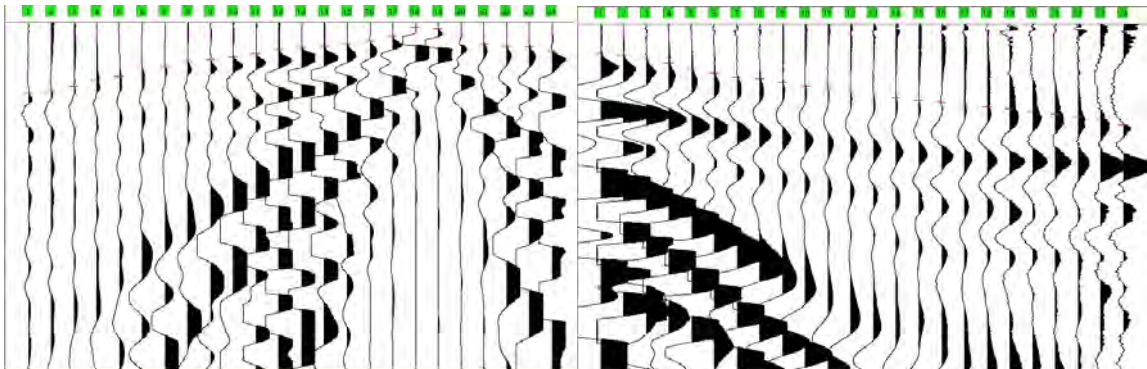
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

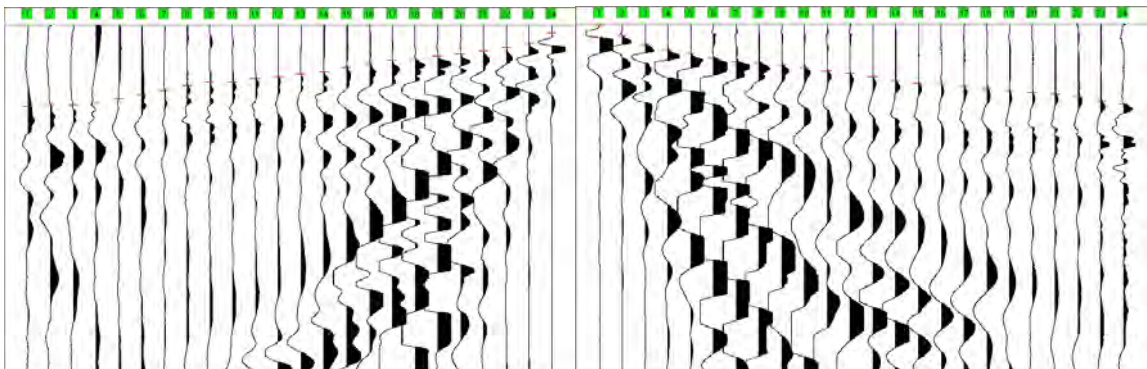
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



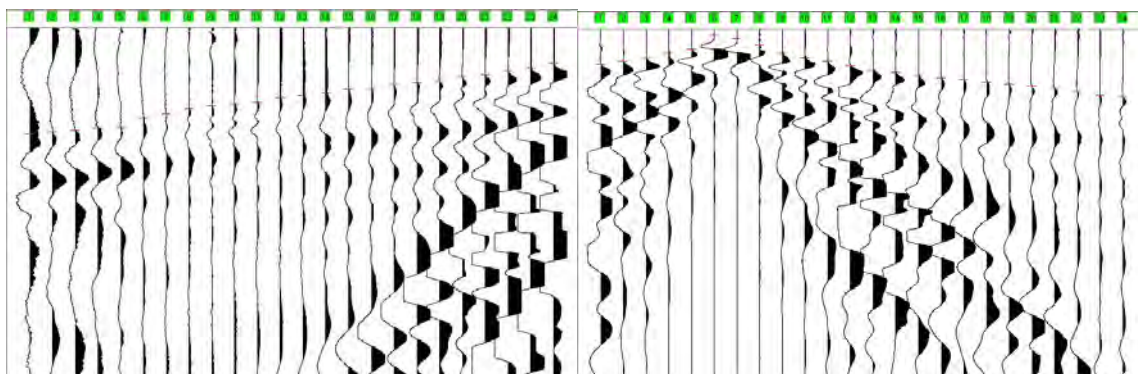


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

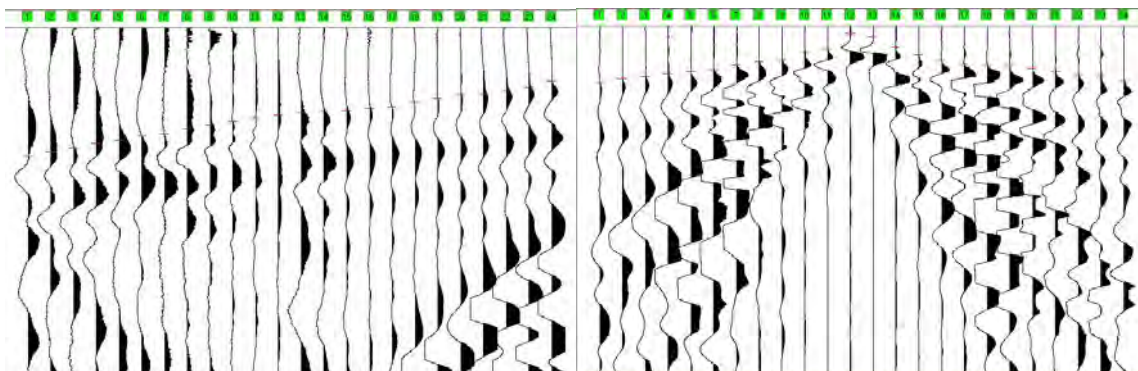
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

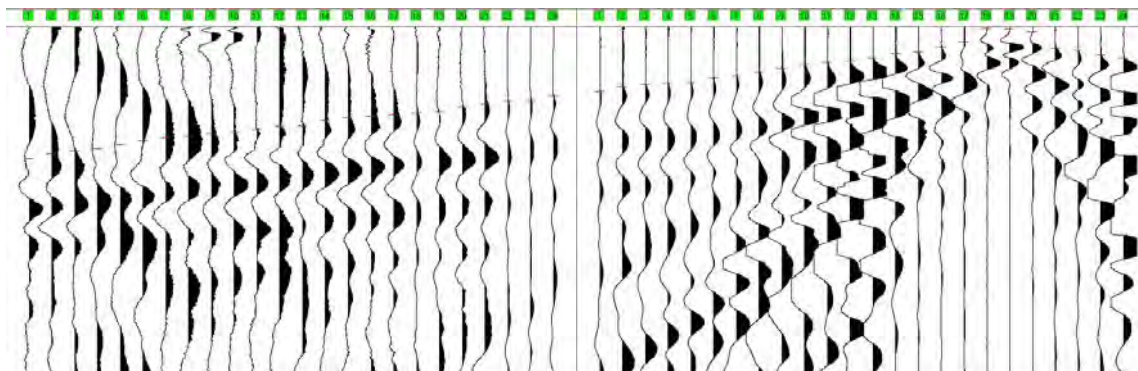
Catena geofonica 25-48

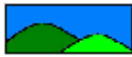


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



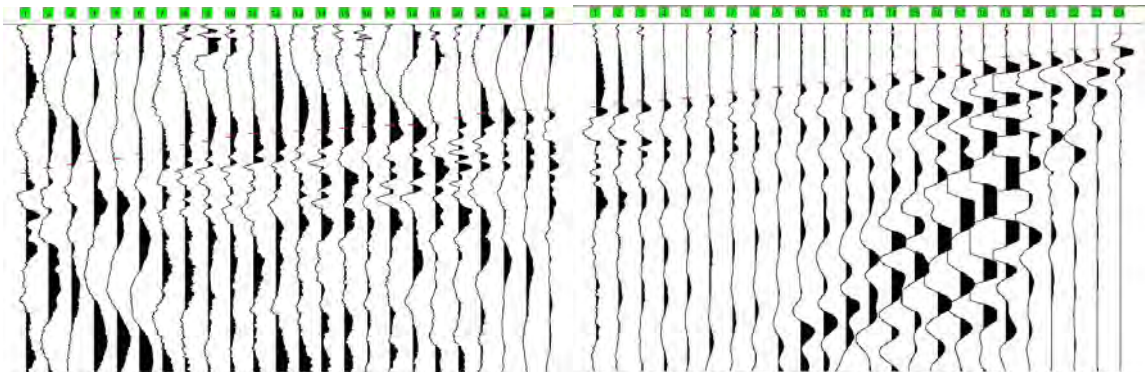


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	18.0	8.1	19.1	31.6	41.6	47.4	62.0	75.1	77.3	87.0
2	19.7	15.8	16.1	28.7	39.9	46.2	60.7	72.6	74.3	84.1
3	21.4	18.8	14.0	25.2	37.3	46.6	59.8	70.5	72.6	81.9
4	21.8	19.7	12.3	25.0	33.9	45.3	58.6	67.5	71.3	80.2
5	23.5	20.5	11.4	24.2	31.4	42.7	57.7	65.8	68.8	78.5
6	24.8	21.4	5.0	21.6	28.0	40.6	52.6	63.2	66.6	76.0
7	26.5	23.1	7.2	19.5	25.4	38.1	50.1	62.0	64.9	73.0
8	28.6	23.9	10.6	17.8	22.5	35.1	47.1	59.0	64.1	70.5
9	30.3	26.1	13.5	16.5	21.6	33.1	45.4	56.9	62.4	68.3
10	32.4	28.6	14.4	12.2	19.9	33.1	44.1	54.7	61.5	65.8
11	34.1	30.7	15.7	10.9	17.8	31.0	43.3	52.6	60.2	63.7
12	36.2	33.3	18.2	5.9	15.7	30.1	40.7	50.9	58.1	63.2
13	37.9	35.0	19.5	5.5	14.4	28.4	39.5	49.6	57.7	62.4
14	39.6	37.4	22.0	10.1	13.5	27.0	37.8	48.8	54.7	61.5
15	40.9	38.4	22.9	15.6	11.8	24.6	35.6	48.4	53.0	60.7
16	42.2	40.1	24.6	17.3	10.6	22.0	35.2	47.1	52.1	59.8
17	46.0	41.8	27.1	18.2	7.6	20.3	33.1	46.2	51.3	59.0
18	48.6	43.1	28.4	18.6	2.5	19.9	31.8	43.7	50.4	58.6
19	49.4	43.8	29.3	20.3	3.3	17.8	31.4	41.2	49.6	57.3
20	51.5	45.1	30.5	22.5	6.7	16.5	28.4	38.9	46.6	54.3
21	52.8	46.5	33.5	23.7	12.3	14.8	27.1	38.1	44.9	52.2
22	54.5	47.6	35.2	26.3	13.5	12.7	24.6	36.8	43.6	50.5
23	56.6	48.5	36.1	27.6	14.0	10.1	23.3	34.8	42.7	50.1
24	57.9	49.7	37.8	29.7	16.5	4.1	20.3	33.7	40.2	49.6
25	59.4	53.8	39.0	30.4	16.9	2.4	20.3	32.7	37.8	48.3
26	60.3	55.6	41.2	31.7	17.8	6.2	18.6	30.4	34.8	46.6
27	61.6	59.0	43.2	34.2	19.9	11.4	16.9	29.3	33.4	44.9
28	64.1	60.7	44.5	36.4	22.5	14.4	13.9	27.6	33.1	44.0
29	65.8	62.0	46.6	38.5	25.9	16.9	11.4	26.3	32.1	43.2
30	70.1	62.4	49.1	39.3	28.4	19.5	3.3	25.0	29.7	41.9
31	70.9	64.1	50.9	41.0	31.0	21.6	5.0	22.5	28.4	39.8
32	74.7	65.4	53.8	42.3	31.8	22.0	8.8	20.3	26.3	38.1
33	76.0	67.1	56.4	44.4	33.9	23.7	13.9	19.1	24.2	36.8
34	78.2	67.9	58.1	47.4	36.1	25.0	16.5	15.2	21.6	35.1
35	79.0	69.6	59.8	49.5	38.2	27.0	18.6	13.1	20.3	34.4
36	79.4	70.9	60.7	51.2	39.5	28.4	21.2	3.8	19.5	33.1
37	81.1	71.6	62.4	52.1	41.2	30.4	23.7	5.9	17.8	31.4
38	82.4	74.3	63.7	52.5	42.8	32.7	25.2	11.8	15.2	29.3
39	85.0	75.0	65.4	54.2	44.5	34.4	26.7	16.5	14.4	27.6
40	87.1	76.7	67.9	55.5	45.8	34.8	28.4	19.9	11.4	25.0
41	88.8	78.1	69.6	55.5	47.1	36.5	29.3	22.0	8.4	24.2
42	90.8	79.3	70.9	57.2	48.4	37.2	31.0	22.9	0.3	21.2
43	92.2	81.0	73.0	58.4	49.6	38.5	32.1	22.9	0.7	19.1
44	92.9	82.4	75.6	60.6	50.9	39.8	33.1	24.6	2.4	17.8
45	93.9	83.1	76.3	61.8	52.6	40.6	34.4	26.3	10.1	16.5
46	95.6	86.1	76.7	63.1	53.9	42.3	36.5	28.0	13.5	14.8
47	96.0	88.2	79.0	66.5	55.6	44.5	38.5	29.7	16.1	14.8
48	96.9	89.9	81.4	68.2	59.0	46.6	39.5	31.7	17.8	5.0

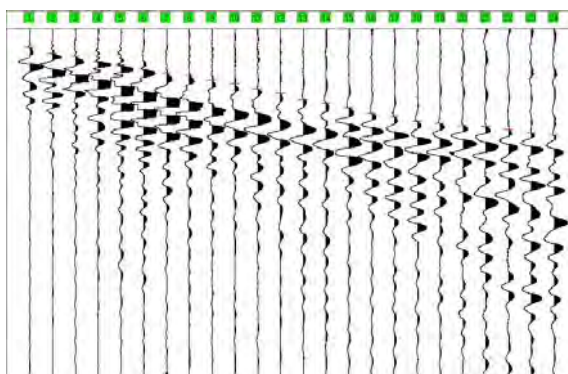




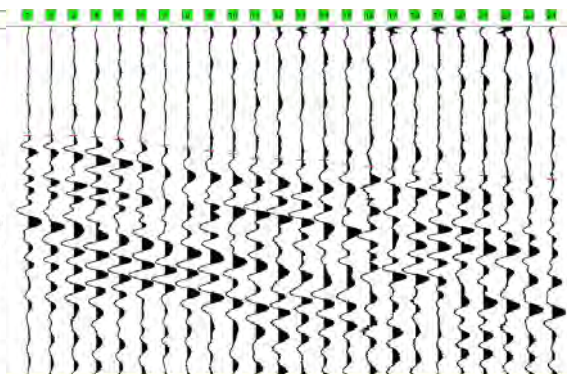
ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

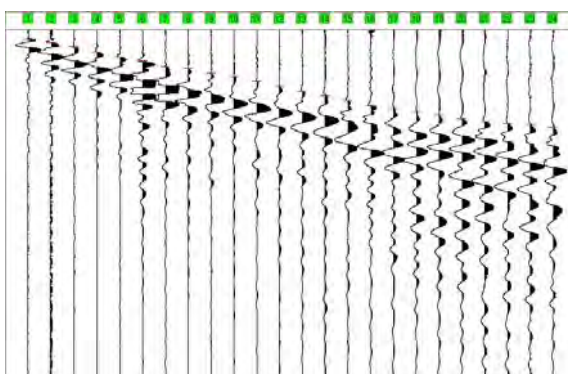


Catena geofonica 25-48

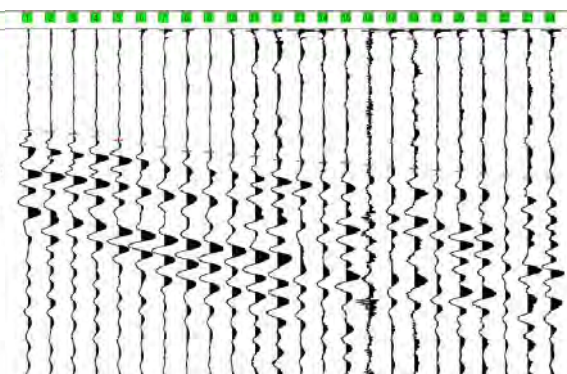


TIRO ESTREMO SX A

Catena geofonica 1-24

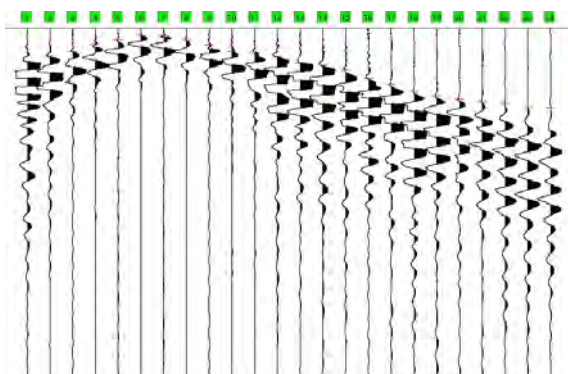


Catena geofonica 25-48

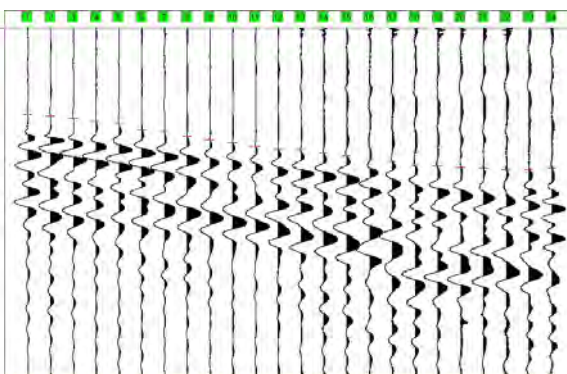


TIRO INTERMEDIO SX D1

Catena geofonica 1-24



Catena geofonica 25-48

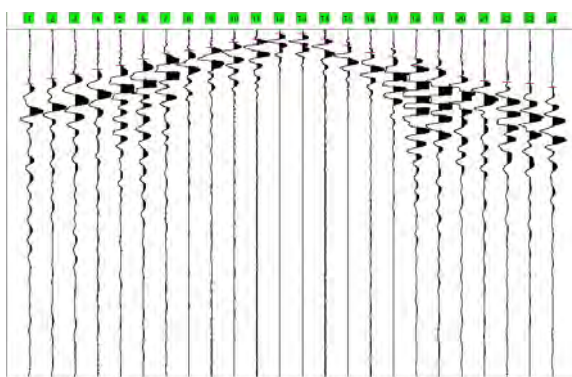




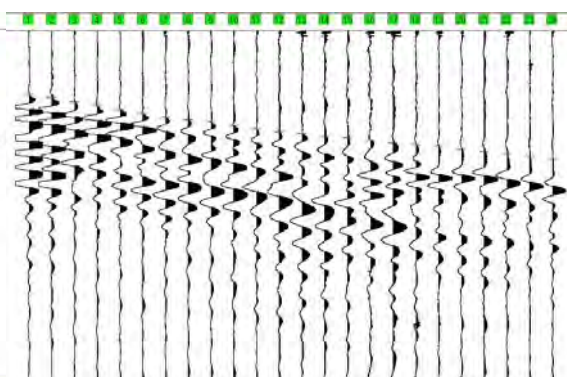
ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

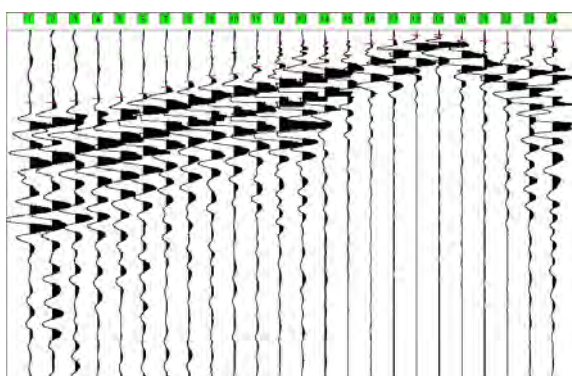


Catena geofonica 25-48

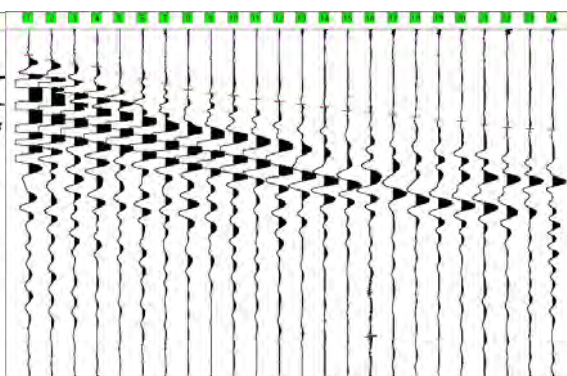


TIRO INTERMEDIO SX D3

Catena geofonica 1-24

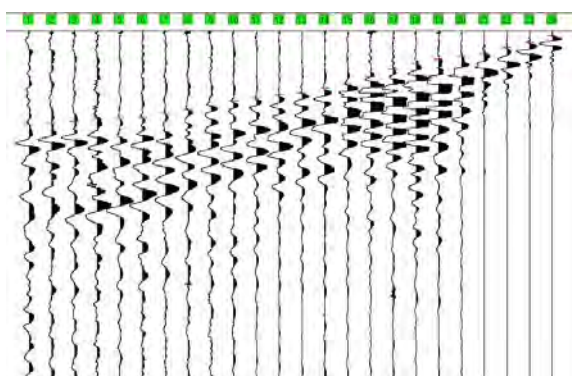


Catena geofonica 25-48

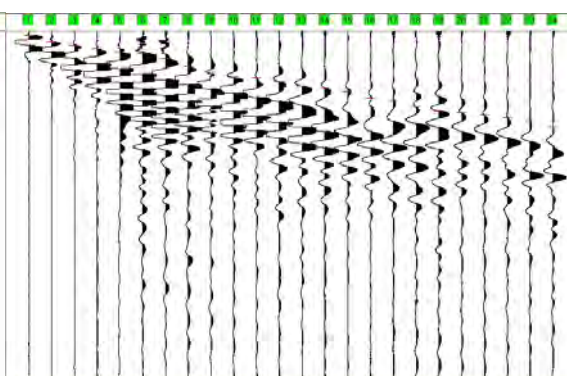


TIRO CENTRALE C

Catena geofonica 1-24



Catena geofonica 25-48



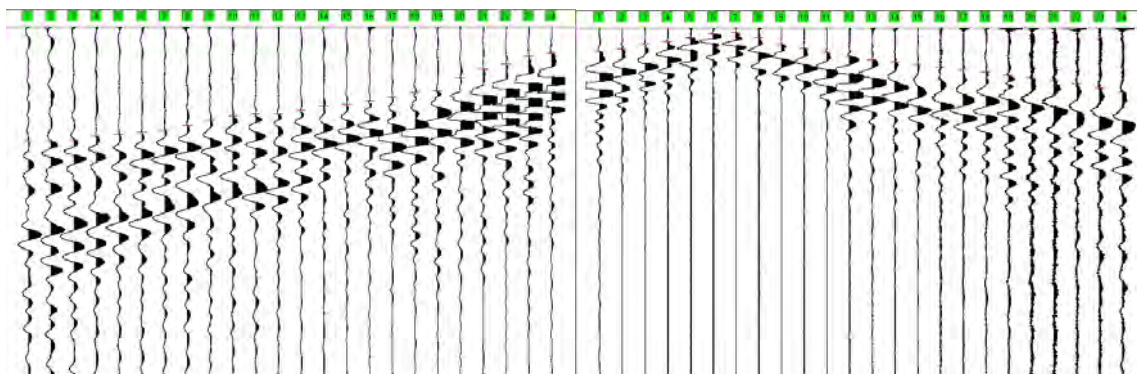


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

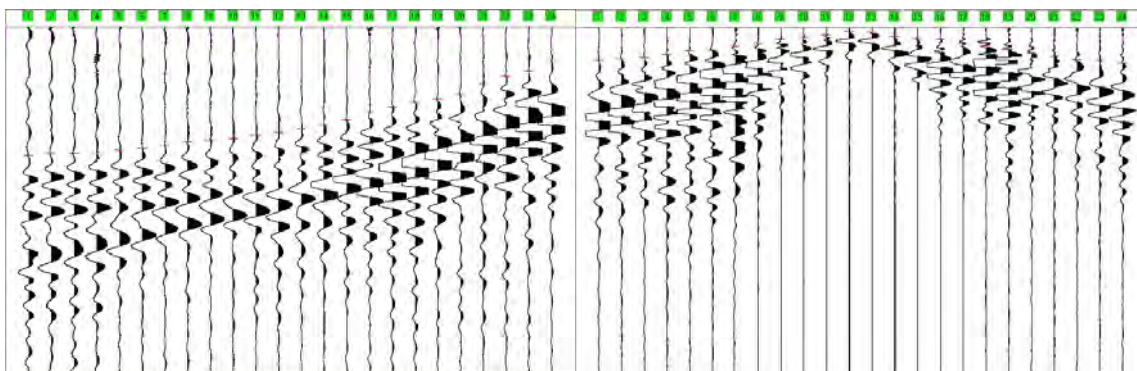
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

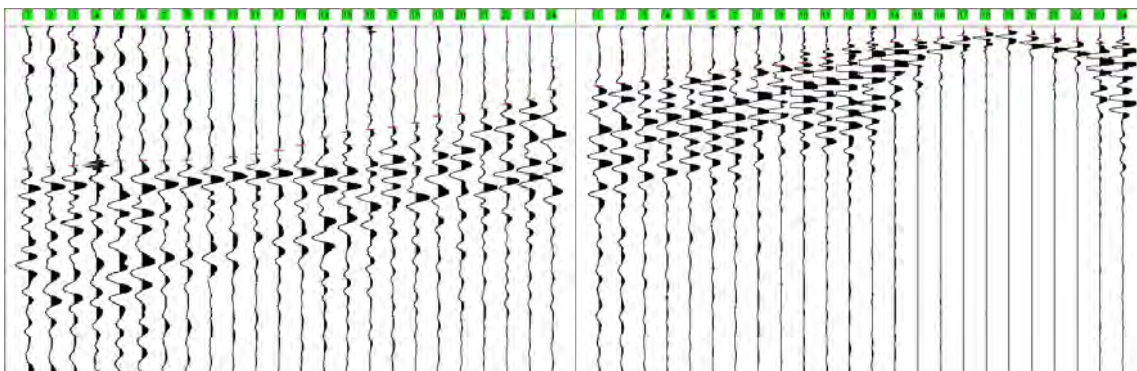
Catena geofonica 25-48

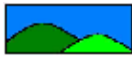


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



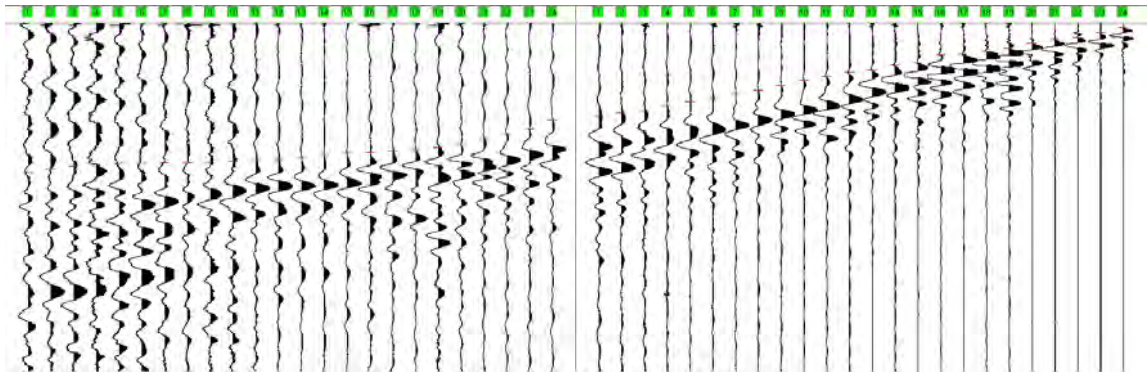


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

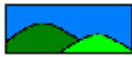
Catena geofonica 25-48



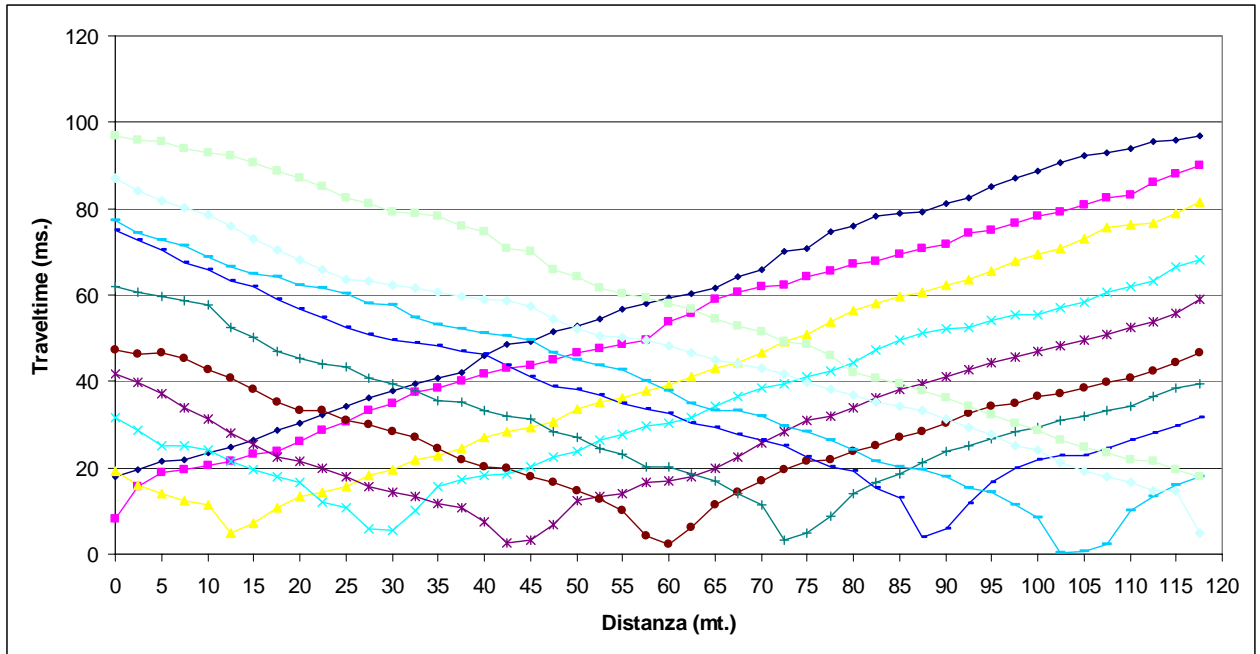


## TEMPI DI PROPAGAZIONE ONDE Sh

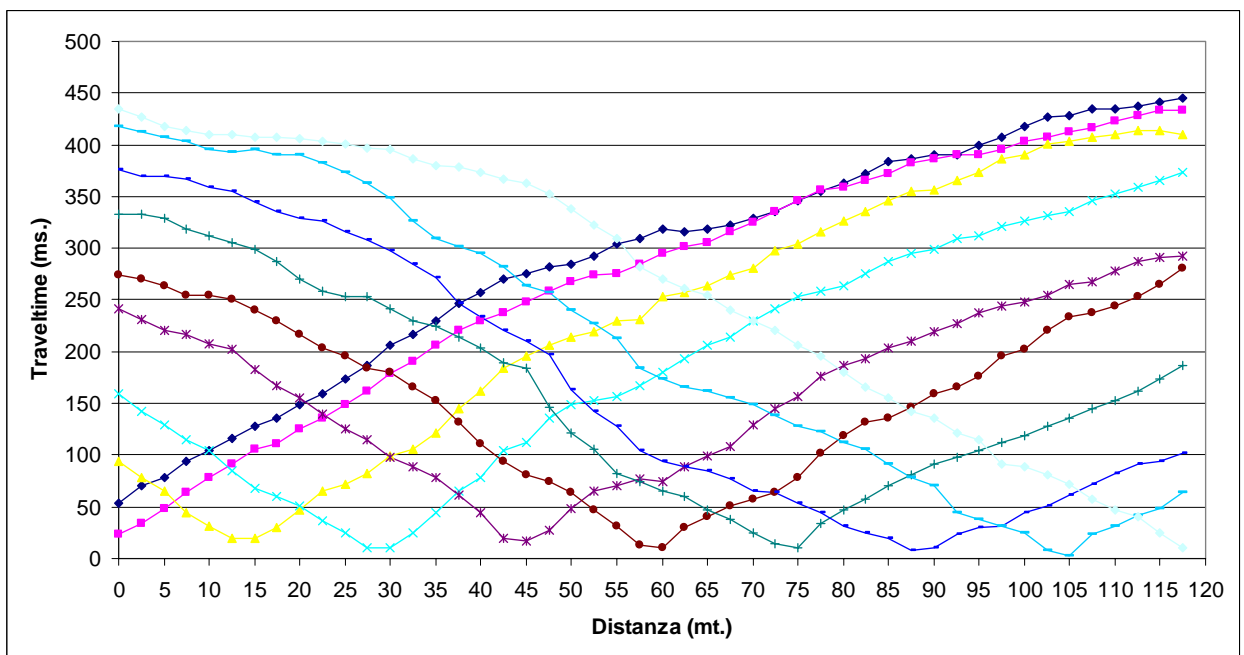
geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	53.00	23.30	93.40	159.20	242.10	273.90	333.40	375.90	418.20	435.30
2	70.00	33.90	78.40	142.20	231.30	269.70	333.40	369.50	412.00	426.80
3	78.50	48.80	65.80	129.50	220.80	263.30	329.00	369.50	407.70	418.30
4	93.40	63.70	44.40	114.60	216.60	254.80	318.50	367.40	403.50	414.10
5	104.00	78.50	31.80	104.00	208.10	254.80	312.00	358.90	395.00	409.80
6	116.80	91.30	19.10	84.90	201.70	250.60	305.80	354.60	392.70	409.80
7	127.40	106.10	19.10	67.90	182.60	239.90	299.40	344.00	395.00	407.70
8	135.90	110.40	29.70	59.40	167.60	229.30	286.70	335.50	390.70	407.70
9	148.60	125.30	46.70	50.90	155.00	216.60	269.70	329.00	390.70	405.60
10	159.20	135.90	65.80	36.10	140.10	203.70	258.90	327.00	382.10	403.50
11	174.10	148.60	72.20	25.40	125.30	195.20	252.70	316.40	373.70	401.30
12	186.80	161.40	82.80	10.60	114.50	184.70	252.70	307.90	363.10	397.10
13	206.00	178.30	99.80	10.60	97.50	180.50	242.10	297.30	348.20	395.00
14	216.60	191.10	106.00	25.40	89.00	165.60	229.30	284.40	327.00	386.50
15	229.30	206.00	121.00	44.50	78.50	152.90	225.10	271.80	310.00	380.10
16	246.30	220.80	144.40	65.80	61.50	131.50	214.40	246.30	301.50	378.00
17	256.90	229.30	161.40	78.50	44.40	110.40	203.80	233.60	295.20	373.70
18	269.70	237.80	184.70	104.00	19.10	93.40	189.00	220.80	282.40	367.40
19	276.00	248.40	195.20	112.50	16.80	80.70	184.70	210.20	263.30	363.10
20	282.40	259.00	206.00	135.90	27.60	74.30	146.50	197.50	256.90	352.50
21	284.50	267.50	214.30	148.60	48.80	63.70	121.00	163.50	239.90	337.50
22	293.00	273.90	218.70	152.90	65.80	46.70	106.10	142.10	227.20	322.80
23	303.60	276.00	229.30	157.10	69.90	31.80	82.80	127.40	212.30	310.00
24	310.00	284.50	231.30	167.70	76.40	12.70	74.30	104.00	184.70	282.40
25	318.50	295.20	252.70	180.50	74.30	10.60	65.80	93.40	174.10	269.70
26	316.40	301.50	256.90	193.20	89.00	29.70	59.40	89.00	165.60	261.20
27	318.50	305.80	263.30	206.00	99.80	40.30	46.70	84.90	161.40	254.80
28	322.80	316.40	273.90	214.40	108.30	50.90	38.20	76.40	155.00	239.90
29	329.10	324.90	280.30	229.30	129.50	57.30	25.30	65.80	148.60	229.30
30	335.50	335.50	297.30	242.10	144.40	63.70	14.80	63.70	138.00	220.80
31	346.10	346.10	303.60	252.70	157.10	78.40	10.60	52.90	127.40	206.00
32	354.60	356.60	316.40	259.00	176.20	101.90	33.90	44.40	123.10	195.30
33	363.10	358.90	327.00	263.30	186.70	118.90	46.70	31.80	112.50	180.50
34	371.60	365.10	335.50	276.00	193.20	131.50	57.30	25.30	106.10	165.60
35	384.20	371.60	346.10	286.70	203.70	135.90	69.90	19.10	91.30	155.00
36	386.50	382.10	354.60	295.20	210.20	146.50	80.70	8.30	78.50	142.20
37	390.70	386.50	356.70	299.40	218.70	159.10	91.30	10.60	70.00	135.90
38	390.70	390.70	365.20	310.00	227.20	165.60	97.50	23.30	44.50	121.00
39	399.20	390.70	373.70	312.10	237.80	176.20	104.00	29.70	38.20	114.60
40	407.70	395.00	386.50	320.60	244.20	195.20	112.50	31.80	31.80	91.30
41	418.30	403.50	390.70	327.00	248.40	201.70	118.90	44.50	25.30	89.10
42	426.80	407.70	401.30	331.30	254.80	220.80	127.40	50.90	8.40	80.70
43	428.80	412.00	403.50	335.50	265.40	233.60	135.90	61.50	2.10	72.20
44	435.30	416.20	407.70	346.10	267.50	237.80	144.40	72.20	23.30	57.30
45	435.30	422.60	409.80	352.50	278.20	244.20	152.90	82.80	31.80	46.70
46	437.30	428.80	414.10	358.90	286.70	252.70	161.40	91.30	42.40	40.30
47	441.70	433.20	414.10	365.20	290.90	265.40	174.10	93.40	48.80	25.40
48	445.80	433.20	409.80	373.70	293.00	280.30	186.70	101.90	63.70	10.60

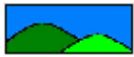


DROMOCRONE ONDE P



DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

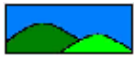
CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1

62



IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

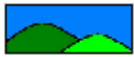
CODIFICADOCUMENTO

REV.

FOGLIO

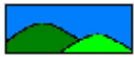
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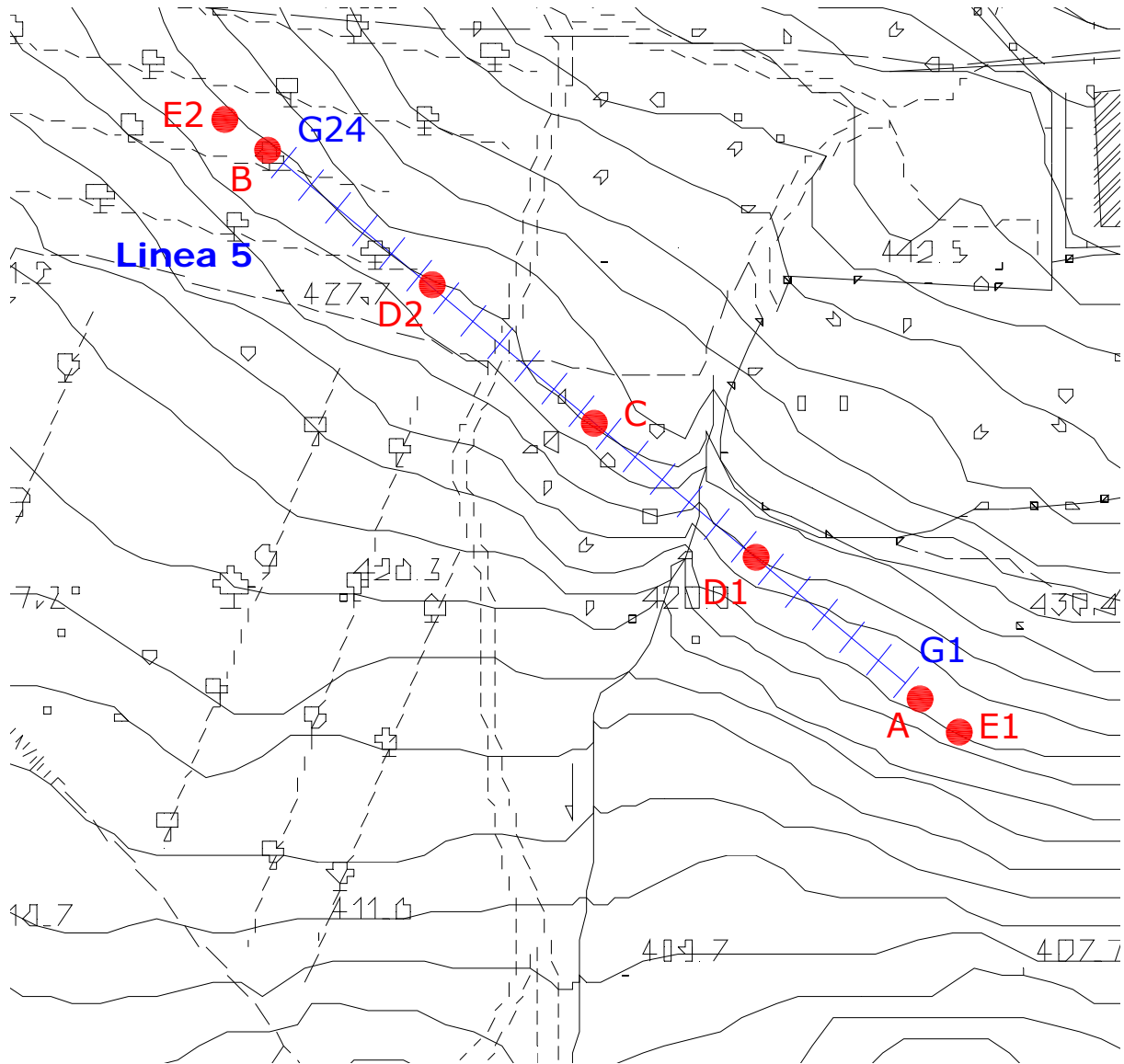


### DOCUMENTAZIONE FOTOGRAFICA LINEA 4





### LINEA SISMICA 5



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	415.00
2	5	5	415.00
3	10	5	415.50
4	15	5	415.70
5	20	5	417.00
6	25	5	418.00
7	30	5	418.00
8	35	5	418.00
9	40	5	419.00
10	45	5	421.50
11	50	5	422.00
12	55	5	422.00
13	60	5	422.00
14	65	5	422.00
15	70	5	422.00
16	75	5	421.00
17	80	5	421.00
18	85	5	421.50
19	90	5	422.00
20	95	5	422.00
21	100	5	422.00
22	105	5	422.00
23	110	5	422.00
24	115	5	422.00

## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650350	4806650
<i>Geofono n. 24 (G24)</i>	1650260	4806730



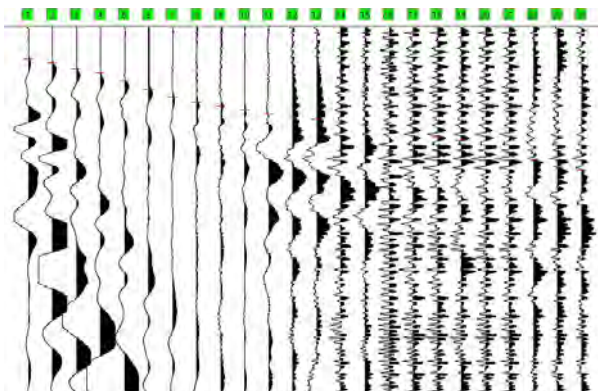
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparato A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	414.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	414.50
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	418.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	422.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	422.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	422.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	422.00

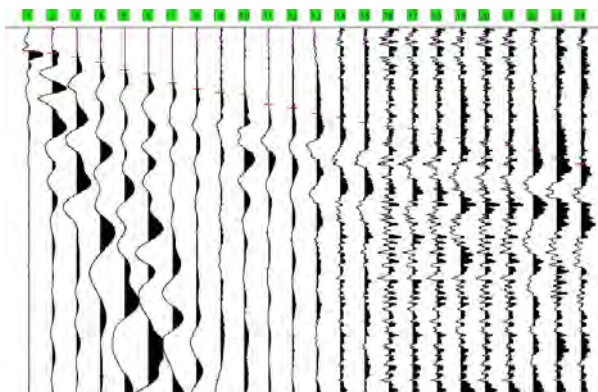


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

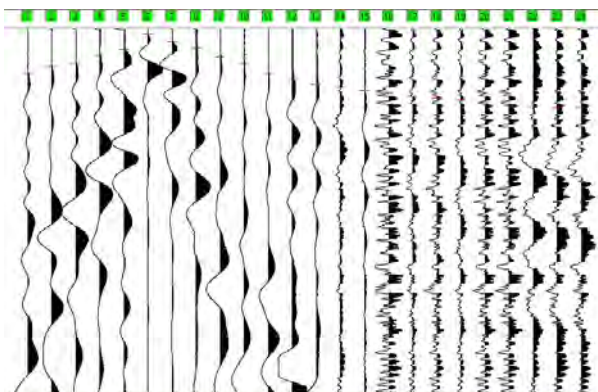
TIRO ESTERNO SX E1

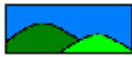


TIRO ESTREMO SX A



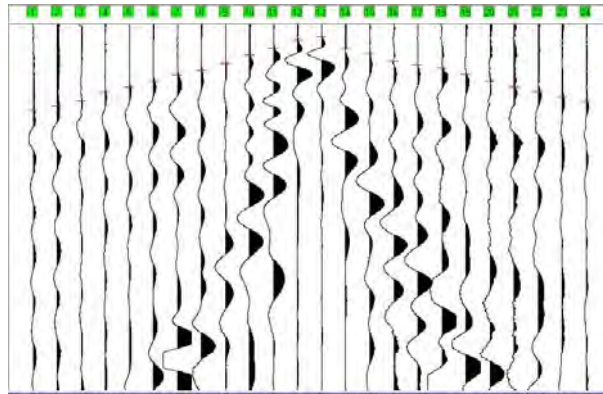
TIRO INTERMEDIO SX D1



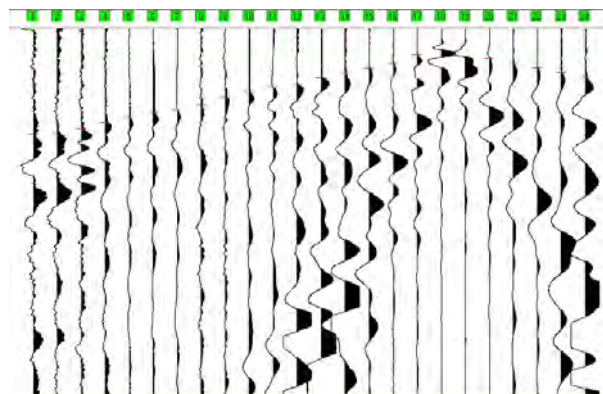


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

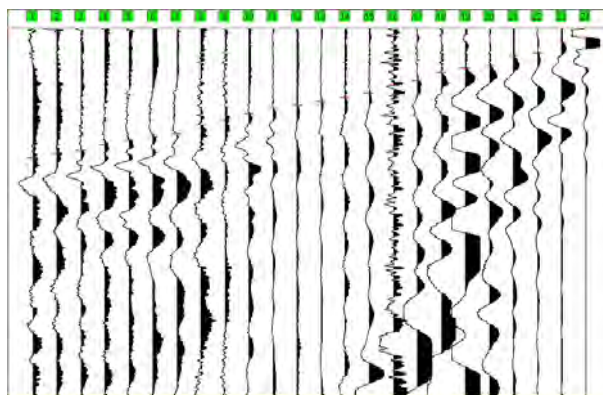
TIRO CENTRALE C

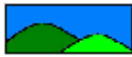


TIRO INTERMEDIO DX D2



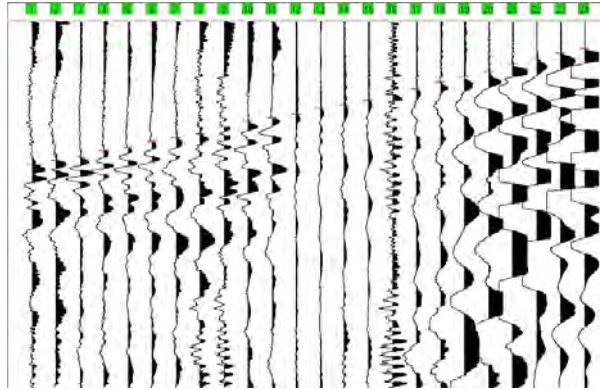
TIRO ESTREMO DX B





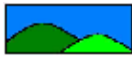
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



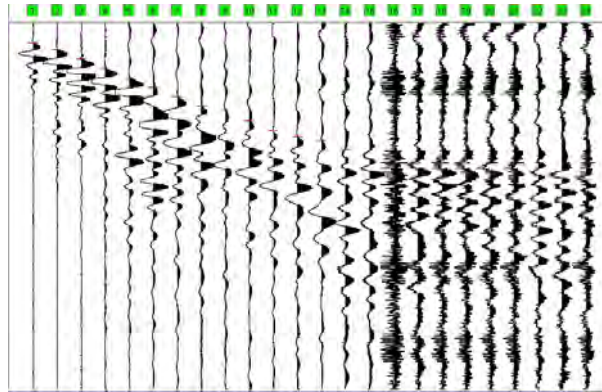
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	17.80	12.70	24.60	47.90	58.60	71.70	79.80
2	19.90	14.00	21.20	45.40	58.10	69.20	77.30
3	23.30	16.10	19.10	42.40	55.60	67.50	75.60
4	25.30	19.10	14.80	37.80	52.20	64.50	71.70
5	30.10	23.30	11.40	34.80	49.60	62.00	70.00
6	34.80	25.90	2.80	31.40	46.20	59.80	66.60
7	38.90	30.50	7.10	28.00	45.40	58.10	64.50
8	41.90	33.90	10.50	25.40	42.40	53.50	62.40
9	44.00	36.10	15.60	21.60	38.20	50.50	58.60
10	46.20	37.30	19.10	16.90	34.80	47.10	55.60
11	48.30	42.40	24.60	13.10	32.70	44.10	53.50
12	50.00	44.50	28.40	8.40	31.00	42.40	51.30
13	51.30	47.50	31.00	6.70	27.10	40.30	48.40
14	53.00	49.60	34.40	13.50	24.60	38.20	46.20
15	54.30	52.60	36.90	16.50	22.00	35.60	43.70
16	56.40	54.70	37.80	20.30	19.10	31.40	40.30
17	58.60	56.00	39.90	22.50	14.40	28.80	37.30
18	61.50	59.00	41.20	24.20	11.40	24.20	33.50
19	63.20	61.10	42.80	27.60	13.80	21.60	30.50
20	65.80	63.20	43.30	31.40	16.50	20.30	27.60
21	70.00	65.40	44.10	34.80	19.10	14.80	23.30
22	73.90	67.90	45.40	37.30	21.60	13.50	21.20
23	77.70	72.20	47.10	39.90	24.20	7.60	17.40
24	79.80	75.60	49.60	42.80	26.70	4.60	14.80

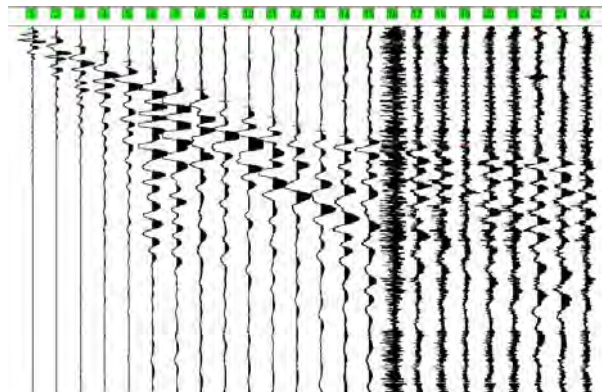


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

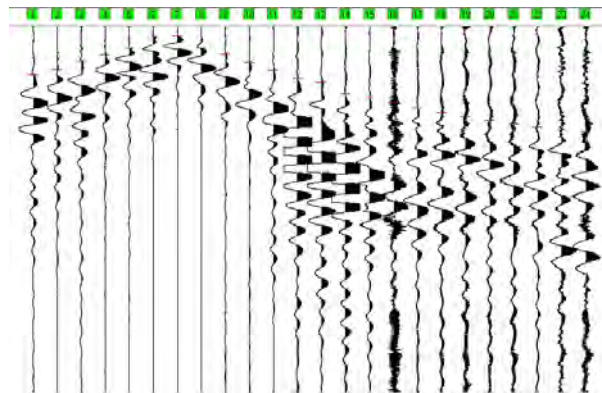
TIRO ESTERNO SX E1



TIRO ESTREMO SX A



TIRO INTERMEDIO SX D1

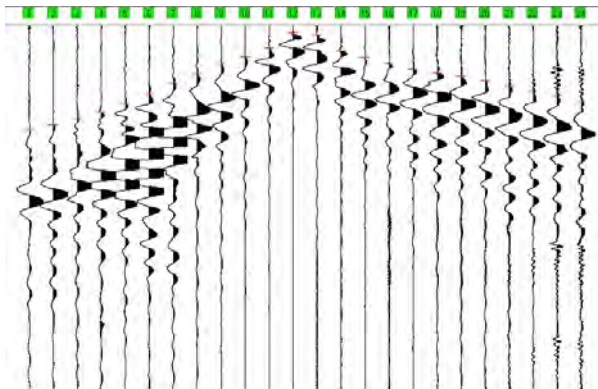




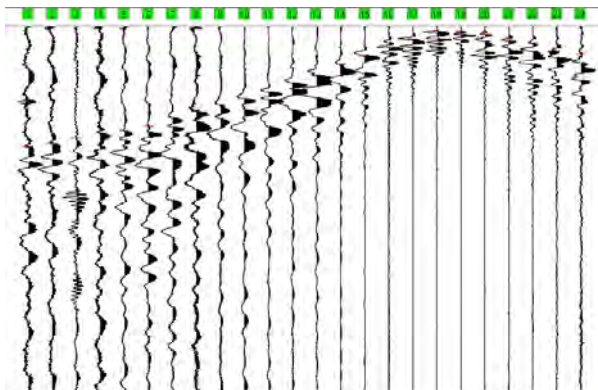


ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

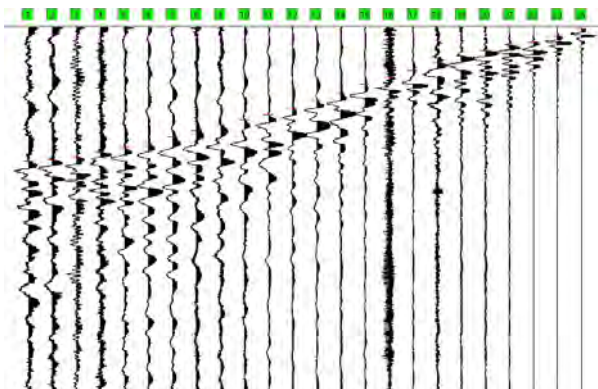
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



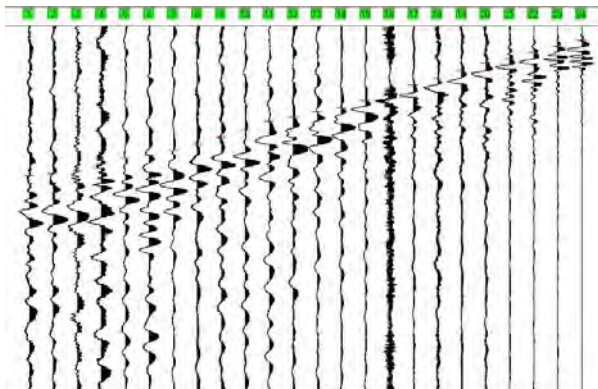
TIRO ESTREMO DX B





## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

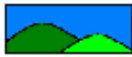
## TIRO ESTERNO DX E2



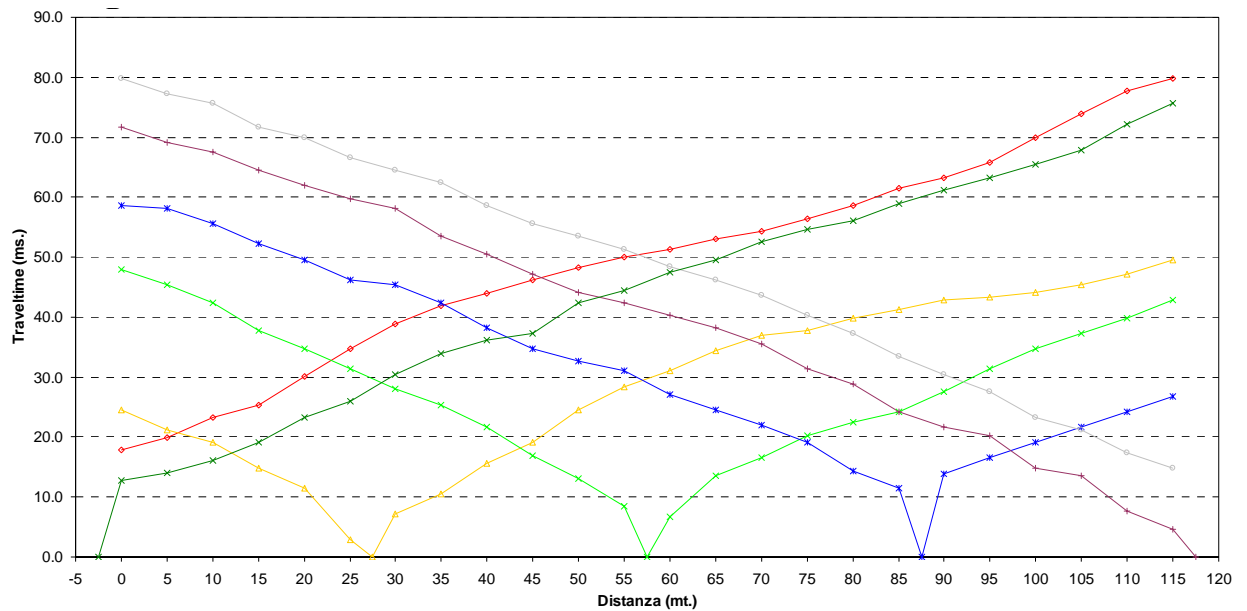
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

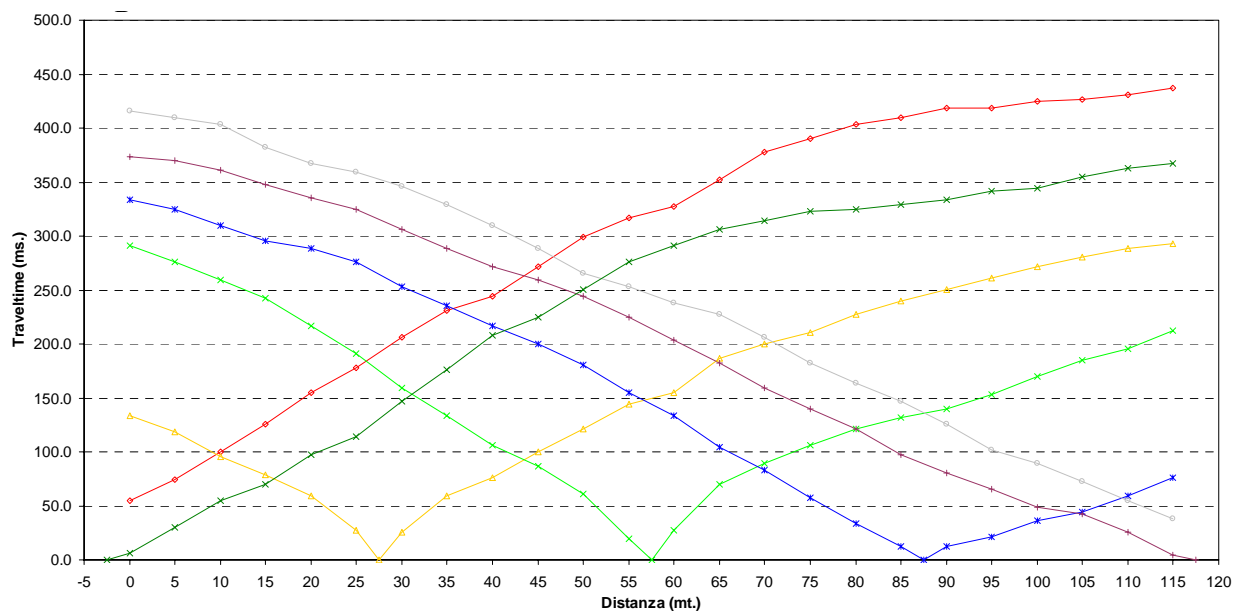
geofono	E1	A	D1	C	D2	B	E2
1	55.20	6.20	133.60	290.90	333.40	373.70	416.20
2	74.30	29.70	118.90	276.00	324.90	369.50	409.80
3	99.80	55.20	95.50	259.00	310.00	361.00	403.50
4	125.30	69.90	78.40	242.10	295.20	348.20	382.20
5	155.00	97.50	59.40	216.60	288.80	335.50	367.40
6	178.30	114.50	27.60	191.10	276.00	324.90	358.90
7	206.00	146.50	25.30	159.20	252.70	305.80	346.10
8	231.30	176.20	59.40	133.70	235.70	288.80	329.10
9	244.20	208.10	76.40	106.10	216.60	271.80	310.00
10	271.80	225.10	99.80	87.00	199.60	259.00	288.80
11	299.40	250.60	121.00	61.50	180.50	244.20	265.40
12	316.40	276.00	144.40	19.10	155.00	225.10	252.70
13	327.00	290.90	155.00	27.60	133.70	203.80	237.80
14	352.50	305.80	186.70	70.00	104.00	182.60	227.20
15	378.00	314.30	199.60	89.10	82.80	159.20	206.00
16	390.70	322.80	210.20	106.10	57.30	140.10	182.60
17	403.50	324.90	227.20	121.00	33.90	121.00	163.50
18	409.80	329.10	239.80	131.60	12.70	97.60	146.50
19	418.30	333.40	250.60	140.10	12.70	80.70	125.30
20	418.30	341.90	261.20	152.90	21.20	65.80	101.90
21	424.70	344.00	271.80	169.80	36.10	48.80	89.10
22	426.80	354.60	280.30	184.70	44.50	42.40	72.20
23	431.10	363.10	288.80	195.30	59.40	25.40	55.20
24	437.40	367.40	292.90	212.30	76.40	4.20	38.20



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

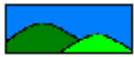
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 75



IGEA S.A.S.

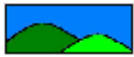
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CODIFICADOCUMENTO

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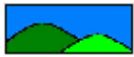
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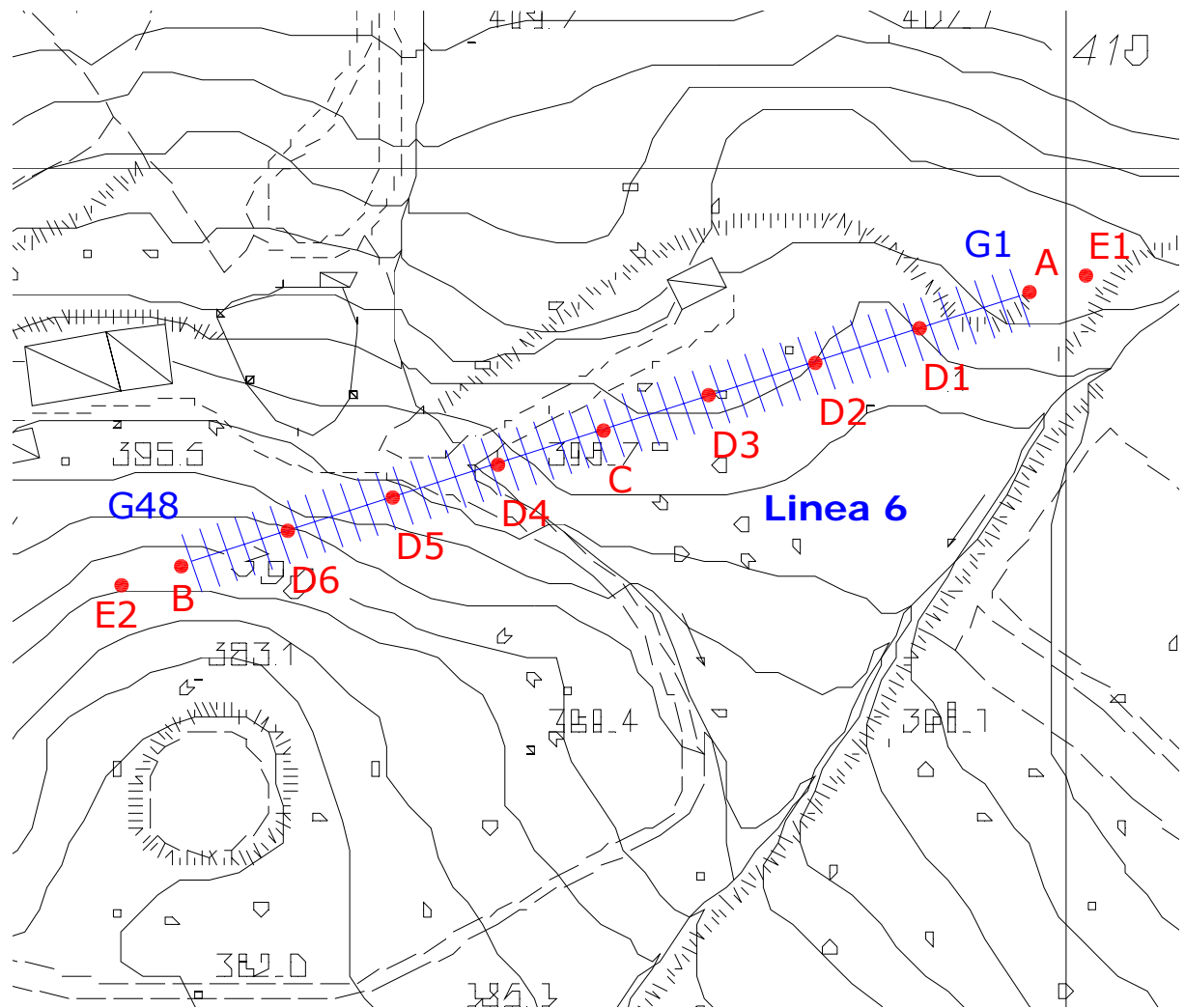


**DOCUMENTAZIONE FOTOGRAFICA LINEA 5**





**LINEA SISMICA 6**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	402.50
2	2.5	2.5	402.30
3	5	2.5	402.00
4	7.5	2.5	401.50
5	10	2.5	401.00
6	12.5	2.5	400.50
7	15	2.5	399.80
8	17.5	2.5	399.70
9	20	2.5	399.60
10	22.5	2.5	399.70
11	25	2.5	399.80
12	27.5	2.5	399.90
13	30	2.5	400.10
14	32.5	2.5	400.20
15	35	2.5	400.30
16	37.5	2.5	400.30
17	40	2.5	400.30
18	42.5	2.5	400.30
19	45	2.5	400.20
20	47.5	2.5	400.10
21	50	2.5	400.00
22	52.5	2.5	400.00
23	55	2.5	399.70
24	57.5	2.5	399.50
25	60	2.5	399.00
26	62.5	2.5	398.80
27	65	2.5	398.60
28	67.5	2.5	398.40
29	70	2.5	398.20
30	72.5	2.5	398.00
31	75	2.5	397.50
32	77.5	2.5	397.20
33	80	2.5	397.00
34	82.5	2.5	396.70
35	85	2.5	396.50





<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	396.20
37	90	2.5	395.50
38	92.5	2.5	395.00
39	95	2.5	394.50
40	97.5	2.5	394.00
41	100	2.5	393.00
42	102.5	2.5	392.00
43	105	2.5	391.50
44	107.5	2.5	391.00
45	110	2.5	390.50
46	112.5	2.5	390.00
47	115	2.5	389.50
48	117.5	2.5	389.00

## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650390	4806580
<i>Geofono n. 48 (G48)</i>	1650280	4806540



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	403.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	402.70
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	400.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	400.00
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	400.30
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	399.30
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	397.70
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	396.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	391.80
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	388.50
<i>E2</i>	Esterno dx	P 48-10.dta		130	388.00

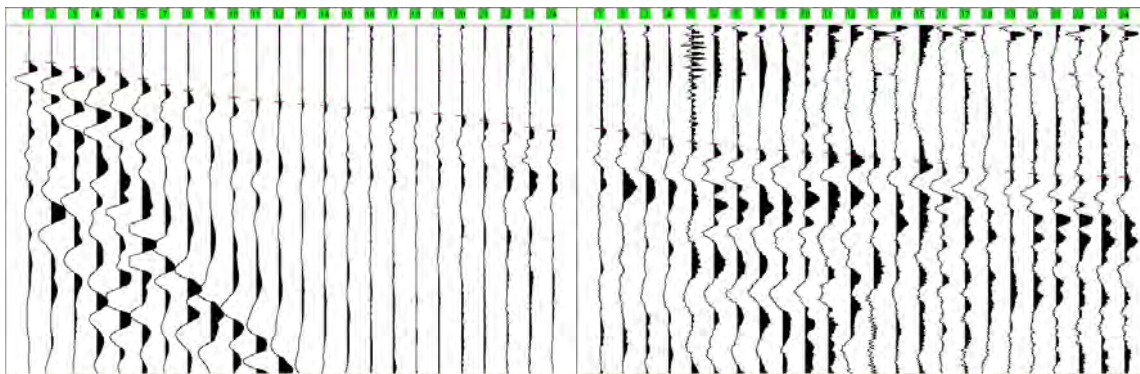


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

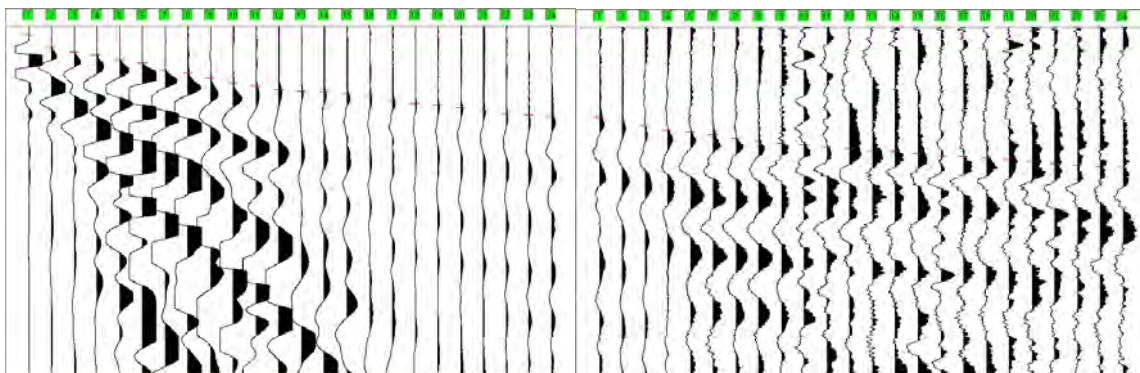
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

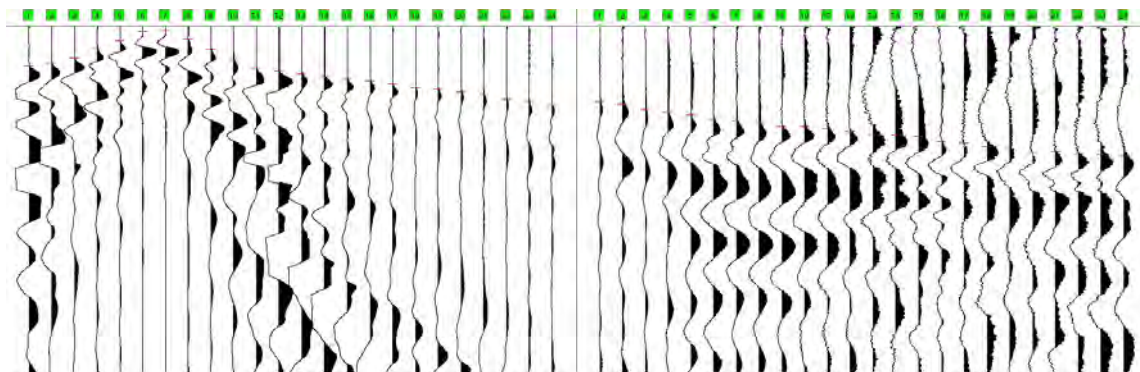
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



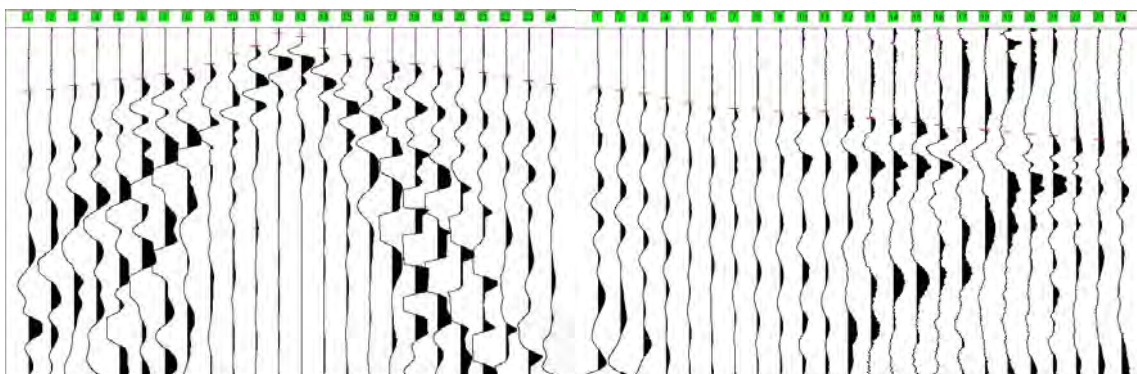


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

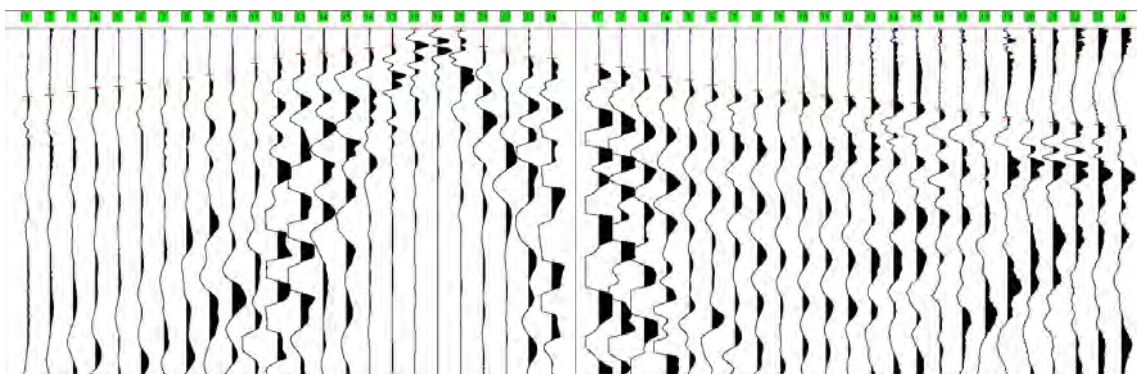
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

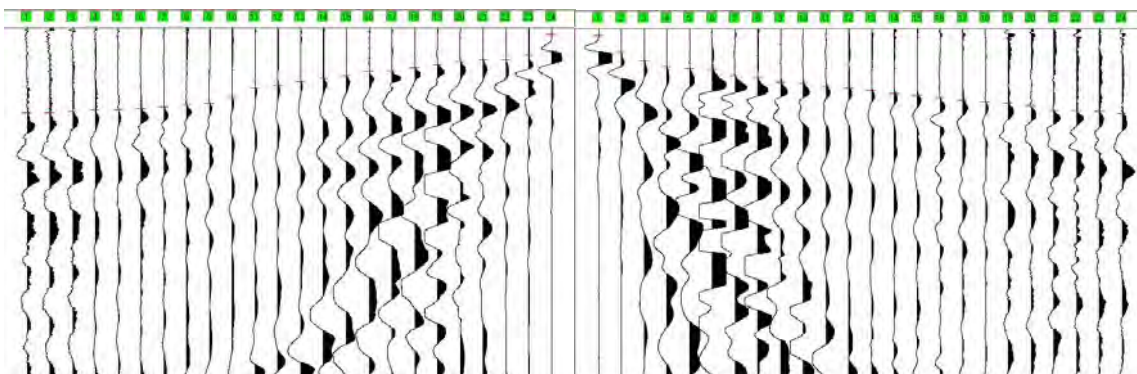
Catena geofonica 25-48

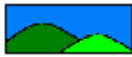


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



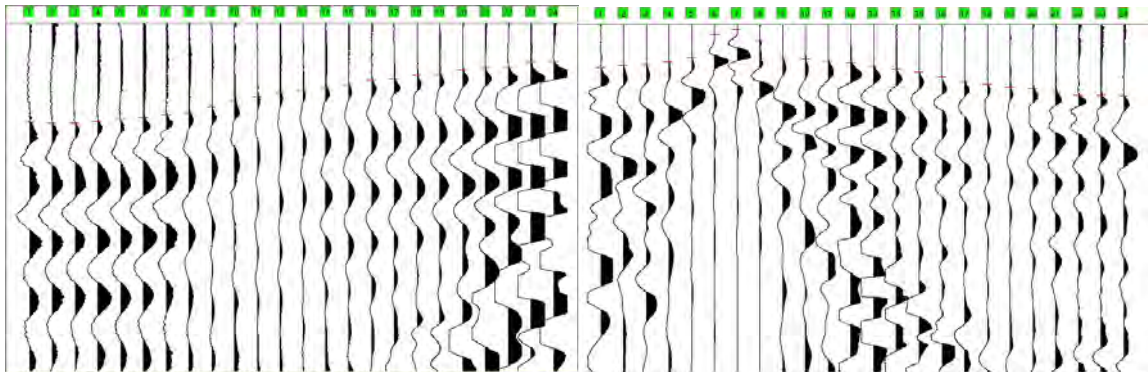


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

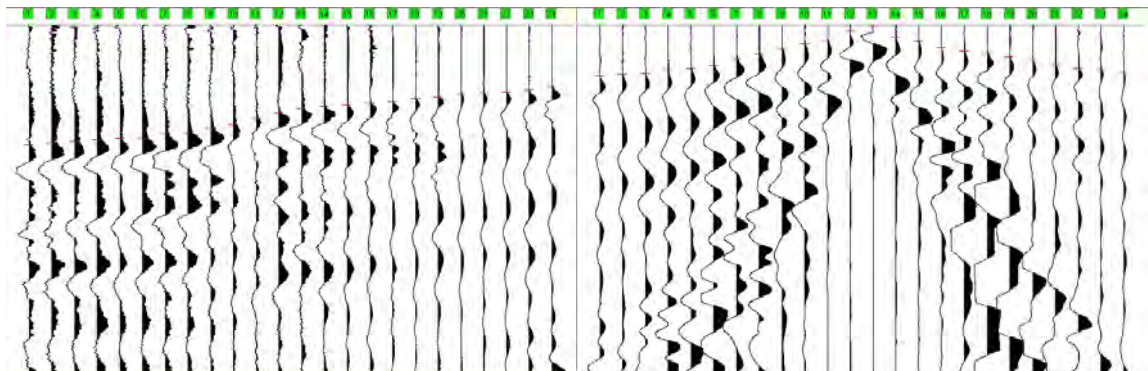
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

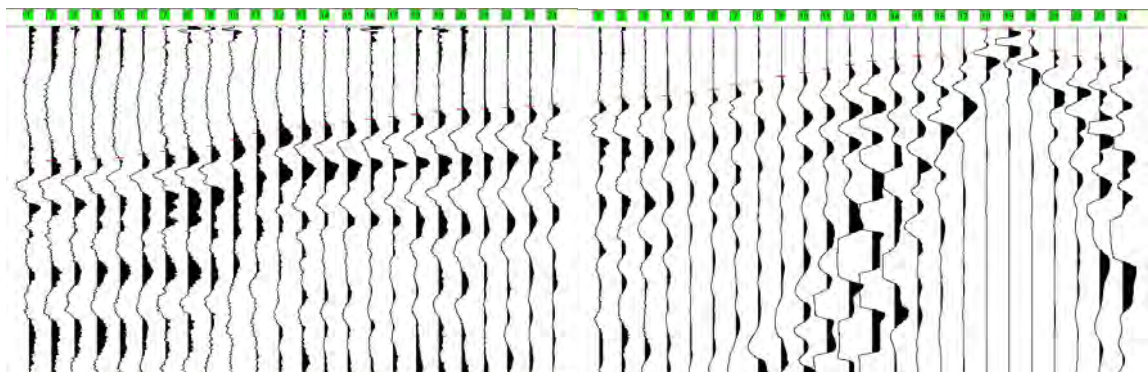
Catena geofonica 25-48

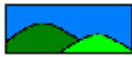


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



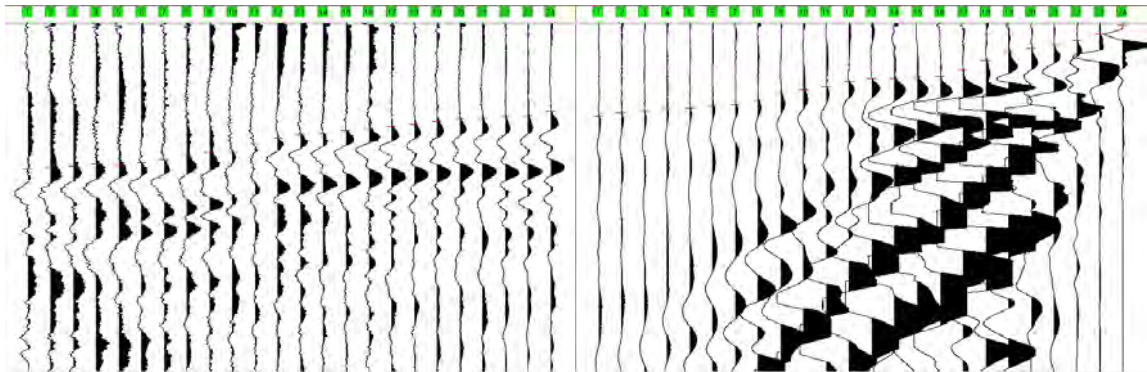


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

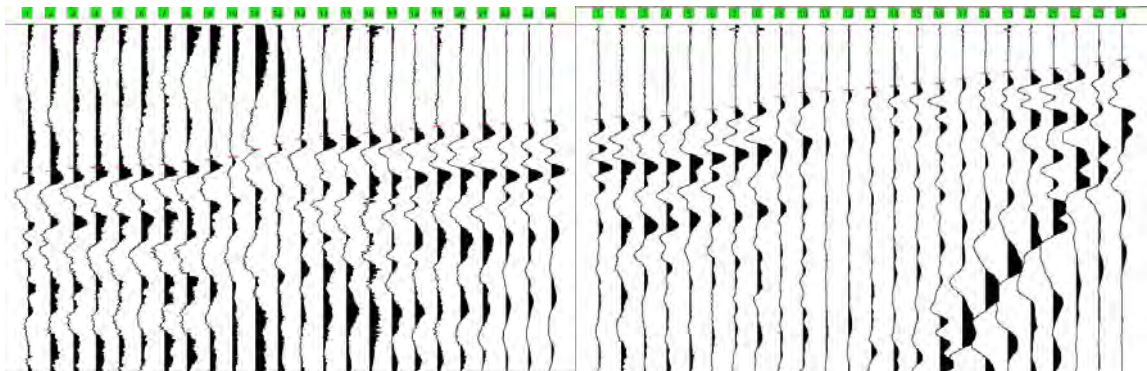
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	20.80	4.60	22.90	36.80	39.80	49.10	57.70	70.00	79.40	85.30	92.00
2	21.60	12.20	21.20	35.50	38.90	49.10	58.10	68.80	78.50	84.10	90.70
3	24.20	14.80	18.20	33.40	36.80	48.70	58.10	67.90	77.70	83.60	89.10
4	25.90	16.50	12.70	32.10	34.80	47.40	57.30	67.10	77.30	82.40	88.60
5	27.60	19.10	8.00	30.10	33.80	47.40	56.00	66.20	76.80	82.80	88.20
6	31.00	21.20	2.50	29.30	32.10	46.60	55.20	65.80	74.70	81.50	87.40
7	34.80	25.00	2.10	26.70	31.40	45.70	53.50	63.70	73.00	79.80	86.90
8	38.20	27.00	7.10	23.70	28.70	44.00	52.20	63.20	71.30	77.30	85.20
9	40.30	30.10	13.10	20.80	26.70	43.60	48.80	60.70	70.00	75.60	84.40
10	42.00	32.70	19.50	14.80	23.70	40.20	45.40	58.10	66.20	75.10	82.30
11	43.70	34.80	24.20	10.10	20.30	34.80	42.80	54.70	62.40	70.50	78.00
12	44.50	36.80	25.90	2.90	17.80	33.10	40.30	51.30	60.70	67.10	75.00
13	45.80	37.80	27.60	4.50	14.80	31.00	38.60	48.80	59.00	65.40	72.10
14	46.70	38.10	29.30	11.40	13.90	29.30	37.30	47.50	57.70	64.50	70.40
15	47.90	39.50	31.00	15.20	12.20	27.60	35.60	46.70	56.00	62.80	69.50
16	47.90	41.20	31.70	17.30	11.40	25.00	33.10	45.40	54.30	61.50	68.20
17	49.20	43.20	33.40	19.50	9.20	24.60	32.20	44.50	52.60	60.30	67.80
18	50.90	44.90	35.50	20.80	0.30	22.90	30.10	42.80	51.30	59.00	65.30
19	51.80	45.70	36.50	22.50	0.30	21.20	29.70	42.00	49.20	57.30	64.40
20	52.60	47.40	38.10	23.30	5.00	19.50	27.10	40.30	48.40	55.60	63.10
21	55.60	49.10	39.80	25.90	10.50	18.20	25.90	39.50	47.90	55.60	63.10
22	57.30	50.90	42.30	28.40	13.10	18.20	25.00	39.00	47.50	54.70	63.10
23	59.40	51.70	43.60	30.40	16.90	15.60	22.50	37.80	46.70	53.90	63.10
24	61.50	52.10	45.70	32.70	17.30	3.30	22.00	35.60	45.40	51.30	61.40
25	61.70	53.60	47.10	34.40	20.80	3.30	22.80	31.70	43.20	51.30	60.10
26	63.20	54.70	47.80	35.50	22.50	13.50	22.40	28.40	41.20	50.00	58.80
27	64.10	57.70	48.30	38.10	24.60	18.20	21.30	28.00	40.20	49.60	58.80
28	65.80	59.80	50.00	40.20	28.00	21.60	20.10	25.90	39.80	48.70	58.00
29	67.50	61.10	51.80	43.20	30.40	22.90	19.10	25.00	38.10	46.60	55.90
30	69.20	62.80	54.30	46.20	33.10	23.30	5.50	23.30	36.50	45.30	54.60
31	71.30	64.90	55.20	46.60	35.50	27.00	2.50	19.10	33.40	43.60	52.90
32	72.60	66.60	56.40	47.00	36.50	28.40	8.80	16.50	31.60	41.20	50.30
33	73.00	67.90	58.60	48.70	37.20	31.00	18.60	13.10	28.40	39.50	46.90
34	73.40	68.80	58.60	49.60	38.10	31.40	19.90	10.50	26.30	37.20	44.50
35	74.70	70.00	59.80	48.70	39.50	33.10	21.20	8.40	24.60	35.50	43.50
36	75.60	70.90	61.50	50.40	39.80	34.40	22.00	3.30	21.60	33.80	42.80
37	76.40	72.20	63.20	52.60	40.60	35.50	24.20	0.40	19.50	32.10	41.50
38	78.10	72.60	63.70	53.40	42.40	37.20	25.90	6.70	17.80	31.00	40.50
39	79.40	73.90	64.50	55.10	43.70	38.50	27.60	8.80	16.50	28.40	38.90
40	80.70	75.10	67.50	56.40	47.10	39.80	30.40	12.70	16.10	27.00	38.90
41	83.20	75.60	68.30	58.10	47.90	41.50	33.10	14.80	12.20	25.00	36.40
42	84.10	76.40	70.50	59.40	49.10	42.30	34.80	16.10	4.30	21.60	33.40
43	85.30	77.30	71.60	60.70	52.10	43.20	36.50	18.20	0.30	19.90	32.10
44	86.60	78.10	73.90	61.50	53.90	44.50	37.20	19.90	5.70	19.10	31.30
45	87.90	79.80	73.30	62.80	55.20	47.40	38.90	22.90	13.10	16.90	30.00
46	87.90	80.70	74.60	64.50	55.60	47.40	41.20	25.00	16.50	15.20	28.30
47	88.30	81.50	75.00	64.90	56.40	47.90	41.20	25.90	17.80	2.50	26.20
48	88.70	81.90	76.00	66.60	57.30	49.10	41.50	27.60	19.50	0.40	25.30

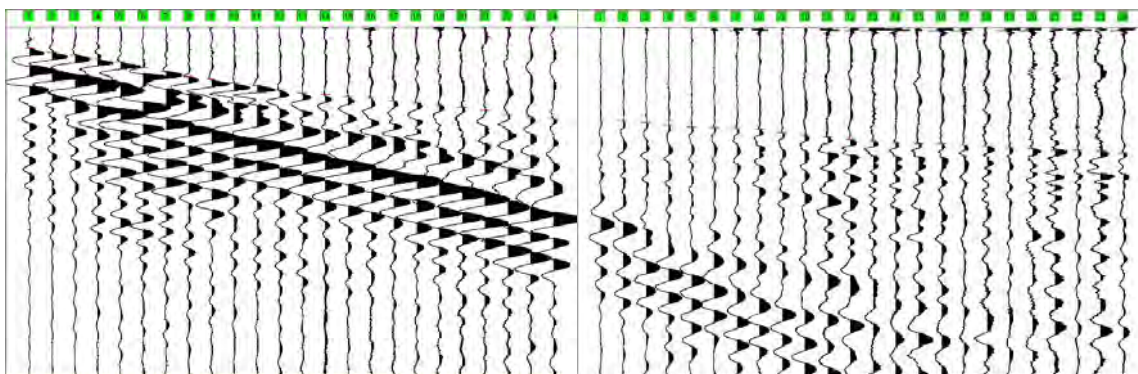


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

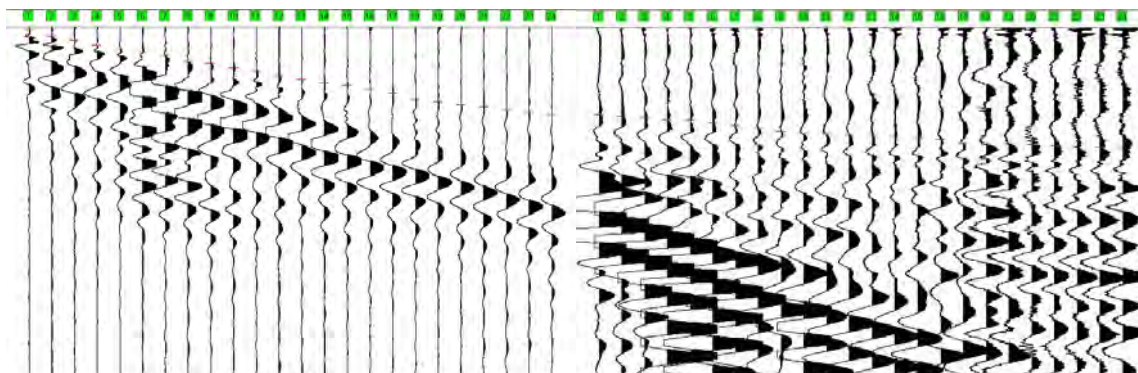
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

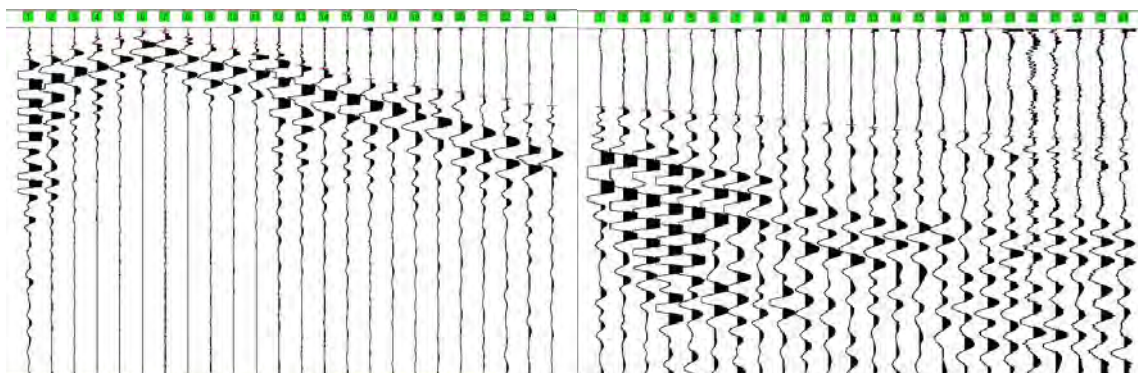
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48





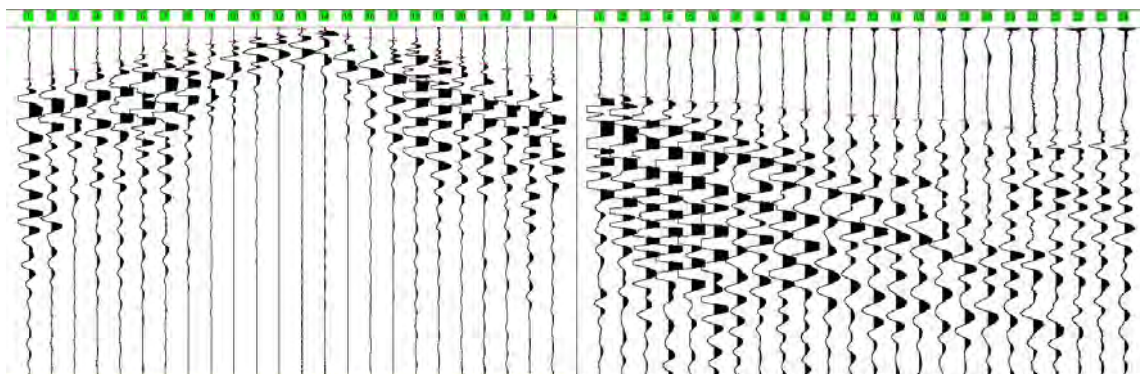


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

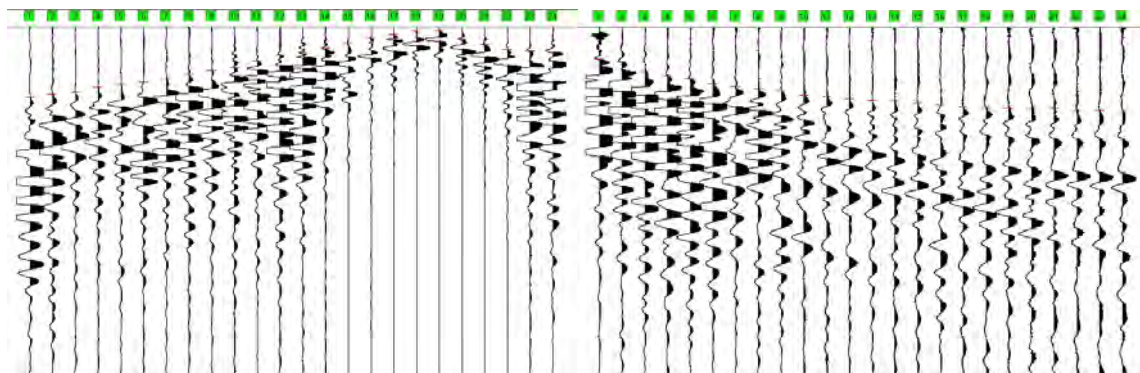
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

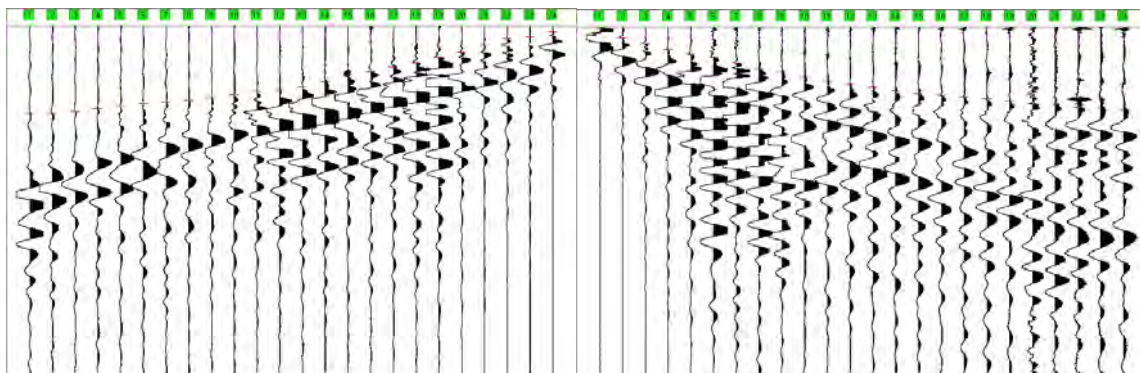
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



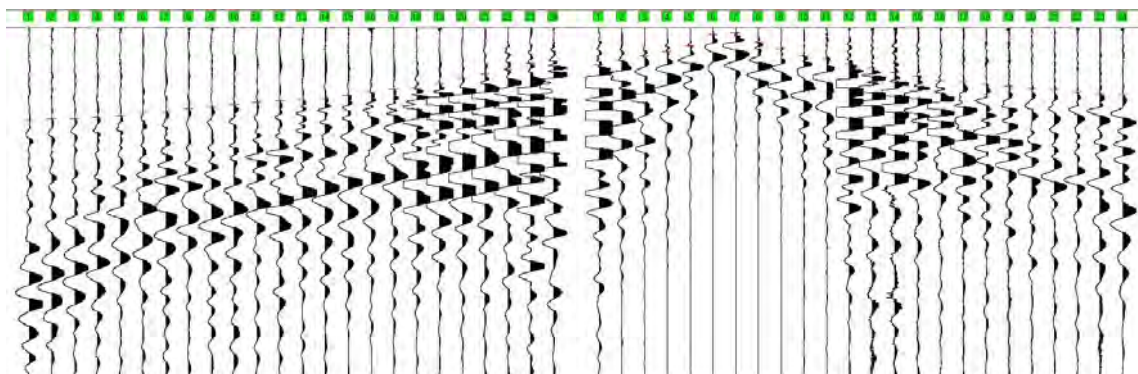


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

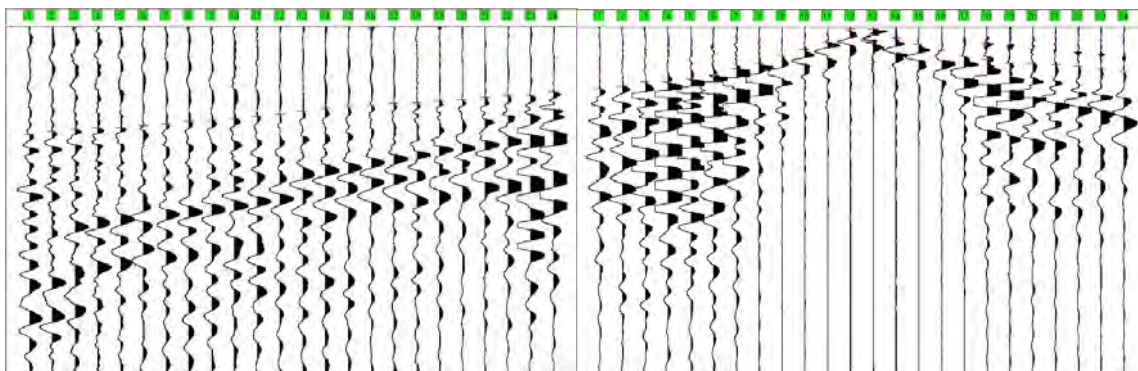
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

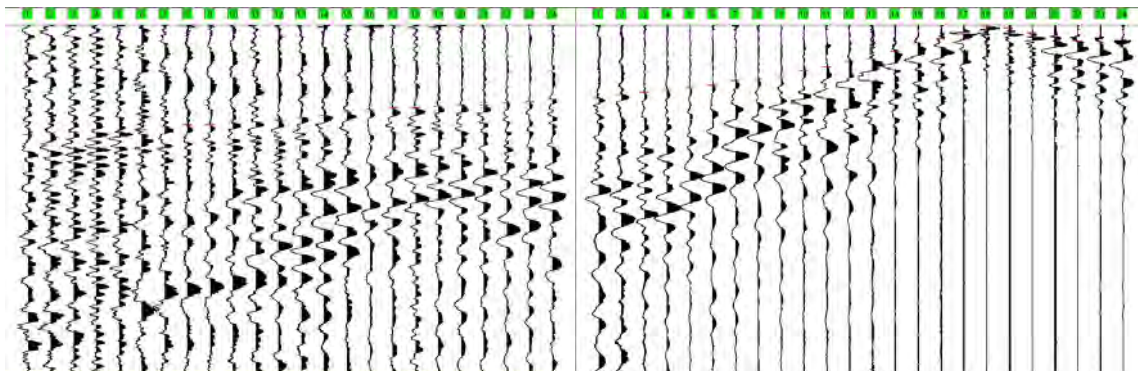
Catena geofonica 25-48

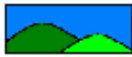


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



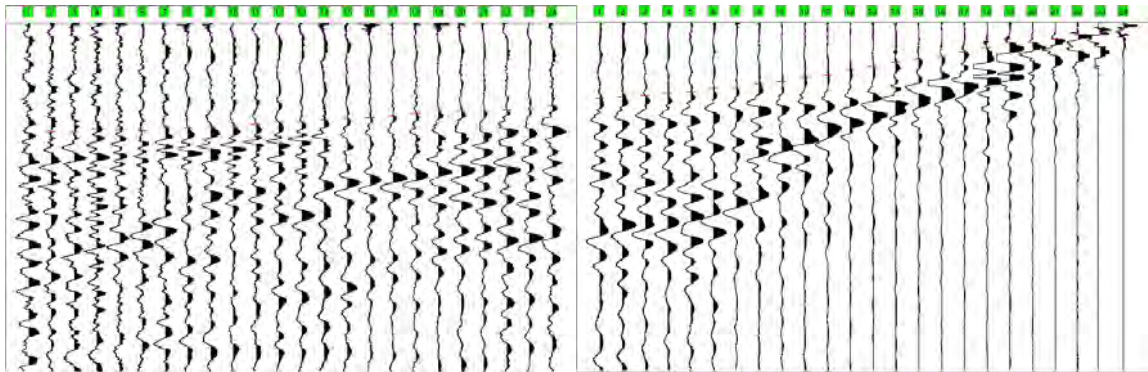


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

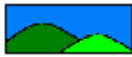
Catena geofonica 25-48



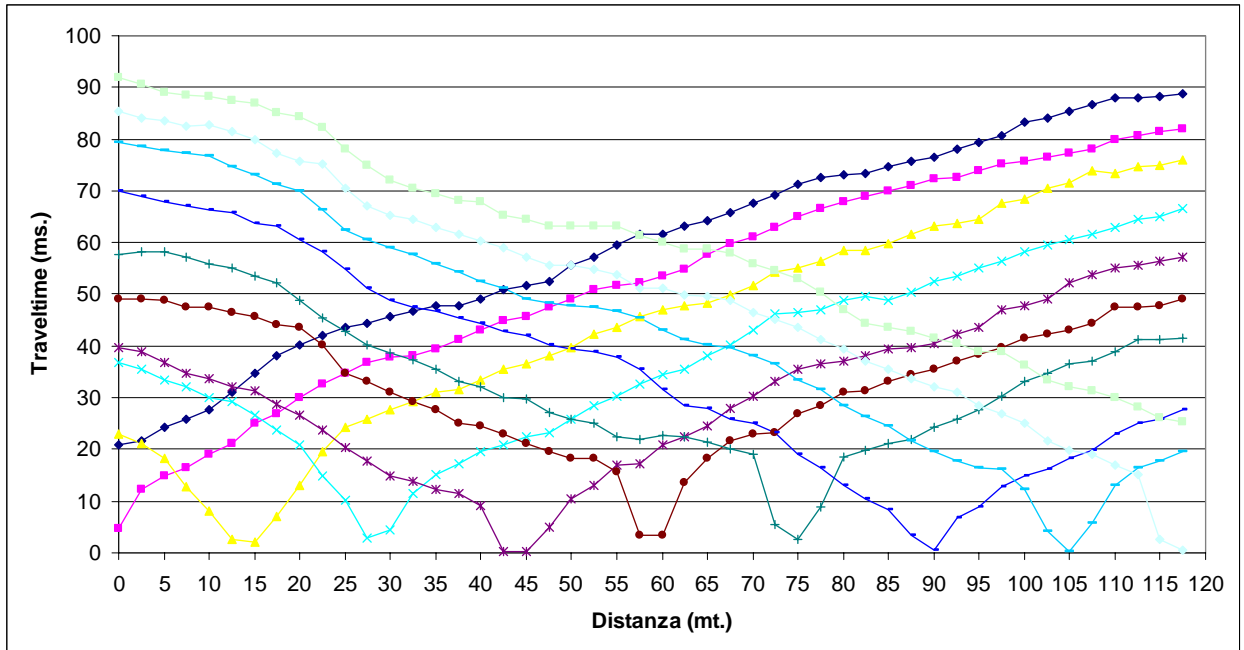


## TEMPI DI PROPAGAZIONE ONDE Sh

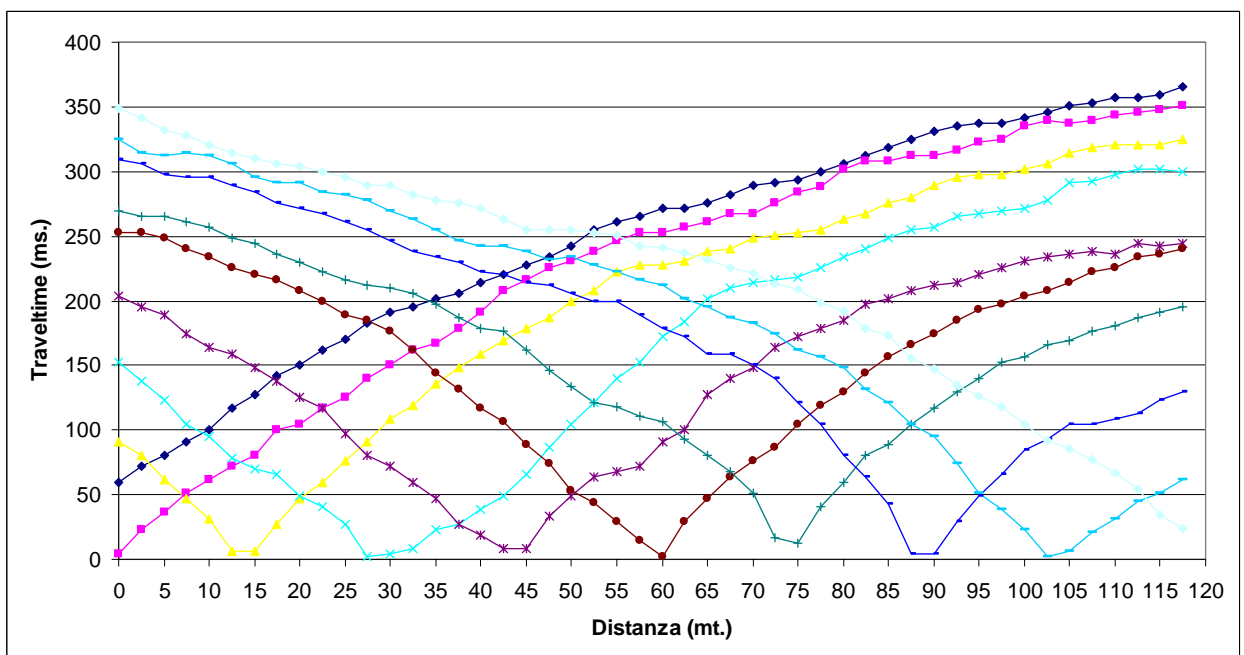
geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	59.40	4.20	91.30	152.90	203.70	252.70	269.70	309.10	325.30	348.60
2	72.20	23.30	80.70	138.00	195.20	252.70	265.40	305.80	314.30	341.20
3	80.70	36.10	61.50	123.00	189.00	248.30	265.40	297.30	312.10	332.50
4	91.30	50.90	46.70	104.00	174.10	239.80	261.20	295.20	314.30	327.60
5	99.80	61.50	31.80	95.50	163.50	233.60	256.80	295.20	312.10	320.40
6	116.80	72.20	6.20	78.50	159.10	225.10	248.30	288.80	305.80	314.30
7	127.40	80.70	6.20	70.00	148.60	220.80	244.20	284.50	295.20	310.50
8	142.20	99.80	27.60	65.80	138.00	216.60	235.70	276.00	290.90	305.80
9	150.70	104.00	46.70	48.80	125.30	208.10	229.30	271.80	290.90	303.60
10	161.40	116.80	59.40	40.30	116.80	199.60	222.80	267.50	284.50	299.40
11	169.80	125.30	76.40	27.60	97.50	189.00	216.60	261.20	282.40	295.20
12	182.60	140.10	91.30	2.10	80.70	184.70	212.20	254.80	278.20	288.80
13	191.10	150.60	108.30	4.20	72.20	176.20	210.20	246.30	269.70	288.80
14	195.30	161.40	118.90	8.40	59.40	161.40	206.00	237.80	263.30	282.40
15	201.70	167.60	135.90	23.30	46.70	144.40	197.50	233.60	254.80	278.20
16	206.00	178.20	148.60	27.60	27.60	131.60	186.70	229.30	246.30	275.90
17	214.40	191.10	159.10	38.20	19.10	116.80	178.20	222.90	242.10	271.80
18	220.80	208.10	169.70	48.80	8.30	106.10	176.20	220.80	242.10	263.30
19	227.20	216.60	178.20	65.80	8.30	89.10	161.40	214.40	237.80	254.80
20	233.60	225.10	186.70	87.00	33.90	74.30	146.50	212.30	231.40	254.80
21	242.10	231.30	199.60	104.00	48.80	53.00	133.60	206.00	233.60	254.80
22	254.80	237.80	208.10	121.00	63.70	44.20	121.00	199.60	227.20	252.70
23	261.20	246.30	222.80	140.10	67.90	29.70	117.50	199.60	222.90	250.60
24	265.40	252.70	227.20	152.90	72.20	14.80	111.20	189.00	216.60	242.10
25	271.80	252.70	227.20	172.40	91.30	2.10	106.10	178.20	212.20	240.80
26	271.80	256.90	231.30	183.70	99.80	29.70	93.40	172.00	201.70	236.60
27	275.90	261.20	237.80	201.70	127.40	46.70	80.70	159.10	195.20	232.20
28	282.40	267.50	239.80	210.20	140.10	63.70	67.90	159.20	186.70	226.00
29	288.80	267.50	248.30	214.40	148.60	76.40	50.90	150.70	182.60	221.70
30	290.90	276.00	250.60	216.60	163.50	87.00	16.80	140.10	174.10	213.20
31	293.00	284.50	252.70	218.70	172.00	104.00	12.70	121.00	161.40	209.00
32	299.80	288.20	254.80	225.10	178.20	118.90	40.30	104.00	157.10	198.20
33	305.80	301.50	263.30	233.60	184.70	129.50	59.40	80.70	148.60	192.00
34	312.10	307.90	267.40	239.80	197.50	144.40	80.70	63.70	131.50	179.10
35	318.50	307.90	275.90	248.30	201.70	157.10	89.00	42.40	121.00	172.90
36	324.90	312.10	280.30	254.80	208.10	165.60	104.00	4.20	104.00	155.90
37	331.30	312.10	288.80	256.80	212.20	174.10	116.80	4.20	95.50	147.40
38	335.50	316.40	295.20	265.40	214.30	184.70	129.50	29.70	74.30	134.50
39	337.60	322.80	297.30	267.40	220.80	193.20	140.10	48.80	50.90	126.00
40	337.60	324.90	297.30	269.70	225.10	197.50	152.90	65.80	38.20	117.50
41	341.90	335.50	301.50	271.80	231.30	203.70	157.10	84.90	23.30	104.90
42	346.10	339.70	305.80	278.20	233.60	208.10	165.60	93.40	2.10	92.20
43	350.40	337.60	314.30	290.90	235.70	214.30	169.70	104.00	6.20	85.60
44	352.50	339.70	318.50	292.90	237.80	222.80	176.20	104.00	21.20	77.30
45	356.70	344.00	320.60	297.30	235.70	225.10	180.50	108.30	31.80	66.70
46	356.70	346.10	320.60	301.40	244.20	233.60	186.70	112.50	44.40	53.90
47	358.90	348.20	320.60	301.40	242.10	235.70	191.10	123.00	50.90	34.80
48	365.20	350.40	324.90	299.40	244.20	239.80	195.20	129.50	61.40	24.20



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

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IGEA S.A.S.

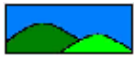
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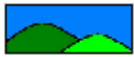
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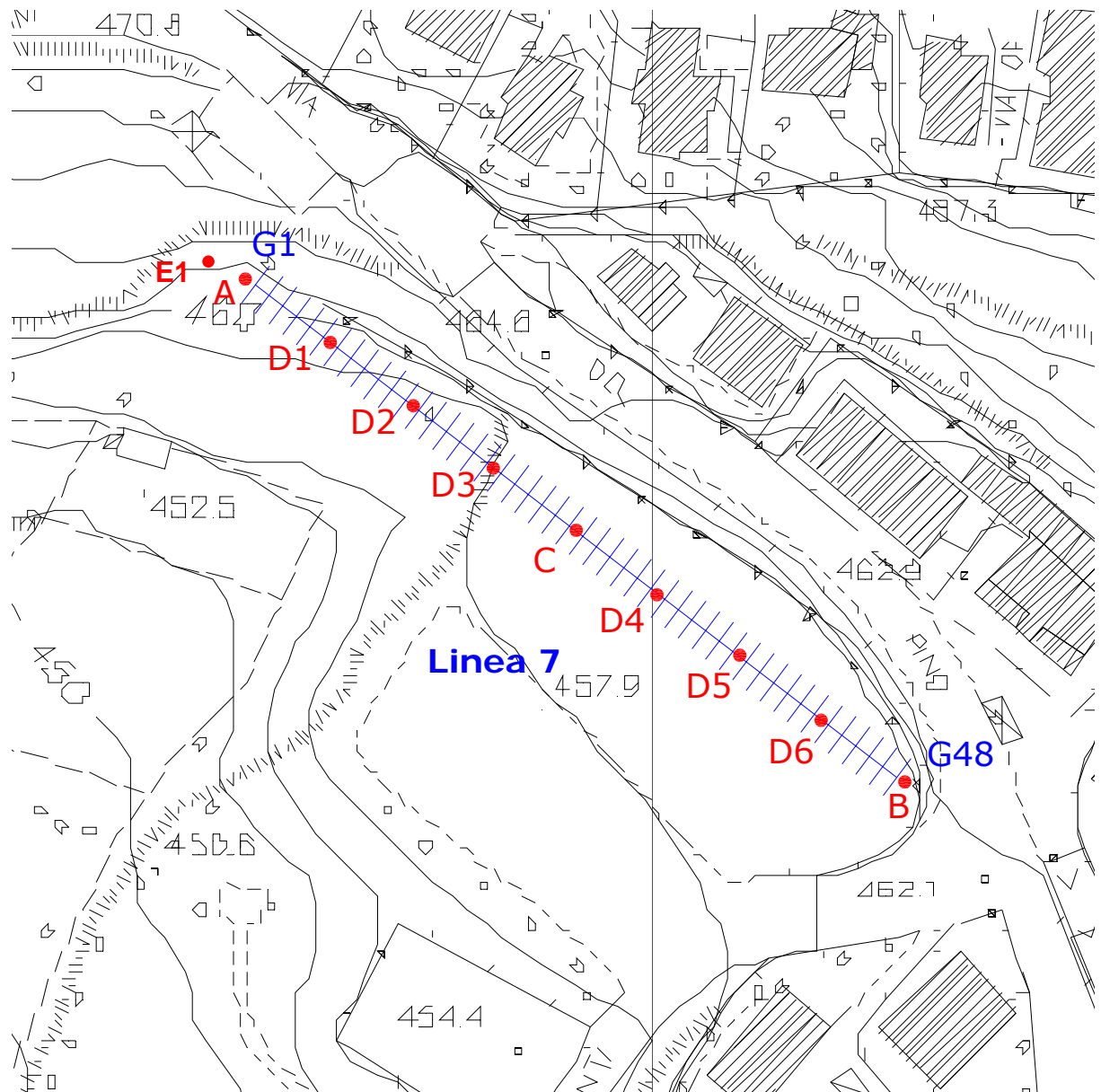
**DOCUMENTAZIONE FOTOGRAFICA LINEA 6**







**LINEA SISMICA 7**



*Ubicazione delle linea - scala 1:1000*



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	460.00
2	2.5	2.5	460.00
3	5	2.5	460.00
4	7.5	2.5	460.00
5	10	2.5	460.00
6	12.5	2.5	460.00
7	15	2.5	460.00
8	17.5	2.5	460.00
9	20	2.5	460.00
10	22.5	2.5	460.00
11	25	2.5	460.00
12	27.5	2.5	460.00
13	30	2.5	460.00
14	32.5	2.5	460.00
15	35	2.5	460.00
16	37.5	2.5	460.00
17	40	2.5	460.00
18	42.5	2.5	460.00
19	45	2.5	460.00
20	47.5	2.5	460.00
21	50	2.5	460.00
22	52.5	2.5	460.00
23	55	2.5	460.00
24	57.5	2.5	460.00
25	60	2.5	460.00
26	62.5	2.5	460.00
27	65	2.5	460.00
28	67.5	2.5	460.00
29	70	2.5	460.00
30	72.5	2.5	460.00
31	75	2.5	460.00
32	77.5	2.5	460.00
33	80	2.5	460.00
34	82.5	2.5	460.00
35	85	2.5	460.00



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	460.00
37	90	2.5	460.00
38	92.5	2.5	460.00
39	95	2.5	460.00
40	97.5	2.5	460.00
41	100	2.5	460.00
42	102.5	2.5	460.00
43	105	2.5	460.00
44	107.5	2.5	460.00
45	110	2.5	460.00
46	112.5	2.5	460.00
47	115	2.5	460.00
48	117.5	2.5	460.00

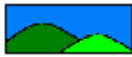
## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650730	4806740
<i>Geofono n. 48 (G48)</i>	1650830	4806670



## PUNTI DI ENERGIZZAZIONE

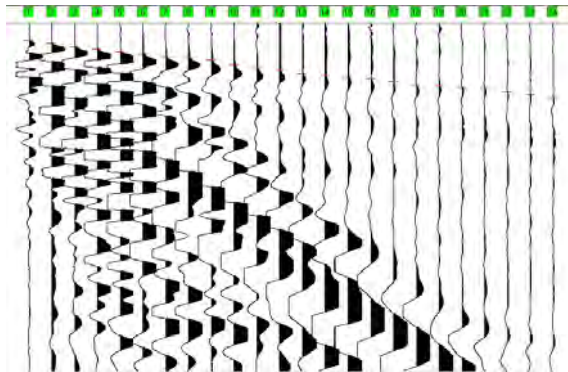
<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	460.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	460.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	460.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	460.00
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	460.00
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	460.00
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	460.00
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	460.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	460.00
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	460.00



ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

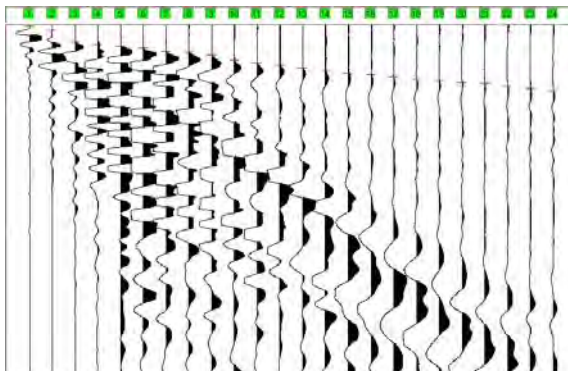
TIRO ESTERNO SX E1

Catena geofonica 1-24



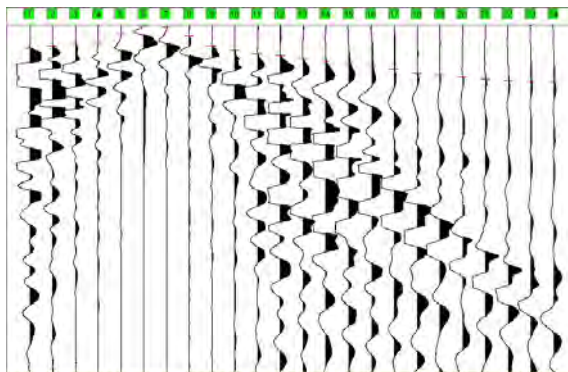
TIRO ESTREMO SX A

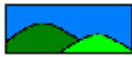
Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

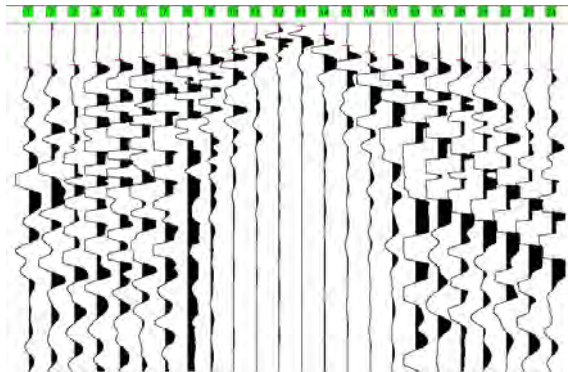




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

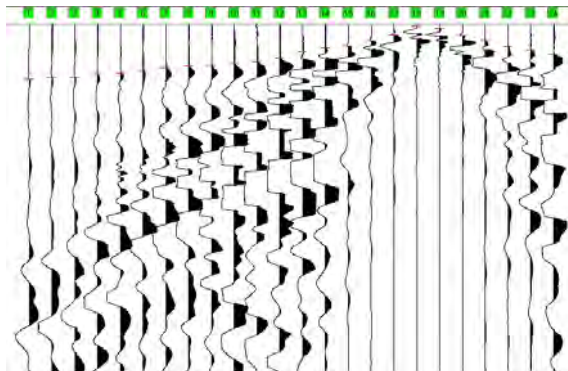
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

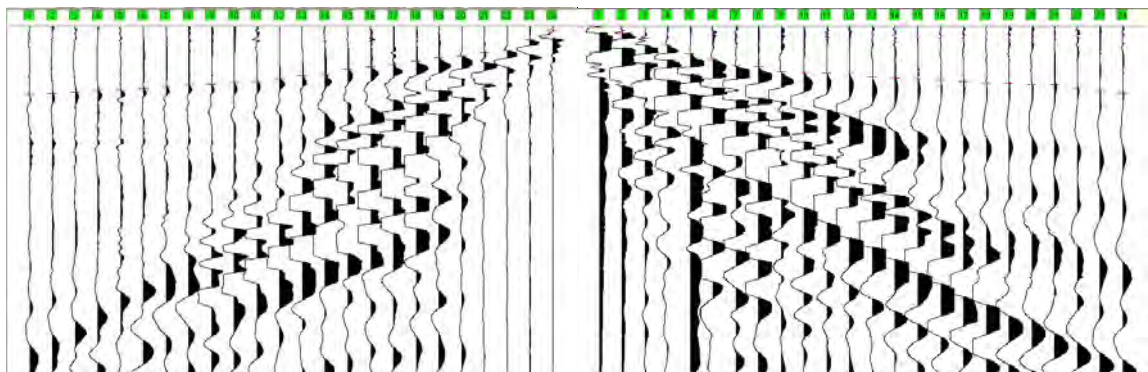
Catena geofonica 1-24

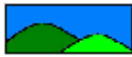


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



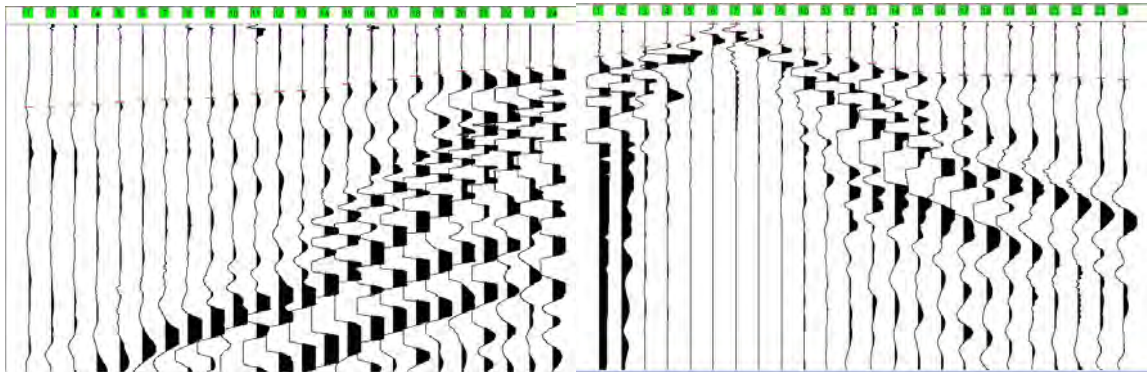


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

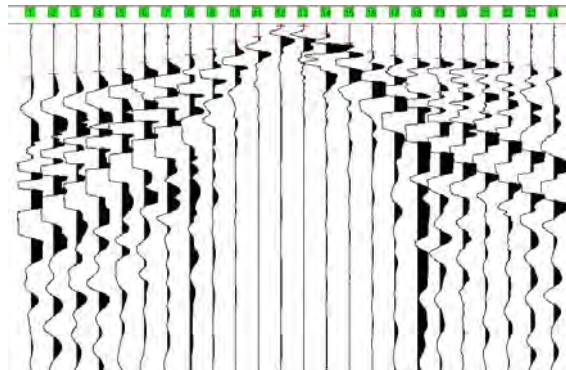
Catena geofonica 1-24

Catena geofonica 25-48



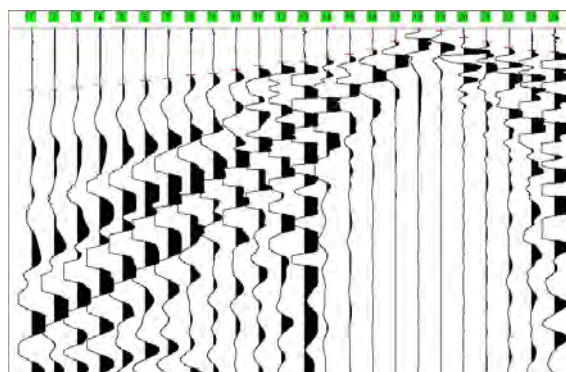
TIRO INTERMEDIO DX D5

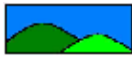
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

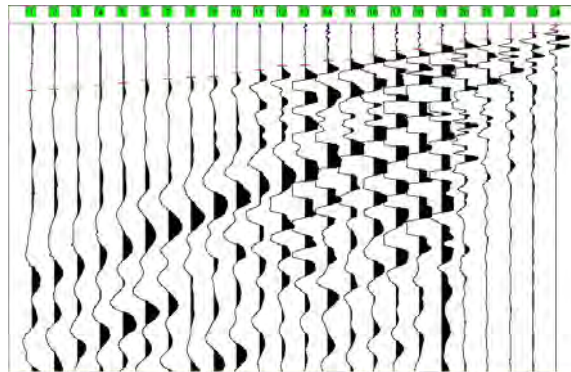




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 25-48







## TEMPI DI PROPAGAZIONE ONDE P

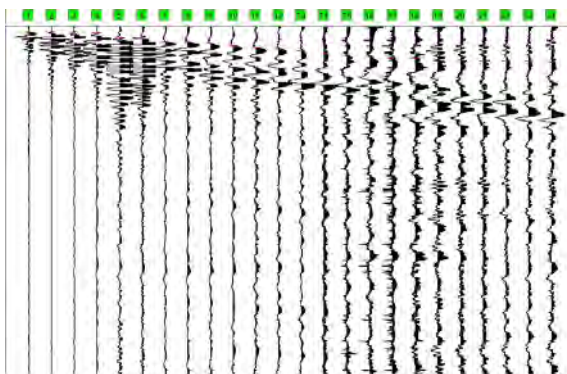
geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	9.70	0.30	13.10	25.90	31.70	39.50	48.40			
2	11.40	2.90	11.80	24.60	31.00	38.90	47.90			
3	13.50	9.70	10.10	24.20	31.00	38.10	47.10			
4	14.80	10.90	10.10	22.50	28.70	36.80	46.20			
5	16.50	12.20	4.60	21.20	28.40	36.80	45.40			
6	17.80	13.10	0.30	19.50	26.70	36.10	44.10			
7	19.10	15.20	0.80	18.60	25.30	34.80	44.10			
8	19.90	15.60	5.80	17.80	24.20	33.80	43.20			
9	21.20	17.30	11.80	17.80	23.70	33.40	42.70			
10	24.20	20.30	14.40	14.80	22.90	32.70	41.20			
11	25.90	22.00	16.50	9.30	21.60	31.70	40.20			
12	26.70	23.30	17.30	0.30	19.50	30.10	38.90			
13	29.30	25.00	19.10	1.10	15.60	28.40	38.50			
14	30.50	26.30	20.80	6.70	13.50	28.00	36.80			
15	31.40	28.00	22.00	12.70	12.30	24.60	34.80			
16	32.20	28.70	23.70	16.90	9.30	23.30	33.40			
17	33.90	30.10	25.30	18.20	5.90	22.00	32.10			
18	35.60	31.40	28.00	19.10	0.70	19.90	30.10			
19	36.50	32.10	28.70	20.30	2.10	17.80	28.70			
20	37.30	33.40	30.10	21.20	6.30	16.90	27.00			
21	38.20	33.80	31.40	22.50	9.20	14.80	26.30			
22	39.90	36.10	32.10	24.20	12.70	13.50	26.70			
23	41.60	36.80	32.70	26.30	14.80	7.10	25.30			
24	43.30	38.10	33.40	27.60	17.30	1.60	23.70			
25						0.30	19.90	31.00	36.50	38.90
26						3.70	17.80	28.70	35.50	38.10
27						6.70	13.90	28.40	34.80	37.20
28						11.00	12.20	27.60	33.40	35.50
29						15.60	7.50	25.90	32.70	34.80
30						19.10	0.70	22.50	30.40	33.40
31						22.90	0.70	20.30	29.30	32.10
32						23.30	4.10	17.80	27.00	31.40
33						26.30	12.70	14.40	26.30	31.00
34						26.70	15.70	9.70	24.20	28.70
35						27.00	18.20	7.10	21.60	27.00
36						27.60	20.80	0.70	19.90	24.60
37						29.30	24.20	0.70	19.10	24.20
38						30.10	27.00	5.00	16.10	21.60
39						30.40	28.70	10.90	14.80	20.80
40						31.60	29.70	15.60	12.30	18.20
41						32.10	31.00	18.20	7.50	15.60
42						32.70	31.00	19.90	0.30	14.80
43						33.10	31.00	19.90	1.10	11.40
44						33.80	31.00	20.30	5.00	10.10
45						33.80	31.00	20.80	7.50	9.20
46						35.50	32.10	22.00	10.90	8.90
47						37.20	32.70	24.20	12.70	5.00
48						38.50	33.40	25.20	13.50	0.80



ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

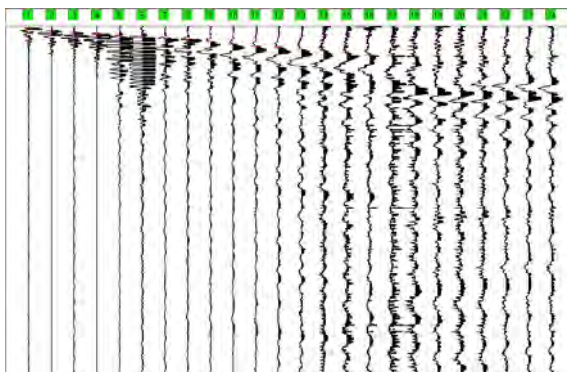
TIRO ESTERNO SX E1

Catena geofonica 1-24



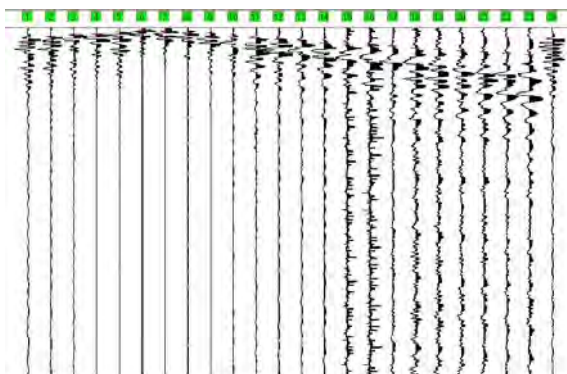
TIRO ESTREMO SX A

Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

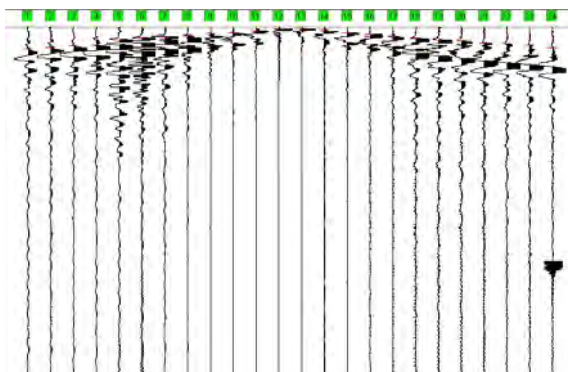




ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

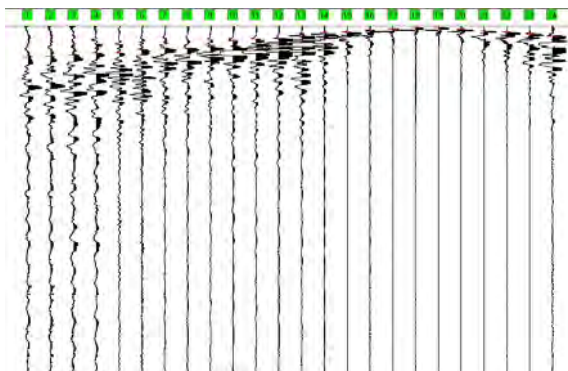
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

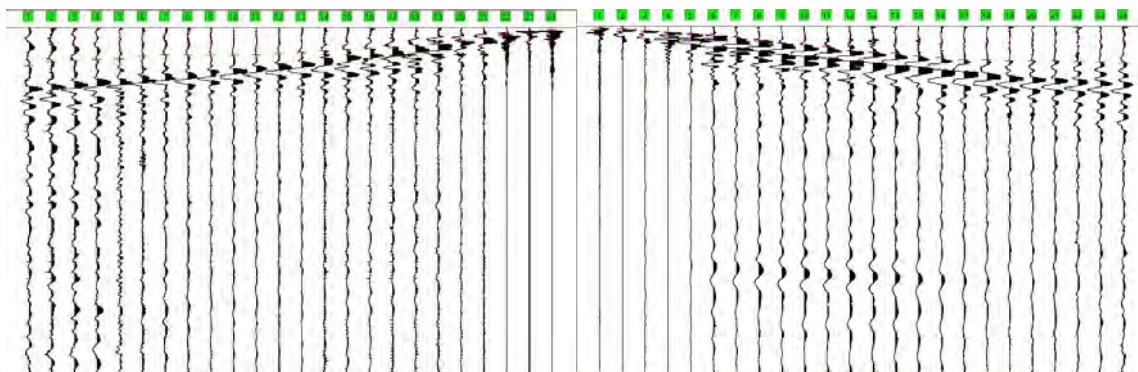
Catena geofonica 1-24

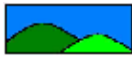


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48

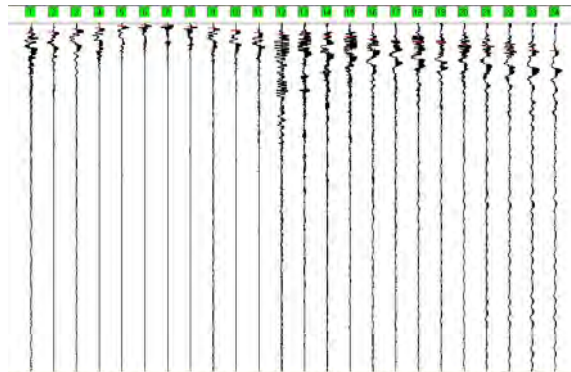




ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

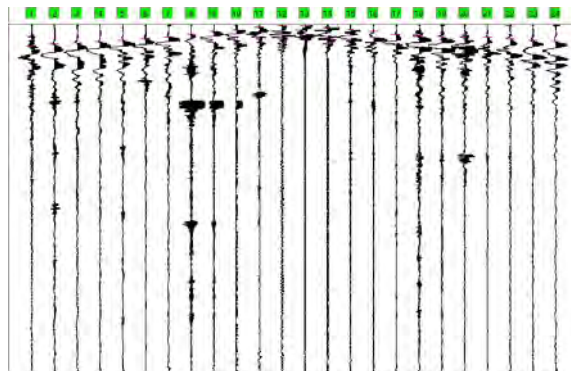
TIRO INTERMEDIO DX D4

Catena geofonica 25-48



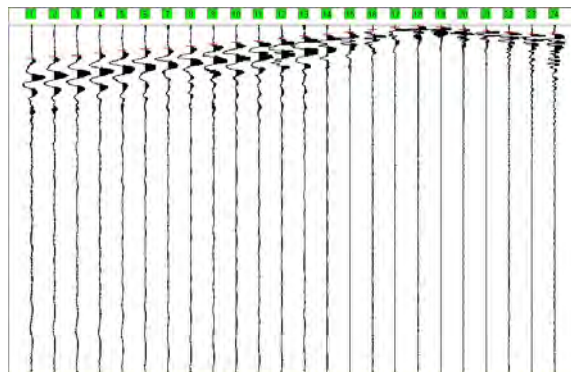
TIRO INTERMEDIO DX D5

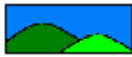
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

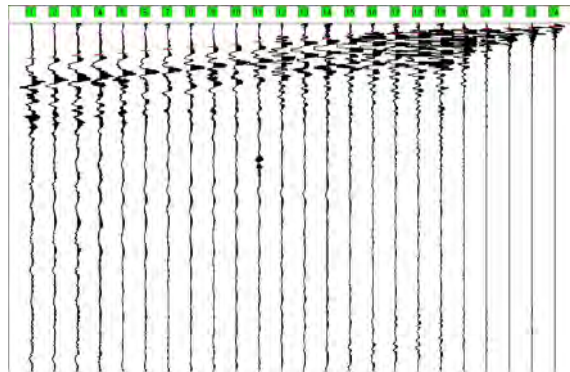




ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

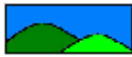
Catena geofonica 25-48



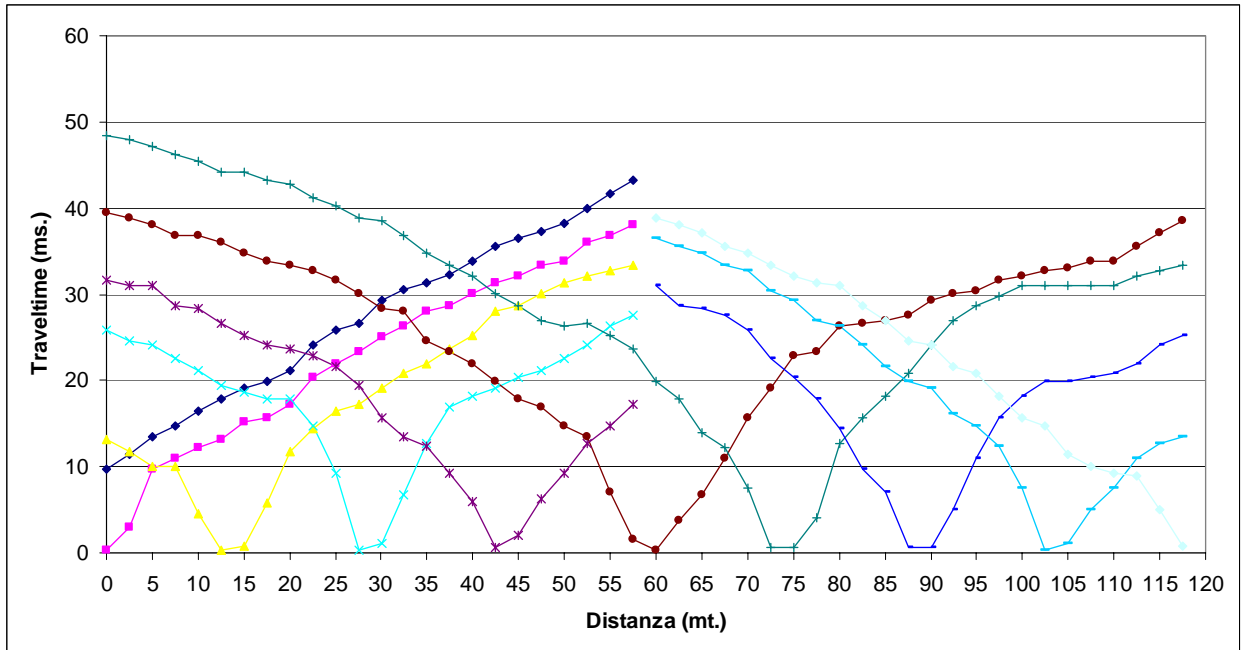


## TEMPI DI PROPAGAZIONE ONDE Sh

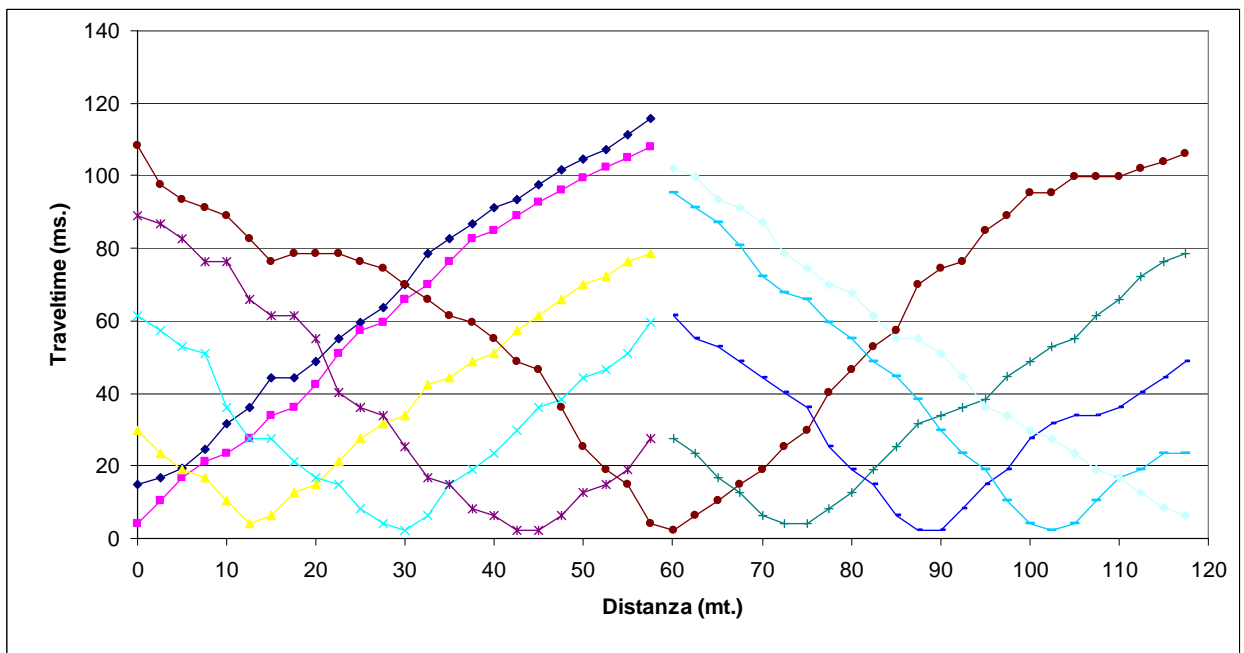
geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	14.80	4.20	29.70	61.40	89.00	108.30				
2	16.80	10.60	23.30	57.30	86.90	97.50				
3	19.20	16.90	19.10	52.90	82.80	93.40				
4	24.70	21.20	16.80	50.90	76.40	91.30				
5	31.80	23.30	10.60	36.10	76.40	89.00				
6	36.10	27.60	4.20	27.60	65.80	82.80				
7	44.40	33.90	6.20	27.60	61.40	76.40				
8	44.40	36.10	12.70	21.20	61.40	78.40				
9	48.80	42.40	14.80	16.80	55.20	78.40				
10	55.20	50.90	21.20	14.80	40.30	78.40				
11	59.40	57.30	27.60	8.30	36.10	76.40				
12	63.70	59.40	31.80	4.20	33.90	74.30				
13	69.90	65.80	33.80	2.10	25.30	69.90				
14	78.40	70.00	42.30	6.20	16.80	65.80				
15	82.80	76.40	44.40	14.80	14.80	61.40				
16	86.90	82.80	48.80	19.10	8.30	59.40				
17	91.30	84.90	50.90	23.30	6.20	55.20				
18	93.30	89.10	57.30	29.70	2.10	48.80				
19	97.50	92.60	61.40	36.10	2.10	46.70				
20	101.50	96.10	65.80	38.20	6.30	36.10				
21	104.60	99.40	69.90	44.40	12.70	25.40				
22	107.20	102.30	72.20	46.70	14.80	19.10				
23	111.40	105.10	76.40	50.90	19.10	14.80				
24	115.80	107.90	78.50	59.40	27.60	4.20				
25						2.10	27.60	61.50	95.50	101.90
26						6.20	23.30	55.20	91.30	99.80
27						10.60	16.80	52.90	87.00	93.40
28						14.80	12.70	48.80	80.70	91.30
29						19.10	6.20	44.40	72.20	87.00
30						25.30	4.20	40.30	67.90	78.50
31						29.70	4.20	36.10	65.80	74.30
32						40.30	8.30	25.30	59.40	70.00
33						46.70	12.70	19.10	55.20	67.90
34						52.90	19.10	14.80	48.80	61.50
35						57.30	25.40	6.20	44.50	55.20
36						70.00	31.80	2.10	38.20	55.20
37						74.30	33.90	2.10	29.70	50.90
38						76.40	36.10	8.30	23.30	44.50
39						84.90	38.20	14.80	19.10	36.10
40						89.00	44.50	19.10	10.60	33.90
41						95.50	48.80	27.60	4.20	29.70
42						95.50	53.00	31.80	2.10	27.60
43						99.80	55.20	33.90	4.20	23.30
44						99.80	61.40	33.90	10.60	19.10
45						99.80	65.80	36.10	16.90	16.90
46						101.90	72.20	40.30	19.10	12.70
47						104.00	76.40	44.40	23.30	8.40
48						106.10	78.40	48.80	23.30	6.30



DROMOCRONE ONDE P



DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

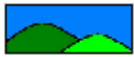
CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 111





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

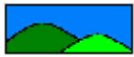
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C DOCUMENTI 2008 SAS2008 20 08 001 1 112

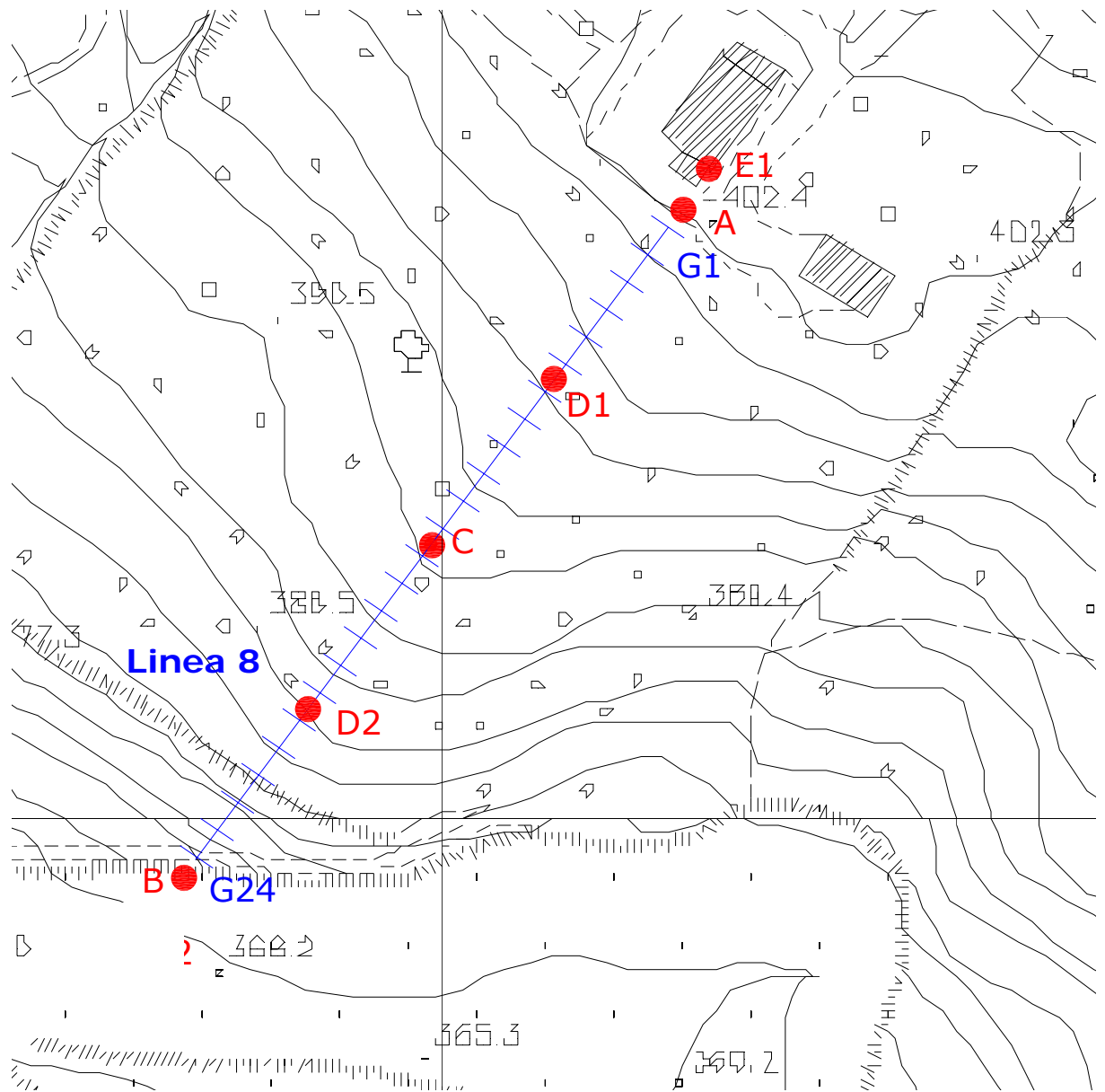


**DOCUMENTAZIONE FOTOGRAFICA LINEA 7**





**LINEA SISMICA 8**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	401.00
2	5	5	400.00
3	10	5	399.60
4	15	5	398.60
5	20	5	398.00
6	25	5	397.00
7	30	5	396.00
8	35	5	395.70
9	40	5	394.70
10	45	5	394.00
11	50	5	394.00
12	55	5	393.00
13	60	5	391.00
14	65	5	390.00
15	70	5	389.00
16	75	5	388.00
17	80	5	387.00
18	85	5	386.00
19	90	5	386.00
20	95	5	384.00
21	100	5	382.00
22	105	5	380.00
23	110	5	377.00
24	115	5	374.00

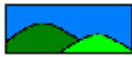
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650440	4806480
<i>Geofono n. 24 (G24)</i>	1650360	4806390



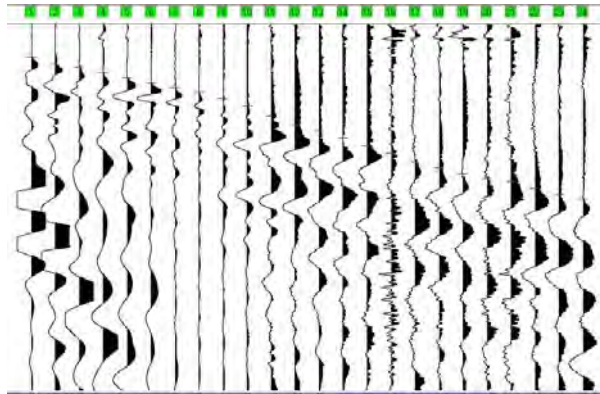
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	402.50
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	402.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	397.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	392.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	386.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	372.00

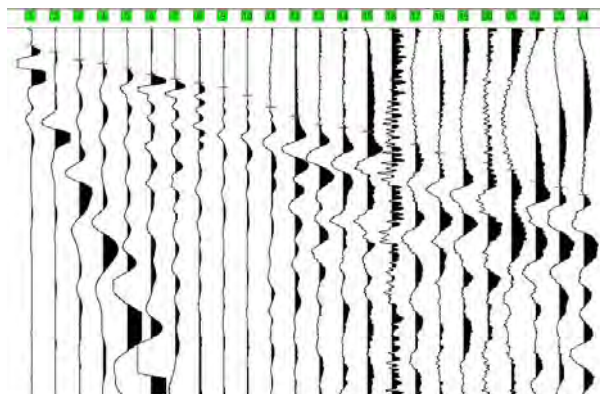


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

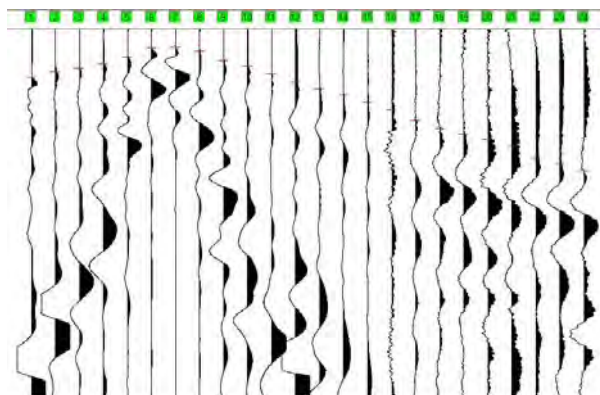
TIRO ESTERNO SX E1

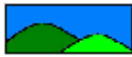


TIRO ESTREMO SX A



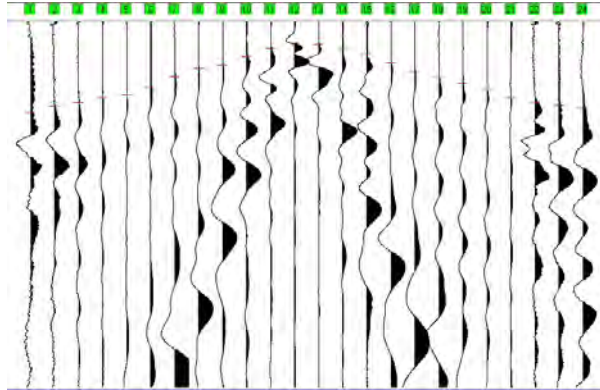
TIRO INTERMEDIO SX D1



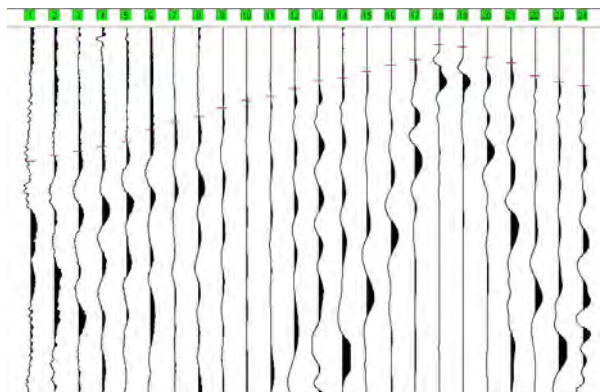


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

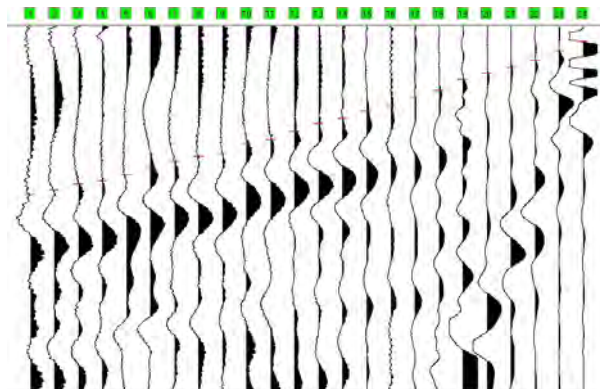
TIRO CENTRALE C

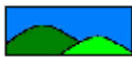


TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B



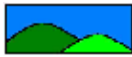


## TEMPI DI PROPAGAZIONE ONDE P

## Tempo di arrivo

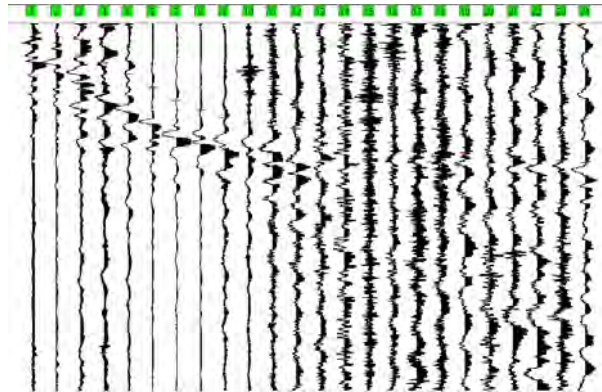
geofono	E1	A	D1	C	D2	B	E2
1	18.20	9.30	26.30	50.50	74.30	93.80	97.20
2	22.00	12.70	23.30	47.10	71.30	91.30	94.70
3	23.70	17.40	21.60	45.00	68.80	87.90	91.30
4	26.70	19.50	19.10	42.40	66.20	86.20	87.40
5	29.70	22.00	15.20	40.70	63.20	82.80	85.70
6	32.70	25.40	10.10	36.90	56.90	79.00	83.20
7	35.20	28.00	9.70	30.50	52.60	75.10	79.80
8	37.80	30.10	11.80	25.90	49.60	72.60	76.40
9	41.20	32.70	17.40	24.20	44.50	70.90	71.70
10	45.40	37.30	20.30	19.50	40.20	65.40	67.50
11	50.90	43.70	24.60	14.80	38.10	63.20	63.20
12	55.60	48.80	29.30	11.80	33.80	58.60	59.40
13	59.40	53.50	33.10	12.70	29.70	54.30	55.60
14	63.20	55.20	36.50	15.20	28.00	51.30	50.90
15	67.50	57.30	40.30	18.20	24.20	47.10	45.40
16	71.70	59.80	44.50	22.90	20.80	44.50	41.20
17	76.40	64.50	50.50	27.60	17.80	40.30	37.80
18	79.80	69.20	55.20	31.00	9.20	35.60	35.20
19	83.20	72.20	58.10	34.40	10.50	29.70	32.70
20	85.70	74.70	61.10	38.20	16.10	26.30	29.70
21	87.40	78.50	64.90	42.40	19.50	22.90	26.70
22	91.30	84.90	71.30	44.50	26.70	19.10	23.70
23	94.70	88.30	75.10	46.70	30.10	13.50	22.00
24	97.20	92.50	78.50	48.40	32.10	8.40	18.20



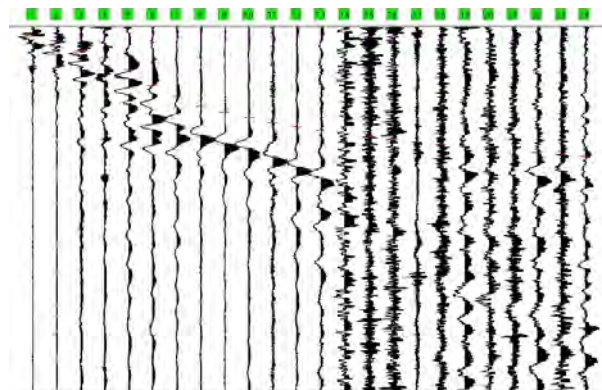


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

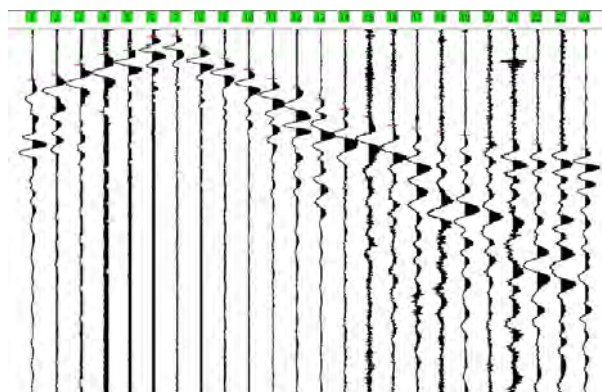
TIRO ESTERNO SX E1

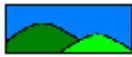


TIRO ESTREMO SX A



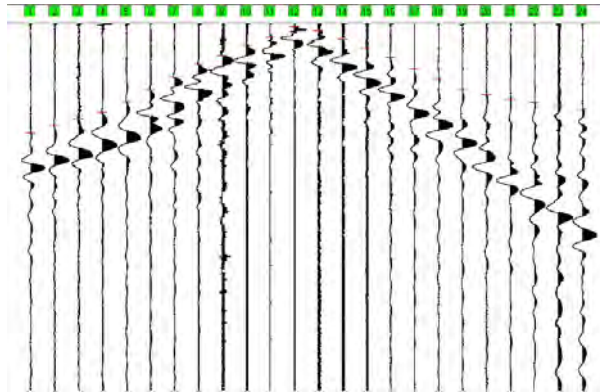
TIRO INTERMEDIO SX D1



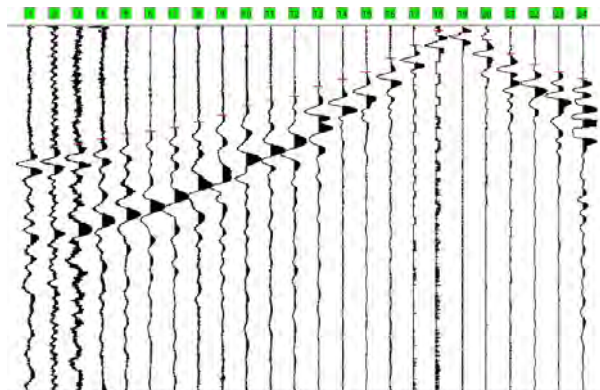


ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

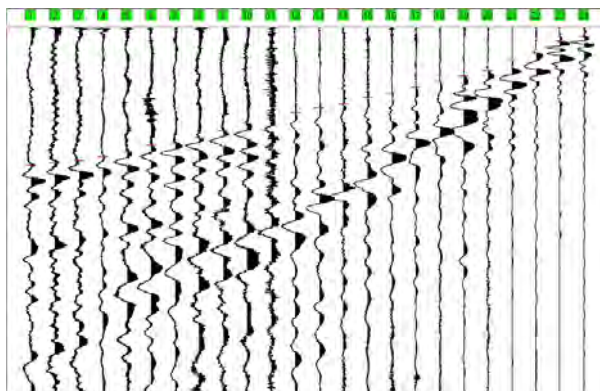
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B

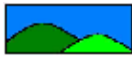




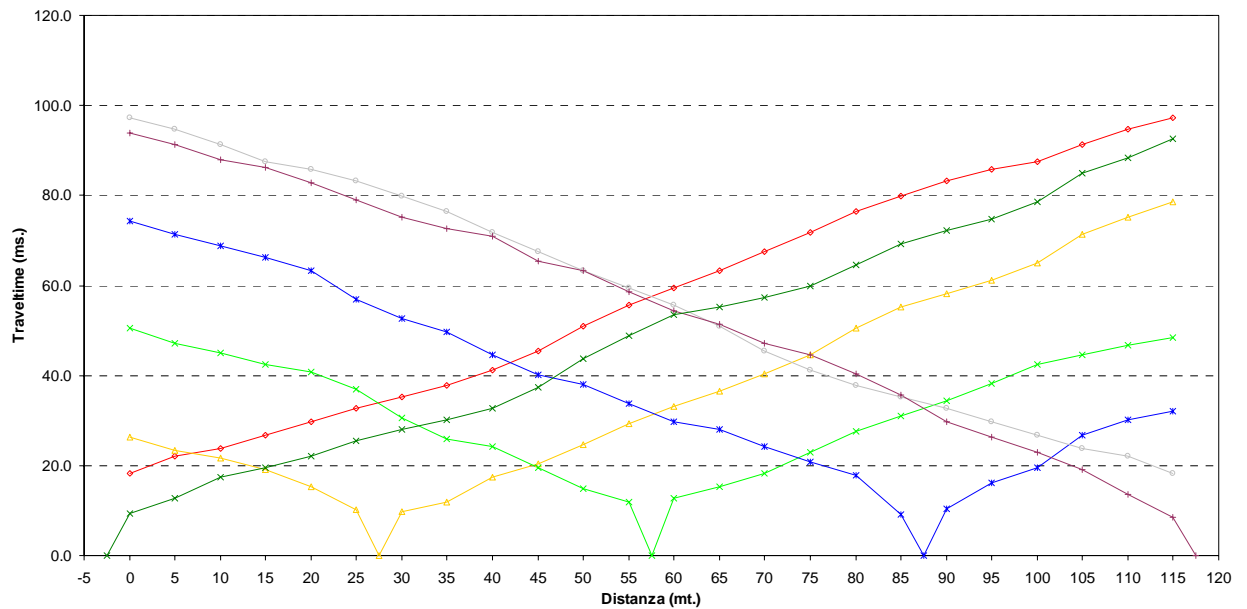
## TEMPI DI PROPAGAZIONE ONDE Sh

**Tempo di arrivo**

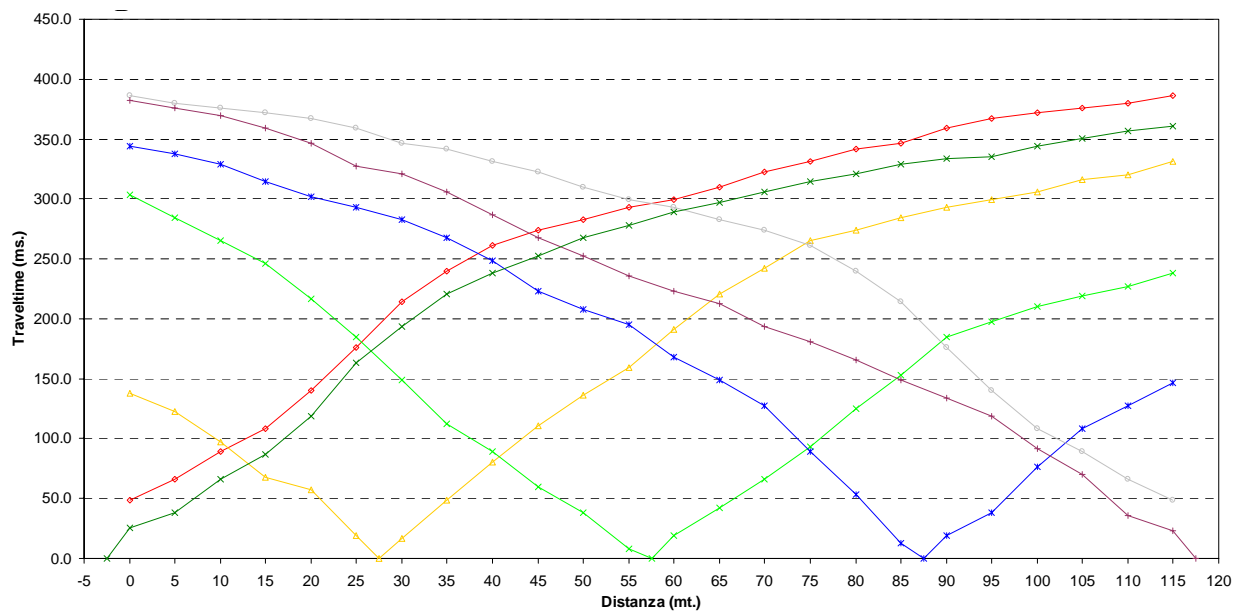
<b>geofono</b>	<b>E1</b>	<b>A</b>	<b>D1</b>	<b>C</b>	<b>D2</b>	<b>B</b>	<b>E2</b>
<b>1</b>	48.80	25.40	138.00	303.60	344.00	382.20	386.50
<b>2</b>	65.80	38.20	123.00	284.50	337.60	375.90	380.10
<b>3</b>	89.10	65.80	97.50	265.40	329.10	369.50	375.90
<b>4</b>	108.30	87.00	67.90	246.30	314.30	358.90	371.60
<b>5</b>	140.10	118.90	57.30	216.60	301.50	346.10	367.40
<b>6</b>	176.20	163.50	19.10	184.70	293.00	327.00	358.90
<b>7</b>	214.40	193.20	16.80	148.60	282.40	320.60	346.10
<b>8</b>	239.90	220.80	48.80	112.50	267.50	305.80	341.90
<b>9</b>	261.20	237.80	80.70	89.00	248.40	286.70	331.30
<b>10</b>	273.90	252.70	110.40	59.40	222.90	267.50	322.80
<b>11</b>	282.40	267.50	135.90	38.20	208.10	252.70	310.00
<b>12</b>	293.00	278.20	159.10	8.30	195.30	235.70	299.40
<b>13</b>	299.40	288.80	191.10	19.10	167.70	222.90	293.00
<b>14</b>	310.00	297.30	220.80	42.30	148.60	212.30	282.40
<b>15</b>	322.80	305.80	242.10	65.80	127.40	193.20	273.90
<b>16</b>	331.30	314.30	265.40	93.40	89.00	180.50	261.20
<b>17</b>	341.90	320.60	273.90	125.30	53.00	165.60	239.90
<b>18</b>	346.10	329.10	284.50	152.90	12.70	148.60	214.40
<b>19</b>	358.90	333.40	293.00	184.70	19.10	133.70	176.20
<b>20</b>	367.40	335.50	299.40	197.50	38.20	118.90	140.10
<b>21</b>	371.60	344.00	305.80	210.20	76.40	91.30	108.30
<b>22</b>	375.90	350.40	316.40	218.70	108.30	70.00	89.10
<b>23</b>	380.10	356.70	320.50	227.20	127.40	36.10	65.80
<b>24</b>	386.50	361.00	331.30	237.80	146.50	23.30	48.80



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

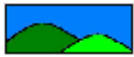
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

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IGEA S.A.S.

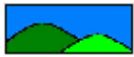
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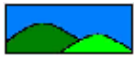
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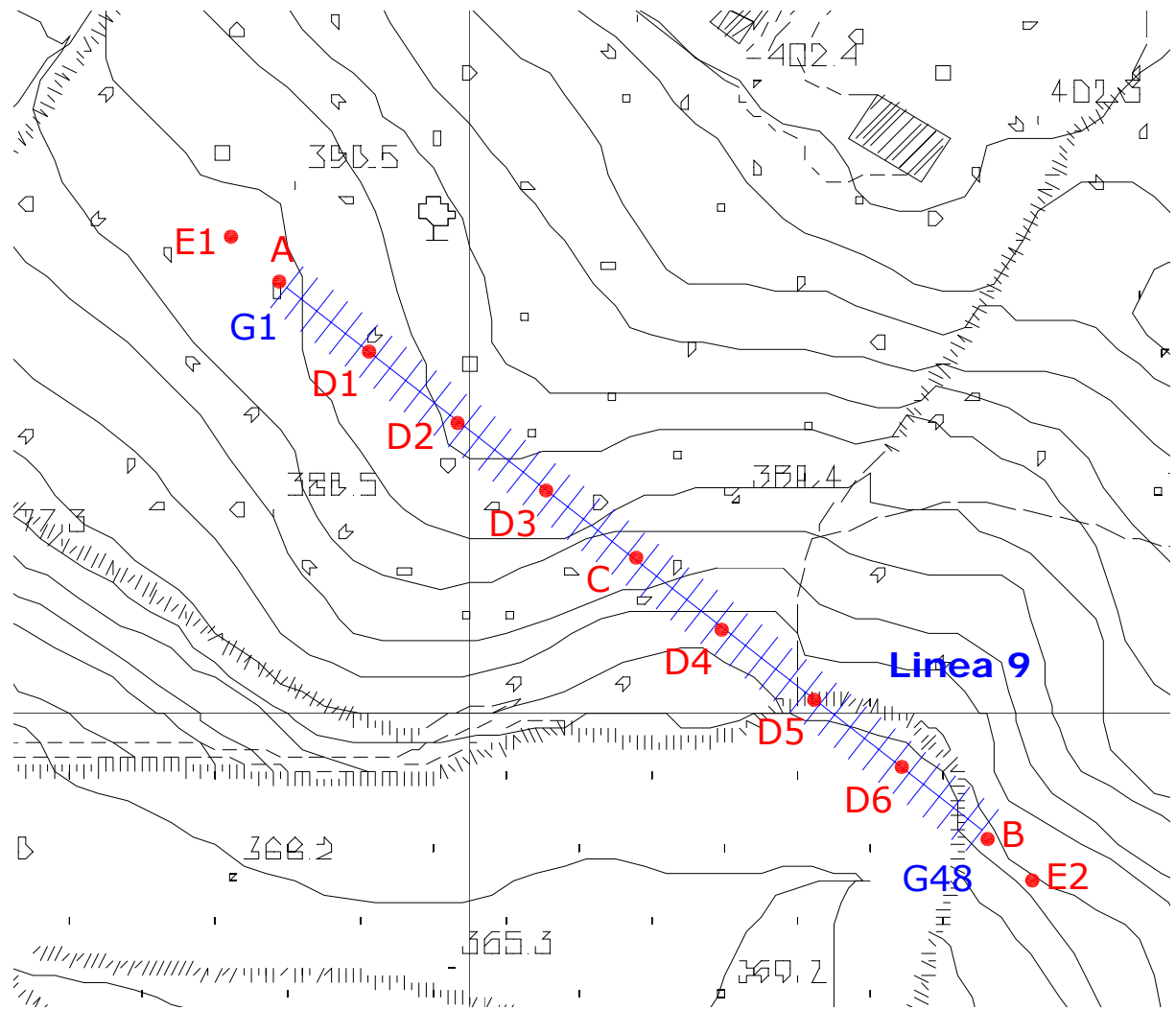


**DOCUMENTAZIONE FOTOGRAFICA LINEA 8**





**LINEA SISMICA 9**



Ubicazione delle linea - scala 1:1000





## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	389.70
2	2.5	2.5	390.00
3	5	2.5	390.20
4	7.5	2.5	390.40
5	10	2.5	390.60
6	12.5	2.5	390.80
7	15	2.5	391.20
8	17.5	2.5	391.40
9	20	2.5	391.60
10	22.5	2.5	391.80
11	25	2.5	392.00
12	27.5	2.5	392.00
13	30	2.5	392.20
14	32.5	2.5	392.20
15	35	2.5	392.10
16	37.5	2.5	392.00
17	40	2.5	391.70
18	42.5	2.5	391.30
19	45	2.5	390.70
20	47.5	2.5	390.50
21	50	2.5	390.30
22	52.5	2.5	390.00
23	55	2.5	388.00
24	57.5	2.5	387.50
25	60	2.5	386.80
26	62.5	2.5	386.40
27	65	2.5	386.00
28	67.5	2.5	385.00
29	70	2.5	384.00
30	72.5	2.5	383.70
31	75	2.5	383.30
32	77.5	2.5	383.20
33	80	2.5	383.10
34	82.5	2.5	383.00
35	85	2.5	382.70



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	382.40
37	90	2.5	381.70
38	92.5	2.5	381.40
39	95	2.5	380.00
40	97.5	2.5	379.80
41	100	2.5	379.60
42	102.5	2.5	379.50
43	105	2.5	379.60
44	107.5	2.5	379.70
45	110	2.5	379.80
46	112.5	2.5	380.00
47	115	2.5	380.50
48	117.5	2.5	381.00

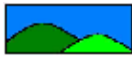
## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650370	4806460
<i>Geofono n. 48 (G48)</i>	1650460	4806380



## PUNTI DI ENERGIZZAZIONE

Sparo		Onde P	Onde SH	Posizione dallo sparso A (m)	Quota (m)
E1	Esterno sx	P 1-10.dta		-10	389.00
A	Estremo sx	P 1.dta	S 1.dta	0	389.40
D1	Intermedio sx	P 6-7.dta	S 6-7.dta	15	391.00
D2	Intermedio sx	P 12-13.dta	S 12-13.dta	30	392.10
D3	Intermedio sx	P 18-19.dta	S 18-19.dta	45	391.00
C	Centrale	P 24-25.dta	S 24-25.dta	60	387.00
D4	Intermedio dx	P 30-31.dta	S 30-31.dta	75	383.50
D5	Intermedio dx	P 36-37.dta	S 36-37.dta	90	382.00
D6	Intermedio dx	P 42-43.dta	S 42-43.dta	105	379.50
B	Estremo dx	P 48.dta	S 48.dta	120	381.50
E2	Esterno dx	P 48-10.dta		130	382.00

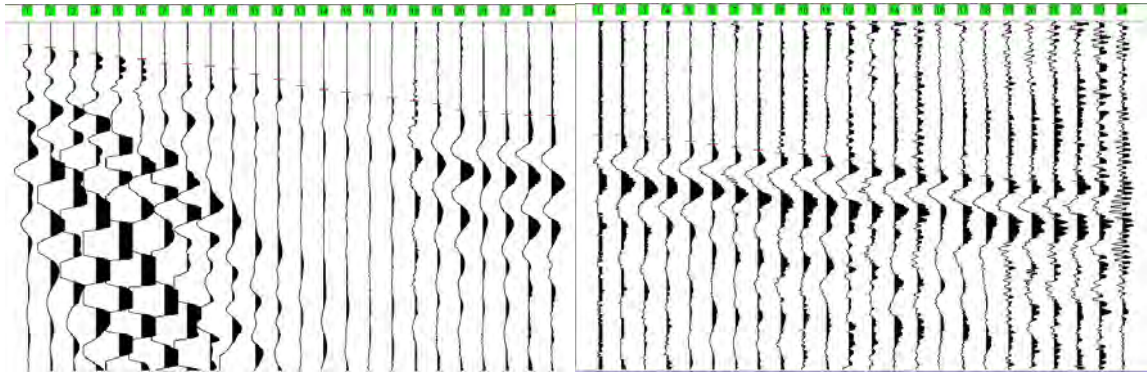


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

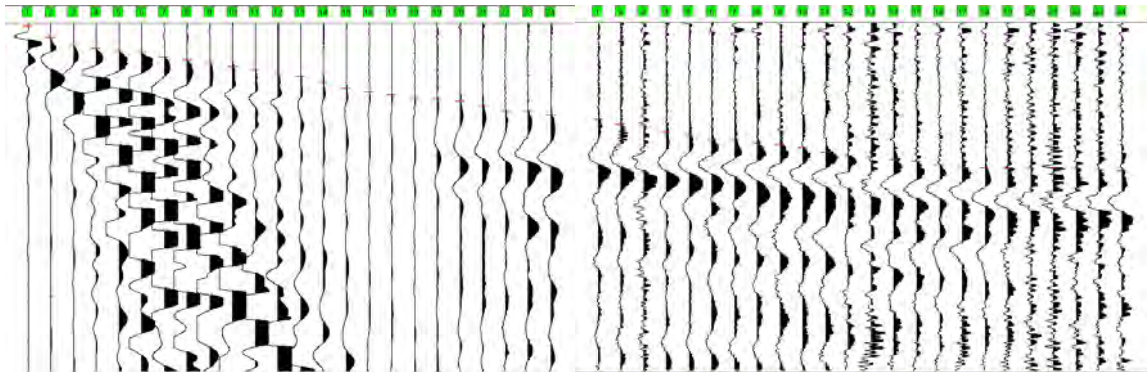
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

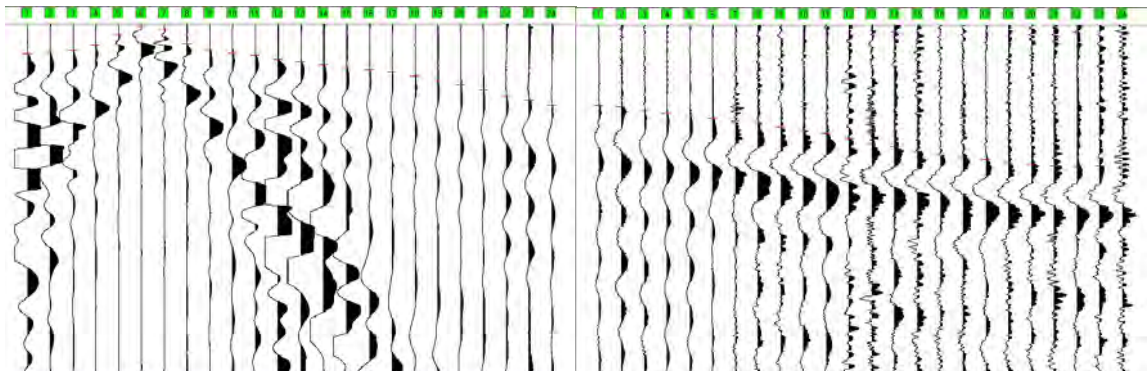
Catena geofonica 25-48

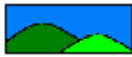


TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



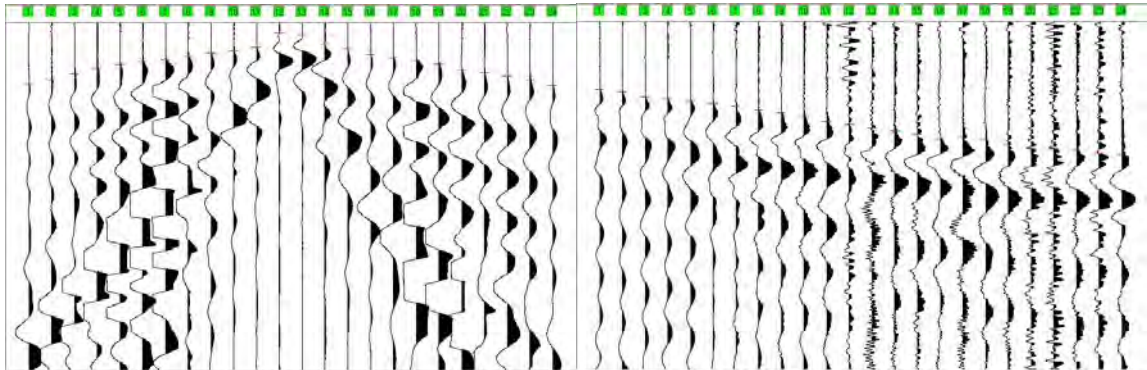


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

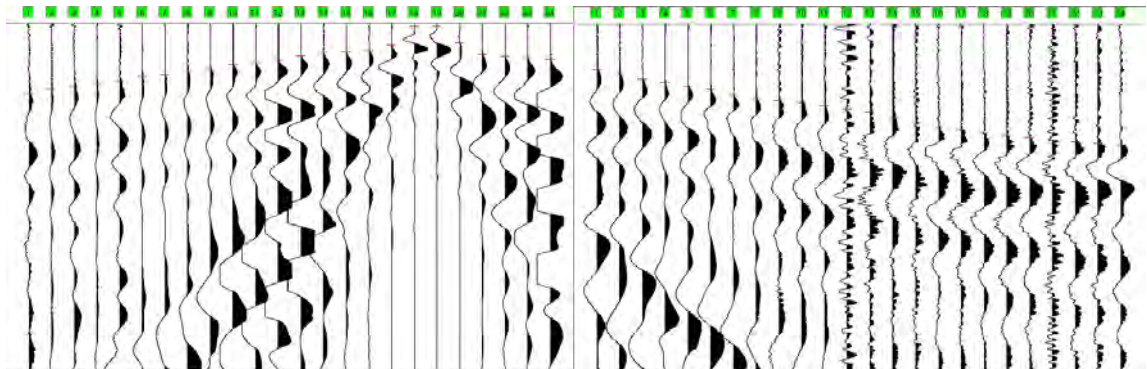
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

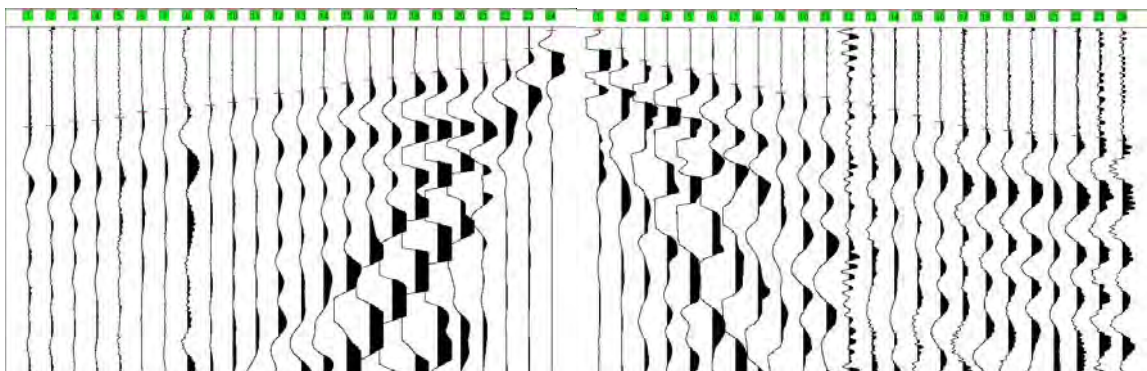
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



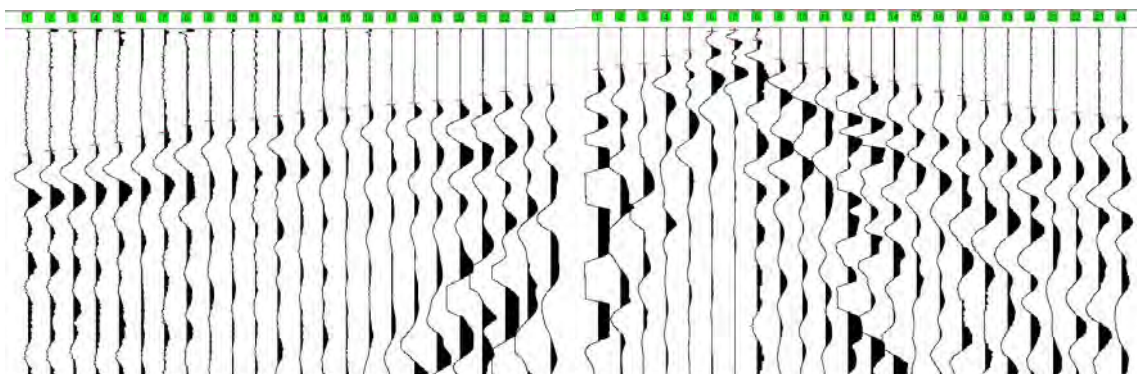


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

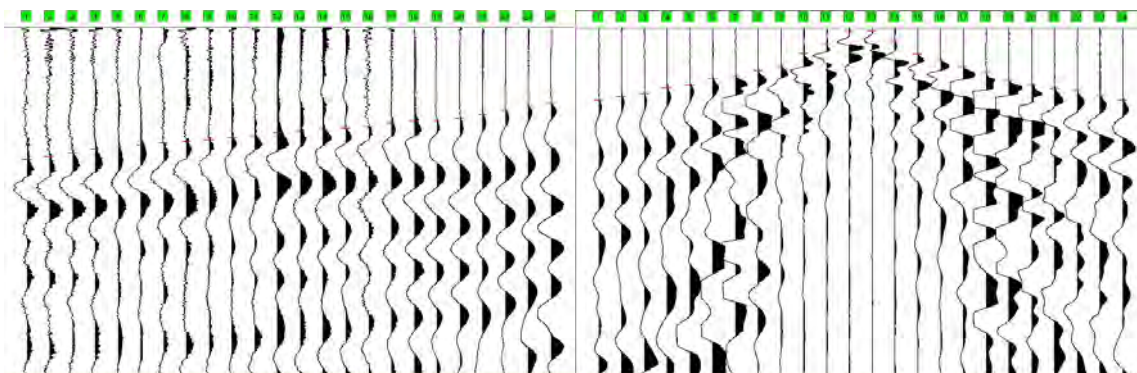
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

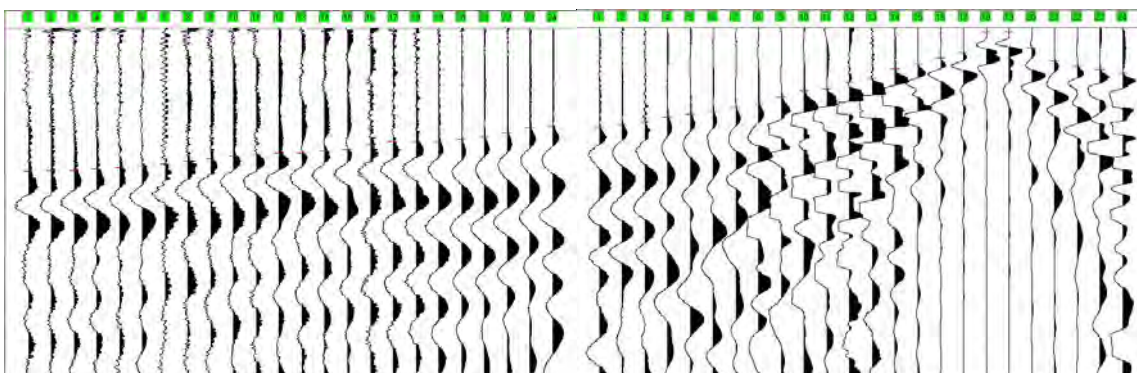
Catena geofonica 25-48

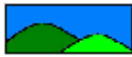


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



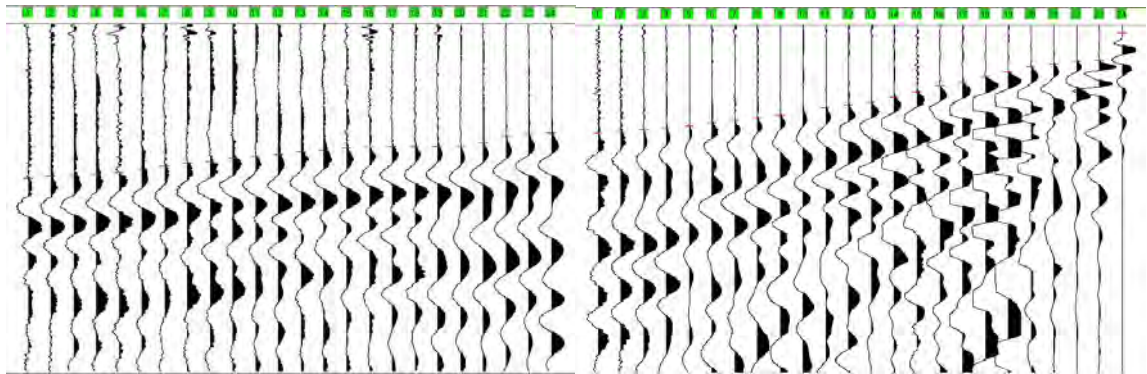


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

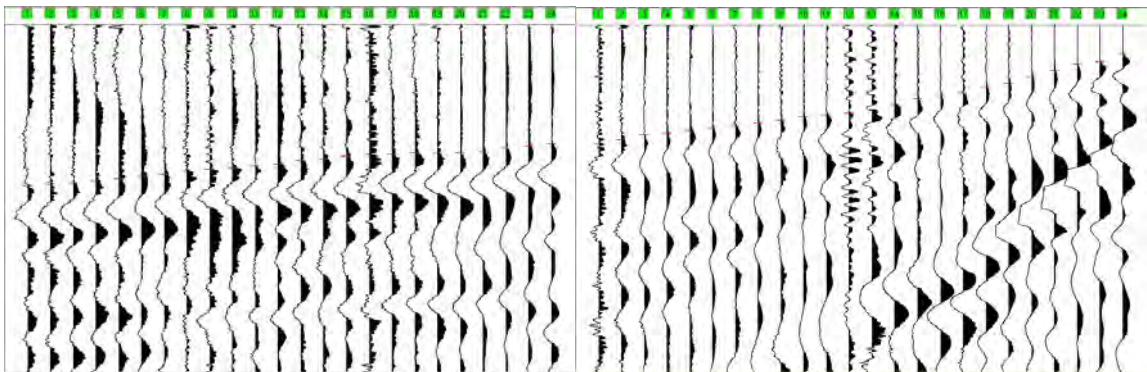
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	12.70	1.10	16.90	36.10	40.60	58.10	73.90	77.30	83.60	90.30	94.20
2	14.40	8.00	16.10	33.10	38.10	57.30	71.30	75.60	83.20	89.10	93.40
3	16.50	12.20	14.80	29.70	36.80	54.70	70.50	73.40	83.20	88.60	92.50
4	17.80	14.40	11.80	26.30	34.80	54.30	67.90	71.30	82.40	87.80	91.30
5	19.90	16.10	5.40	24.20	33.10	52.60	66.60	70.00	81.50	86.90	90.00
6	21.20	16.90	0.70	22.50	31.00	49.20	63.20	68.80	80.20	84.80	88.70
7	23.70	19.50	2.40	21.20	29.70	47.50	60.70	67.50	79.40	83.10	87.40
8	24.20	21.20	11.00	19.50	28.00	46.20	56.40	66.60	77.70	81.40	85.70
9	25.30	22.90	14.40	17.40	26.30	45.40	53.90	65.80	76.40	80.70	84.50
10	26.70	25.00	16.50	16.10	23.70	43.70	53.50	64.50	74.70	78.40	83.60
11	30.10	26.70	17.80	14.00	22.50	42.00	52.60	63.20	73.40	77.30	82.80
12	33.10	29.70	20.30	5.50	21.20	38.60	50.90	61.50	73.00	76.30	81.50
13	36.90	31.00	21.60	6.70	18.60	37.30	48.80	60.30	73.00	74.60	79.40
14	39.00	34.40	23.30	11.80	16.50	35.20	47.50	59.40	71.70	73.90	78.50
15	40.70	37.80	25.00	14.80	16.10	32.70	46.70	59.00	70.90	72.60	76.80
16	42.40	39.90	26.30	18.20	15.70	30.50	45.00	58.10	67.90	72.20	76.00
17	44.10	41.60	27.60	20.30	12.30	29.30	44.10	56.00	66.20	71.70	75.60
18	45.70	43.30	30.10	21.60	1.10	26.70	43.70	54.70	66.60	71.70	74.70
19	47.40	44.10	32.70	23.70	1.10	25.90	42.00	54.30	66.60	71.70	75.10
20	50.90	45.40	35.10	27.10	10.90	24.20	42.00	53.00	64.90	71.30	74.70
21	52.10	47.90	38.10	28.80	17.80	20.80	38.20	50.90	63.70	69.60	74.30
22	53.40	50.90	41.50	31.00	19.10	18.60	36.50	48.40	61.10	65.40	72.20
23	56.40	51.80	44.00	33.10	20.30	12.30	33.10	45.80	58.10	64.50	70.90
24	59.20	53.50	47.00	36.50	23.40	1.60	32.20	44.50	56.90	63.70	69.60
25	64.10	56.40	47.80	39.50	26.30	0.70	24.20	41.90	57.70	63.20	69.60
26	66.60	59.40	48.50	40.60	28.70	11.40	21.60	39.80	56.40	62.40	67.10
27	67.50	60.20	50.00	43.60	31.70	18.60	20.80	38.10	54.70	61.10	64.10
28	68.80	64.10	51.30	44.90	33.80	22.00	16.10	34.80	52.10	59.80	63.20
29	69.90	65.80	53.00	45.70	36.10	24.20	12.70	33.10	50.40	59.00	61.50
30	71.60	67.90	54.30	47.40	37.80	26.70	1.60	29.30	48.70	56.80	59.80
31	73.30	68.80	56.00	49.10	41.20	32.70	0.70	27.60	46.60	55.60	59.00
32	75.00	70.50	56.80	51.30	43.20	34.40	6.70	24.60	44.00	54.30	57.30
33	77.30	71.30	59.40	53.00	44.50	37.80	17.80	22.00	40.20	52.60	55.60
34	77.70	73.00	61.50	55.60	45.70	38.90	20.30	14.40	36.50	50.90	53.40
35	79.00	76.00	63.20	58.10	47.40	40.20	23.30	9.20	35.50	48.30	52.10
36	81.00	77.70	66.20	59.80	49.60	43.20	25.30	1.60	31.40	46.60	51.30
37	82.40	78.40	69.20	62.00	51.30	44.90	28.40	1.20	29.30	44.90	49.10
38	84.10	80.10	70.90	63.70	54.70	47.40	30.40	7.10	23.70	41.90	46.20
39	85.30	81.00	73.30	65.80	57.70	50.90	33.10	14.80	18.20	38.90	42.70
40	87.00	83.20	76.00	68.30	59.80	54.70	36.90	18.20	17.40	35.10	41.20
41	89.10	84.50	77.30	67.50	61.50	56.90	39.50	22.00	14.00	33.40	39.50
42	90.40	84.90	78.50	69.20	63.70	58.60	42.40	25.90	2.10	29.70	36.50
43	92.10	85.30	80.20	71.30	65.40	59.80	44.10	30.40	2.10	27.00	33.90
44	93.00	85.30	81.10	73.90	66.20	61.10	46.70	32.70	11.40	25.40	30.50
45	93.00	85.30	82.40	74.30	67.90	62.00	47.90	35.10	19.10	23.80	26.30
46	93.40	85.30	82.80	75.10	68.80	62.80	49.60	36.50	22.50	17.40	25.60
47	93.40	86.20	82.40	76.80	69.60	64.10	50.90	39.50	24.20	7.30	24.70
48	93.80	86.60	83.60	77.30	70.50	65.40	52.60	41.90	26.30	4.20	23.50

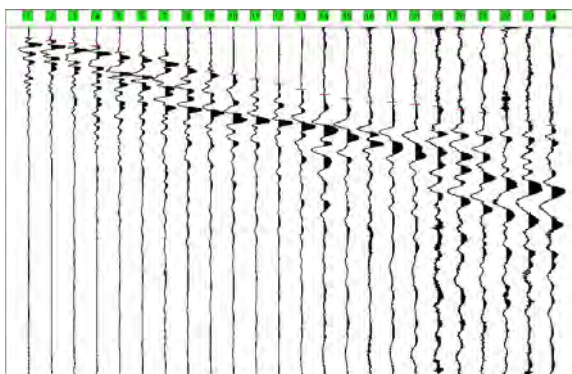




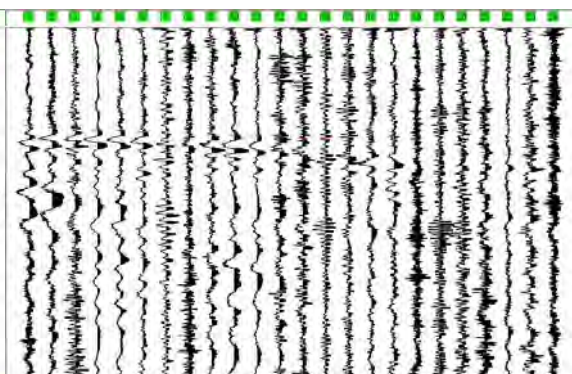
ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

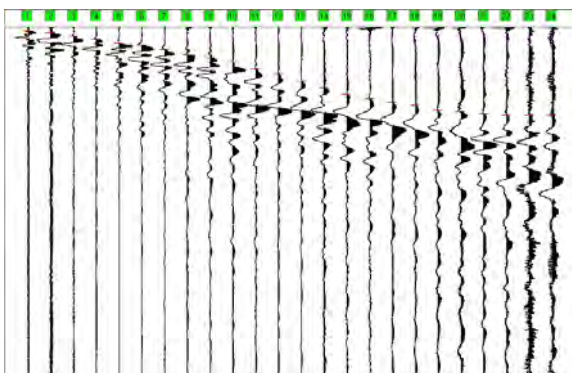


Catena geofonica 25-48

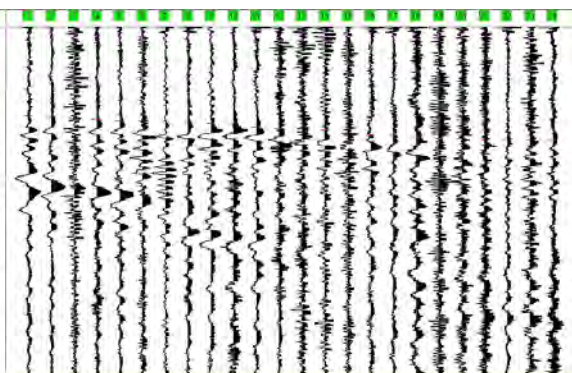


TIRO ESTREMO SX A

Catena geofonica 1-24

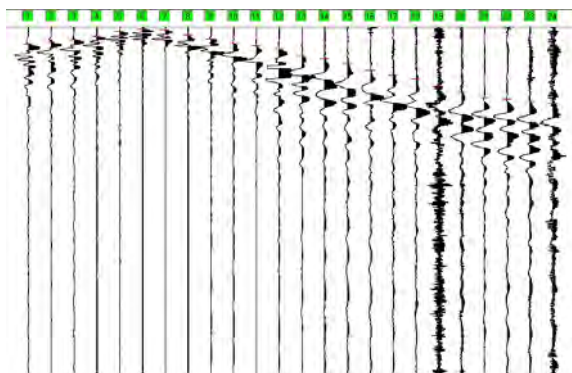


Catena geofonica 25-48

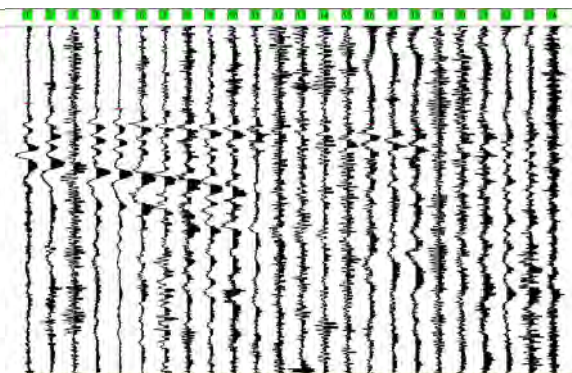


TIRO INTERMEDIO SX D1

Catena geofonica 1-24



Catena geofonica 25-48



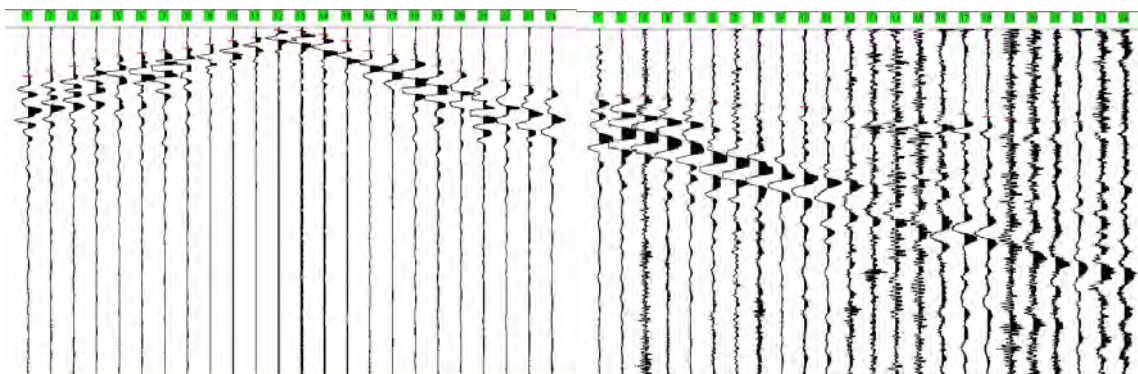


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

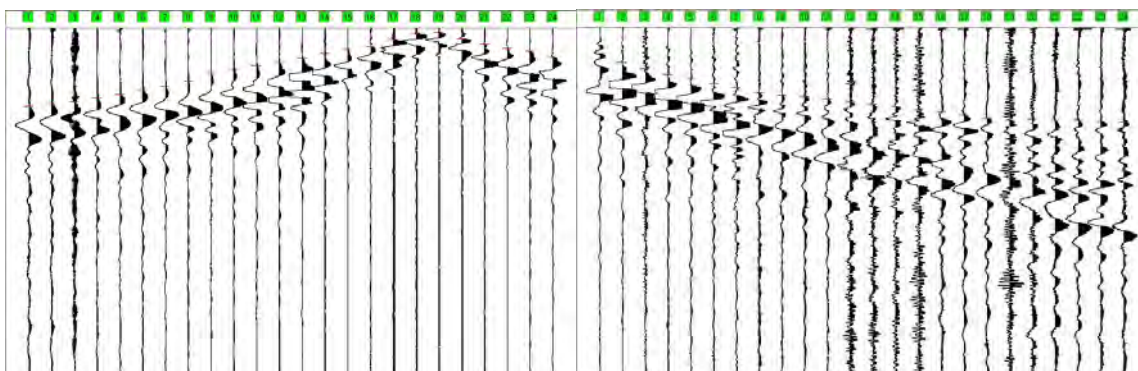
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

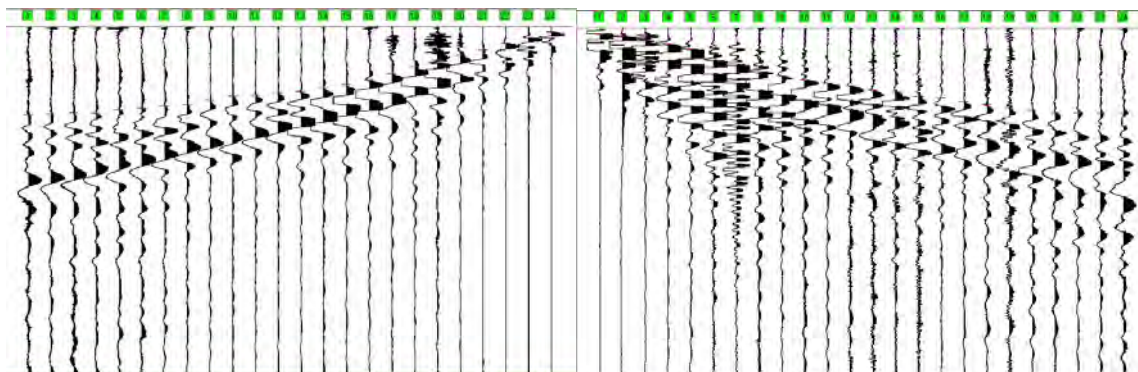
Catena geofonica 25-48

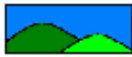


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



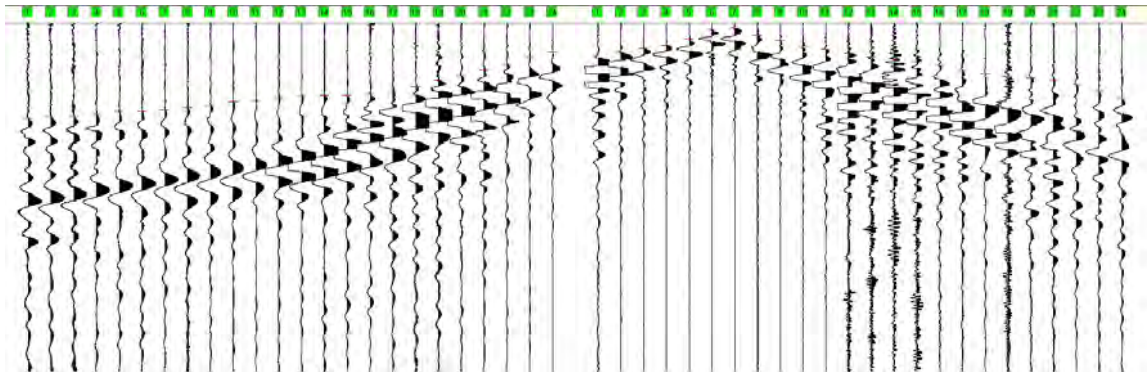


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

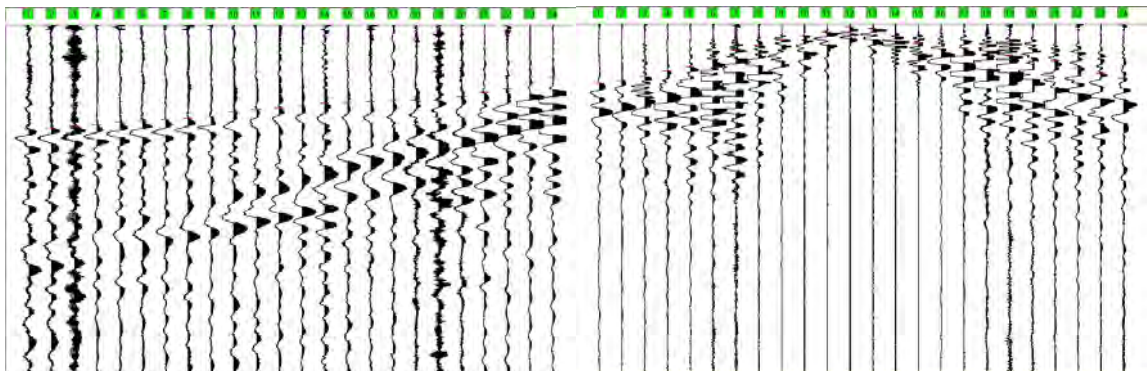
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

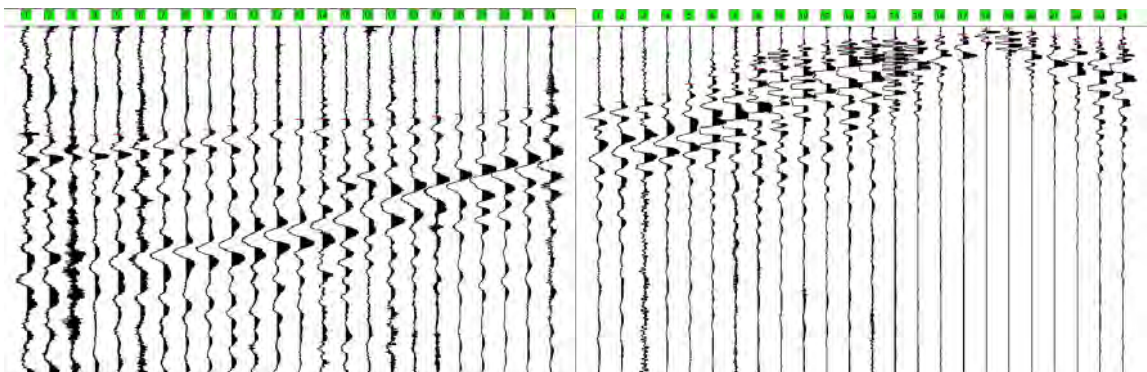
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



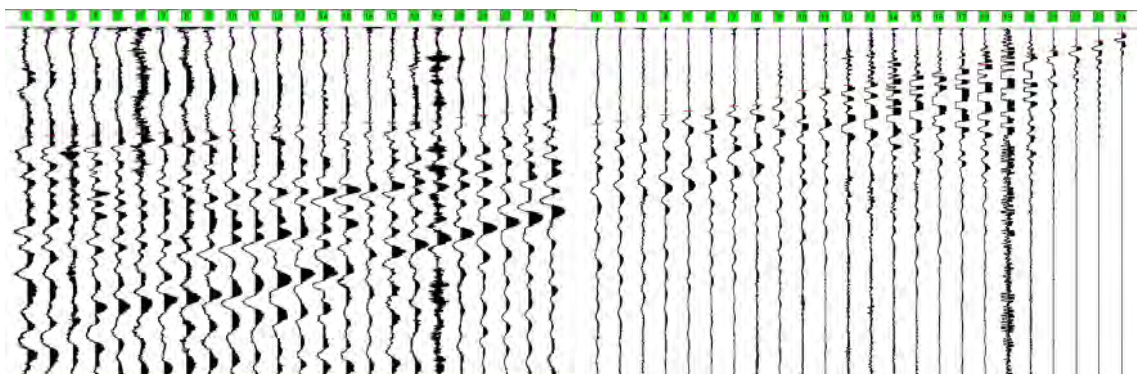


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

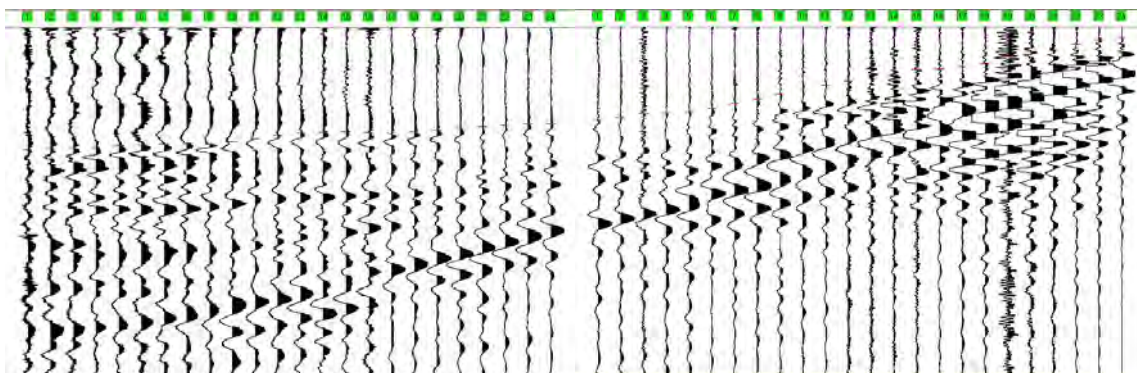
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

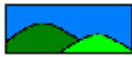
Catena geofonica 25-48



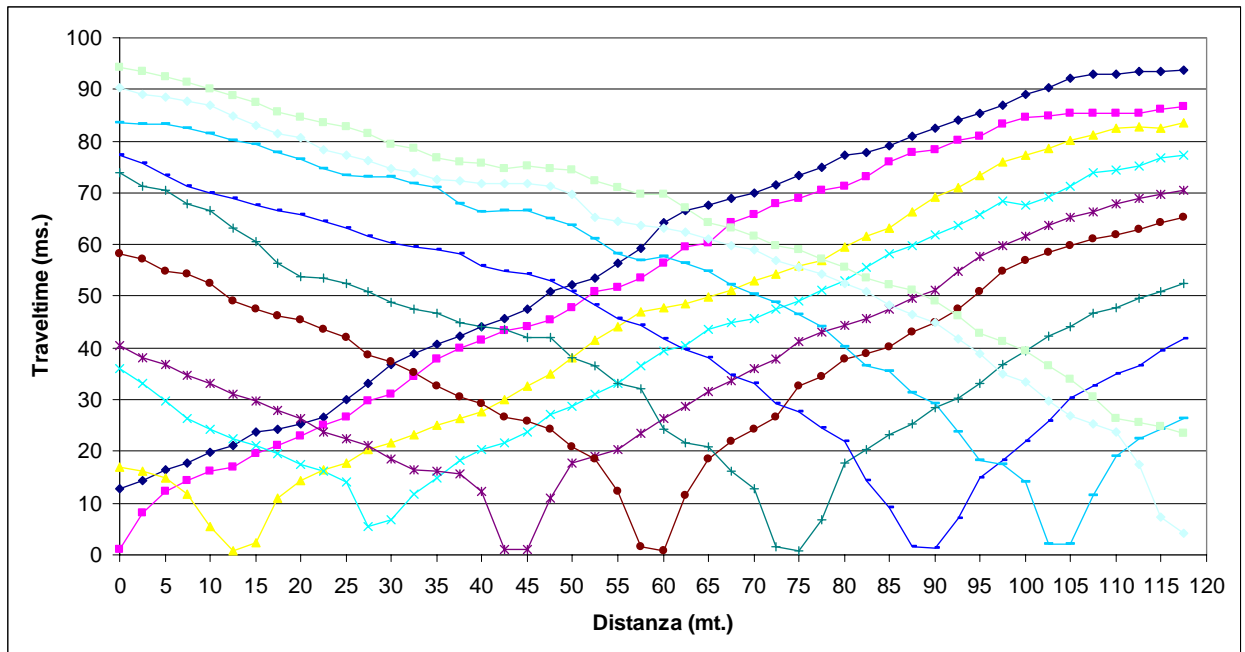


## TEMPI DI PROPAGAZIONE ONDE Sh

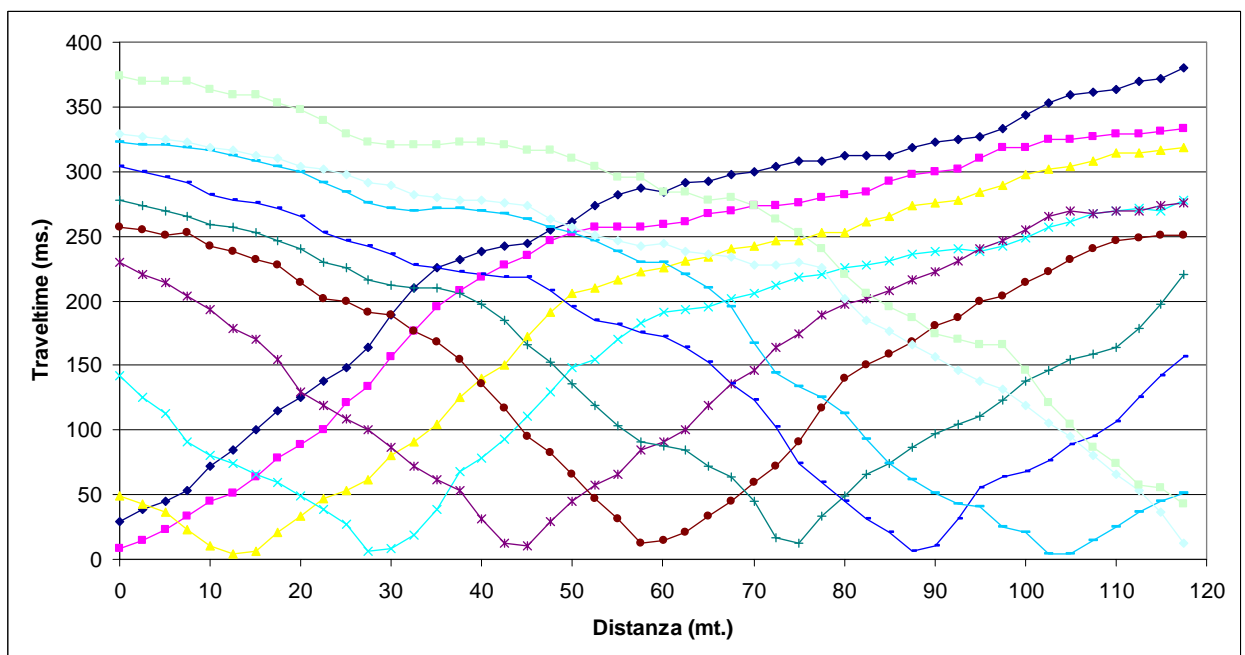
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	29.70	8.40	48.80	142.10	229.30	256.80	278.20	303.50	322.80	329.10	373.70
2	38.20	14.80	42.40	125.30	220.80	254.80	273.90	299.40	320.50	327.00	369.50
3	44.40	23.30	36.10	112.50	214.40	250.60	269.70	295.20	320.50	324.30	369.50
4	52.90	33.90	23.30	91.30	203.80	252.70	265.40	290.90	318.50	322.80	369.50
5	72.20	44.50	10.60	80.70	193.20	242.10	258.90	282.40	316.40	318.50	363.10
6	84.90	50.90	4.20	74.30	178.30	237.80	256.80	278.20	312.00	316.40	358.90
7	99.80	63.70	6.30	65.80	169.80	231.40	252.70	275.90	307.90	312.10	358.90
8	114.50	78.50	21.20	59.40	155.00	227.20	246.30	271.80	303.50	310.00	352.50
9	125.30	89.10	33.90	48.80	129.50	214.40	239.80	265.40	299.40	303.50	348.20
10	138.00	99.80	46.70	38.20	118.90	201.70	229.30	252.70	290.90	301.40	339.70
11	148.60	121.00	53.00	27.60	108.30	199.60	225.10	246.30	284.40	297.30	329.10
12	163.50	133.60	61.50	6.20	99.80	191.10	216.60	242.10	275.90	290.90	322.80
13	189.00	157.10	80.70	8.30	86.90	189.00	212.20	235.70	271.80	288.80	320.60
14	210.20	176.20	91.30	19.10	72.20	176.20	210.20	227.20	269.70	282.40	320.60
15	225.10	195.20	104.00	38.20	61.50	167.70	210.20	225.10	271.80	280.30	320.60
16	231.40	208.10	125.30	67.90	53.00	155.00	206.00	222.80	271.80	278.20	322.80
17	237.80	218.70	140.10	78.40	31.80	135.90	197.50	220.80	269.70	278.20	322.80
18	242.10	227.20	150.60	93.40	12.70	116.80	184.70	218.70	267.40	275.90	320.60
19	244.20	234.50	172.00	110.40	10.60	95.50	165.60	218.70	263.30	273.90	316.40
20	254.80	246.30	191.10	129.50	29.70	82.80	152.90	208.10	256.80	263.30	316.40
21	261.20	252.70	206.00	148.60	44.50	65.80	135.90	195.20	252.70	256.80	310.00
22	273.90	256.80	210.20	155.00	57.30	46.70	118.90	184.70	246.30	250.60	303.60
23	282.40	256.80	216.60	169.80	65.80	31.80	103.50	181.30	237.80	246.30	295.20
24	286.70	256.90	222.80	182.60	84.90	12.70	91.20	175.70	229.30	242.10	295.20
25	284.50	258.90	225.10	191.10	91.20	14.80	87.30	172.00	229.30	244.20	284.50
26	290.90	261.20	231.30	193.20	99.80	21.20	84.90	163.50	220.80	237.80	284.50
27	292.90	267.40	233.60	195.20	118.90	33.80	72.20	152.90	210.20	235.70	278.20
28	297.30	269.70	239.80	201.70	135.90	44.40	63.70	135.90	195.20	233.60	280.30
29	299.40	273.90	242.10	206.00	146.50	59.40	44.50	123.10	167.60	227.20	273.90
30	303.50	273.90	246.30	212.20	163.50	72.20	16.80	101.90	144.40	227.20	263.30
31	307.90	275.90	246.30	218.70	174.10	91.30	12.70	74.30	133.60	229.30	252.70
32	307.90	280.30	252.70	220.80	189.00	116.80	33.90	59.40	125.30	225.10	239.90
33	312.00	282.40	252.70	225.10	197.50	140.10	48.80	44.50	112.50	201.70	220.80
34	312.00	284.40	261.20	227.20	201.70	150.70	65.80	31.80	93.40	184.70	206.00
35	312.00	292.90	265.40	231.30	208.10	159.20	74.30	21.20	74.30	176.20	195.30
36	318.50	297.30	273.90	235.70	216.60	167.70	87.00	6.30	61.40	165.60	186.80
37	322.80	299.40	275.90	237.80	222.80	180.50	97.60	10.60	50.90	157.10	174.10
38	324.90	301.40	278.20	239.80	231.30	186.80	104.00	31.80	42.30	146.50	169.80
39	327.00	310.00	284.40	237.80	239.80	199.60	110.40	55.20	40.30	138.00	165.60
40	333.40	318.50	288.80	242.10	246.30	203.80	123.10	63.70	25.30	131.50	165.60
41	344.00	318.50	297.30	248.30	254.80	214.40	138.00	67.90	21.20	118.90	146.50
42	352.50	324.90	301.40	256.80	265.40	222.80	146.50	76.40	4.20	106.00	121.00
43	358.90	324.90	303.60	261.20	269.70	231.40	155.00	89.10	4.20	95.50	104.00
44	361.00	327.00	307.90	267.40	267.40	239.90	159.20	95.50	14.80	80.70	87.00
45	363.10	329.10	314.30	269.70	269.70	246.30	163.50	106.10	25.30	65.80	74.30
46	369.50	329.10	314.30	271.80	269.70	248.40	178.30	125.30	36.10	52.90	57.30
47	371.60	331.30	316.40	269.70	273.90	250.60	197.50	142.20	44.40	36.10	55.20
48	380.10	333.40	318.50	278.20	275.90	250.60	220.80	157.10	50.90	12.70	42.40



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

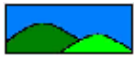
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 142



IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

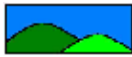
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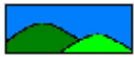
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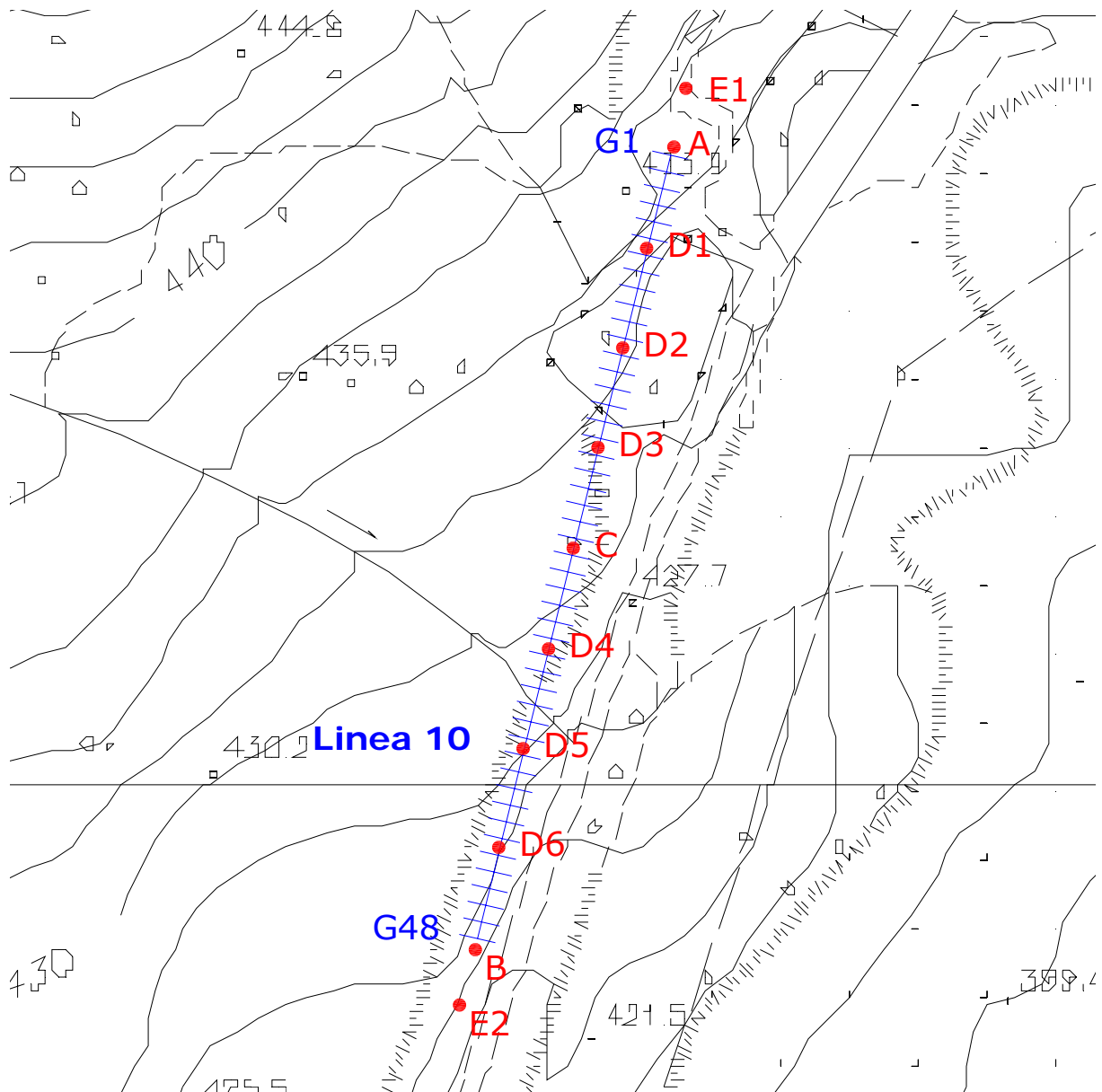


**DOCUMENTAZIONE FOTOGRAFICA LINEA 9**





### LINEA SISMICA 10



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	433.60
2	2.5	2.5	433.70
3	5	2.5	433.80
4	7.5	2.5	433.90
5	10	2.5	433.60
6	12.5	2.5	433.30
7	15	2.5	433.00
8	17.5	2.5	432.80
9	20	2.5	432.70
10	22.5	2.5	432.60
11	25	2.5	432.50
12	27.5	2.5	432.40
13	30	2.5	432.20
14	32.5	2.5	432.10
15	35	2.5	432.00
16	37.5	2.5	431.80
17	40	2.5	431.70
18	42.5	2.5	431.60
19	45	2.5	431.30
20	47.5	2.5	431.20
21	50	2.5	431.00
22	52.5	2.5	430.80
23	55	2.5	430.70
24	57.5	2.5	430.60
25	60	2.5	430.40
26	62.5	2.5	430.30
27	65	2.5	430.20
28	67.5	2.5	430.00
29	70	2.5	429.90
30	72.5	2.5	429.70
31	75	2.5	429.40
32	77.5	2.5	429.20
33	80	2.5	429.00
34	82.5	2.5	428.70
35	85	2.5	428.50



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	428.20
37	90	2.5	427.70
38	92.5	2.5	427.50
39	95	2.5	427.20
40	97.5	2.5	427.00
41	100	2.5	426.50
42	102.5	2.5	426.00
43	105	2.5	426.00
44	107.5	2.5	426.00
45	110	2.5	425.70
46	112.5	2.5	425.50
47	115	2.5	425.20
48	117.5	2.5	425.00

## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651120	4806490
<i>Geofono n. 48 (G48)</i>	1651090	4806370



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	434.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	433.50
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	433.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	432.30
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	431.50
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	430.50
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	429.50
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	428.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	426.00
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	424.50
<i>E2</i>	Esterno dx	P 48-10.dta	S 48-10.dta	130	424.00

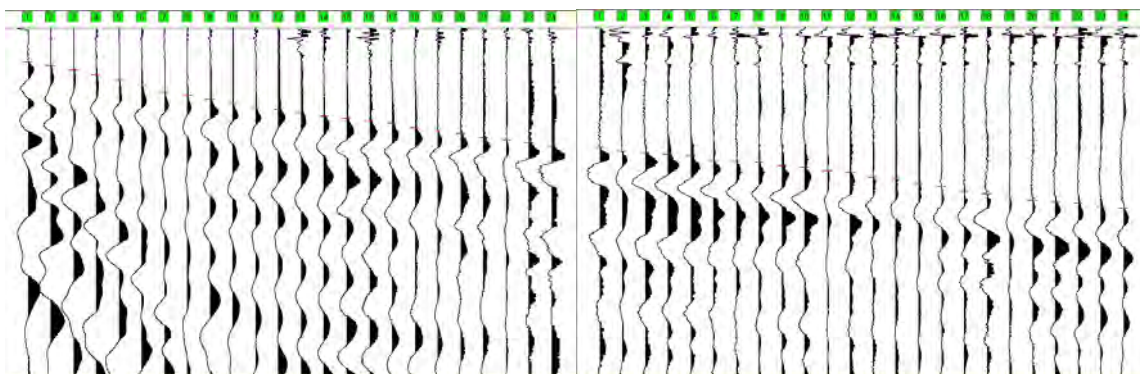


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

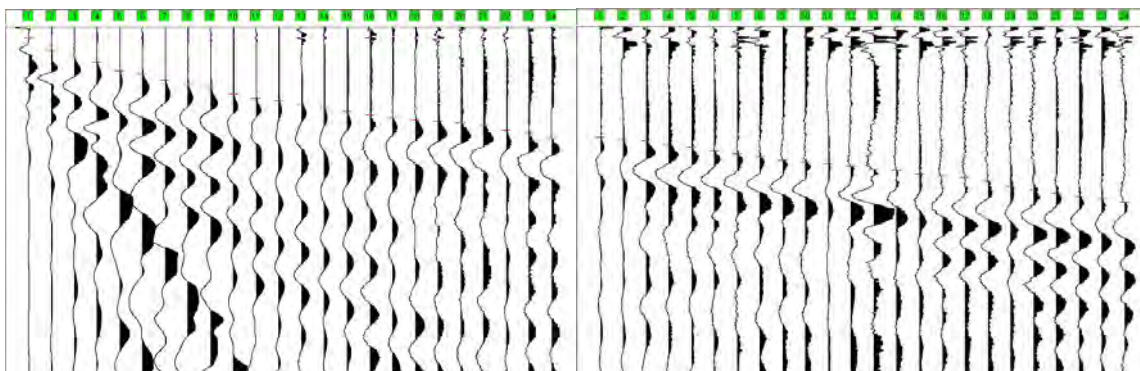
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

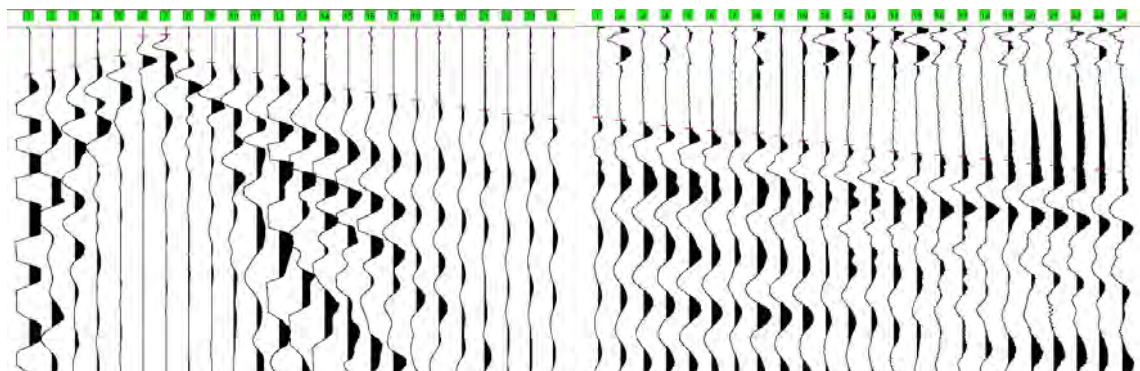
Catena geofonica 25-48

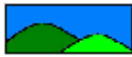


TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



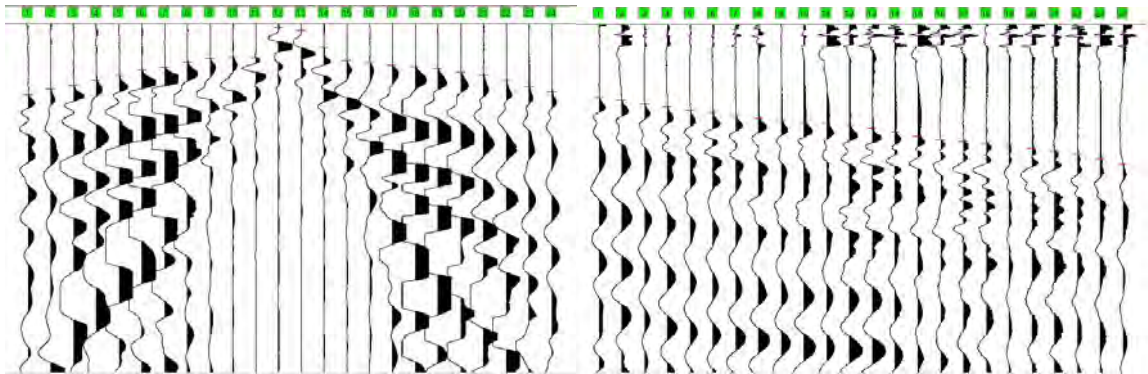


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

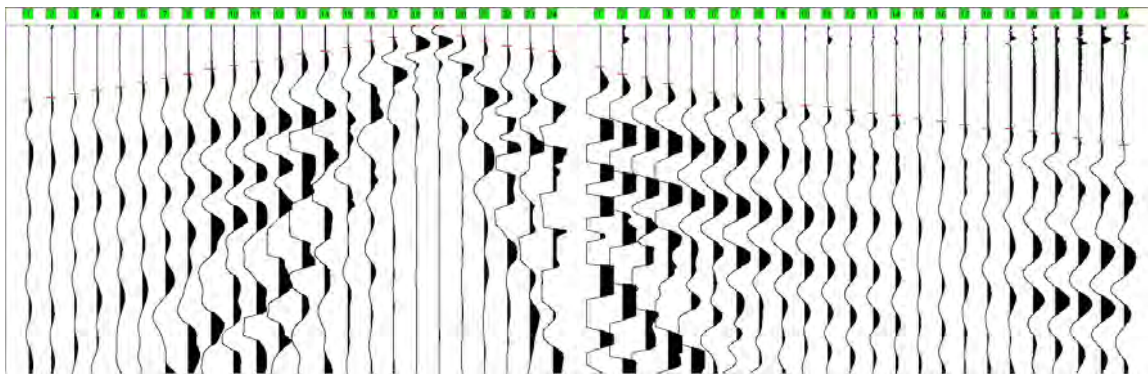
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

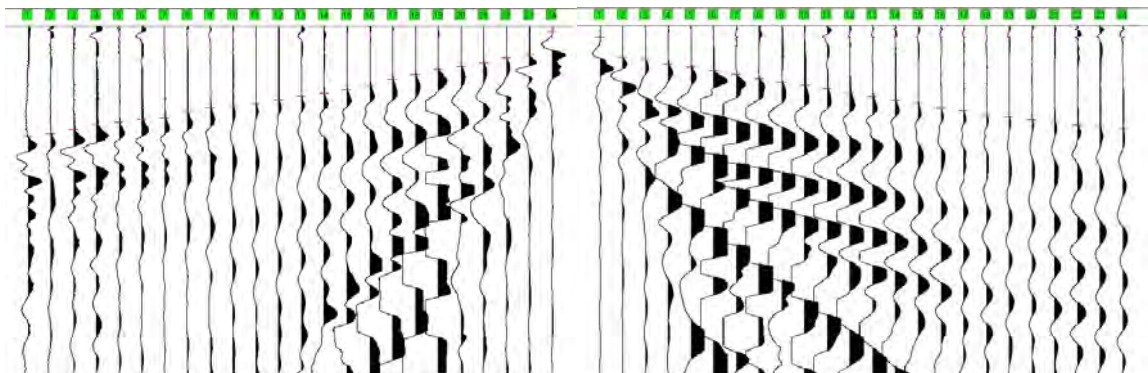
Catena geofonica 25-48

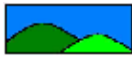


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



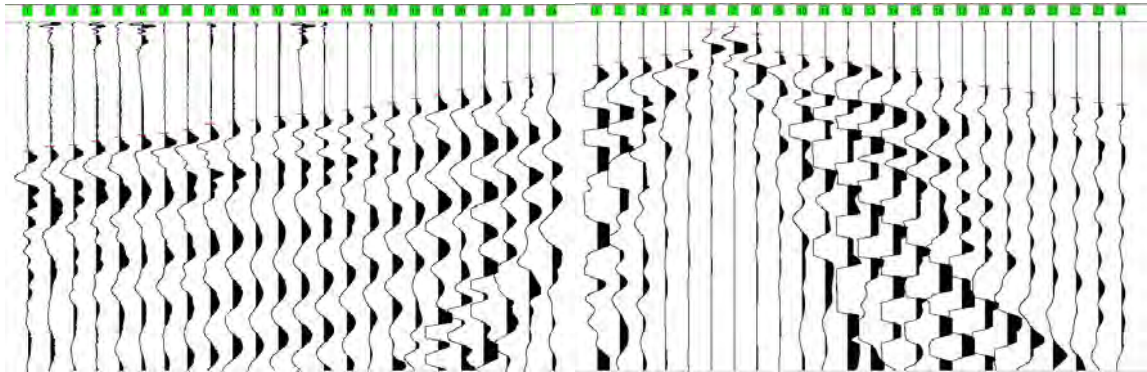


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

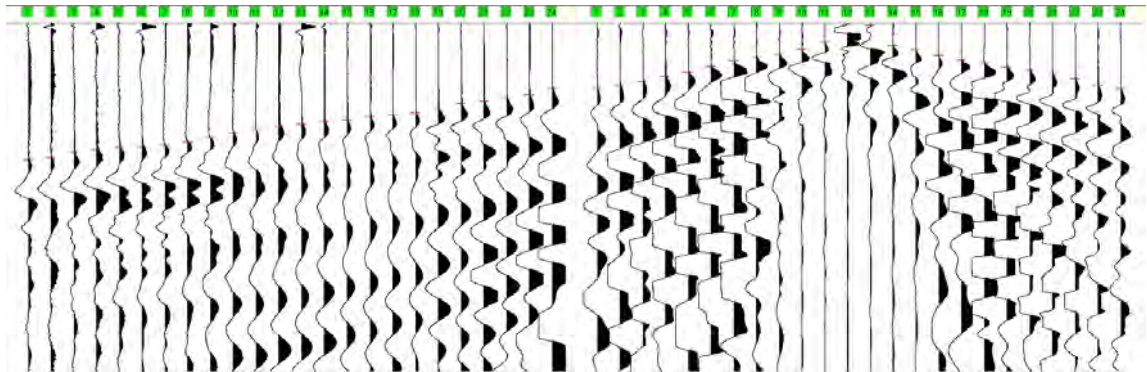
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

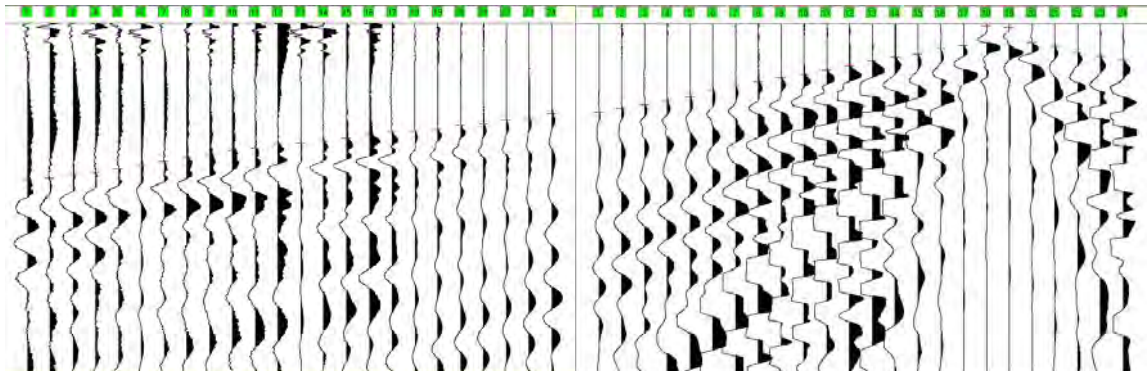
Catena geofonica 25-48



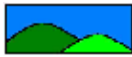
TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48





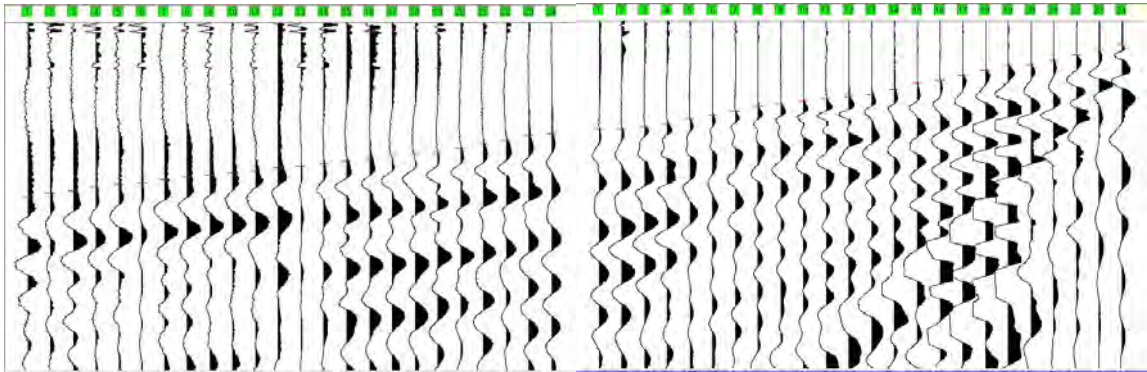


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

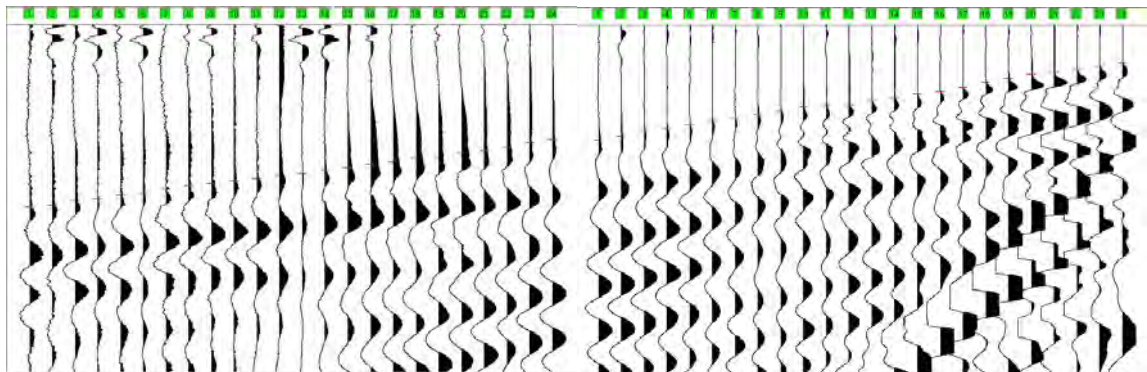
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	19.50	5.80	27.60	41.20	43.30	64.50	75.10	79.40	91.30	102.30	111.60
2	21.60	13.10	25.00	37.80	42.00	62.80	72.60	78.50	90.40	99.80	110.70
3	24.20	17.80	22.90	35.50	39.90	60.30	71.70	75.10	88.30	98.50	108.20
4	27.10	20.30	17.80	32.70	38.20	57.70	69.60	73.90	87.00	96.40	106.90
5	30.50	25.30	12.30	30.10	35.60	56.00	67.10	72.60	84.90	94.70	104.70
6	33.50	27.60	4.60	26.70	33.50	54.30	65.80	72.20	83.20	93.80	103.50
7	37.30	31.00	3.70	25.00	31.00	53.50	64.90	71.30	80.70	91.70	101.30
8	39.00	33.40	13.90	22.00	28.40	50.10	62.80	69.60	78.50	90.40	99.20
9	41.60	35.50	20.30	19.90	25.40	47.50	59.40	66.60	76.40	89.10	97.90
10	44.10	38.90	23.70	19.50	23.30	46.20	57.70	64.10	74.30	87.90	96.20
11	46.20	41.50	26.30	19.50	20.80	45.00	56.90	62.40	73.00	86.60	94.90
12	47.50	42.70	28.00	1.60	19.10	42.80	55.20	59.80	70.50	84.90	92.80
13	49.20	44.90	29.70	3.30	16.50	40.70	53.50	59.00	70.00	84.10	91.90
14	51.30	47.00	32.70	13.50	15.90	39.00	53.00	57.30	68.80	82.40	89.80
15	52.60	49.10	35.50	21.20	12.70	36.90	51.80	56.40	67.10	81.10	88.50
16	53.90	51.30	37.80	22.50	9.30	34.40	49.60	54.30	64.90	79.40	86.40
17	55.60	53.00	39.50	23.70	6.70	31.00	47.10	53.50	63.70	77.70	85.10
18	58.10	54.30	42.30	24.60	0.40	28.00	44.50	52.20	62.80	76.80	83.10
19	59.80	55.10	44.00	25.90	0.40	25.00	42.40	50.10	62.00	76.00	82.30
20	61.50	56.00	46.20	28.00	5.50	23.30	39.50	46.70	59.40	73.40	80.00
21	64.10	57.70	48.30	29.70	8.40	21.20	37.30	45.40	58.60	70.90	78.30
22	65.40	60.20	50.40	33.10	11.80	18.20	34.80	43.30	56.40	68.30	76.30
23	67.10	62.40	51.70	36.50	13.50	16.10	32.20	41.60	55.20	65.80	73.80
24	68.80	63.80	53.40	39.50	18.30	2.50	29.70	38.20	52.60	64.90	72.10
25	70.50	65.10	53.00	42.70	24.60	6.20	25.00	38.20	51.30	62.80	72.10
26	72.60	66.20	54.70	44.00	28.40	17.80	23.30	36.50	49.10	62.80	69.90
27	73.40	66.60	56.00	46.20	30.40	19.50	20.80	33.90	47.00	61.50	66.50
28	74.30	69.20	57.70	47.90	33.80	22.00	18.60	31.00	44.90	59.80	64.80
29	75.60	70.50	59.40	50.00	37.20	23.70	16.10	28.40	42.30	56.80	63.10
30	77.70	72.60	60.70	51.30	39.50	25.90	4.20	25.00	38.90	54.70	60.60
31	78.50	74.30	62.00	53.40	41.20	28.00	2.50	21.60	36.10	52.60	59.70
32	79.00	76.00	62.80	54.70	42.70	30.40	6.70	19.90	33.40	49.60	57.20
33	81.10	78.10	64.10	55.60	44.90	32.70	17.40	17.80	31.00	48.30	55.10
34	81.90	79.00	66.60	57.30	46.60	34.40	19.10	14.80	29.30	46.60	52.50
35	84.10	80.20	67.50	58.10	47.40	36.50	20.30	11.00	26.70	45.30	51.20
36	84.90	81.50	69.20	59.40	49.60	38.90	23.30	0.40	24.20	44.00	51.20
37	87.90	83.60	70.90	60.70	51.30	41.20	25.40	0.80	21.20	42.70	49.10
38	89.10	84.10	73.00	62.80	52.60	43.20	26.30	12.70	19.10	39.80	47.40
39	91.30	86.20	74.30	65.40	53.80	44.90	28.80	15.20	17.30	36.10	44.90
40	93.40	87.40	75.10	67.50	56.00	47.90	32.70	18.60	13.90	34.40	43.60
41	95.90	88.30	76.00	68.30	58.10	49.10	34.80	21.20	12.20	31.40	41.10
42	97.60	90.40	77.30	69.20	59.80	51.70	37.30	22.90	0.70	28.40	38.10
43	99.80	93.40	78.10	69.90	60.20	53.00	38.60	25.40	1.60	25.90	36.00
44	101.50	95.50	80.20	72.60	61.50	54.70	41.20	27.60	10.60	25.00	33.40
45	102.30	97.60	81.10	73.90	63.20	56.40	42.00	29.70	12.70	22.90	32.60
46	103.20	99.30	82.80	76.00	65.80	57.70	44.10	32.20	16.50	19.50	30.90
47	104.90	101.00	83.60	78.40	68.30	58.50	47.10	36.10	18.60	16.90	28.70
48	106.10	102.70	85.30	81.80	70.00	60.20	48.40	38.20	20.80	13.10	26.60

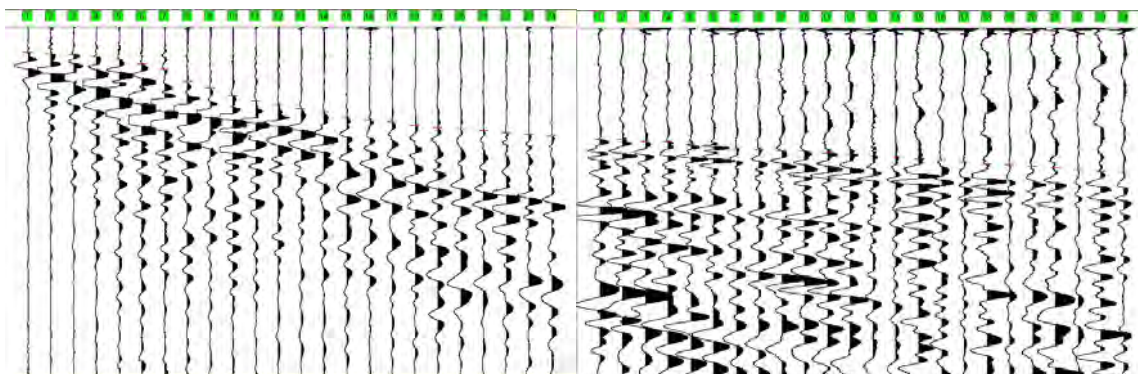


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

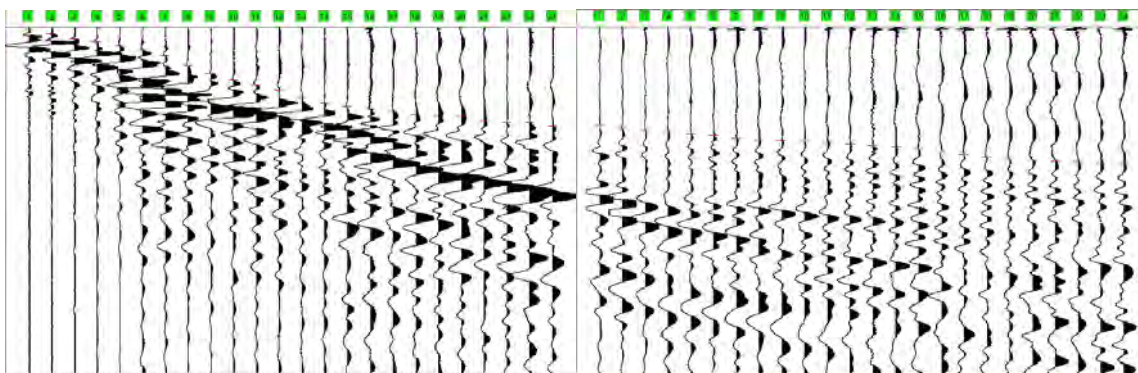
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

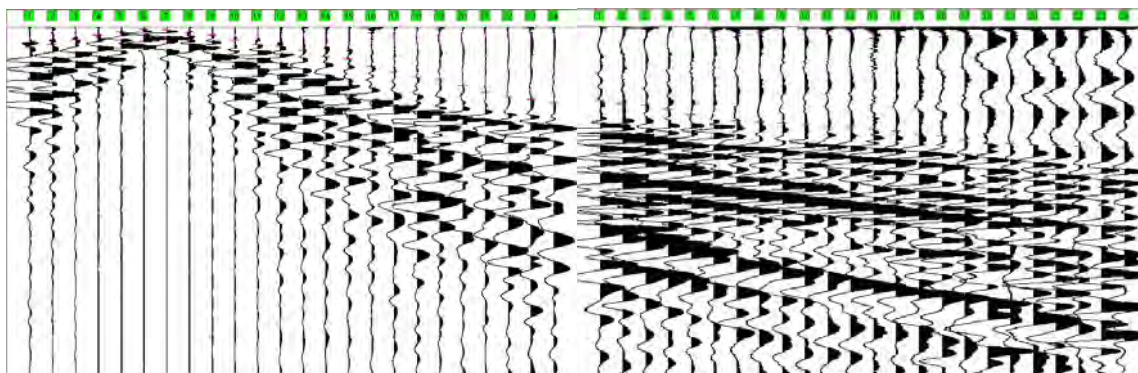
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



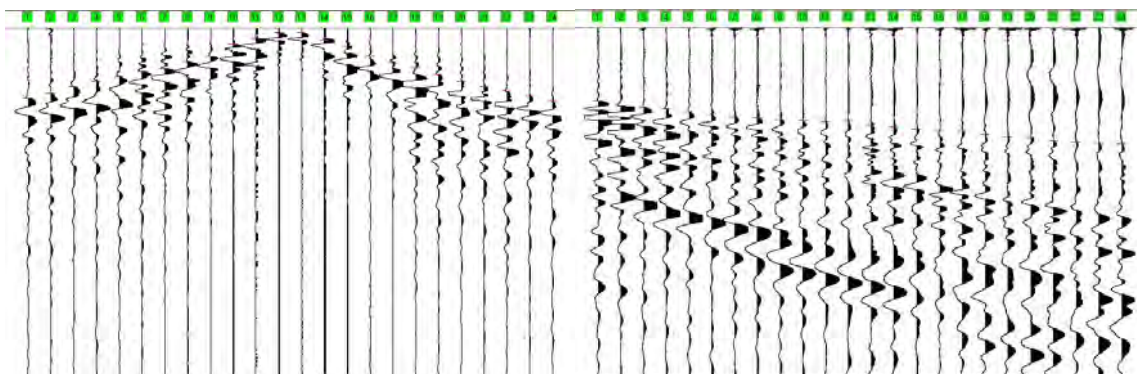


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

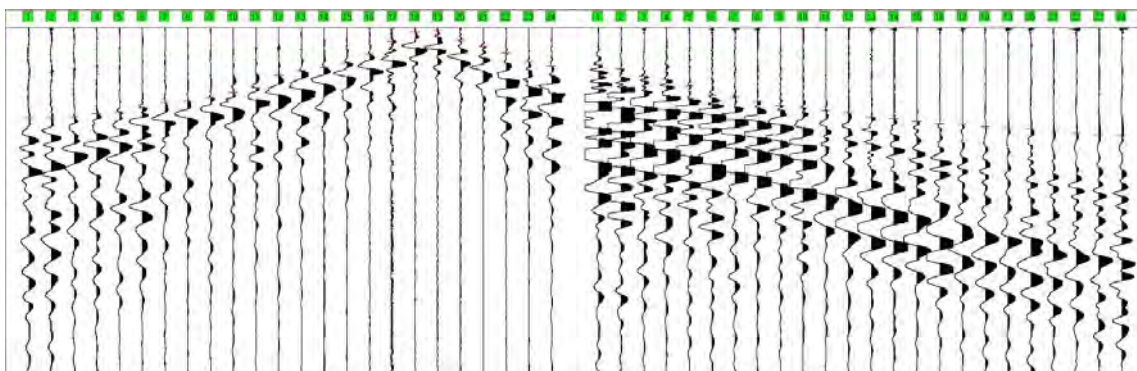
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

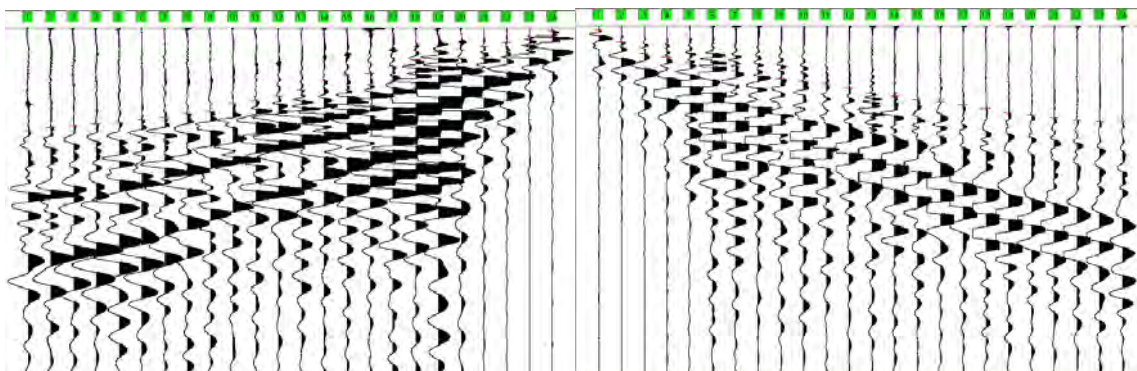
Catena geofonica 25-48

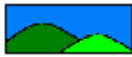


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



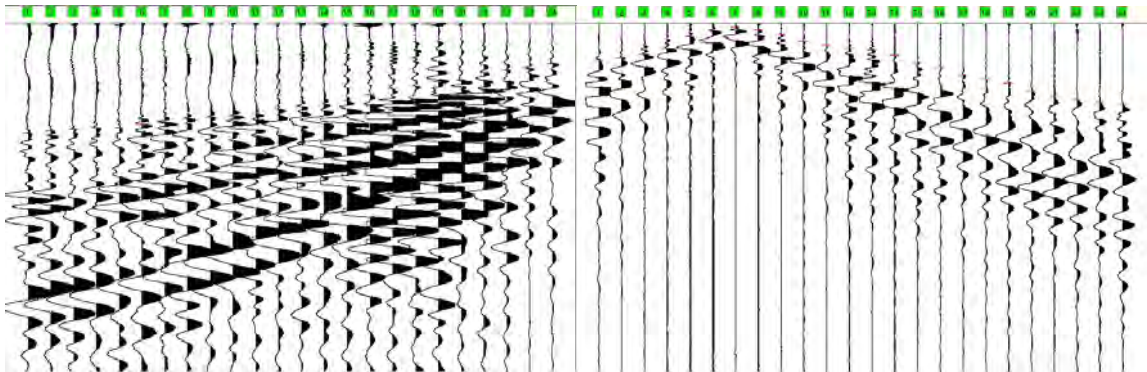


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

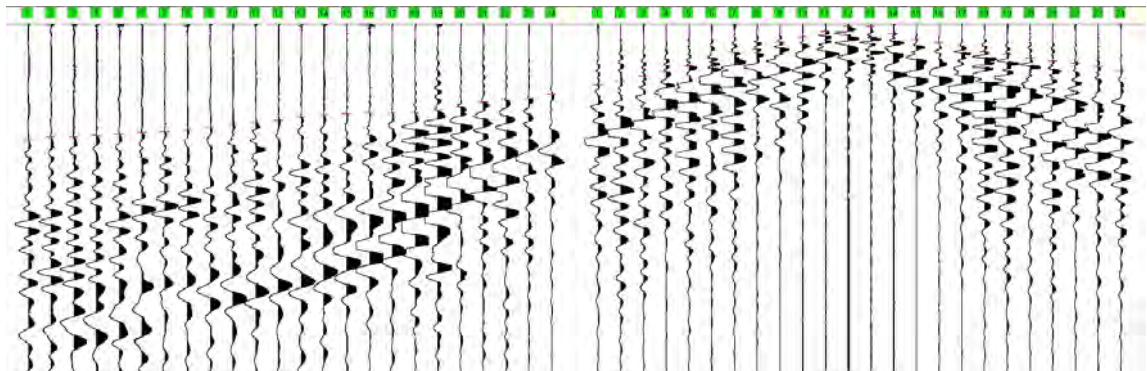
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

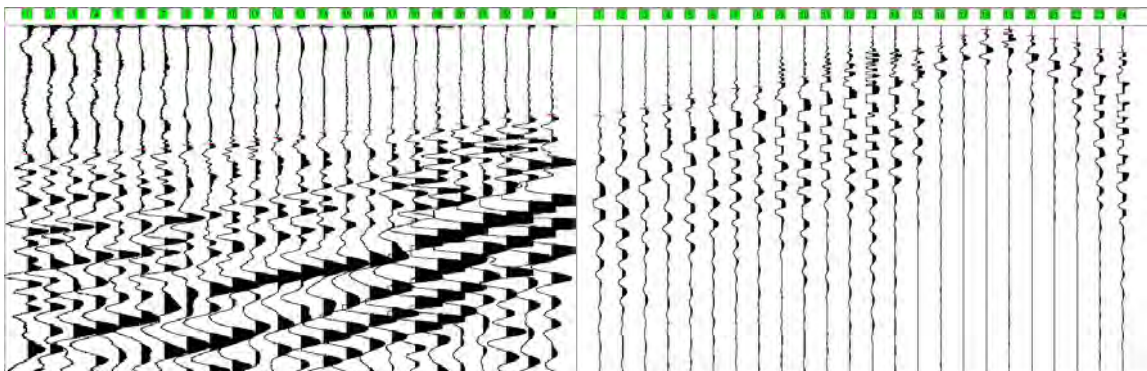
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



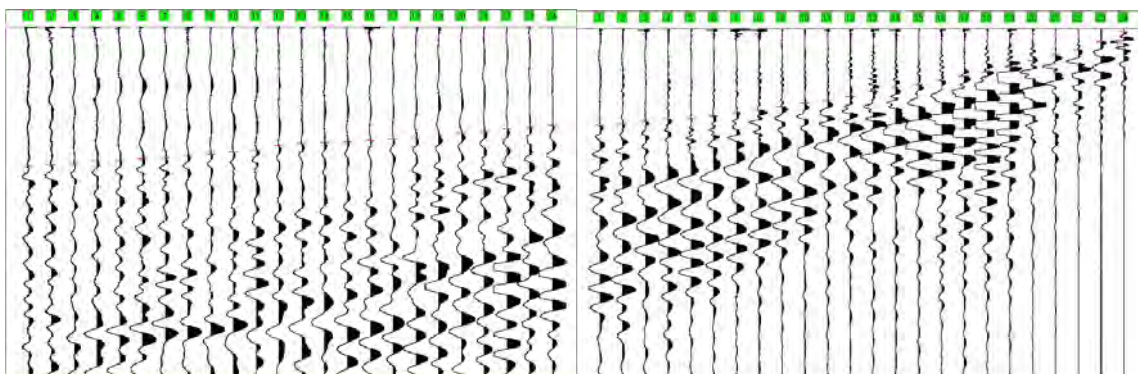


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

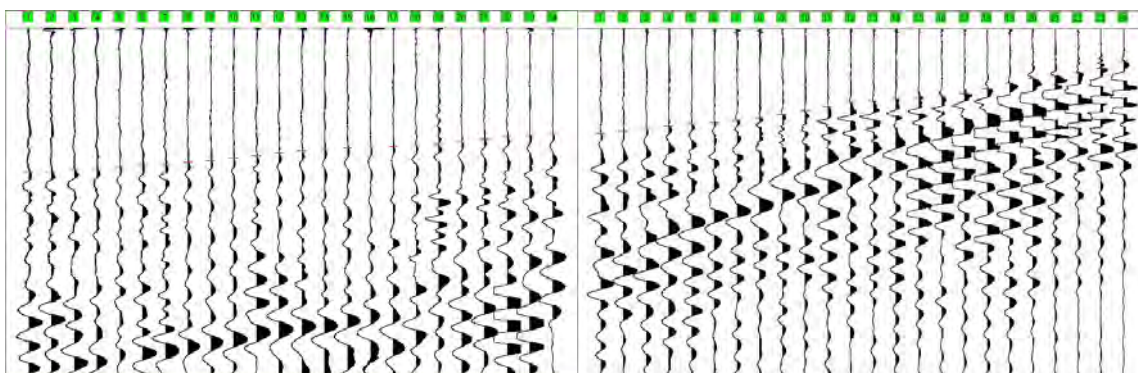
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

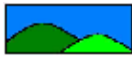
Catena geofonica 25-48



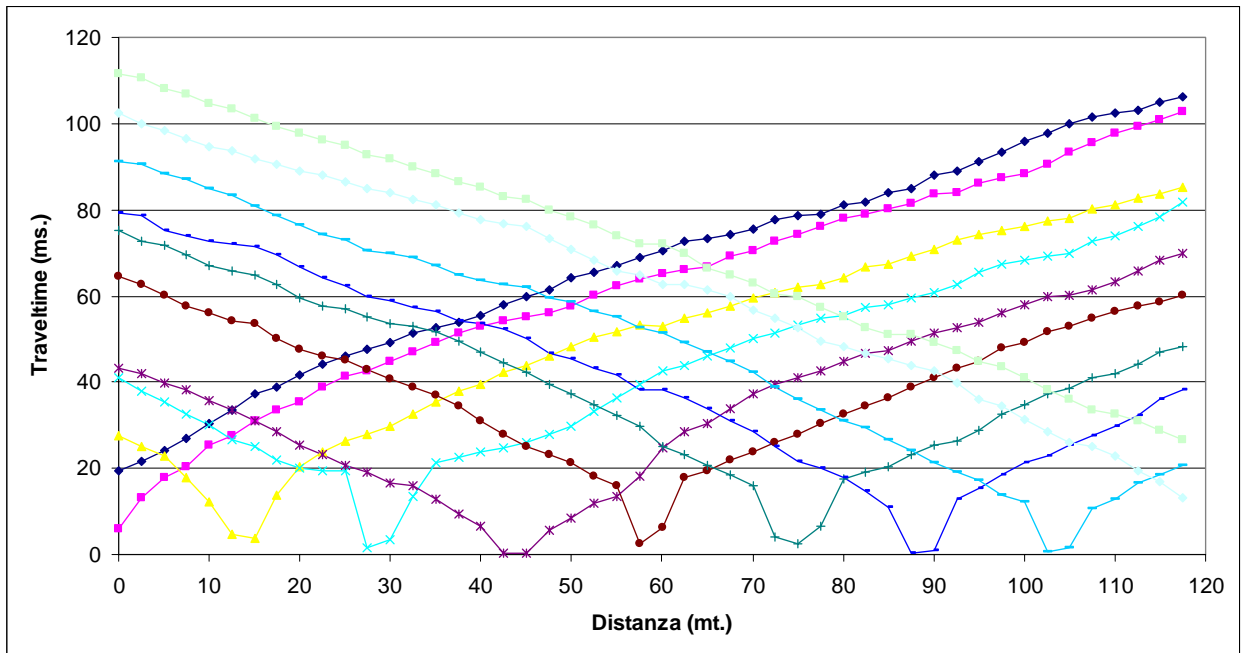


## TEMPI DI PROPAGAZIONE ONDE Sh

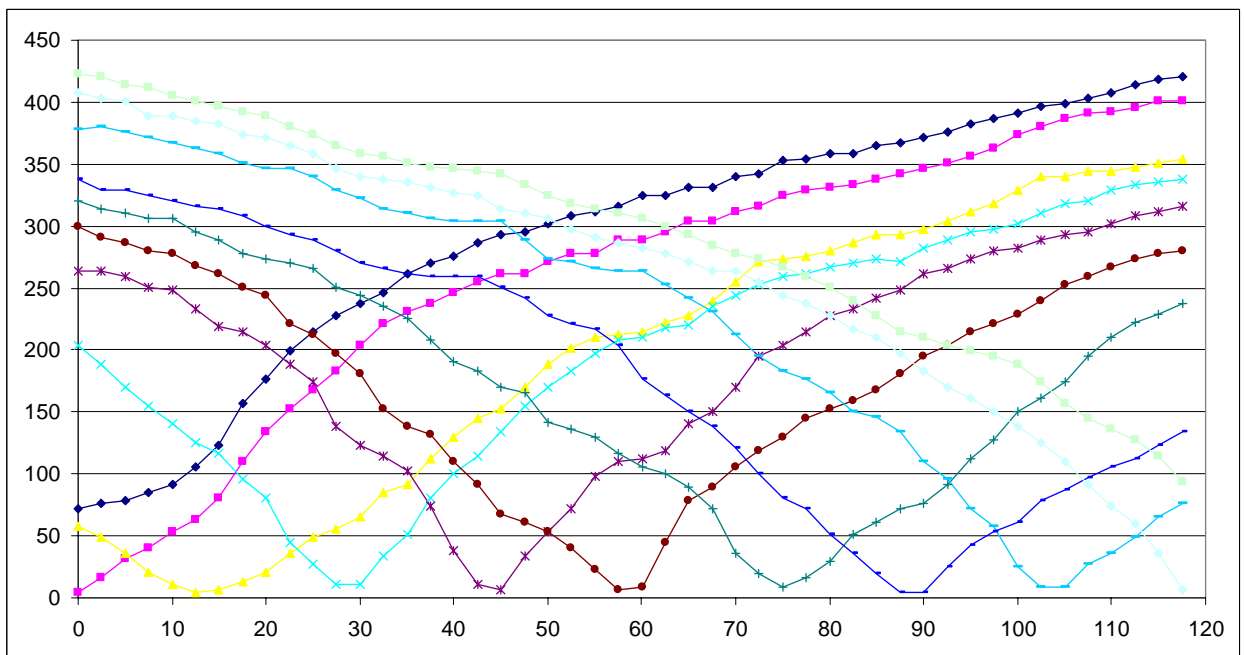
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	72.20	4.20	57.30	203.80	263.30	299.40	320.60	337.60	378.00	407.70	422.60
2	76.40	16.80	48.80	189.00	263.30	290.90	314.30	329.10	380.10	403.50	420.50
3	78.50	31.80	36.10	169.80	259.00	286.70	310.00	329.10	375.90	401.30	414.10
4	84.90	40.30	21.20	155.00	250.60	280.30	305.80	324.90	371.60	388.60	412.00
5	91.30	52.90	10.60	140.10	248.40	278.20	305.80	320.60	367.40	388.60	405.60
6	106.10	63.70	4.20	125.30	233.60	267.50	295.20	316.40	363.10	384.30	401.20
7	123.00	80.70	6.30	116.80	218.70	261.20	288.80	314.30	358.90	382.20	397.10
8	157.10	110.40	12.70	95.50	214.40	250.60	278.20	307.90	350.40	373.70	392.70
9	176.20	133.60	21.20	80.70	203.80	244.20	273.90	299.40	346.10	371.60	388.60
10	199.60	152.90	36.10	44.50	189.00	220.80	269.70	293.00	346.10	365.20	380.10
11	214.30	167.70	48.80	27.60	174.10	212.30	265.40	288.80	339.70	358.90	373.60
12	227.20	182.60	55.20	10.60	138.00	197.50	250.60	280.30	329.10	346.10	365.10
13	237.80	203.80	65.80	10.60	123.10	180.50	244.20	269.70	322.80	339.60	358.90
14	246.30	220.80	84.90	33.90	114.60	152.90	235.70	265.40	314.30	337.60	356.60
15	261.20	231.40	91.30	50.90	101.90	138.00	225.10	261.20	310.00	335.50	350.40
16	269.70	237.80	112.50	80.70	74.30	131.50	208.10	259.00	305.80	331.30	348.10
17	275.90	246.30	129.50	99.80	38.20	110.40	191.10	259.00	303.60	327.00	346.10
18	286.70	254.80	144.40	114.60	10.60	91.30	182.60	259.00	303.60	324.90	344.00
19	292.90	261.20	152.90	133.70	6.20	67.90	169.80	250.60	303.60	314.30	341.90
20	295.20	261.20	169.80	155.00	33.90	61.50	165.60	242.10	288.80	310.00	333.40
21	301.40	271.80	189.00	169.80	53.00	53.00	142.10	227.20	273.90	305.80	324.90
22	307.90	278.20	201.70	182.60	72.20	40.30	135.90	220.80	271.80	297.30	318.50
23	312.00	278.20	210.20	197.50	97.60	23.30	129.50	216.60	265.40	290.90	314.30
24	316.40	288.80	212.30	208.30	110.40	6.30	116.80	203.80	264.10	286.70	310.00
25	324.90	288.80	214.30	210.40	112.10	8.40	106.10	176.20	263.30	282.40	305.80
26	324.90	295.20	222.80	218.30	118.90	44.50	99.80	163.50	252.70	278.20	299.40
27	331.30	303.50	227.20	220.20	140.10	78.40	89.10	150.70	242.10	271.80	292.90
28	331.30	303.50	239.90	235.70	150.70	89.00	72.20	138.00	231.30	263.30	284.50
29	339.70	312.00	254.80	244.20	169.80	106.00	36.10	121.00	212.20	263.30	278.20
30	341.90	316.40	271.80	252.70	195.30	118.90	19.10	99.80	195.20	254.80	273.90
31	352.50	324.90	273.90	258.90	203.80	129.50	8.40	80.70	182.60	244.20	267.40
32	354.60	329.00	276.00	261.20	214.40	144.40	16.80	72.20	176.20	237.80	258.90
33	358.90	331.30	280.30	267.40	227.20	152.90	29.70	50.90	165.60	227.20	250.60
34	358.90	333.40	286.70	269.70	233.60	159.10	50.90	36.10	150.60	216.60	239.80
35	365.20	337.50	293.00	273.90	242.10	167.60	61.50	19.10	146.50	210.20	227.20
36	367.40	341.90	292.90	271.80	248.40	180.50	72.20	4.20	133.70	197.50	214.30
37	371.60	346.10	297.30	282.40	261.20	195.20	76.40	4.20	110.40	182.60	210.20
38	375.90	350.40	303.50	288.80	265.40	203.70	91.30	25.30	95.50	169.80	203.80
39	382.20	356.70	312.00	295.20	273.90	214.30	112.50	42.30	72.20	161.40	199.60
40	386.50	363.10	318.50	297.30	280.30	220.80	127.40	52.90	57.30	150.70	195.30
41	390.70	373.70	329.00	301.40	282.40	229.30	150.70	61.40	25.40	138.00	189.00
42	397.10	380.10	339.60	310.00	288.80	239.80	161.40	78.40	8.40	125.30	174.10
43	399.20	386.50	339.60	318.50	293.00	252.70	174.10	86.90	8.40	110.40	157.10
44	403.50	390.70	344.00	320.50	295.20	258.90	195.30	97.50	27.60	91.30	144.40
45	407.70	392.70	344.00	329.00	301.50	267.40	210.20	106.10	36.10	74.30	135.90
46	414.10	395.00	348.10	333.40	307.90	273.90	222.80	112.50	48.80	59.40	127.40
47	418.30	401.20	350.40	335.50	312.10	278.20	229.30	123.10	65.80	36.10	114.60
48	420.50	401.20	354.60	337.50	316.40	280.30	237.80	133.70	76.40	6.20	93.40



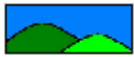
DROMOCRONE ONDE P



DROMOCRONE ONDE Sh







IGEA S.A.S.

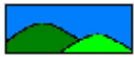
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

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IGEA S.A.S.

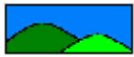
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

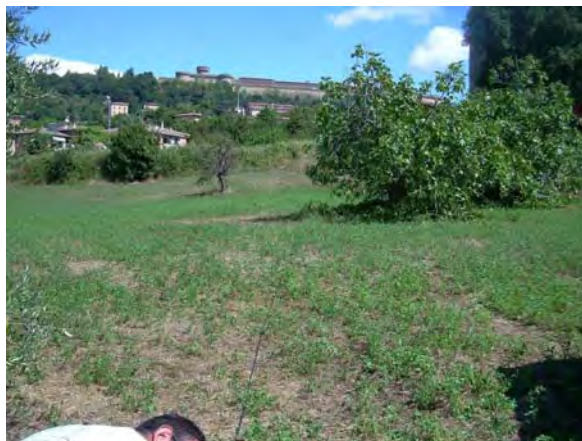
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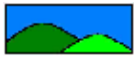
FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 161

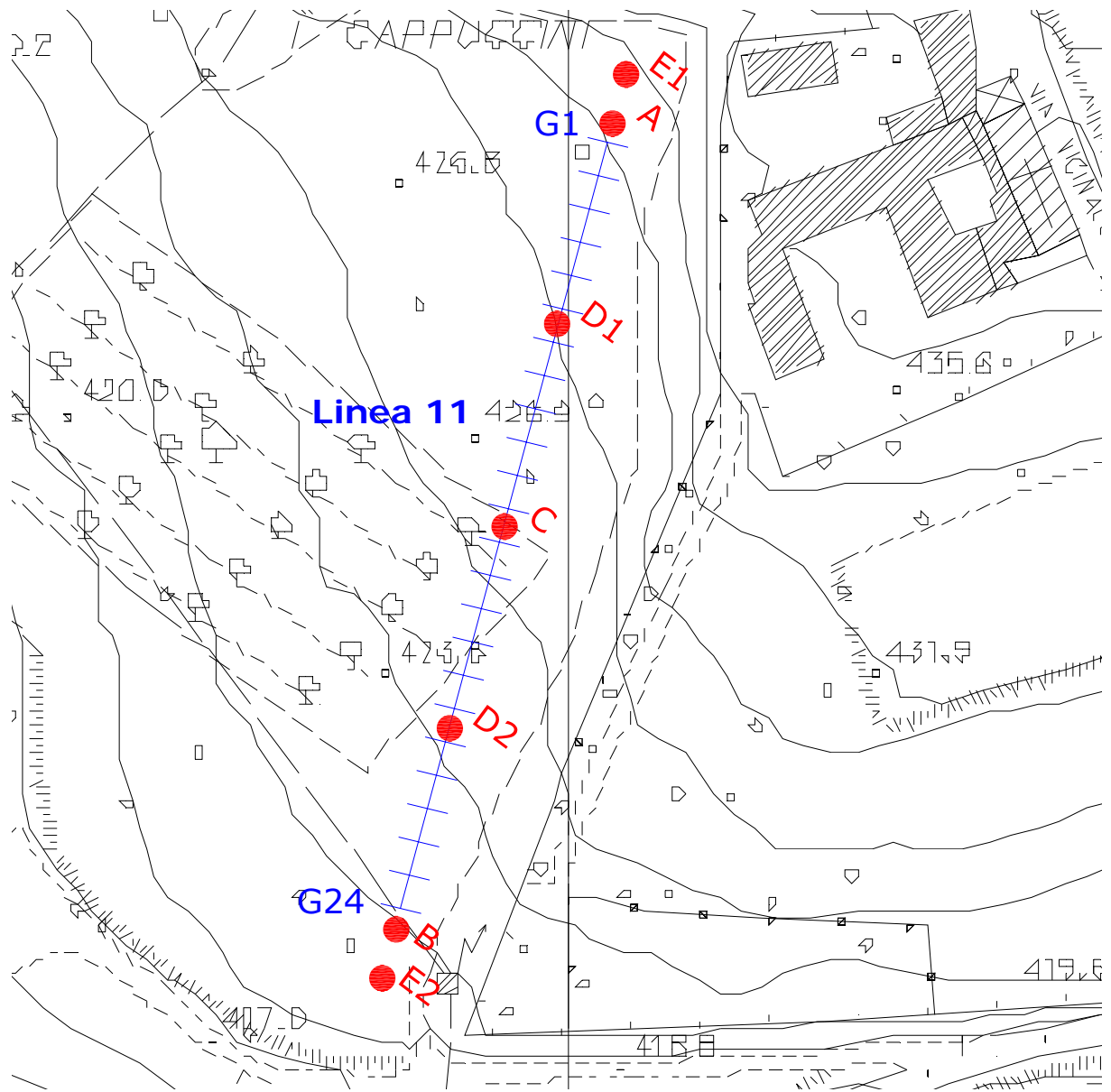


**DOCUMENTAZIONE FOTOGRAFICA LINEA 10**





**LINEA SISMICA 11**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	430.00
2	5	5	429.70
3	10	5	429.30
4	15	5	429.00
5	20	5	428.50
6	25	5	428.20
7	30	5	428.00
8	35	5	427.70
9	40	5	427.50
10	45	5	427.20
11	50	5	427.00
12	55	5	426.70
13	60	5	426.20
14	65	5	426.00
15	70	5	425.70
16	75	5	425.40
17	80	5	425.00
18	85	5	424.70
19	90	5	424.00
20	95	5	423.70
21	100	5	423.40
22	105	5	423.00
23	110	5	422.70
24	115	5	422.00

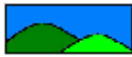
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1650800	4806350
<i>Geofono n. 24 (G24)</i>	1650770	4806230



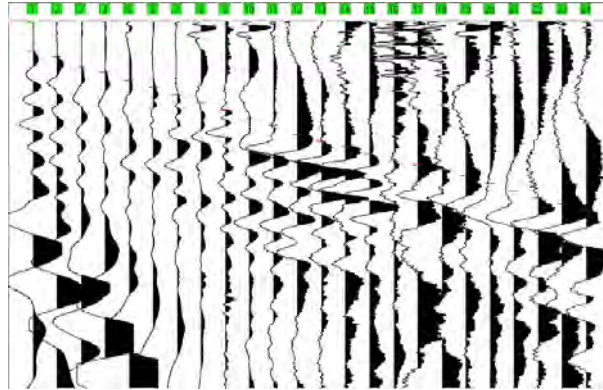
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	432.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	430.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	428.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	426.50
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	424.40
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	422.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	419.00

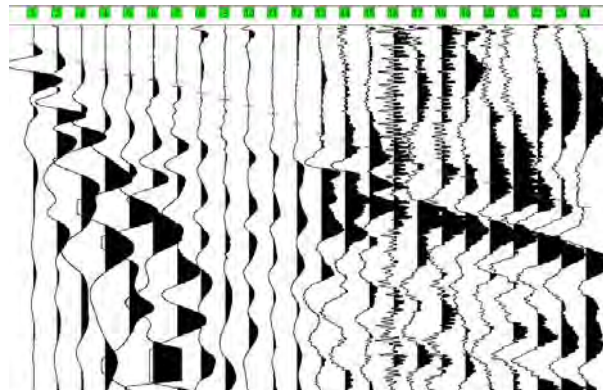


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

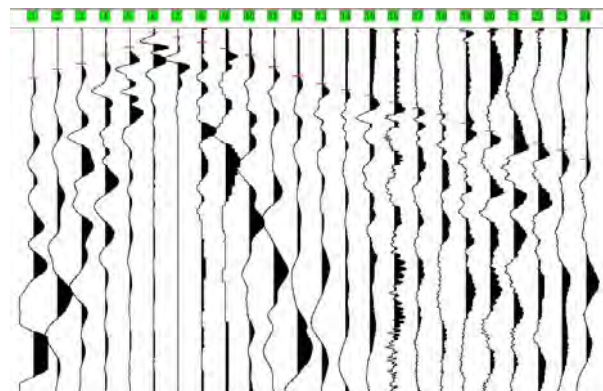
TIRO ESTERNO SX E1

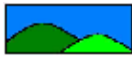


TIRO ESTREMO SX A



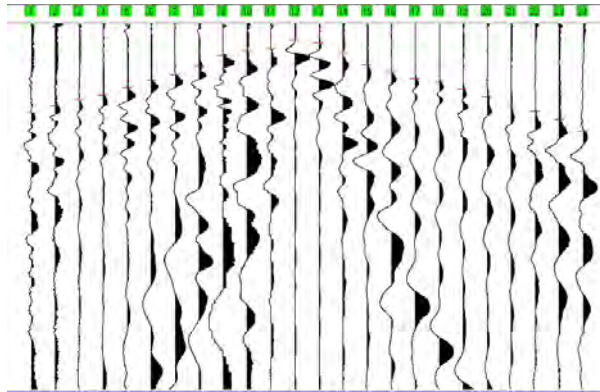
TIRO INTERMEDIO SX D1



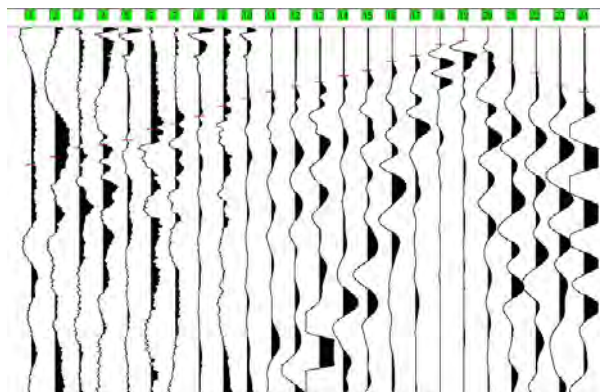


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

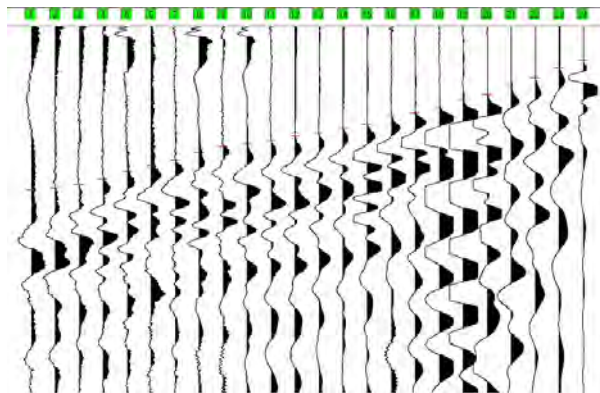
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B

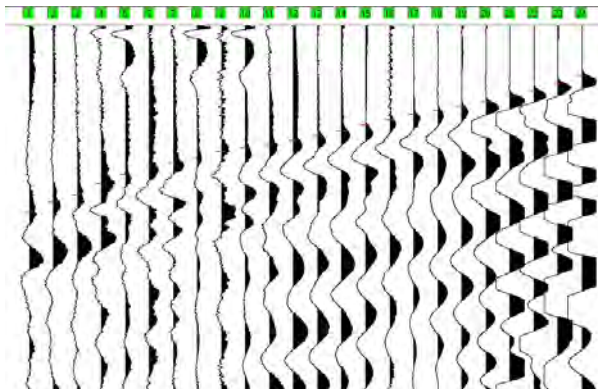






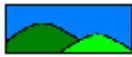
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



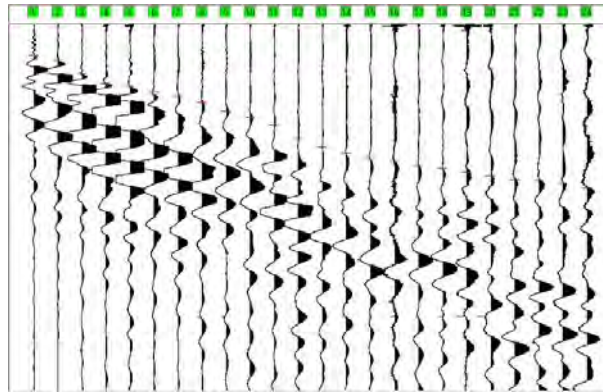
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	16.10	10.50	27.00	49.60	76.00	90.80	109.00
2	19.50	15.60	22.50	45.80	71.70	89.60	103.00
3	25.40	20.80	19.50	42.40	67.10	87.90	99.20
4	28.00	24.20	14.40	39.90	65.40	84.90	92.90
5	32.70	27.60	10.10	35.60	62.40	80.70	87.80
6	36.50	30.10	2.00	31.40	56.40	77.30	84.00
7	40.70	33.80	5.00	28.40	53.50	74.30	81.00
8	45.40	37.80	7.60	23.70	49.20	70.00	78.90
9	49.20	41.20	11.00	17.80	43.70	66.60	75.00
10	53.90	44.10	14.80	15.20	39.00	65.40	72.90
11	57.70	49.20	21.20	14.00	35.60	63.20	71.20
12	62.80	54.30	26.30	8.90	32.70	60.70	68.70
13	66.60	59.80	30.50	10.60	30.10	59.00	66.10
14	69.60	63.70	33.90	16.10	26.70	56.90	63.60
15	73.90	67.50	37.30	22.90	23.70	54.30	60.10
16	77.30	72.60	40.70	26.70	18.60	49.60	57.10
17	80.10	76.70	44.10	30.50	15.70	47.90	54.10
18	85.00	80.70	47.50	32.70	8.90	44.50	52.00
19	87.40	84.10	52.60	36.50	7.20	40.30	49.50
20	90.00	86.90	56.90	40.70	13.10	37.80	47.30
21	94.20	90.80	60.30	45.40	19.10	33.10	43.90
22	98.10	94.60	63.70	48.80	24.60	28.40	41.10
23	101.50	97.20	67.50	53.50	31.80	22.90	36.70
24	105.30	101.00	72.60	59.80	35.60	18.60	32.60

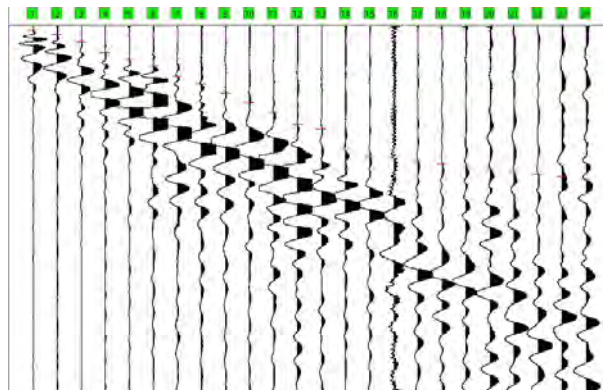


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

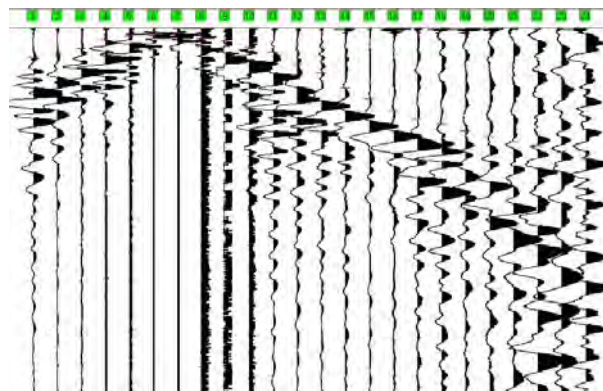
TIRO ESTERNO SX E1

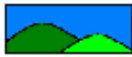


TIRO ESTREMO SX A



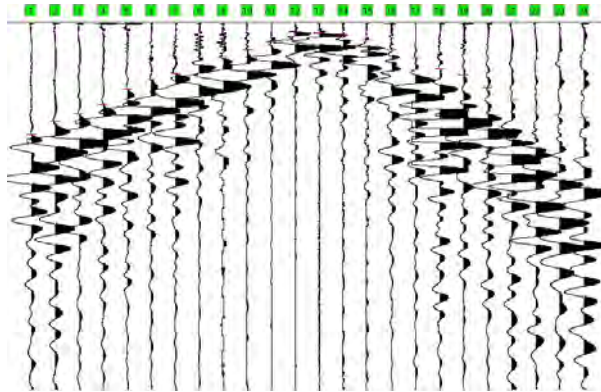
TIRO INTERMEDIO SX D1



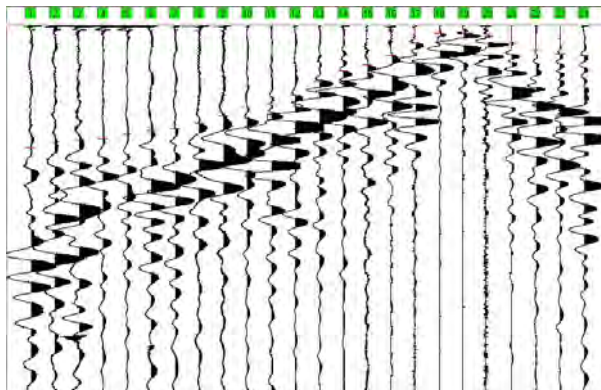


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

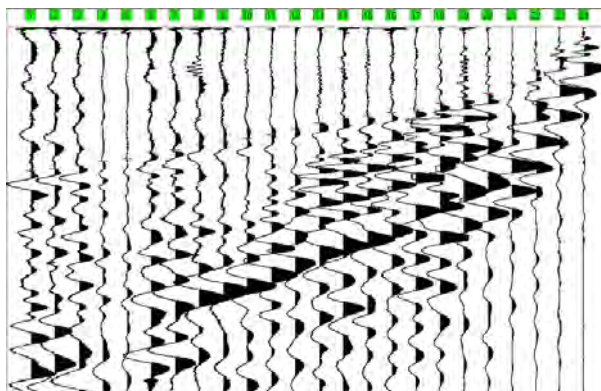
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



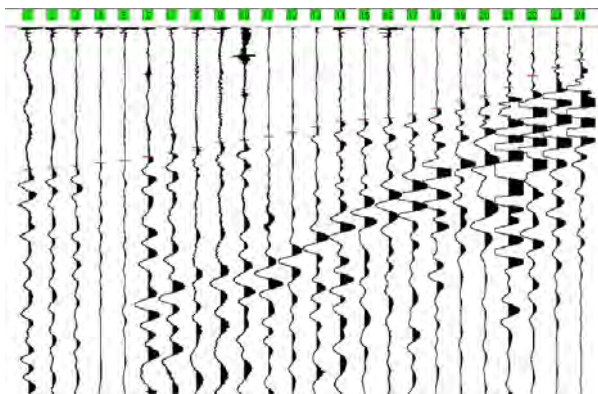
TIRO ESTREMO DX B





## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

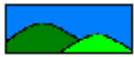
## TIRO ESTERNO DX E2



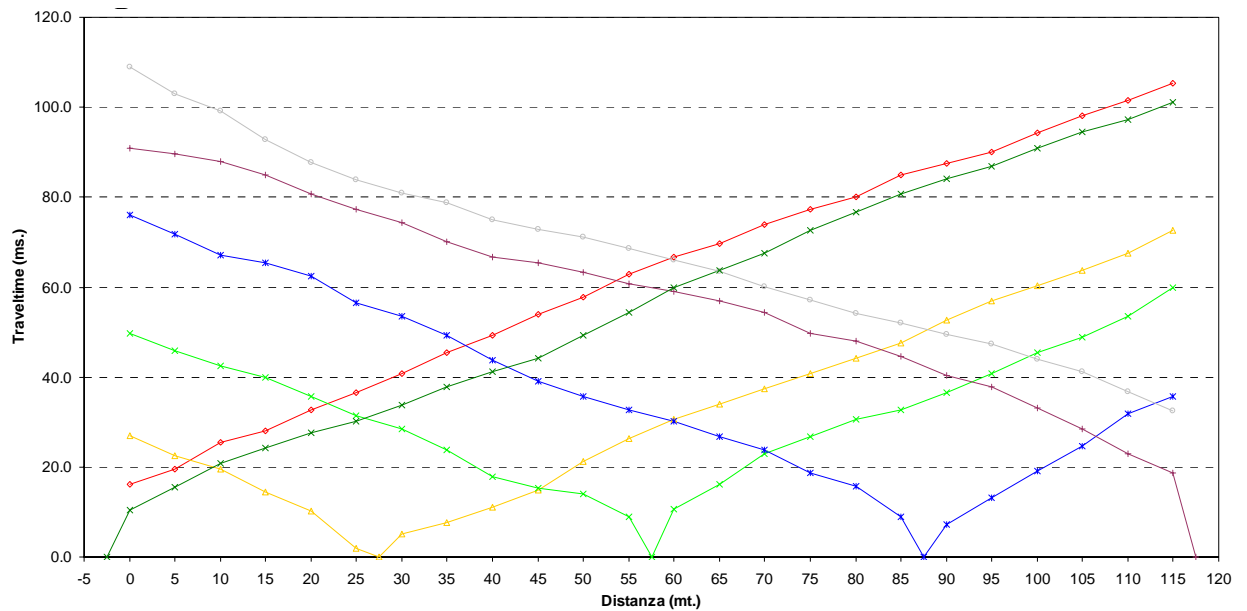
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

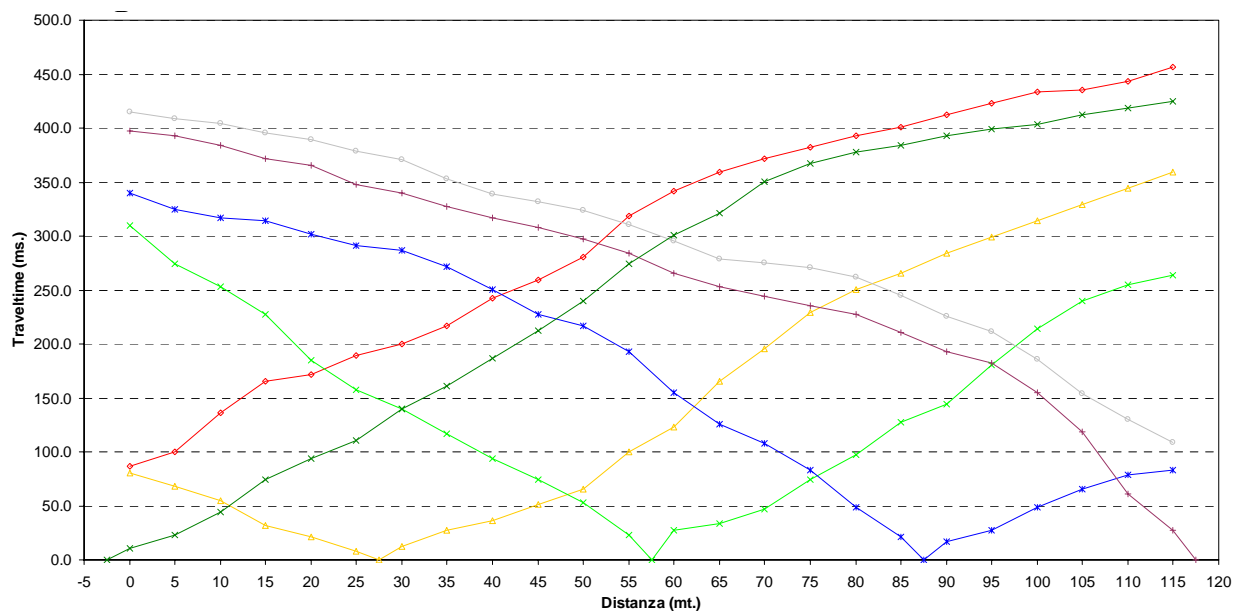
geofono	E1	A	D1	C	D2	B	E2
1	86.90	10.60	80.70	310.00	339.70	397.10	415.00
2	99.80	23.30	67.90	273.90	324.90	392.80	408.60
3	135.90	44.40	55.20	252.70	316.40	384.30	404.20
4	165.60	74.30	31.80	227.20	314.30	371.60	395.90
5	172.00	93.40	21.20	184.70	301.50	365.20	389.50
6	189.00	110.40	8.30	157.10	290.90	348.20	378.90
7	199.60	140.10	12.70	140.10	286.70	339.70	370.40
8	216.60	161.40	27.60	116.80	271.80	327.00	353.40
9	242.10	186.70	36.10	93.40	250.60	316.40	338.50
10	258.90	212.20	50.90	74.30	227.20	307.90	332.00
11	280.30	239.80	65.80	52.90	216.60	297.30	323.50
12	318.50	273.90	99.80	23.30	193.20	284.50	310.90
13	341.90	301.20	123.10	27.60	155.00	265.40	295.90
14	358.90	321.20	165.60	33.80	125.30	252.70	278.90
15	371.60	350.20	195.30	46.70	108.30	244.20	274.80
16	382.10	367.40	229.30	74.30	82.80	235.70	270.60
17	392.70	378.00	250.60	97.60	48.80	227.20	262.10
18	401.20	384.30	265.40	127.40	21.20	210.20	245.10
19	412.00	392.80	284.50	144.40	16.80	193.20	226.00
20	422.60	399.20	299.40	180.50	27.60	182.60	211.10
21	433.20	403.50	314.30	214.30	48.80	155.00	185.60
22	435.30	412.00	329.10	239.80	65.80	118.90	153.70
23	443.80	418.30	344.00	254.80	78.40	61.50	130.40
24	456.60	424.70	358.90	263.30	82.80	27.60	109.10

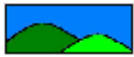


### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

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IGEA S.A.S.

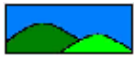
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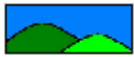
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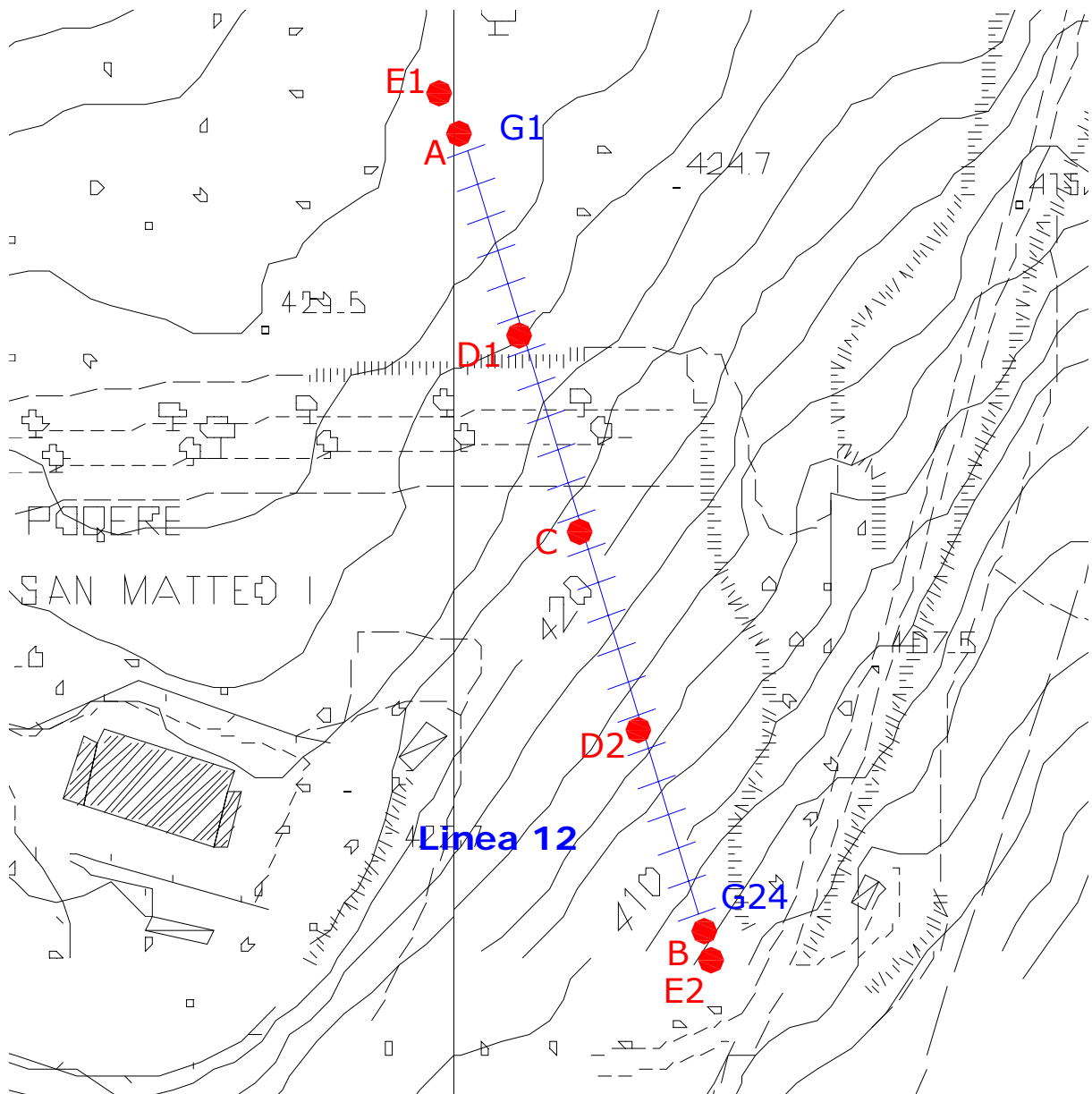
**DOCUMENTAZIONE FOTOGRAFICA LINEA 11**







**LINEA SISMICA 12**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	429.00
2	5	5	428.70
3	10	5	428.30
4	15	5	428.00
5	20	5	427.00
6	25	5	426.80
7	30	5	426.00
8	35	5	425.00
9	40	5	424.00
10	45	5	423.00
11	50	5	422.50
12	55	5	421.50
13	60	5	420.00
14	65	5	419.00
15	70	5	418.00
16	75	5	418.00
17	80	5	416.00
18	85	5	415.00
19	90	5	412.00
20	95	5	411.00
21	100	5	410.50
22	105	5	410.00
23	110	5	408.00
24	115	5	407.00

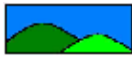
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651000	4806310
<i>Geofono n. 24 (G24)</i>	1651030	4806200



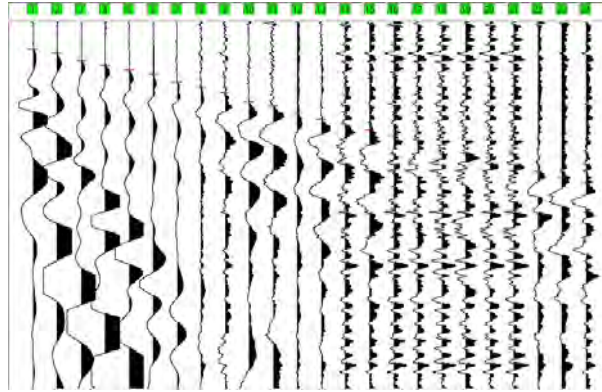
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-5.dta	S 1-10.dta	-5	429.80
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	429.30
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	426.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	421.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	414.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	406.00
<i>E2</i>	Esterno dx	P 24-5.dta	S 24-10.dta	125	404.00

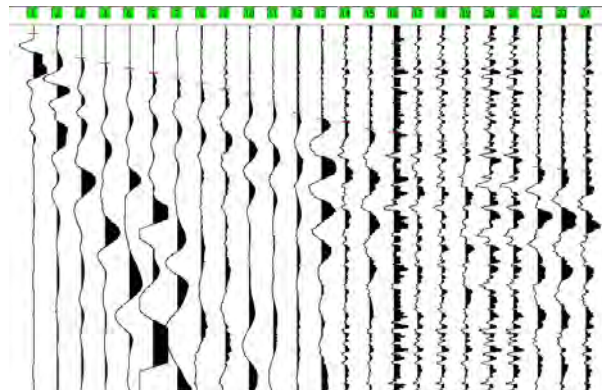


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

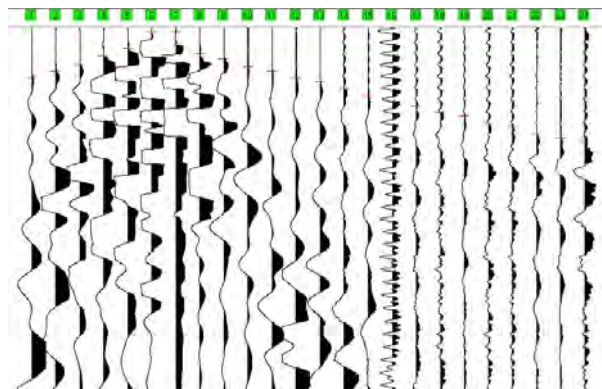
TIRO ESTERNO SX E1

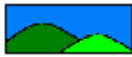


TIRO ESTREMO SX A



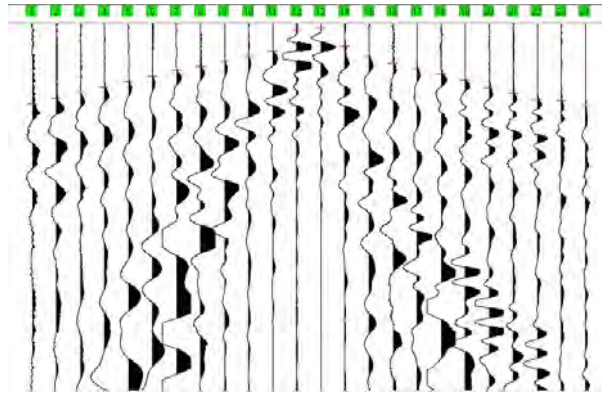
TIRO INTERMEDIO SX D1



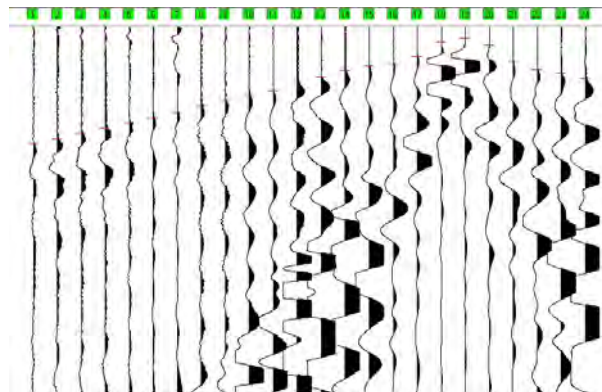


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

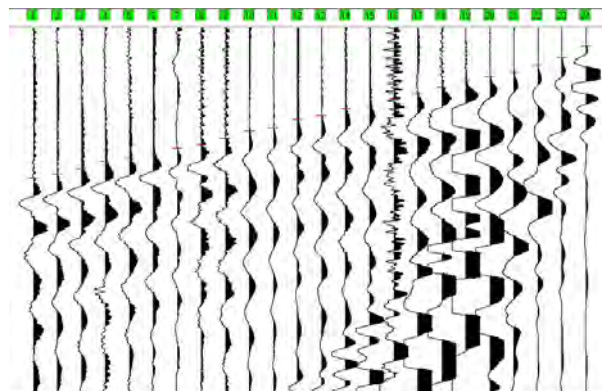
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



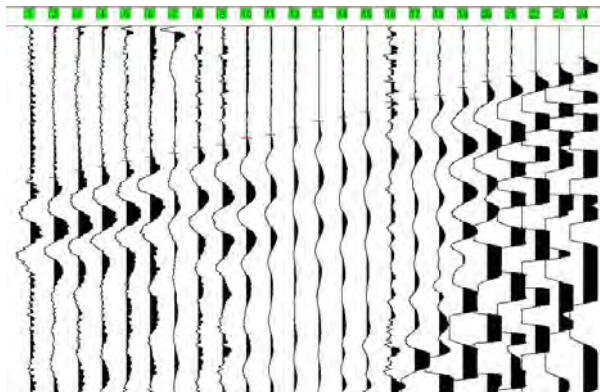
TIRO ESTREMO DX B





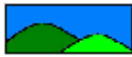
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



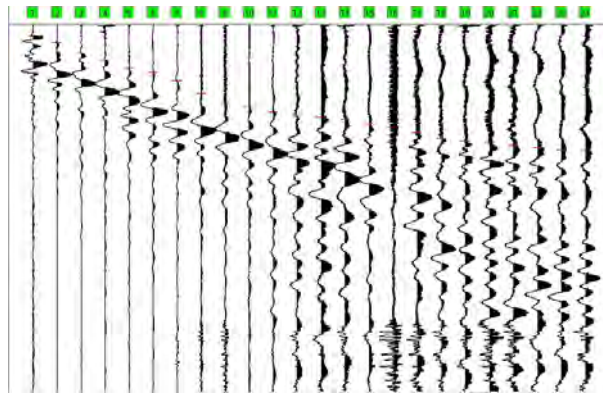
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	15.20	4.20	27.60	44.50	64.90	83.60	87.00
2	17.40	13.90	24.20	41.50	62.40	81.50	84.10
3	21.60	17.80	20.30	38.10	59.00	78.50	80.20
4	24.20	20.80	15.60	35.10	56.40	74.30	78.10
5	26.70	23.70	11.40	32.10	53.40	72.60	74.70
6	29.30	26.30	5.60	29.30	50.40	70.50	72.60
7	33.50	28.70	5.80	25.90	47.40	67.10	70.50
8	36.90	31.70	14.40	23.70	44.00	64.90	67.50
9	39.50	35.10	17.30	21.20	41.20	61.50	65.80
10	44.50	38.10	21.60	18.20	38.10	57.30	62.00
11	46.70	43.20	24.20	15.20	35.50	55.60	60.30
12	50.50	48.30	27.60	6.60	30.40	50.90	56.40
13	54.30	51.70	30.10	6.40	28.00	48.80	52.60
14	57.30	53.40	33.80	12.20	24.20	45.00	50.10
15	60.30	57.30	38.10	18.20	21.60	43.30	47.10
16	63.20	59.00	41.50	22.00	20.30	39.50	42.00
17	65.80	61.10	43.60	24.60	16.50	36.90	40.30
18	68.80	64.10	47.00	28.00	8.40	33.10	38.20
19	73.00	66.20	49.10	31.40	6.30	29.70	33.90
20	75.60	68.80	53.40	35.50	10.10	27.10	30.50
21	79.40	73.00	55.60	38.50	19.10	24.60	27.60
22	83.20	78.40	59.00	41.90	23.70	21.20	25.00
23	86.20	79.70	61.50	42.70	25.90	16.50	20.80
24	90.00	81.00	63.20	45.30	28.70	10.10	17.40

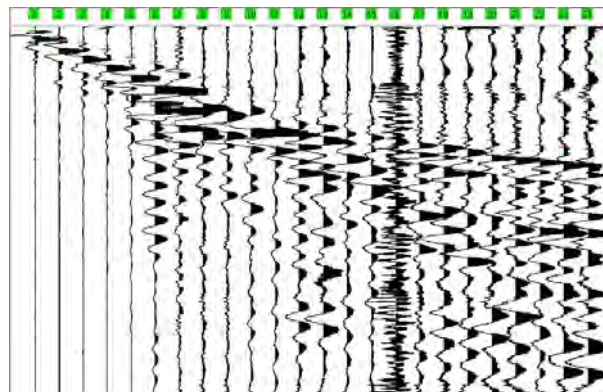


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

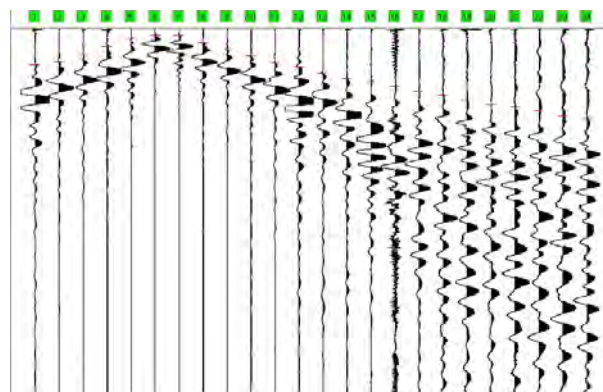
TIRO ESTERNO SX E1

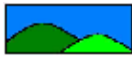


TIRO ESTREMO SX A



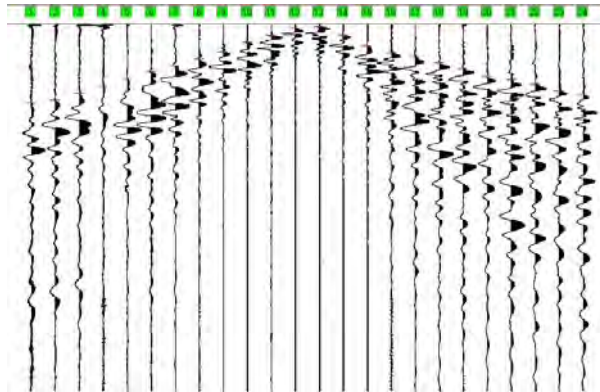
TIRO INTERMEDIO SX D1



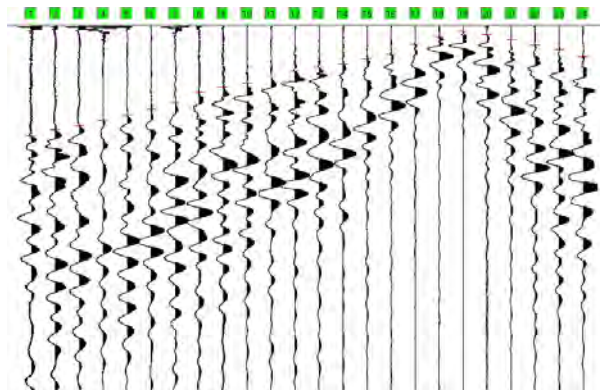


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

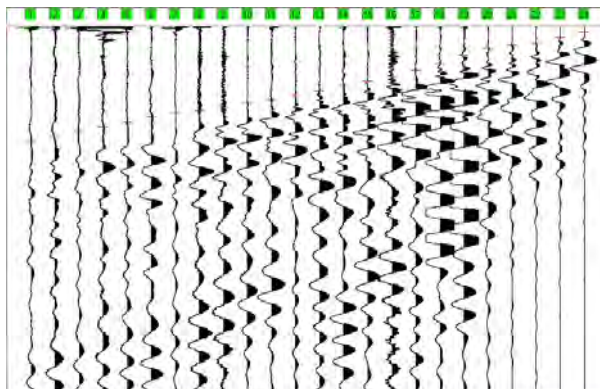
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B

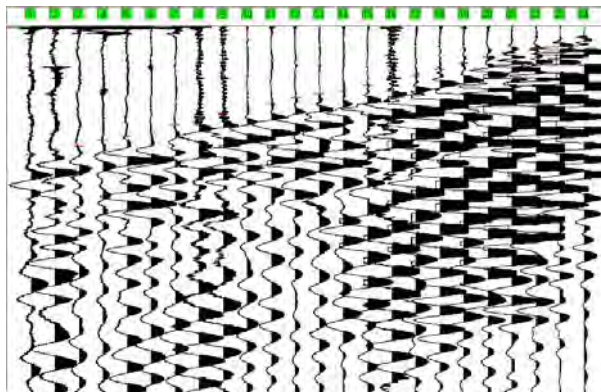






## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

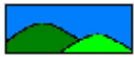
## TIRO ESTERNO DX E2



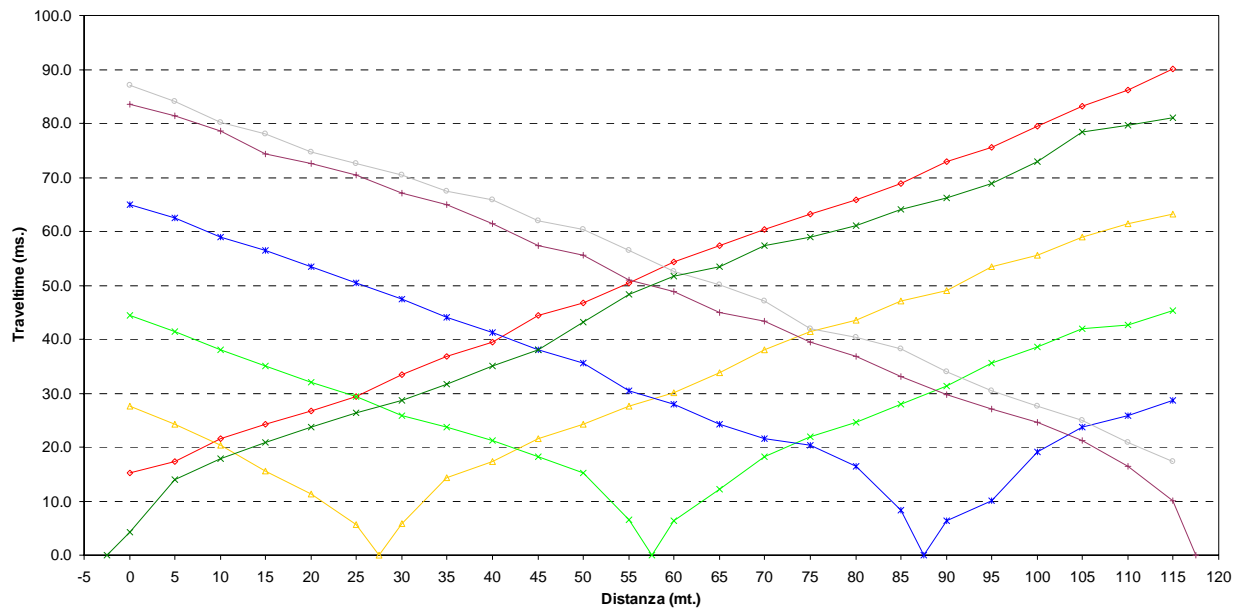
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

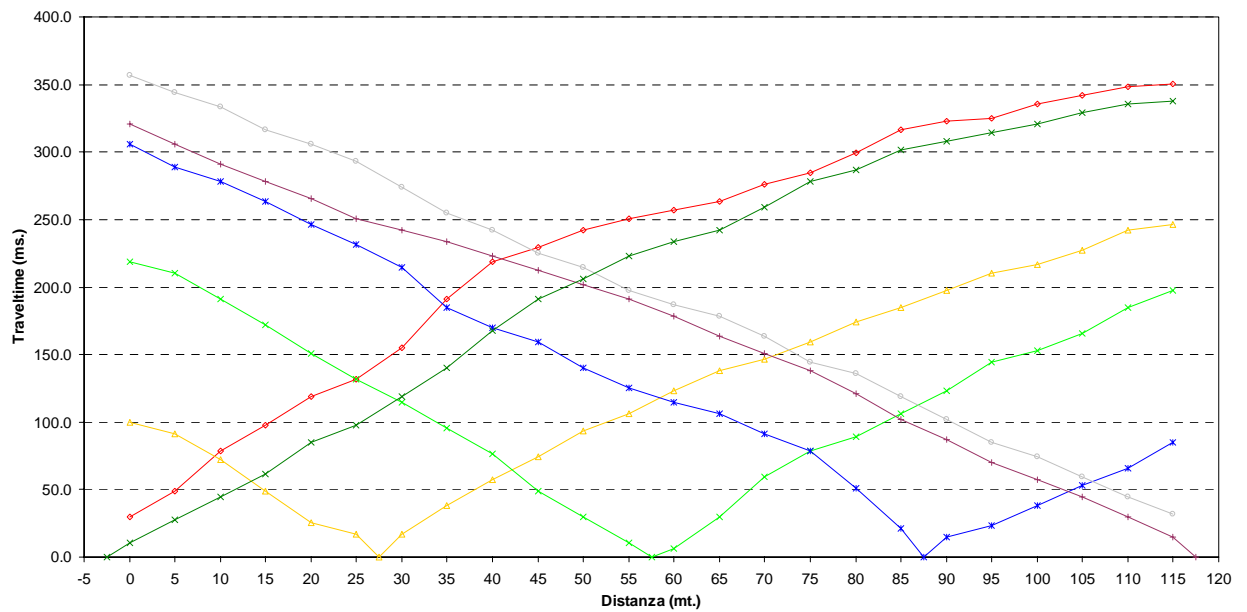
geofono	E1	A	D1	C	D2	B	E2
1	29.70	10.60	99.80	218.70	305.80	320.60	356.70
2	48.80	27.60	91.30	210.20	288.80	305.80	344.00
3	78.50	44.40	72.20	191.10	278.20	290.90	333.40
4	97.60	61.40	48.80	172.00	263.30	278.20	316.40
5	118.90	84.90	25.40	150.70	246.30	265.40	305.80
6	131.60	97.50	16.80	131.60	231.30	250.60	293.00
7	155.00	118.90	16.80	114.60	214.30	242.10	273.90
8	191.10	140.10	38.20	95.50	184.70	233.60	254.80
9	218.70	167.70	57.30	76.40	169.70	222.80	242.10
10	229.30	191.10	74.30	48.80	159.10	212.20	225.10
11	242.10	206.00	93.40	29.70	140.10	201.70	214.40
12	250.60	222.90	106.10	10.60	125.30	191.10	197.50
13	256.90	233.60	123.10	6.30	114.50	178.20	186.80
14	263.30	242.10	138.00	29.70	106.00	163.50	178.30
15	276.00	259.00	146.50	59.40	91.30	150.70	163.50
16	284.50	278.20	159.20	78.50	78.40	138.00	144.40
17	299.40	286.70	174.10	89.10	50.90	121.00	135.90
18	316.40	301.40	184.70	106.10	21.30	101.90	118.90
19	322.80	307.90	197.50	123.10	14.80	86.90	101.90
20	324.90	314.30	210.20	144.40	23.30	69.90	84.90
21	335.50	320.50	216.60	152.90	38.20	57.30	74.30
22	341.90	329.00	227.20	165.60	53.00	44.40	59.40
23	348.20	335.50	242.10	184.70	65.80	29.70	44.50
24	350.40	337.50	246.30	197.50	84.90	14.80	31.80

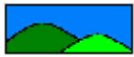


### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

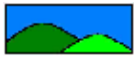
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 186



IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

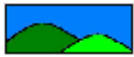
FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 187

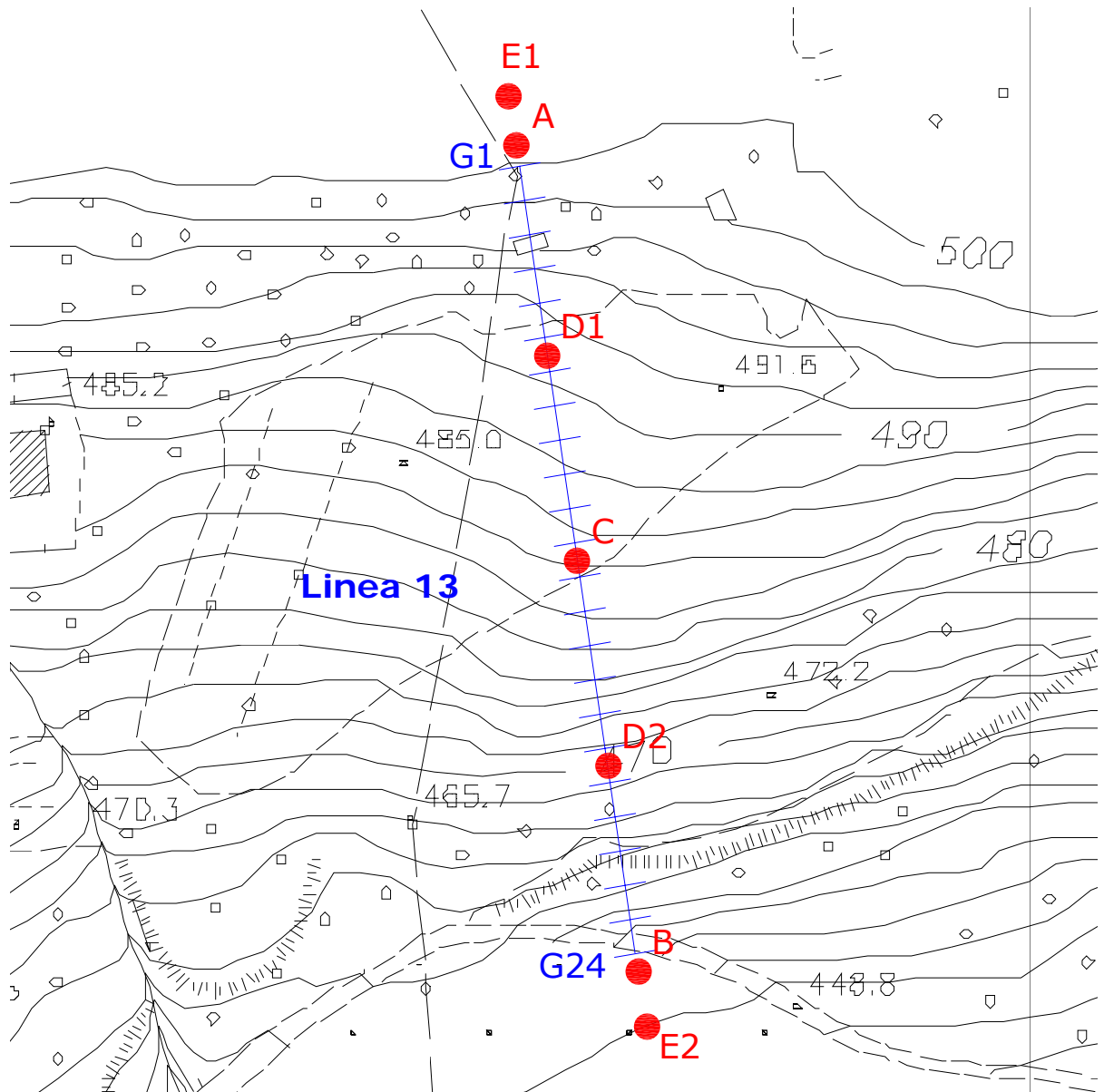


**DOCUMENTAZIONE FOTOGRAFICA LINEA 12**





**LINEA SISMICA 13**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	500.00
2	5	5	498.00
3	10	5	497.00
4	15	5	494.00
5	20	5	492.00
6	25	5	491.00
7	30	5	490.50
8	35	5	489.50
9	40	5	488.50
10	45	5	488.00
11	50	5	486.50
12	55	5	485.00
13	60	5	483.80
14	65	5	482.00
15	70	5	480.00
16	75	5	478.00
17	80	5	474.00
18	85	5	472.00
19	90	5	468.00
20	95	5	466.00
21	100	5	462.00
22	105	5	460.00
23	110	5	457.00
24	115	5	454.00

## COORDINATE GAUSS BOAGA DI G1 E G24

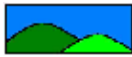
<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651320	4806800
<i>Geofono n. 24 (G24)</i>	1651340	4806680



## PUNTI DI ENERGIZZAZIONE

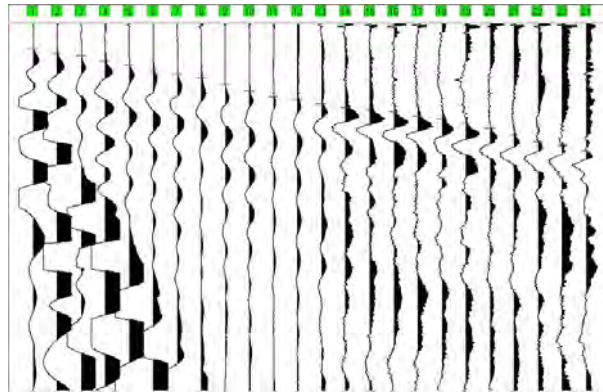
<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	502.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	501.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	491.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	484.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	470.00
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	453.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	450.00



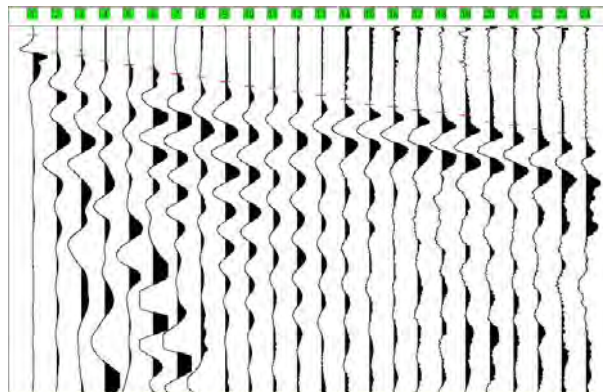


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

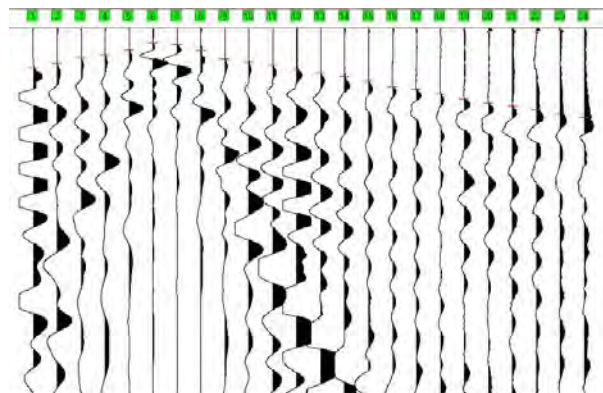
TIRO ESTERNO SX E1

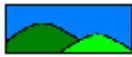


TIRO ESTREMO SX A



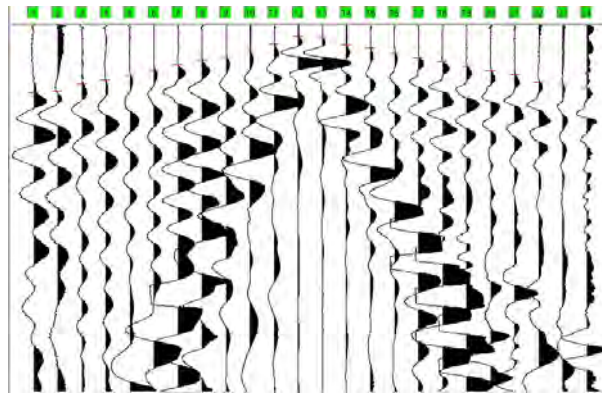
TIRO INTERMEDIO SX D1



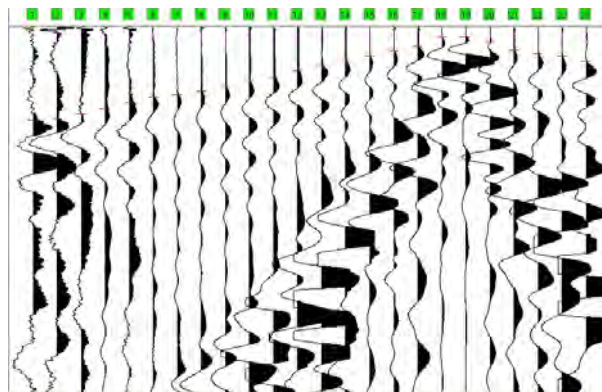


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

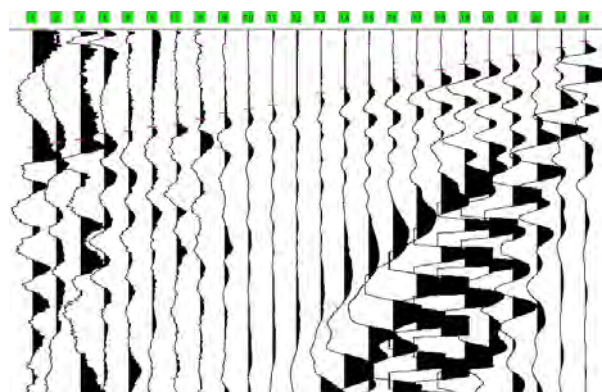
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



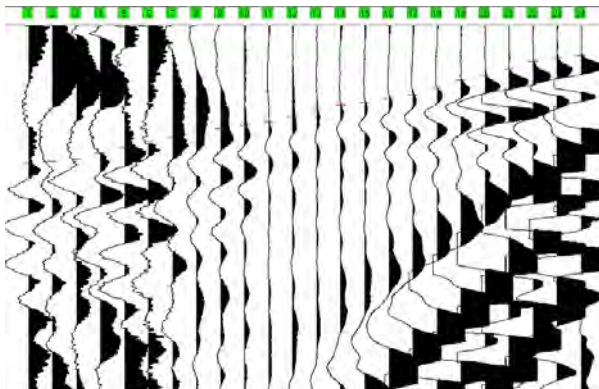
TIRO ESTREMO DX B





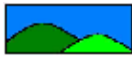
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



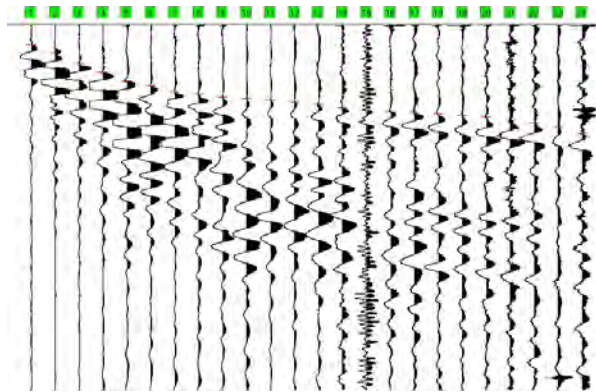
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	14.00	4.60	22.00	37.80	51.80	65.80	76.80
2	16.10	14.40	19.50	36.90	50.90	63.20	75.60
3	17.80	15.60	16.50	32.70	48.40	61.10	74.30
4	20.80	18.60	14.80	30.50	45.40	57.70	70.90
5	22.90	21.20	11.80	28.00	42.00	56.40	67.50
6	25.40	22.90	8.00	25.00	39.00	53.80	64.50
7	28.40	26.30	8.90	22.00	37.80	52.10	62.40
8	30.10	28.00	12.30	19.50	35.60	49.60	59.00
9	33.90	30.40	16.90	17.80	33.10	46.20	57.30
10	37.30	33.10	18.60	14.40	30.10	44.00	55.60
11	40.70	34.40	20.80	10.60	28.00	41.90	53.50
12	42.00	35.50	22.90	6.30	24.20	39.50	50.50
13	44.50	38.10	25.00	7.20	21.60	35.10	47.10
14	46.70	40.20	26.70	11.00	18.60	32.10	44.10
15	47.50	43.20	29.30	12.70	16.10	30.10	42.80
16	48.80	44.50	32.70	15.70	13.10	27.00	40.20
17	51.30	46.20	33.90	18.20	10.60	25.00	38.50
18	53.00	47.40	36.50	20.30	5.50	22.00	34.80
19	55.60	49.10	39.50	22.90	5.50	19.10	30.10
20	58.10	53.00	41.60	25.40	8.00	17.30	27.60
21	62.00	54.70	43.30	27.60	12.70	14.40	24.20
22	65.80	56.80	45.40	31.80	14.80	12.20	19.90
23	67.90	58.50	47.90	33.50	16.10	9.70	17.30
24	70.90	62.40	49.60	35.20	19.10	6.20	16.50

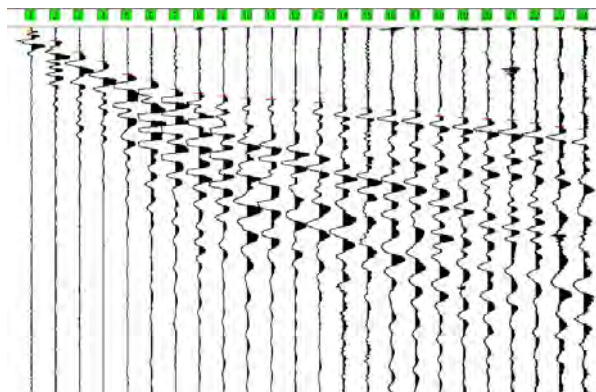


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

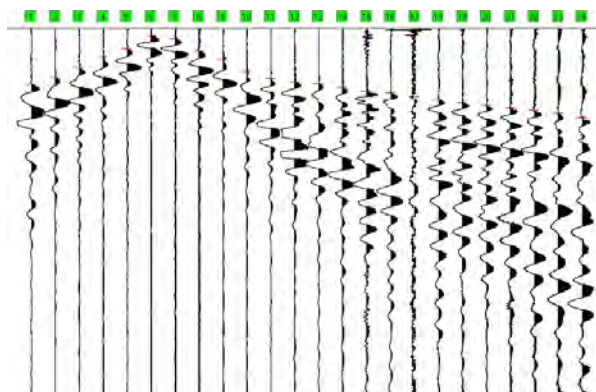
TIRO ESTERNO SX E1

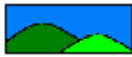


TIRO ESTREMO SX A



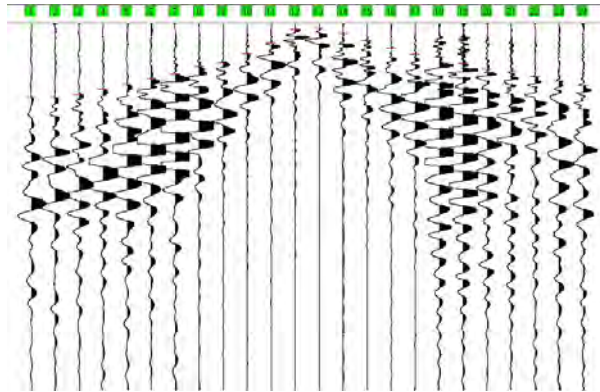
TIRO INTERMEDIO SX D1



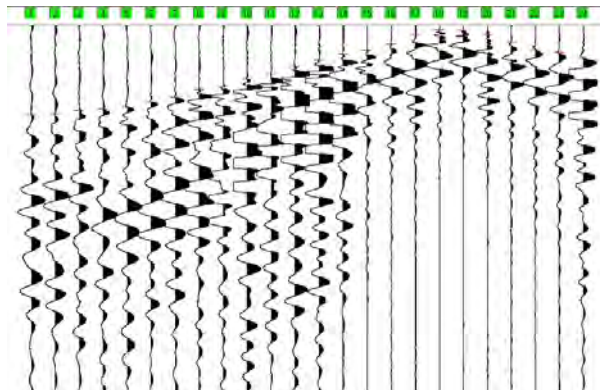


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

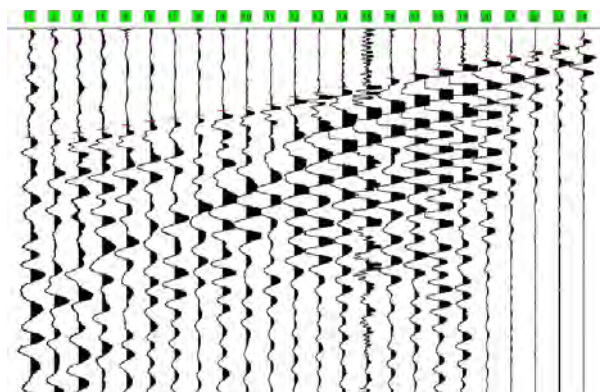
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



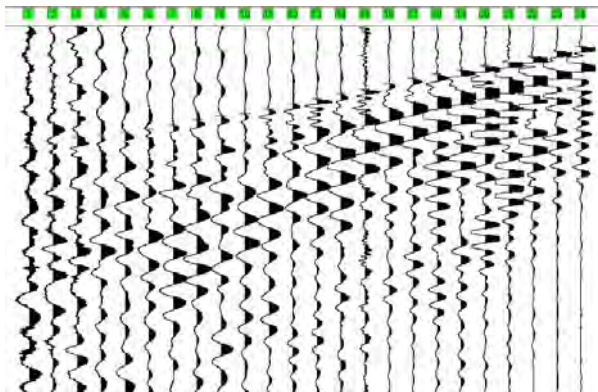
TIRO ESTREMO DX B





## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

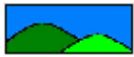
## TIRO ESTERNO DX E2



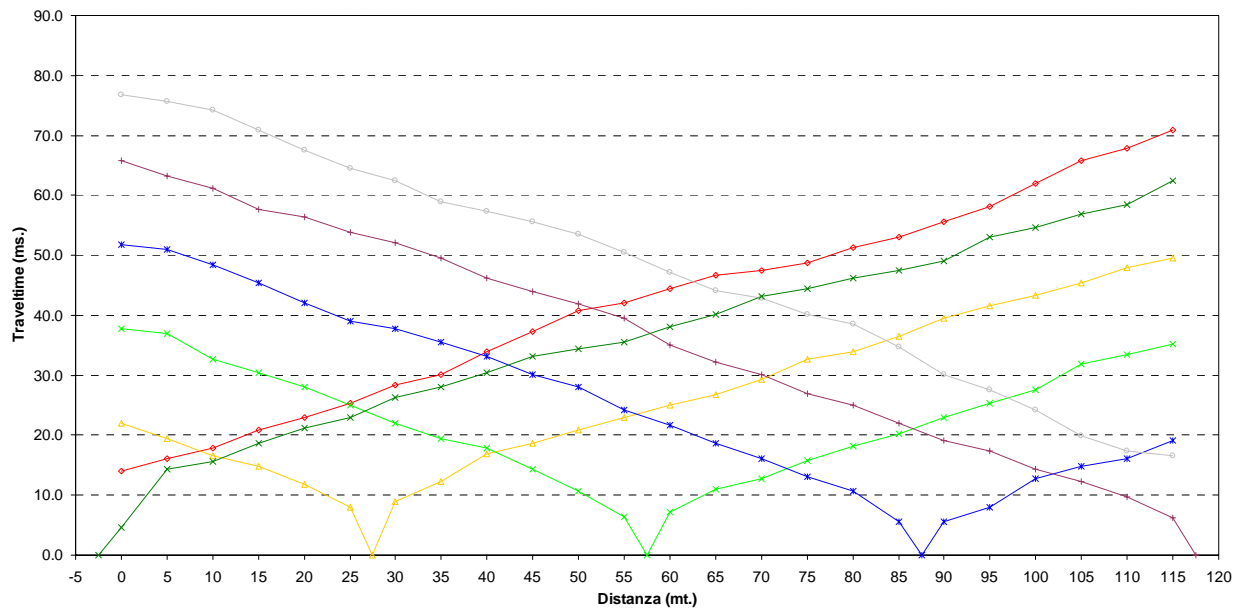
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

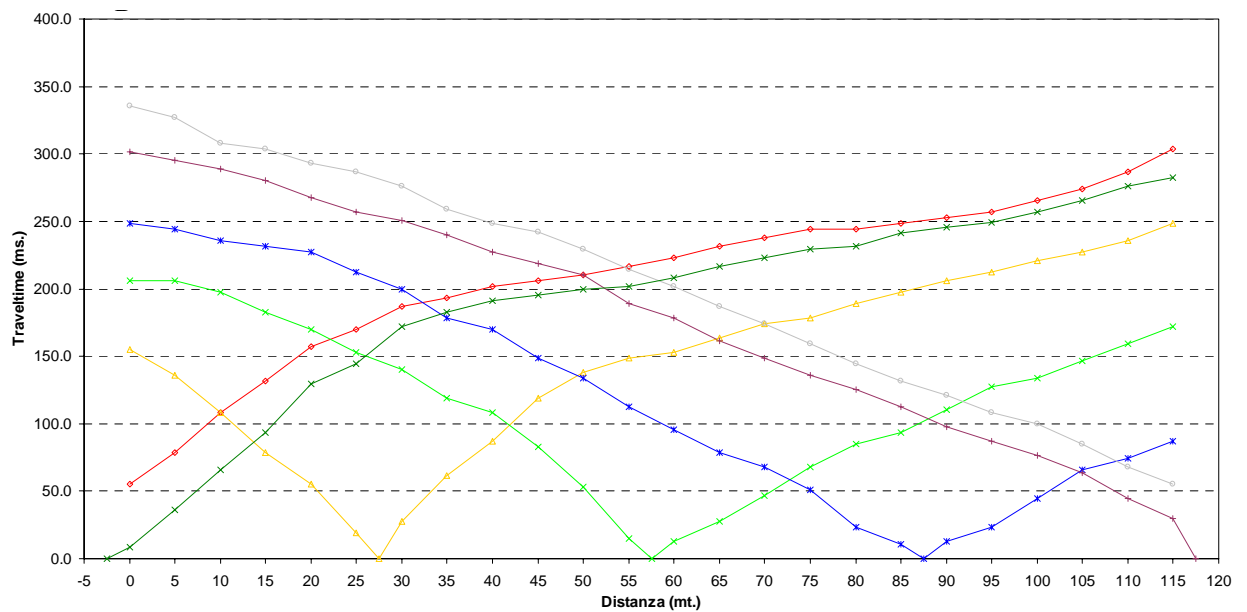
geofono	E1	A	D1	C	D2	B	E2
1	55.20	8.40	155.00	206.00	248.40	301.50	335.50
2	78.50	36.10	135.90	206.00	244.20	295.20	327.00
3	108.30	65.80	108.30	197.50	235.70	288.80	307.90
4	131.60	93.40	78.40	182.60	231.40	280.30	303.50
5	157.10	129.50	55.20	169.80	227.20	267.50	292.90
6	169.80	144.40	19.10	152.90	212.30	256.90	286.70
7	186.80	172.00	27.60	140.10	199.60	250.60	275.90
8	193.20	182.60	61.40	118.90	178.30	239.90	258.90
9	201.70	191.10	86.90	108.30	169.80	227.20	248.30
10	206.00	195.30	118.90	82.80	148.60	218.70	242.10
11	210.20	199.60	138.00	53.00	133.70	210.20	229.30
12	216.60	201.70	148.60	14.80	112.50	189.00	214.30
13	222.90	208.10	152.90	12.70	95.50	178.30	201.70
14	231.40	216.60	163.50	27.60	78.40	161.40	186.70
15	237.80	222.90	174.10	46.70	67.90	148.60	174.10
16	244.20	229.30	178.20	67.90	50.90	135.90	159.10
17	244.20	231.40	189.00	84.90	23.30	125.30	144.40
18	248.40	241.30	197.50	93.40	10.60	112.50	131.50
19	252.70	245.40	206.00	110.40	12.70	97.60	121.00
20	256.90	249.30	212.30	127.40	23.30	87.00	108.30
21	265.40	256.90	220.80	133.60	44.50	76.40	99.80
22	273.90	265.40	227.20	146.50	65.80	63.70	84.90
23	286.70	276.00	235.70	159.10	74.30	44.50	67.90
24	303.60	282.40	248.40	172.00	87.00	29.70	55.20

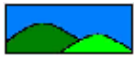


### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

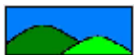
CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 199





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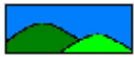
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CODIFICADOCUMENTO

REV.

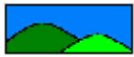
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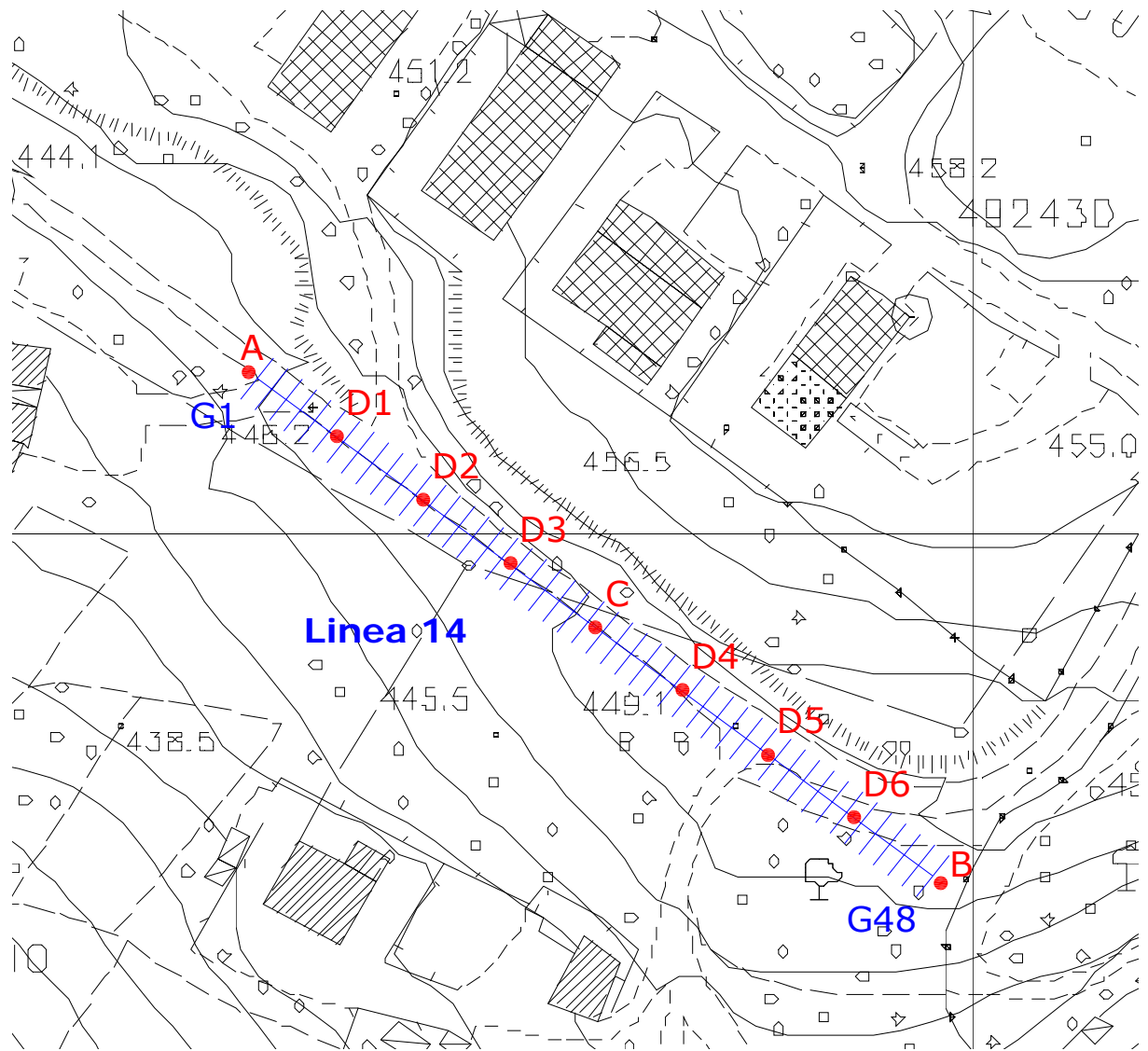


### DOCUMENTAZIONE FOTOGRAFICA LINEA 13





**LINEA SISMICA 14**



*Ubicazione delle linea - scala 1:1000*



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	446.00
2	2.5	2.5	446.00
3	5	2.5	446.10
4	7.5	2.5	446.20
5	10	2.5	446.30
6	12.5	2.5	446.40
7	15	2.5	446.60
8	17.5	2.5	446.70
9	20	2.5	446.80
10	22.5	2.5	446.90
11	25	2.5	447.00
12	27.5	2.5	447.00
13	30	2.5	447.10
14	32.5	2.5	447.20
15	35	2.5	447.30
16	37.5	2.5	447.40
17	40	2.5	447.50
18	42.5	2.5	447.60
19	45	2.5	447.70
20	47.5	2.5	447.70
21	50	2.5	447.70
22	52.5	2.5	447.90
23	55	2.5	448.00
24	57.5	2.5	448.10
25	60	2.5	448.30
26	62.5	2.5	448.40
27	65	2.5	448.50
28	67.5	2.5	448.60
29	70	2.5	448.70
30	72.5	2.5	448.80
31	75	2.5	449.00
32	77.5	2.5	449.00
33	80	2.5	449.00
34	82.5	2.5	449.00
35	85	2.5	449.00



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	449.00
37	90	2.5	449.00
38	92.5	2.5	449.00
39	95	2.5	449.00
40	97.5	2.5	449.00
41	100	2.5	449.00
42	102.5	2.5	449.00
43	105	2.5	449.00
44	107.5	2.5	449.00
45	110	2.5	449.00
46	112.5	2.5	449.00
47	115	2.5	449.00
48	117.5	2.5	449.00

## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651500	4806630
<i>Geofono n. 48 (G48)</i>	1651590	4806550



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	445.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	445.50
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	446.50
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	447.00
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	447.70
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	448.20
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	449.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	449.00
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	449.00

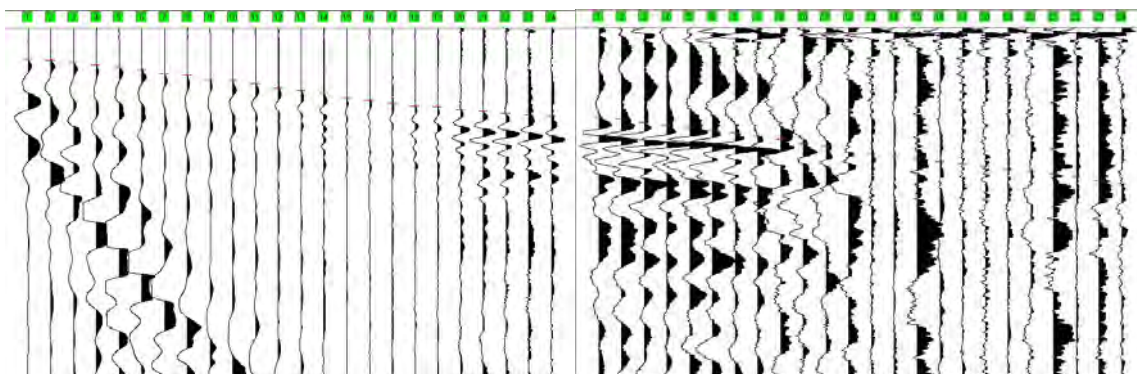


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

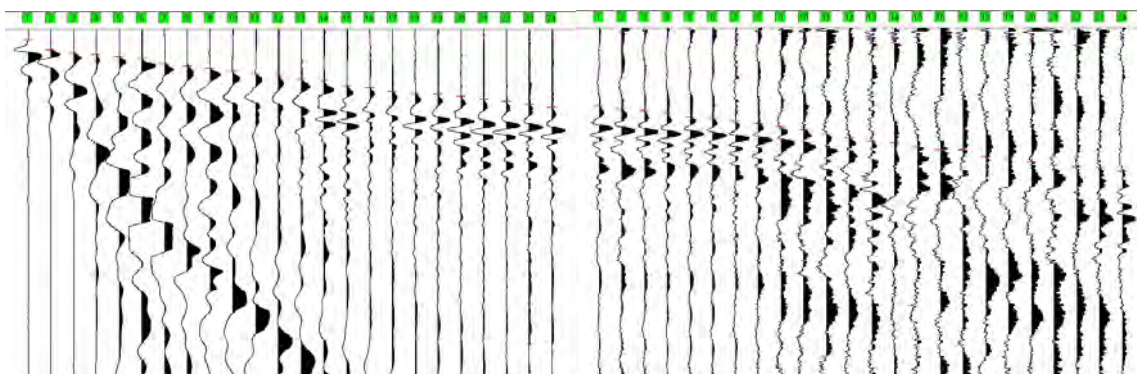
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

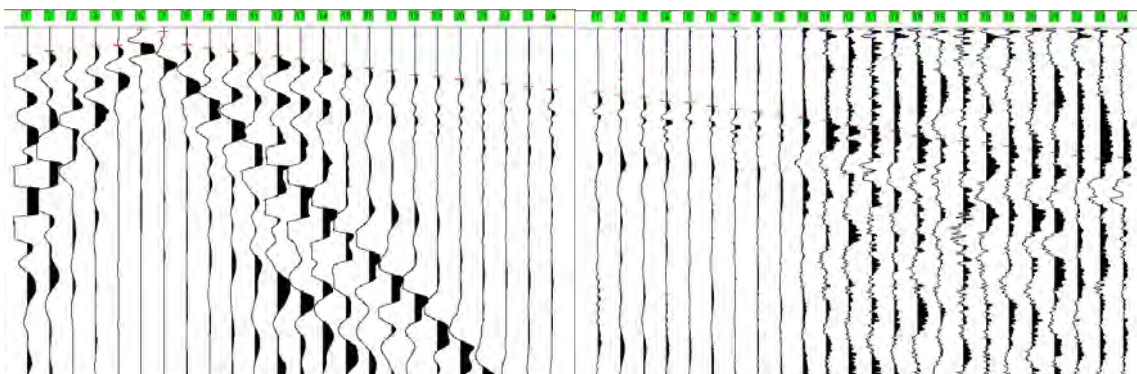
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



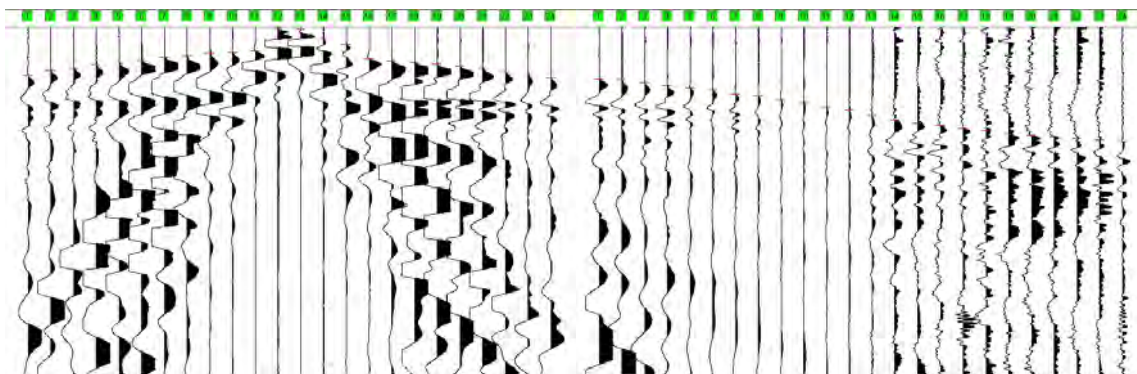


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

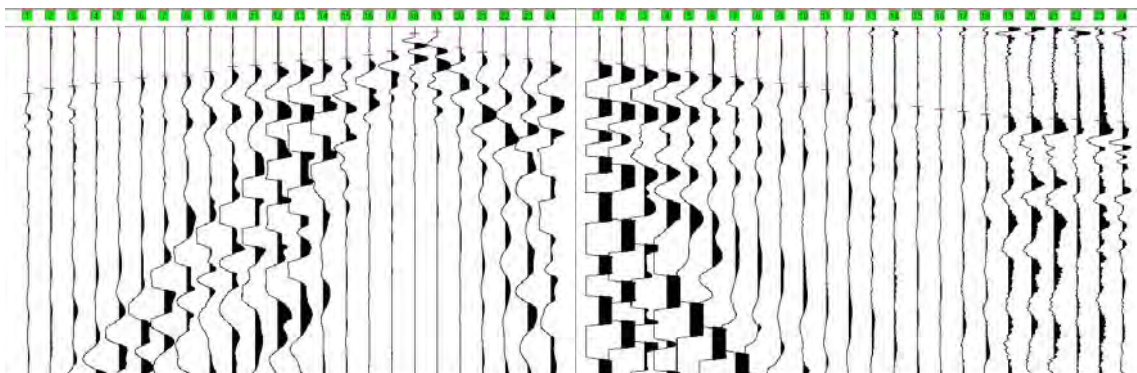
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

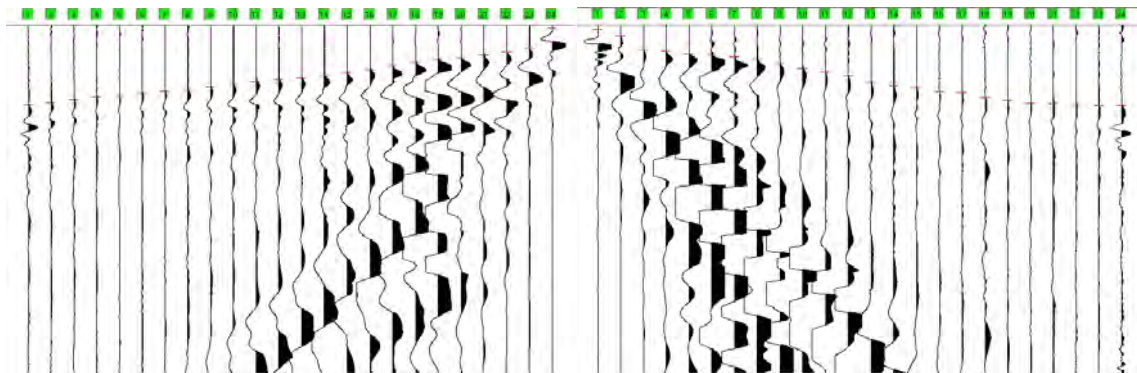
Catena geofonica 25-48



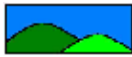
TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48





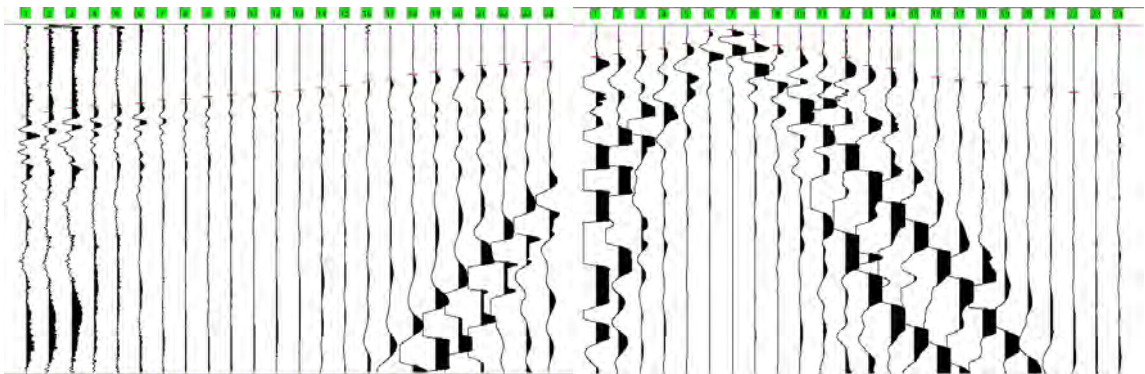


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

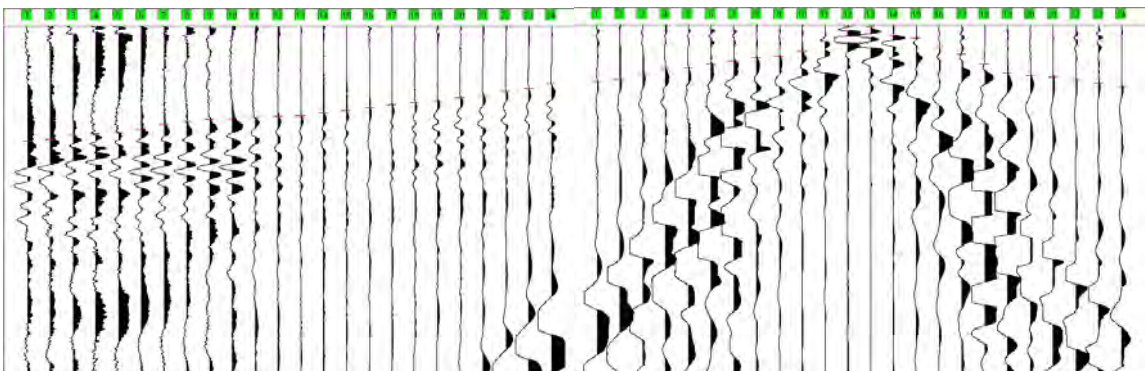
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

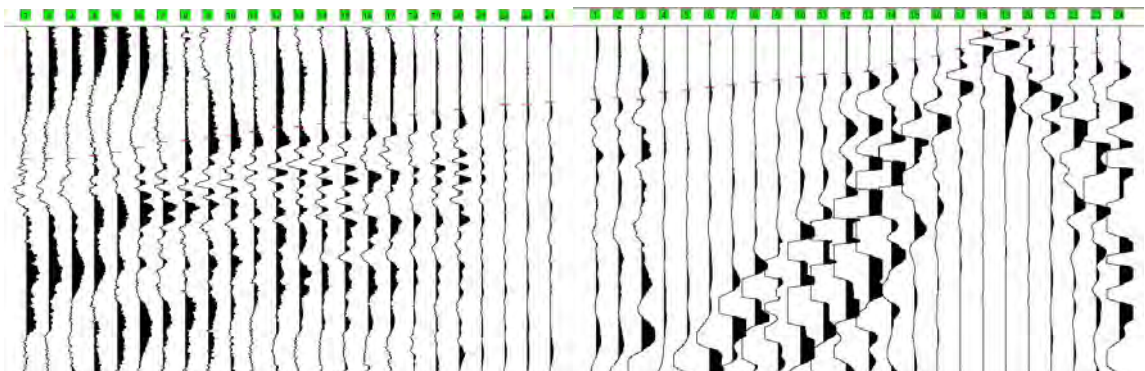
Catena geofonica 25-48

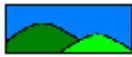


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



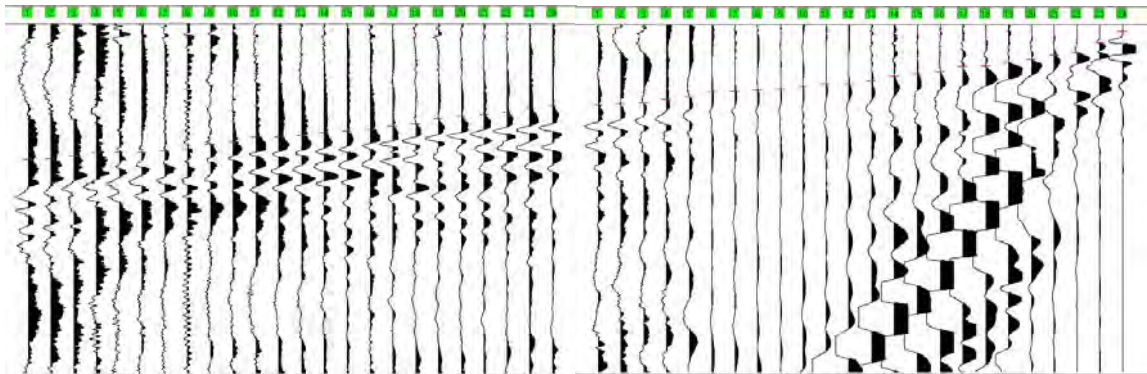


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

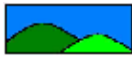
Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	17.80	5.50	16.10	28.00	38.50	46.20	53.50	67.10	77.70	79.00
2	18.60	11.80	13.50	25.00	35.50	45.00	50.90	66.20	77.30	78.50
3	19.90	14.00	12.20	23.70	34.40	43.30	48.80	63.70	77.30	76.80
4	21.20	14.40	10.60	21.60	32.70	41.60	47.50	62.80	75.60	75.10
5	22.90	15.70	10.10	20.80	31.70	40.70	46.70	62.40	73.30	74.60
6	24.60	16.90	0.70	19.10	29.70	39.00	45.80	59.80	70.90	74.60
7	26.30	19.90	2.00	17.30	28.40	38.20	43.70	57.30	67.50	73.90
8	27.10	21.20	9.70	16.50	28.40	37.80	43.30	55.60	66.60	72.60
9	29.70	22.50	11.40	14.80	25.90	35.60	42.00	54.30	64.90	69.90
10	30.50	24.60	13.90	14.40	22.90	33.90	40.70	53.90	64.10	68.80
11	32.20	25.90	15.20	13.50	22.00	32.70	40.70	53.00	61.50	65.80
12	34.80	26.70	16.50	0.30	20.80	31.40	39.00	52.60	59.00	65.80
13	36.10	28.80	18.20	0.70	19.50	30.50	38.60	52.20	58.60	64.90
14	38.20	29.70	19.90	6.20	19.10	29.30	36.90	50.50	56.90	63.20
15	40.30	32.70	22.00	9.70	17.80	27.10	35.60	49.20	56.00	62.40
16	42.00	33.90	23.70	18.20	16.10	25.40	33.10	47.50	53.90	61.50
17	43.70	36.10	25.30	19.50	13.90	23.30	31.80	45.80	53.50	59.40
18	45.40	37.30	27.60	20.30	3.30	21.20	28.80	44.50	51.30	58.10
19	46.70	37.80	28.70	21.20	2.80	19.50	27.10	43.30	49.60	55.10
20	47.50	39.00	30.10	22.50	11.80	18.60	26.30	41.60	48.40	53.80
21	48.40	40.70	31.70	23.70	13.20	16.90	23.70	40.30	47.50	52.60
22	49.60	42.00	32.70	25.90	14.60	15.20	22.90	38.20	45.40	51.30
23	50.50	43.70	34.40	27.60	16.30	12.70	21.60	36.10	45.00	48.70
24	50.90	45.40	36.10	29.30	19.20	1.20	21.20	33.50	44.10	47.00
25	51.70	46.30	36.80	30.10	20.10	2.10	18.20	32.70	42.70	46.60
26	53.00	47.10	38.50	30.50	21.20	5.90	16.50	31.40	41.90	45.70
27	55.10	47.90	39.80	32.20	22.50	12.10	14.40	28.70	40.10	45.30
28	56.80	50.10	42.30	33.90	24.60	14.30	13.10	25.00	38.10	43.20
29	58.50	51.80	43.20	35.20	25.90	16.50	10.50	24.60	37.20	41.90
30	59.40	52.20	45.30	36.50	27.60	16.90	2.50	22.50	35.50	38.90
31	61.10	54.30	47.00	39.00	28.80	18.20	2.00	20.80	34.40	38.50
32	63.20	55.60	48.70	39.90	30.10	19.90	5.00	18.60	32.70	37.80
33	64.90	57.70	50.40	42.40	32.70	22.00	11.40	17.80	31.60	37.20
34	67.50	59.40	52.10	44.10	34.80	25.00	13.10	14.80	29.70	36.10
35	69.20	62.00	54.30	46.20	36.50	27.10	16.90	9.30	28.00	34.40
36	72.60	64.10	56.80	48.40	39.00	29.30	18.60	0.30	27.00	34.40
37	73.90	66.20	59.00	51.80	42.80	32.70	23.30	0.30	26.30	32.70
38	75.00	67.10	60.20	54.30	45.80	35.20	25.00	5.40	22.00	29.70
39	76.00	69.60	62.80	56.00	46.20	36.50	27.60	9.80	19.50	28.40
40	78.00	70.90	64.50	57.30	47.90	38.60	30.10	12.20	16.90	27.10
41	79.30	71.30	65.80	59.00	49.20	39.00	31.70	16.50	13.10	24.20
42	80.70	75.10	66.60	60.30	50.90	42.00	33.40	22.50	2.90	23.70
43	82.40	76.40	68.80	62.40	51.80	43.70	35.10	27.60	0.30	21.60
44	84.40	78.10	70.90	63.20	52.60	45.40	36.50	29.30	6.50	19.90
45	85.20	80.20	72.60	64.10	53.50	45.80	37.20	30.10	9.60	17.40
46	86.50	81.10	74.30	64.90	53.90	46.20	38.90	31.60	12.20	16.10
47	89.10	81.50	76.00	65.80	54.70	46.70	39.50	33.40	15.60	10.10
48	91.20	83.60	75.60	66.60	55.60	46.70	39.80	35.50	20.80	3.30

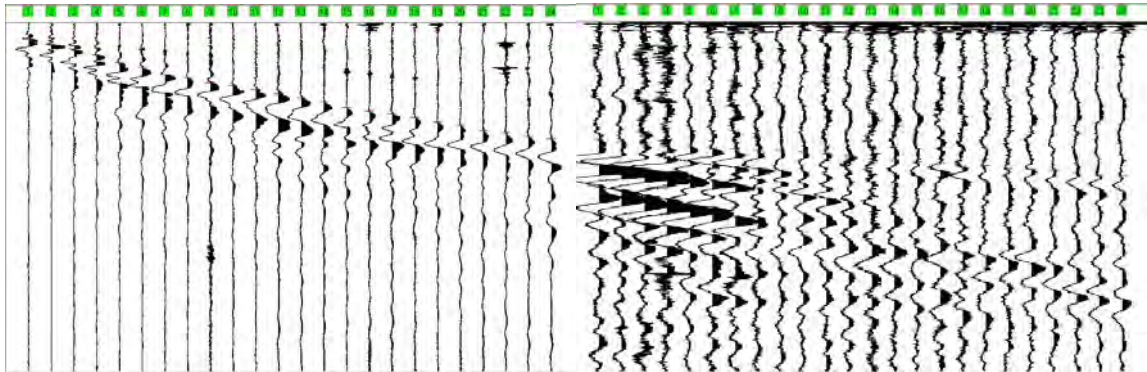


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

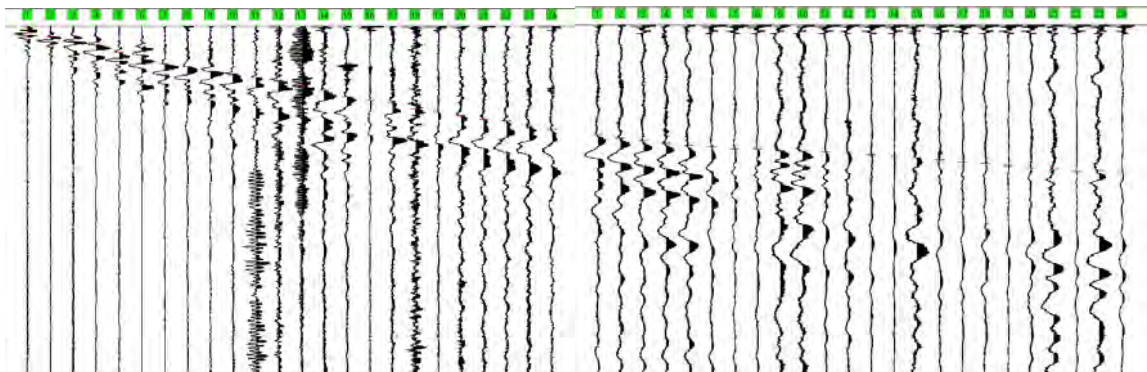
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

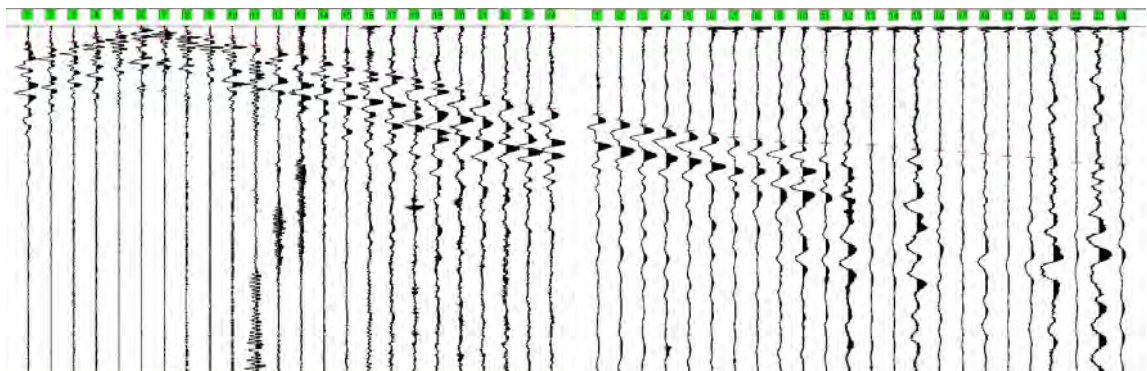
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



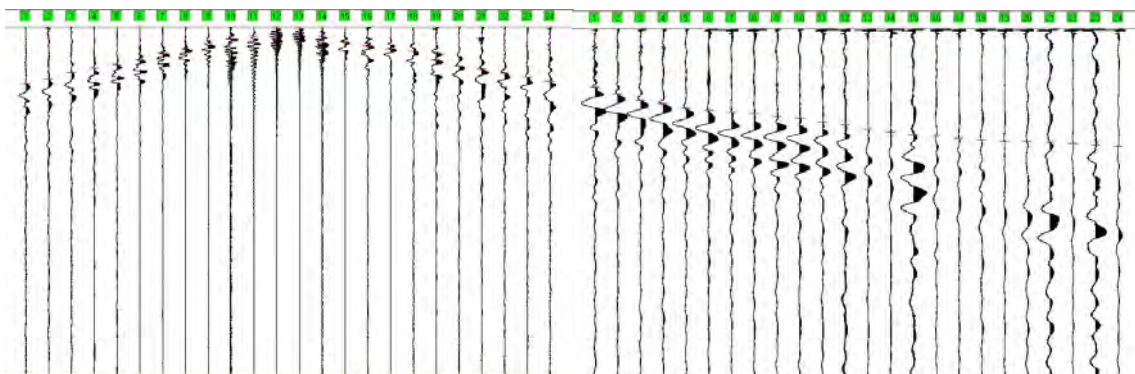


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

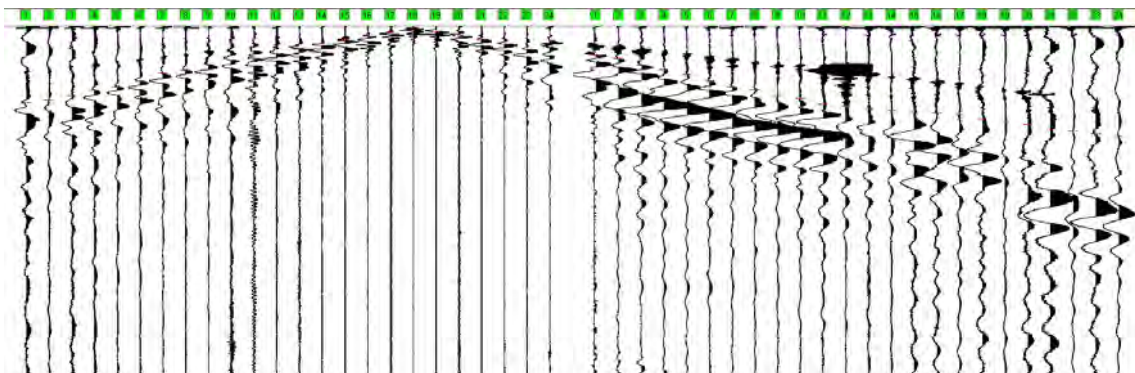
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

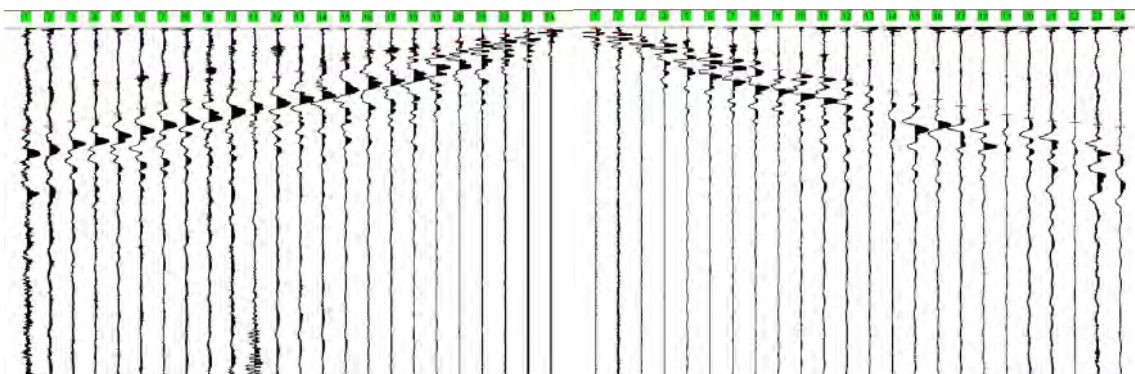
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



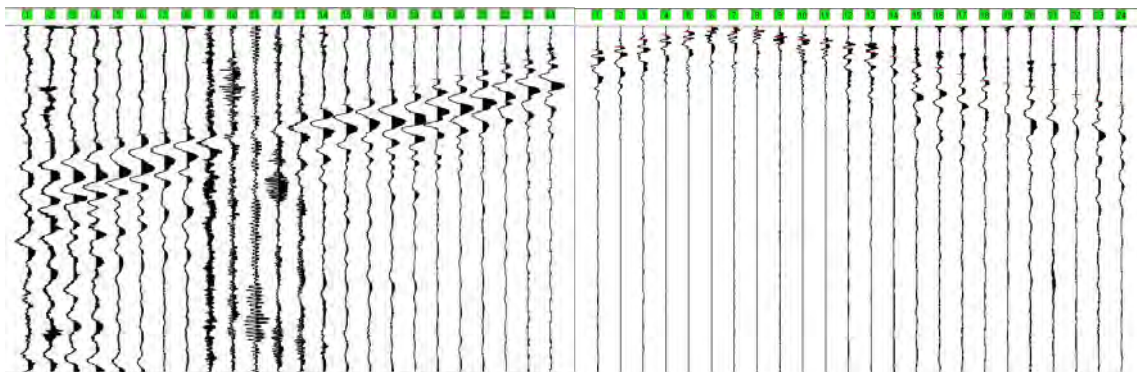


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

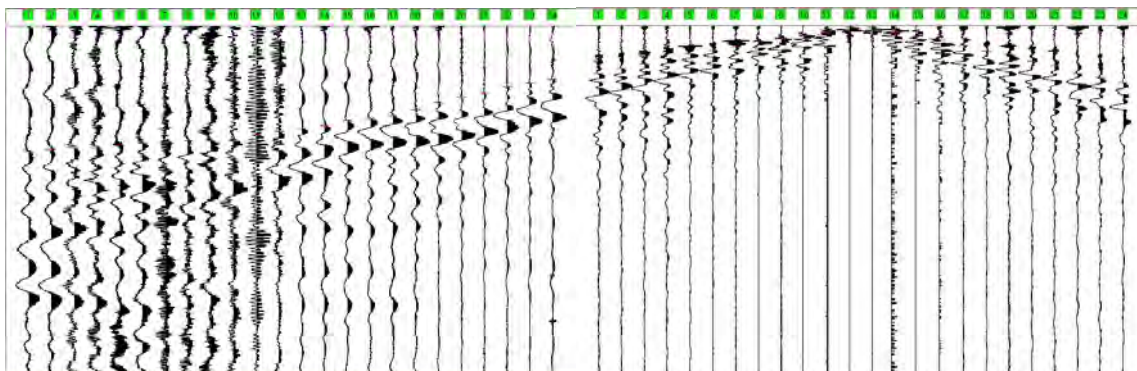
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

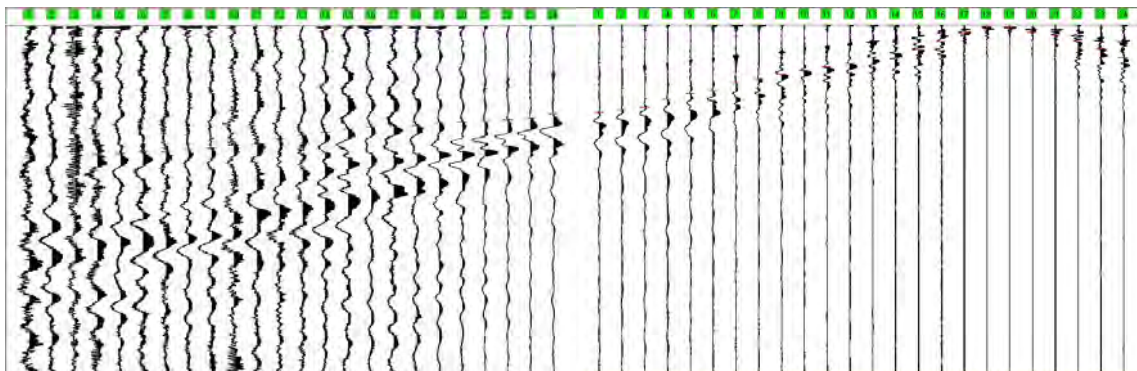
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



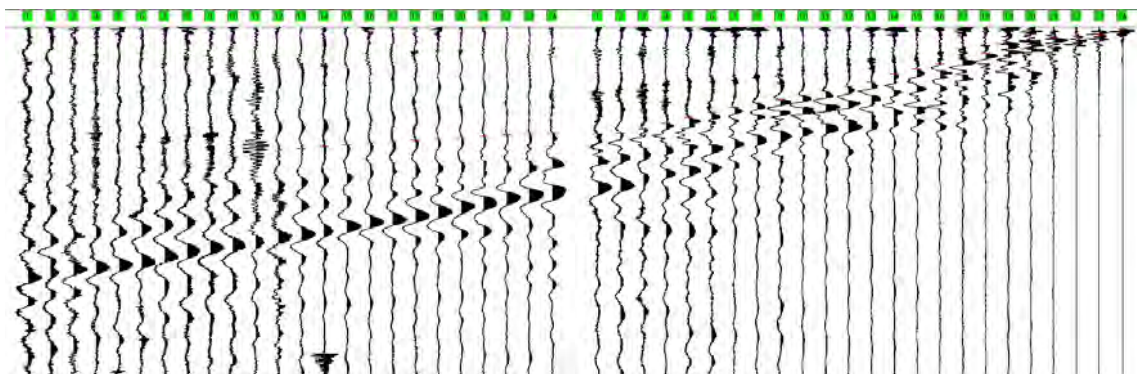


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

Catena geofonica 25-48

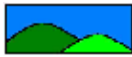




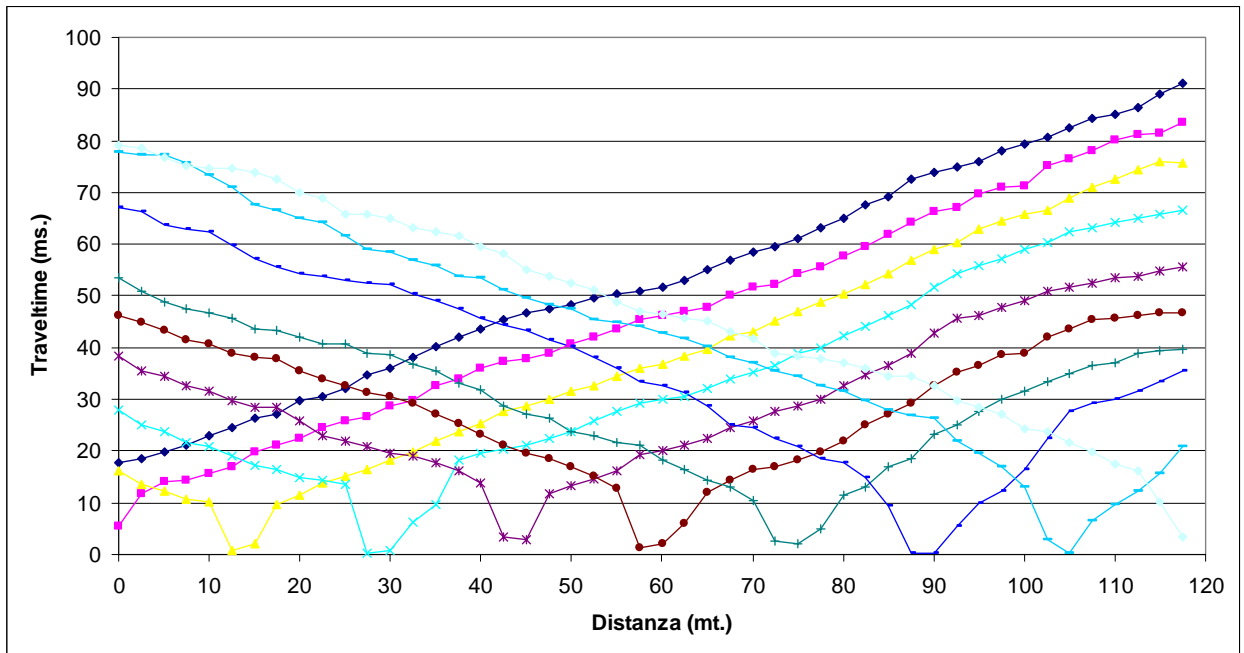
## TEMPI DI PROPAGAZIONE ONDE Sh

geofono	Tempo di arrivo									
	E1	A	D1	D2	D3	C	D4	D5	D6	B
1	42.40	2.10	65.80	163.50	222.90	297.30	341.90	367.40	378.00	431.10
2	61.50	27.60	57.30	150.60	214.40	284.50	339.70	361.00	375.90	428.80
3	74.30	42.40	44.40	131.50	201.70	271.80	337.50	356.60	373.70	428.80
4	91.30	50.90	27.60	118.90	186.70	265.40	337.50	356.60	373.70	424.70
5	114.60	74.30	14.80	108.30	176.20	250.60	329.00	348.10	371.60	420.50
6	127.40	82.80	2.10	93.40	159.10	235.70	318.50	341.90	367.40	412.00
7	150.70	108.30	2.10	74.30	135.90	220.80	314.30	339.60	367.40	405.60
8	157.10	116.80	12.70	61.40	127.40	208.10	301.40	335.50	361.00	399.20
9	174.10	129.50	23.30	46.70	110.40	195.20	290.90	335.50	356.60	388.60
10	182.60	138.00	31.80	31.80	97.50	176.20	278.20	333.40	346.10	380.10
11	193.20	148.60	55.20	23.30	93.40	155.00	265.40	318.50	344.00	369.50
12	206.00	159.10	65.80	2.10	78.40	142.10	256.80	307.90	329.00	361.00
13	218.70	174.10	82.80	2.10	63.70	125.30	252.70	299.40	320.50	354.60
14	229.30	186.70	104.00	23.30	55.20	110.40	244.20	290.90	310.00	348.10
15	246.30	206.00	118.90	40.30	38.20	93.40	231.30	275.90	301.40	344.00
16	256.90	216.60	131.50	53.00	27.60	84.90	214.30	269.70	295.20	337.50
17	265.40	225.10	142.10	61.50	14.80	72.20	186.70	261.20	292.90	333.40
18	276.00	242.10	152.90	69.90	2.10	67.90	176.20	244.20	290.90	329.00
19	288.80	250.60	167.60	93.40	14.80	57.30	155.00	222.90	282.40	327.00
20	297.30	261.20	184.70	112.50	27.60	38.20	144.40	208.10	280.30	322.80
21	314.30	271.80	203.80	121.00	38.20	27.60	129.50	193.20	278.20	318.50
22	320.60	275.90	214.30	133.70	50.90	14.80	110.40	176.20	273.90	314.30
23	331.30	288.80	227.20	144.40	65.80	10.60	99.80	165.60	269.70	312.10
24	337.60	299.40	242.10	157.10	84.90	2.10	82.80	155.00	256.80	307.90
25	341.90	318.50	254.80	169.70	82.80	2.10	69.90	138.00	254.80	312.00
26	348.20	329.00	271.80	189.00	93.40	16.90	59.40	123.10	246.30	310.00
27	352.50	337.50	286.70	208.10	112.50	25.40	38.20	110.40	233.60	297.30
28	358.90	344.00	293.00	216.60	125.30	44.50	23.30	93.40	216.60	280.30
29	363.10	350.40	303.60	231.40	140.10	59.40	14.80	80.70	199.60	263.30
30	367.40	354.60	312.10	237.80	159.10	74.30	2.10	70.00	189.00	248.30
31	369.50	361.00	322.80	244.20	176.20	91.30	2.10	59.40	167.60	233.60
32	375.90	361.00	329.10	248.30	184.70	99.80	10.60	42.40	155.00	220.80
33	375.90	365.20	335.50	254.80	201.70	123.10	27.60	36.10	142.10	212.20
34	378.00	367.40	339.70	261.20	210.20	133.70	38.20	27.60	131.50	197.50
35	384.30	369.50	339.70	271.80	227.20	146.50	50.90	16.90	121.00	186.70
36	390.70	371.60	341.90	280.30	233.60	152.90	63.70	2.10	110.40	172.00
37	399.20	378.00	346.10	292.90	239.80	169.80	74.30	2.10	91.30	159.10
38	405.60	382.20	350.40	301.40	246.30	184.70	89.10	16.80	80.70	135.90
39	407.70	386.50	358.90	310.00	250.60	197.50	104.00	27.60	69.90	121.00
40	412.00	392.80	361.00	312.00	252.70	210.20	121.00	40.30	46.70	106.10
41	416.20	399.20	365.20	320.50	258.90	229.30	140.10	55.20	21.20	89.10
42	418.30	403.50	371.60	324.90	269.70	239.90	159.20	72.20	2.10	74.30
43	426.80	409.80	378.00	329.10	278.20	254.80	167.70	82.80	4.20	65.80
44	428.90	416.20	382.20	329.10	286.70	265.40	176.20	101.90	19.10	48.80
45	431.10	420.50	388.60	331.30	299.40	273.90	184.70	116.80	27.60	29.70
46	439.60	426.70	395.00	335.50	305.80	278.20	199.60	138.00	46.70	23.30
47	445.90	424.70	401.30	339.70	314.30	284.50	220.80	150.70	67.90	19.10
48	448.10	431.10	403.50	344.00	322.80	290.90	231.40	165.60	93.40	4.20

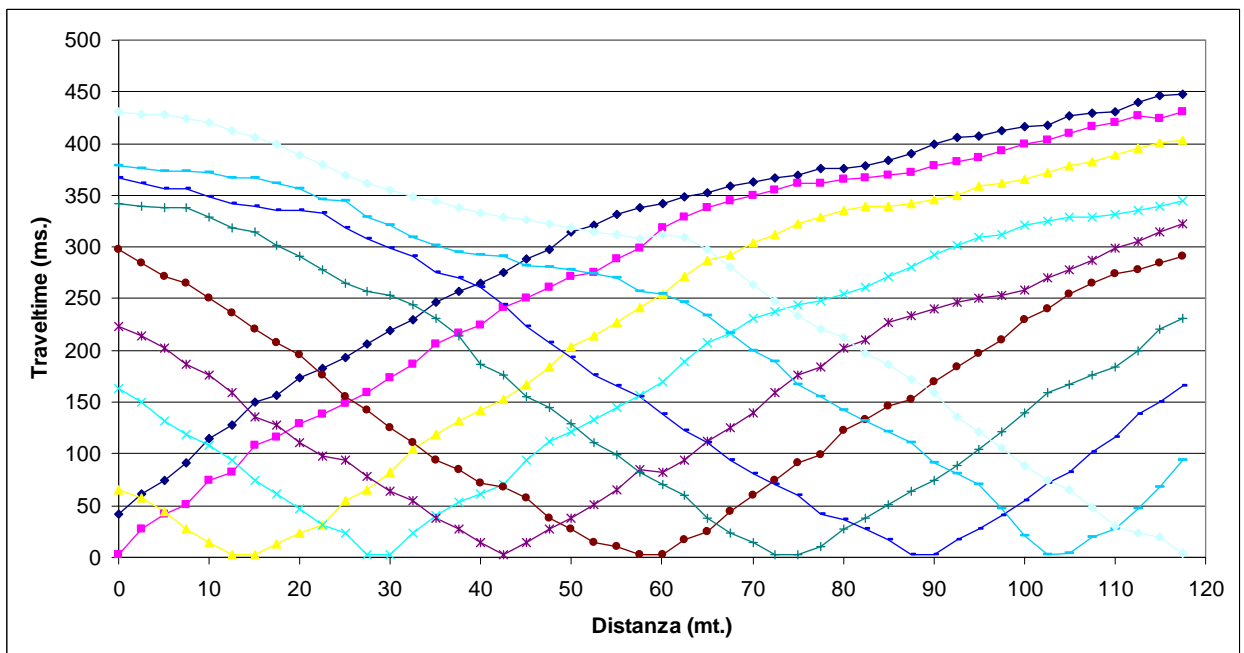




### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





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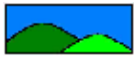
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 218

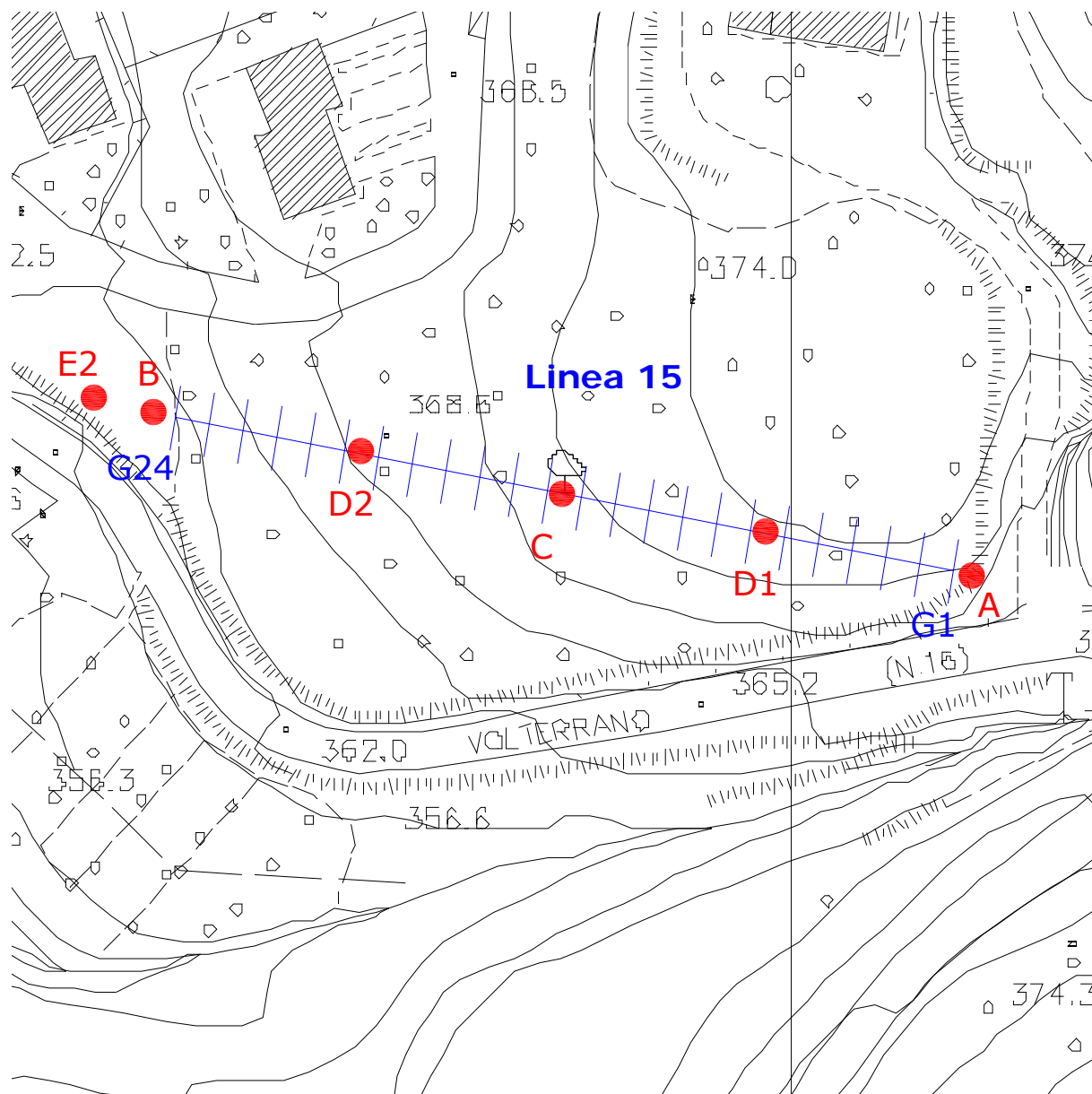


**DOCUMENTAZIONE FOTOGRAFICA LINEA 14**





**LINEA SISMICA 15**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	372.00
2	5	5	373.00
3	10	5	373.00
4	15	5	374.00
5	20	5	374.00
6	25	5	374.00
7	30	5	373.00
8	35	5	372.00
9	40	5	371.00
10	45	5	370.30
11	50	5	369.80
12	55	5	369.60
13	60	5	369.40
14	65	5	369.30
15	70	5	369.20
16	75	5	369.00
17	80	5	368.70
18	85	5	368.50
19	90	5	368.00
20	95	5	367.60
21	100	5	367.20
22	105	5	366.00
23	110	5	365.00
24	115	5	364.00

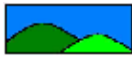
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1649830	4806880
<i>Geofono n. 24 (G24)</i>	1649710	4806900



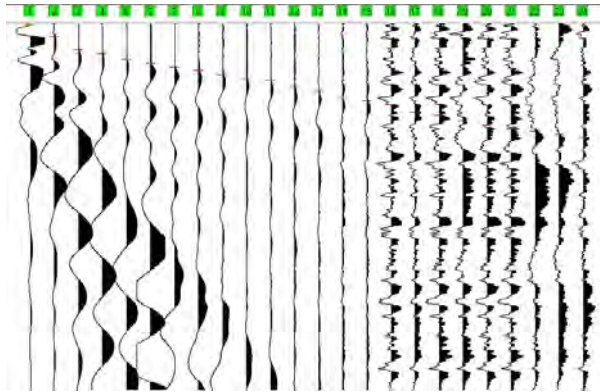
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparato A (m)</i>	<i>Quota (m)</i>
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	370.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	374.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	369.50
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	368.10
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	363.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	362.30

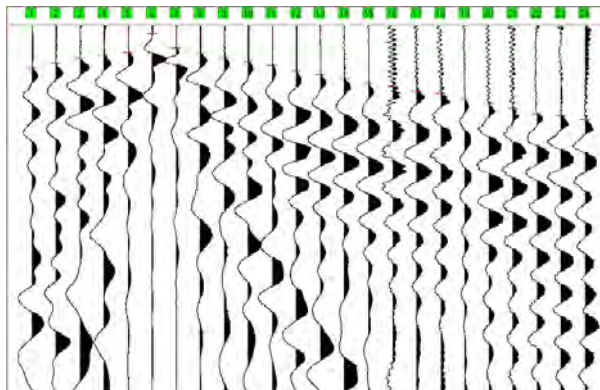


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

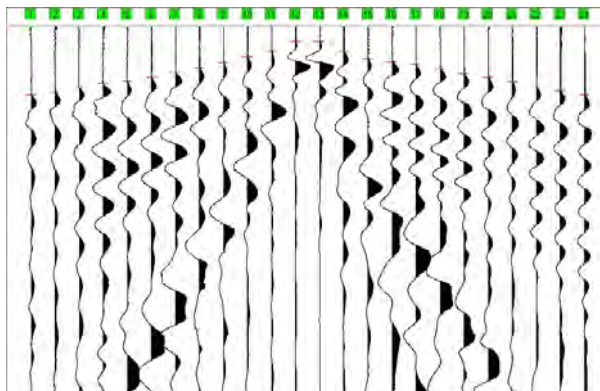
TIRO ESTREMO SX A



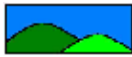
TIRO INTERMEDIO SX D1



TIRO CENTRALE C

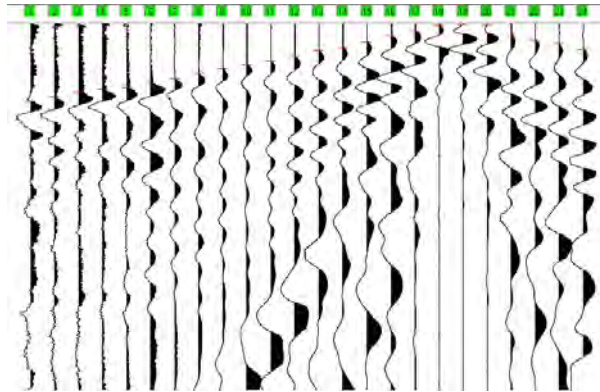




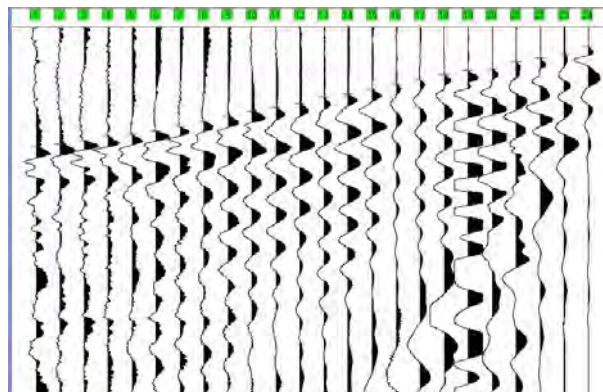


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

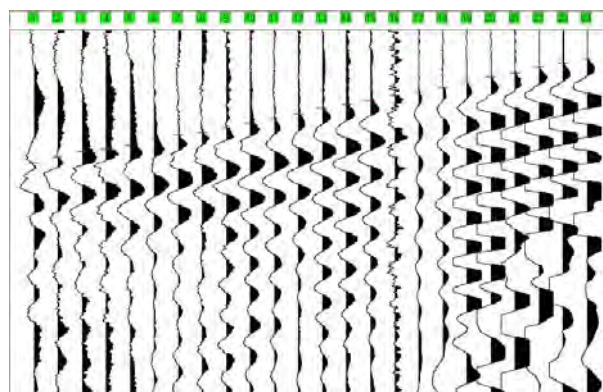
TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B



TIRO ESTERNO DX E2

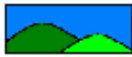




## TEMPI DI PROPAGAZIONE ONDE P

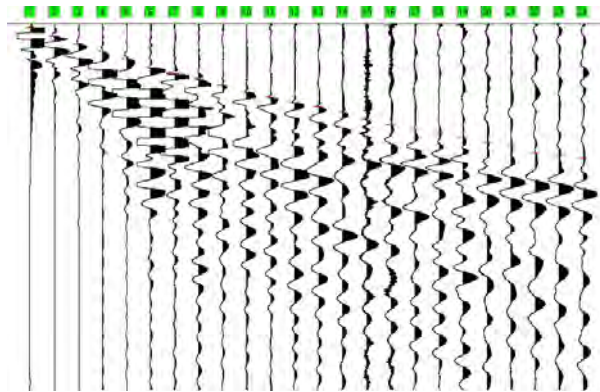
## Tempo di arrivo

geofono	E1	A	D1	C	D2	B	E2
1	15.70	0.40	23.30	37.80	43.20	66.60	73.90
2	18.20	7.20	20.80	36.10	40.60	64.90	70.90
3	20.30	14.40	18.20	33.80	38.10	62.80	67.50
4	23.70	16.50	16.10	31.40	36.50	60.70	66.20
5	25.90	19.90	14.80	30.10	35.50	59.40	64.10
6	28.40	22.00	4.20	28.00	33.10	57.70	60.70
7	31.80	24.20	12.30	25.30	30.40	55.20	58.10
8	34.40	25.90	15.20	22.90	27.60	52.20	56.90
9	36.10	28.40	17.30	19.90	25.00	49.20	54.30
10	39.00	31.00	19.90	16.50	22.90	46.70	51.80
11	41.20	31.60	22.00	13.10	20.80	44.50	49.20
12	43.30	34.80	25.30	8.00	18.20	42.40	46.70
13	46.70	37.20	27.00	8.00	14.80	38.60	43.30
14	49.20	41.20	29.70	13.90	13.10	36.90	41.20
15	51.80	42.70	31.70	17.80	10.10	34.40	39.00
16	54.30	44.90	33.40	19.50	6.70	31.40	36.10
17	56.90	49.10	36.10	20.80	3.70	29.30	34.40
18	58.10	50.90	37.80	23.30	2.40	26.30	31.80
19	60.70	53.80	41.20	25.90	2.30	23.70	28.40
20	64.10	56.40	43.20	28.00	2.80	22.90	25.90
21	66.20	58.50	45.70	30.40	5.50	19.10	23.70
22	67.50	59.80	48.70	33.10	8.80	16.90	20.30
23	70.90	61.50	50.00	35.50	10.90	14.40	18.20
24	73.90	63.20	52.10	37.80	14.40	10.60	15.70

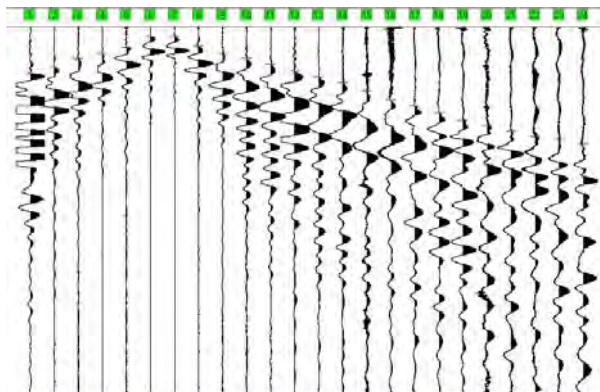


ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

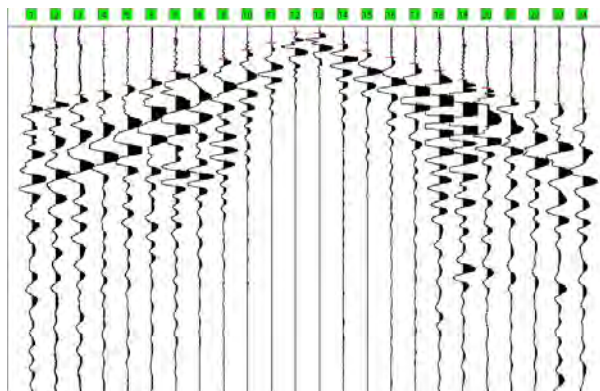
TIRO ESTREMO SX A

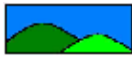


TIRO INTERMEDIO SX D1



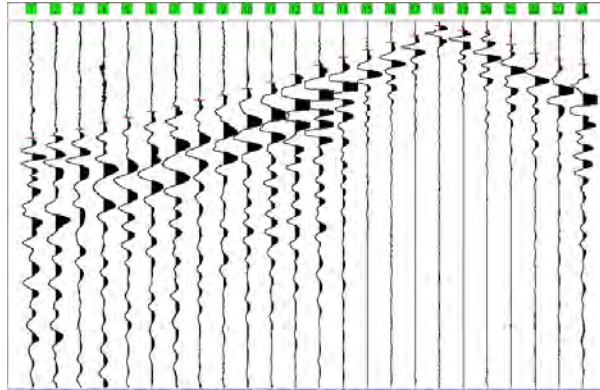
TIRO CENTRALE C



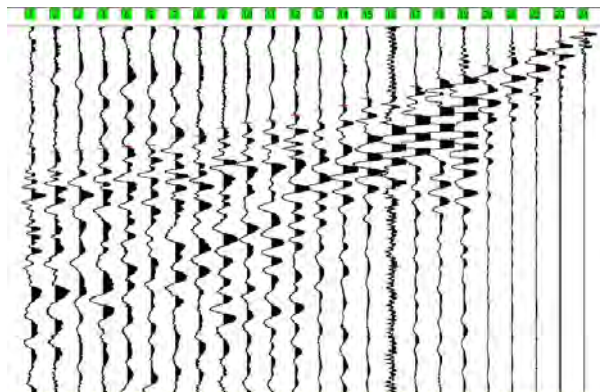


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

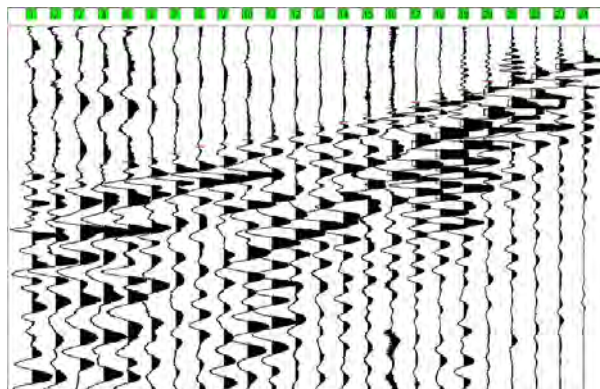
TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B



TIRO ESTERNO DX E2





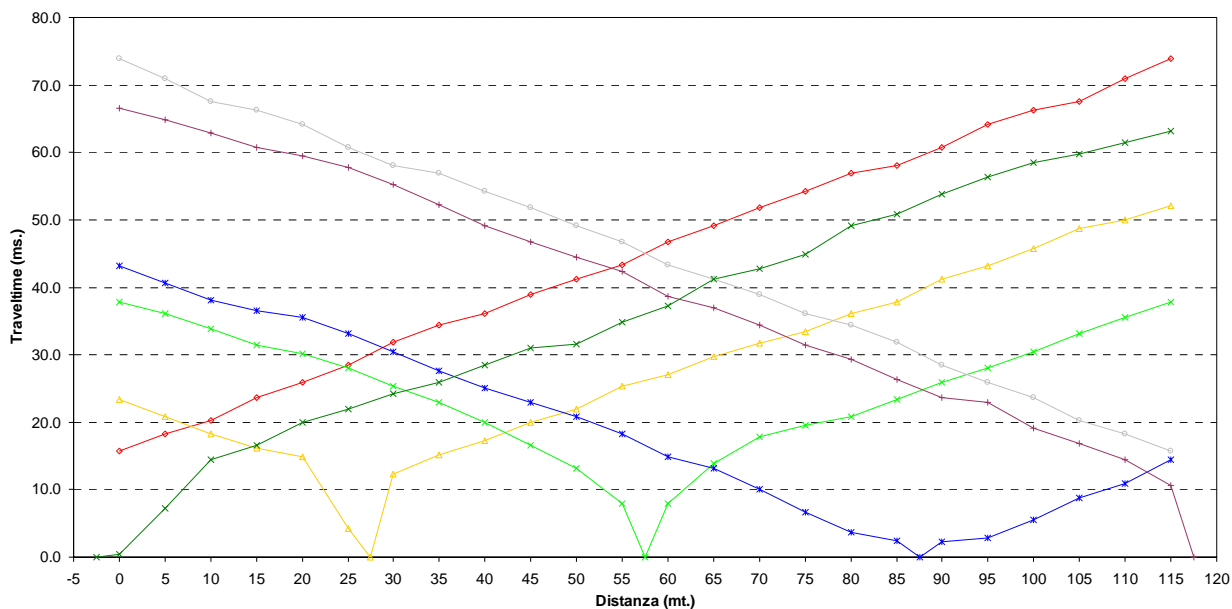
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

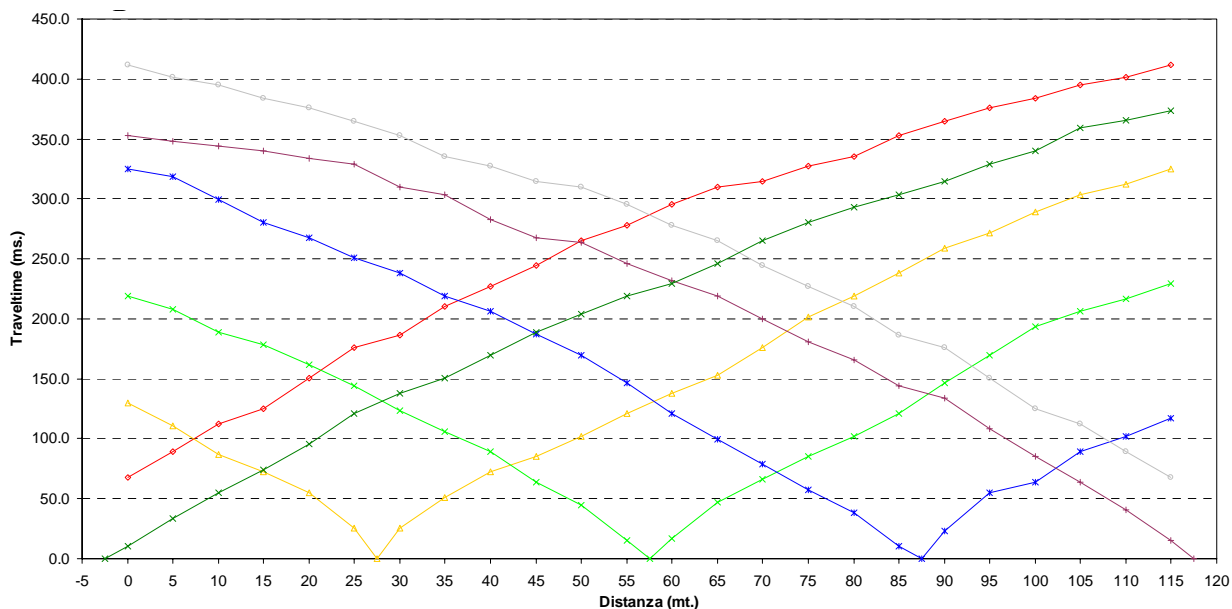
geofono	E1	A	D1	C	D2	B	E2
1	67.90	10.60	129.50	218.70	324.90	352.50	412.00
2	89.00	33.80	110.40	208.10	318.50	348.20	401.20
3	112.50	55.20	86.90	189.00	299.40	344.00	395.00
4	125.30	74.30	72.20	178.30	280.30	339.70	384.20
5	150.60	95.50	55.20	161.40	267.50	333.40	375.90
6	176.20	121.00	25.30	144.40	250.60	329.10	365.10
7	186.70	138.00	25.30	123.10	237.80	310.00	352.50
8	210.20	150.60	50.90	106.10	218.70	303.60	335.50
9	227.20	169.70	72.20	89.10	206.00	282.40	327.00
10	244.20	189.00	84.90	63.70	186.80	267.50	314.30
11	265.40	203.70	101.90	44.50	169.80	263.30	310.00
12	278.20	218.70	121.00	14.80	146.50	246.30	295.20
13	295.20	229.30	138.00	16.90	121.00	231.40	278.20
14	310.00	246.30	152.90	46.70	99.80	218.70	265.40
15	314.30	265.40	176.20	65.80	78.50	199.60	244.20
16	327.00	280.30	201.70	84.90	57.30	180.50	227.20
17	335.50	293.00	218.70	101.90	38.20	165.60	210.20
18	352.50	303.60	237.80	121.00	10.60	144.40	186.70
19	365.10	314.30	258.90	146.50	23.30	133.60	176.20
20	375.90	329.10	271.80	169.80	55.20	108.30	150.60
21	384.20	339.70	288.80	193.20	63.70	84.90	125.30
22	395.00	358.90	303.60	206.00	89.10	63.70	112.50
23	401.20	365.20	312.10	216.60	101.90	40.30	89.00
24	412.00	373.70	324.90	229.30	116.80	14.80	67.90



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





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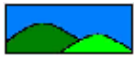
INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

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INDAGINI GEOLOGICHE ED AMBIENTALI

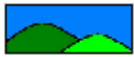
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FOGLIO

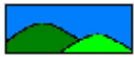
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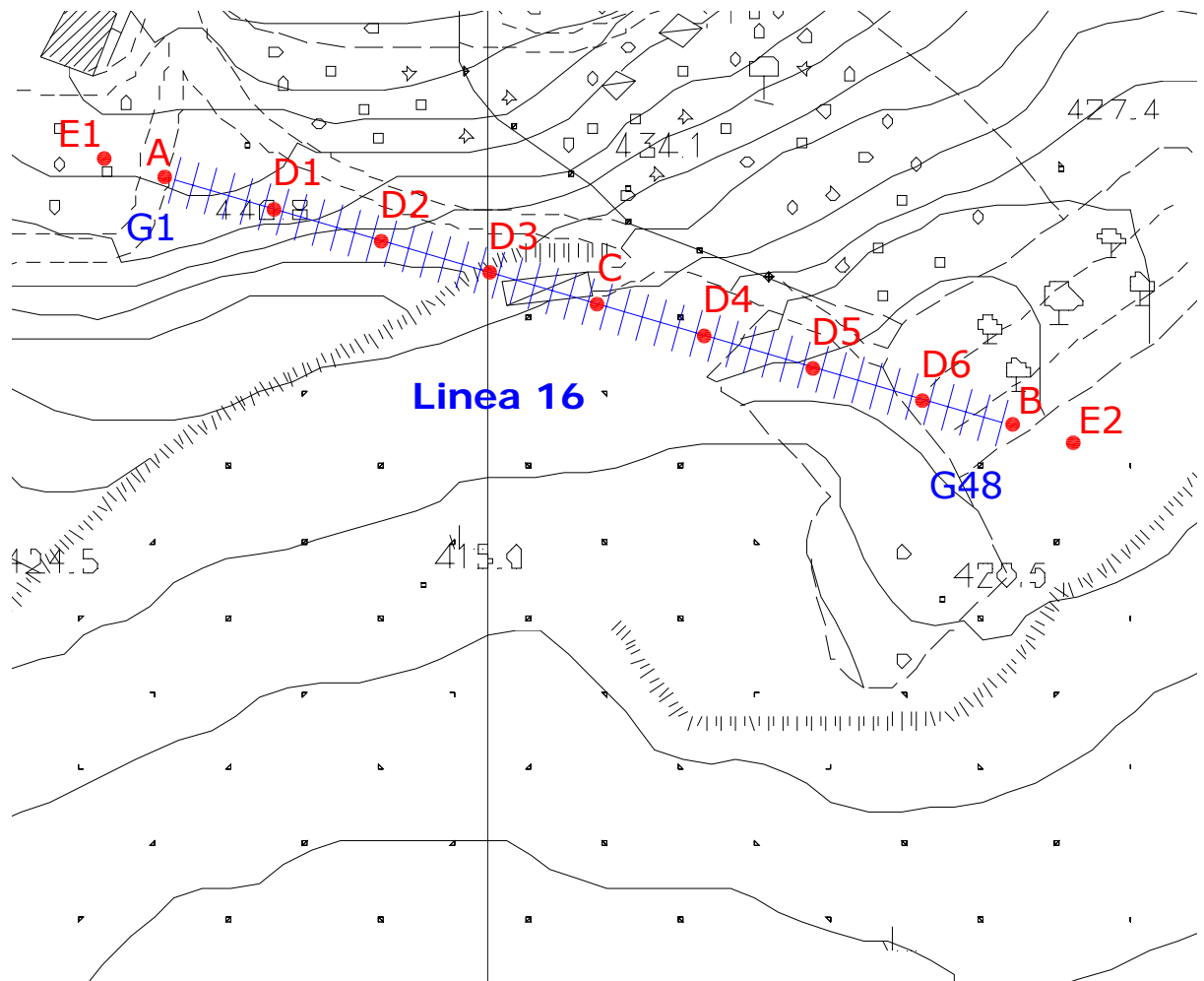


**DOCUMENTAZIONE FOTOGRAFICA LINEA 15**





**LINEA SISMICA 16**



*Ubicazione delle linea - scala 1:1000*



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	440.20
2	2.5	2.5	440.10
3	5	2.5	440.00
4	7.5	2.5	439.70
5	10	2.5	439.50
6	12.5	2.5	439.00
7	15	2.5	438.50
8	17.5	2.5	438.30
9	20	2.5	438.00
10	22.5	2.5	436.00
11	25	2.5	435.80
12	27.5	2.5	435.70
13	30	2.5	435.40
14	32.5	2.5	435.20
15	35	2.5	435.00
16	37.5	2.5	434.80
17	40	2.5	434.60
18	42.5	2.5	434.40
19	45	2.5	434.00
20	47.5	2.5	434.00
21	50	2.5	433.70
22	52.5	2.5	433.50
23	55	2.5	433.20
24	57.5	2.5	432.00
25	60	2.5	430.50
26	62.5	2.5	430.00
27	65	2.5	429.50
28	67.5	2.5	429.00
29	70	2.5	428.50
30	72.5	2.5	428.00
31	75	2.5	426.70
32	77.5	2.5	426.00
33	80	2.5	425.70
34	82.5	2.5	425.30
35	85	2.5	424.60



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	424.00
37	90	2.5	423.60
38	92.5	2.5	423.40
39	95	2.5	423.20
40	97.5	2.5	423.10
41	100	2.5	422.80
42	102.5	2.5	422.60
43	105	2.5	422.40
44	107.5	2.5	422.40
45	110	2.5	422.60
46	112.5	2.5	422.80
47	115	2.5	423.00
48	117.5	2.5	423.40

## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651550	4806510
<i>Geofono n. 48 (G48)</i>	1651670	4806480



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta			440.10
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	440.20
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	438.70
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	435.60
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	434.20
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	431.00
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	427.30
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	423.80
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	422.50
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	423.80
<i>E2</i>	Esterno dx	P 48-10.dta		130	424.00

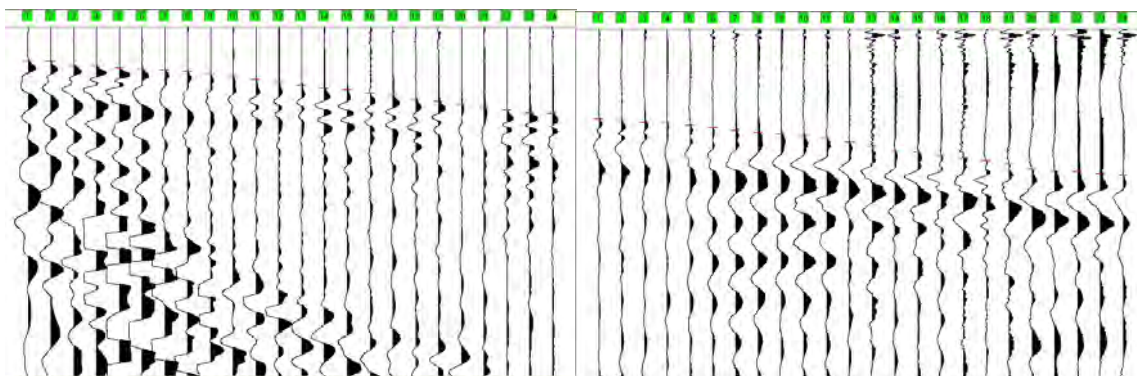


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

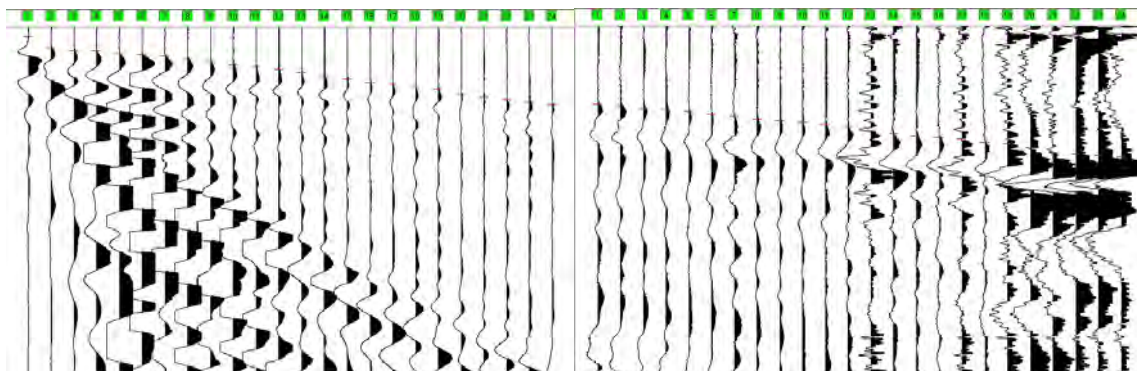
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

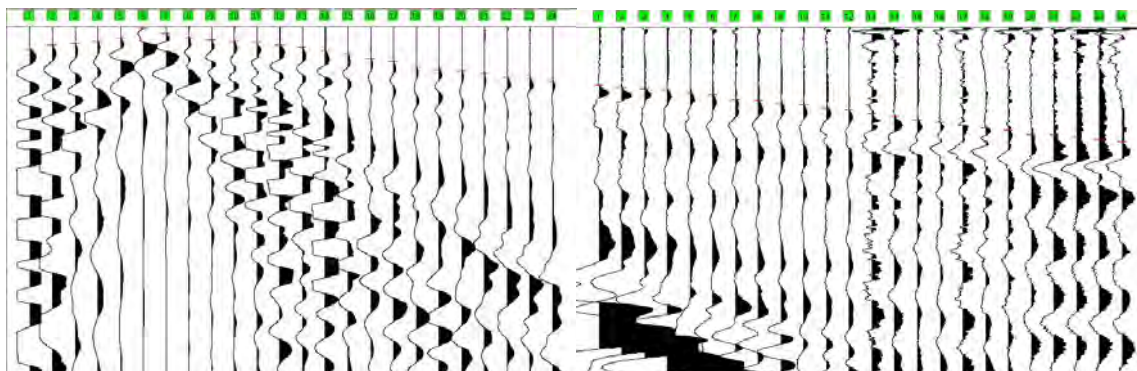
Catena geofonica 25-48

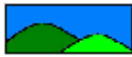


TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



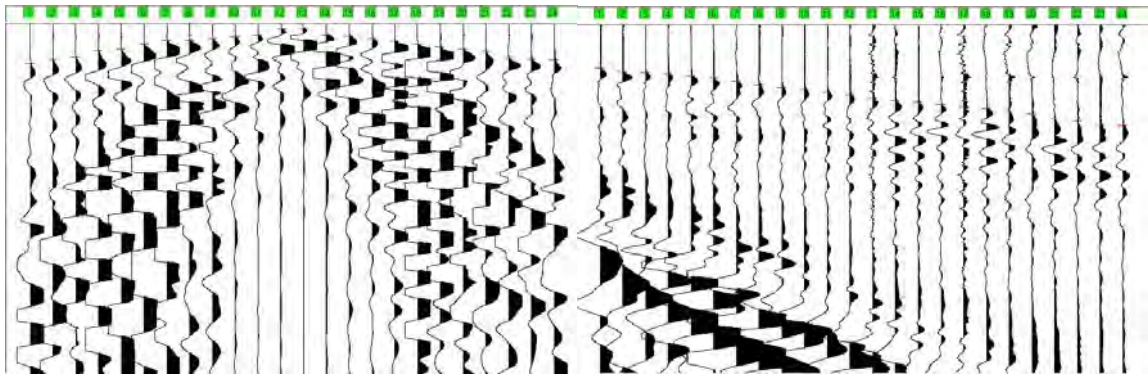


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

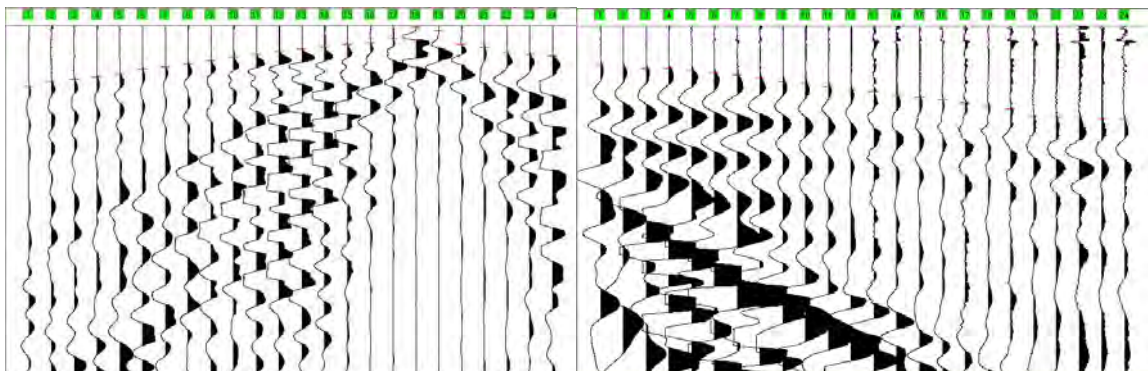
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

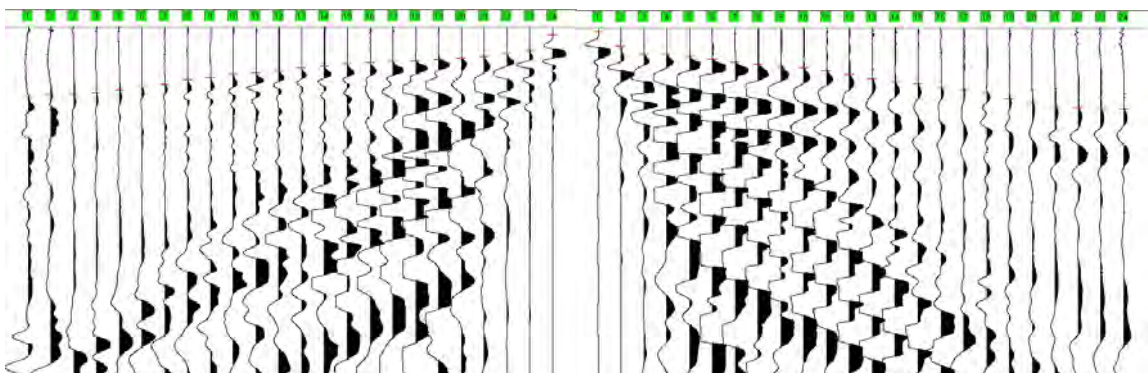
Catena geofonica 25-48

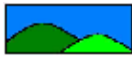


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



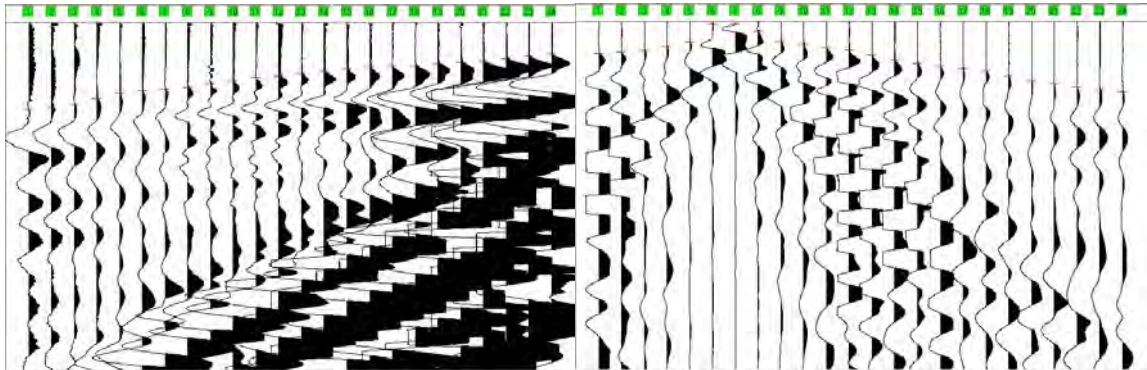


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

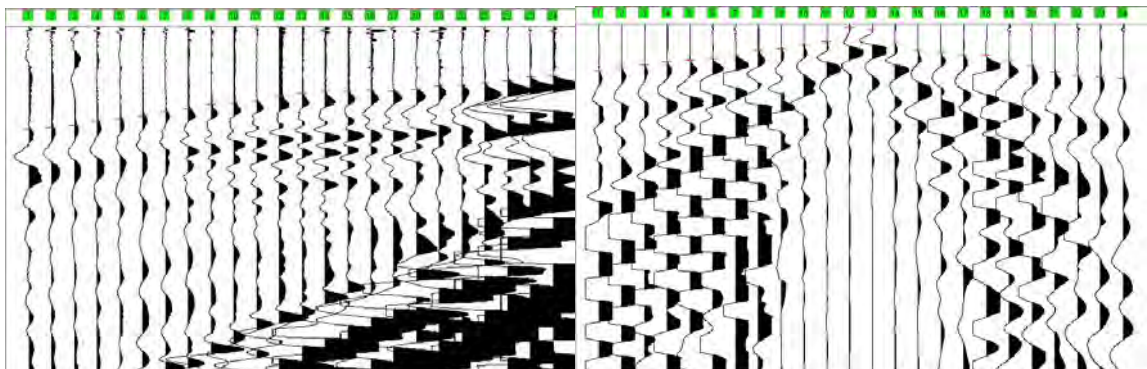
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

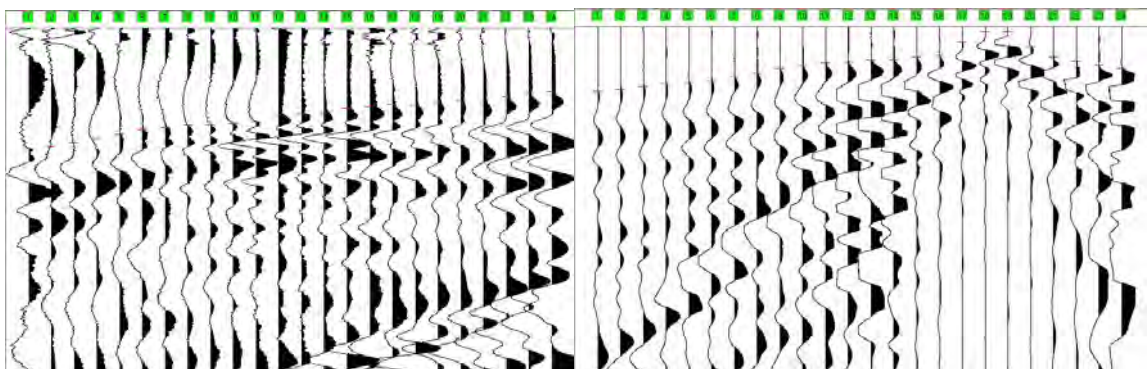
Catena geofonica 25-48



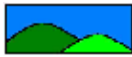
TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48





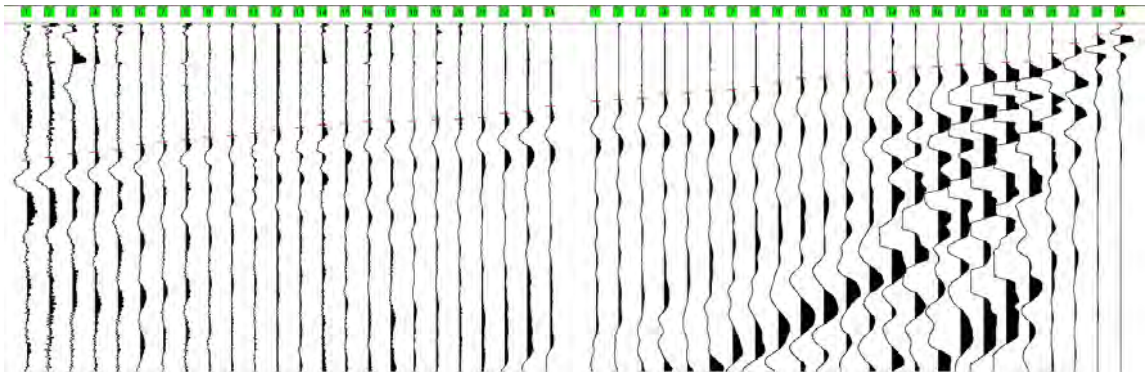


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

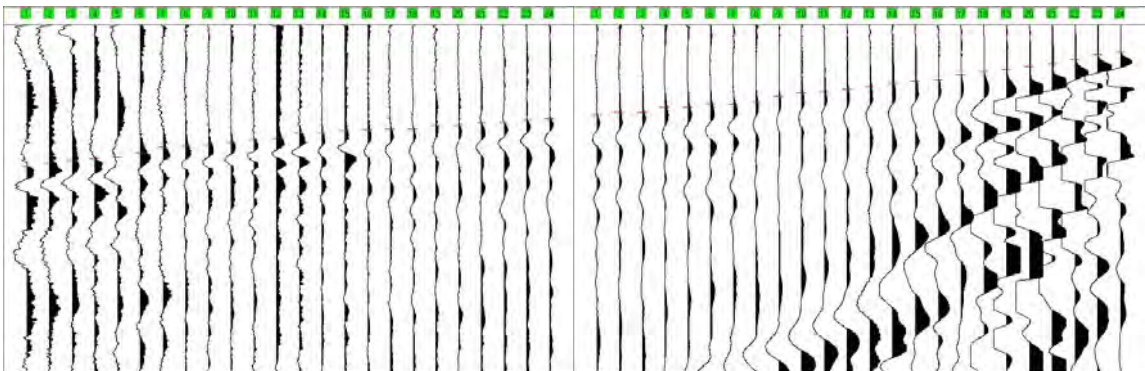
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	19.10	5.00	12.70	26.90	35.10	40.70	50.50	59.80	70.50	80.20	82.80
2	19.50	11.40	10.10	24.40	32.10	39.50	49.60	59.00	69.20	78.50	80.70
3	22.00	13.50	9.30	23.10	31.00	38.50	47.40	57.70	67.10	76.40	79.00
4	22.00	13.50	8.00	19.20	29.70	38.10	44.00	55.20	64.50	75.60	78.10
5	23.30	15.20	5.90	18.40	27.60	36.50	41.20	53.90	62.00	73.40	77.30
6	24.20	15.70	0.40	15.40	25.00	34.80	39.50	52.20	59.40	70.90	74.70
7	24.60	16.50	3.30	13.30	23.70	33.10	38.50	49.60	58.10	69.20	71.30
8	25.40	18.20	5.90	13.30	21.00	30.40	37.80	47.90	56.40	68.30	70.90
9	27.10	19.90	7.20	12.00	19.90	29.30	35.10	45.40	56.40	66.60	70.00
10	28.00	21.60	8.00	11.10	17.80	27.00	33.80	44.50	55.60	65.80	68.30
11	30.10	22.90	8.90	10.30	16.50	26.30	31.70	43.70	54.70	64.10	67.10
12	31.80	24.60	10.10	0.30	14.80	25.20	31.00	40.70	50.90	62.40	66.20
13	33.50	26.30	11.40	0.30	13.10	23.30	29.30	38.60	50.00	61.10	63.20
14	35.20	28.80	13.50	10.30	11.80	22.50	28.00	37.80	49.10	59.40	63.20
15	36.10	30.10	15.70	11.60	10.50	21.20	26.70	37.80	46.60	58.60	61.50
16	38.20	32.20	18.20	12.50	9.70	20.30	25.30	36.90	45.70	57.70	61.10
17	39.50	32.70	19.90	14.20	7.20	19.90	24.60	37.30	44.50	56.90	60.70
18	41.60	34.80	23.30	15.40	0.30	19.50	24.60	36.50	44.90	56.90	60.70
19	42.80	36.10	24.60	17.10	2.40	18.60	23.70	34.40	43.20	56.40	58.60
20	44.50	38.60	25.40	18.40	10.50	17.80	22.90	33.90	42.30	56.00	58.60
21	46.70	40.70	27.10	19.70	12.20	16.90	22.50	32.20	42.30	55.20	57.30
22	47.90	42.00	29.30	21.10	14.30	15.20	20.80	31.40	39.80	52.60	57.30
23	49.60	43.70	30.10	22.30	16.90	13.10	19.10	28.80	38.10	51.80	55.60
24	51.10	45.00	31.40	24.80	18.50	4.10	17.80	28.40	36.80	48.40	54.70
25	52.20	45.40	33.50	25.00	20.70	1.60	18.20	27.00	36.60	45.30	52.60
26	53.00	46.20	34.80	27.10	22.10	10.10	17.30	25.00	36.50	44.50	50.90
27	54.30	47.90	35.60	27.60	23.20	15.20	16.50	23.30	34.80	43.60	50.90
28	54.70	48.80	36.10	28.40	24.60	15.20	13.90	21.60	33.10	41.20	47.90
29	56.00	49.60	37.80	29.70	25.90	16.10	11.40	20.80	32.10	40.20	47.90
30	57.30	51.30	39.00	31.00	27.00	17.80	0.70	19.90	31.40	39.50	45.70
31	59.00	52.60	41.00	32.70	28.40	19.50	0.70	18.20	29.30	38.50	46.20
32	60.30	54.30	42.40	34.80	30.10	20.80	5.00	15.20	27.00	36.80	44.90
33	61.10	55.20	44.50	36.50	32.10	22.00	10.90	13.90	24.20	34.40	41.50
34	62.40	56.00	45.00	37.80	33.40	22.90	12.70	11.40	22.50	31.70	39.50
35	63.70	57.30	46.70	39.00	35.10	24.60	14.80	9.70	20.80	31.40	38.90
36	65.80	58.60	47.90	40.70	37.20	26.70	16.10	1.10	20.30	30.40	37.20
37	68.30	60.70	50.10	42.80	38.10	29.30	19.10	2.40	19.10	28.70	36.10
38	71.30	62.80	52.20	44.10	40.20	31.00	22.00	10.50	19.10	28.40	33.80
39	71.70	64.10	53.90	45.00	41.50	32.20	24.20	15.20	17.30	25.90	32.70
40	73.40	64.90	55.20	46.20	42.70	34.80	25.30	16.10	16.50	25.00	31.70
41	75.10	65.80	56.90	47.50	44.50	36.10	27.00	17.30	8.40	24.20	28.70
42	76.80	67.90	58.60	48.80	46.20	37.80	28.40	17.80	2.40	23.30	27.00
43	79.00	68.80	59.80	50.50	48.40	41.20	31.40	21.20	2.40	22.50	25.90
44	81.90	70.90	62.40	51.80	49.20	43.70	34.40	24.20	10.90	18.20	24.20
45	82.80	73.90	62.40	54.30	51.10	45.80	36.10	27.60	17.30	14.20	22.50
46	83.20	74.70	64.10	56.00	53.00	46.20	37.80	29.70	19.90	11.40	19.90
47	84.50	75.60	65.40	58.10	54.30	46.70	38.90	30.40	22.00	6.20	16.90
48	85.30	76.40	66.60	58.60	54.70	47.10	40.60	31.40	24.20	0.30	15.70

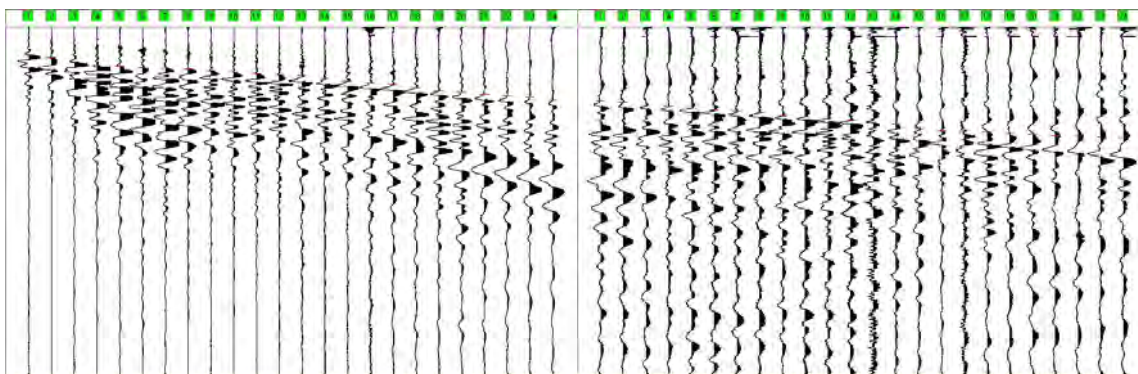


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

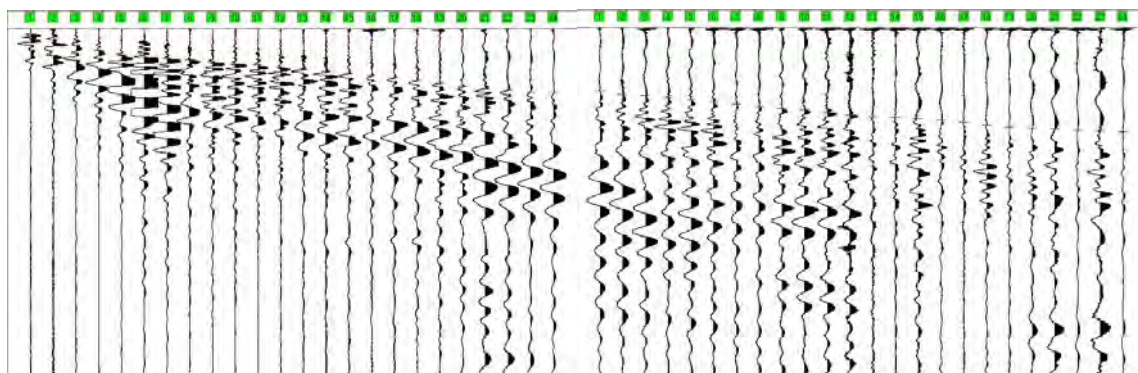
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

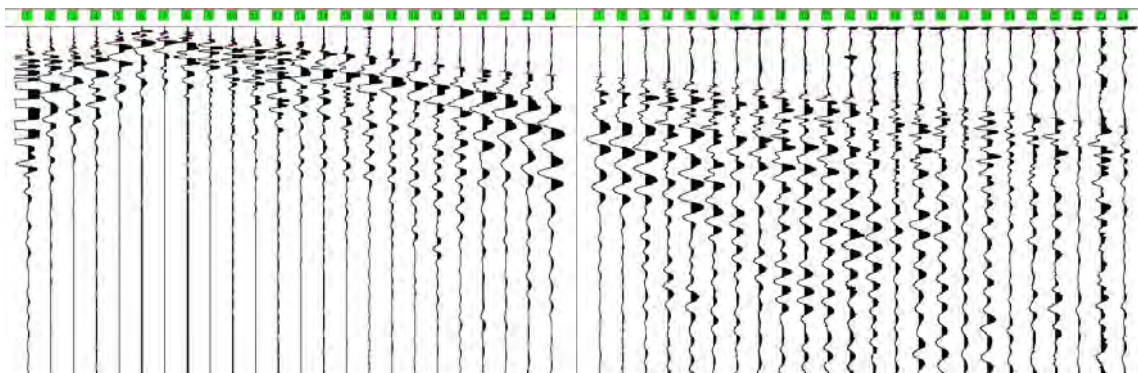
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



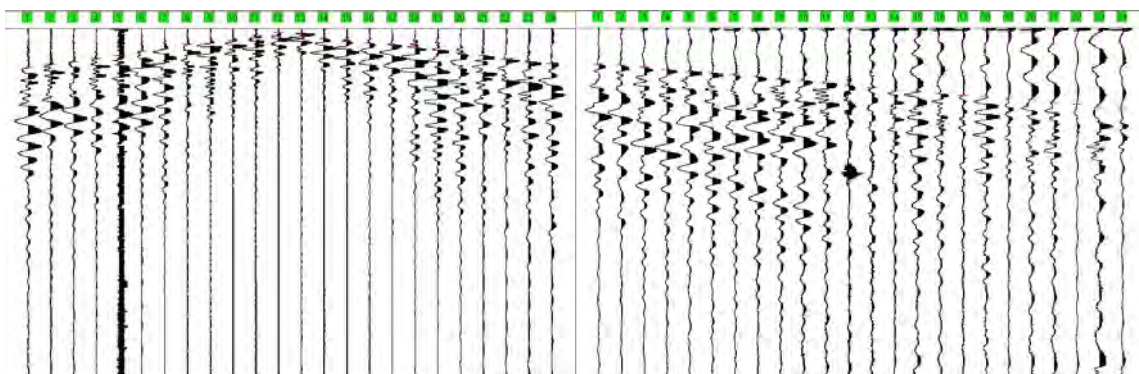


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

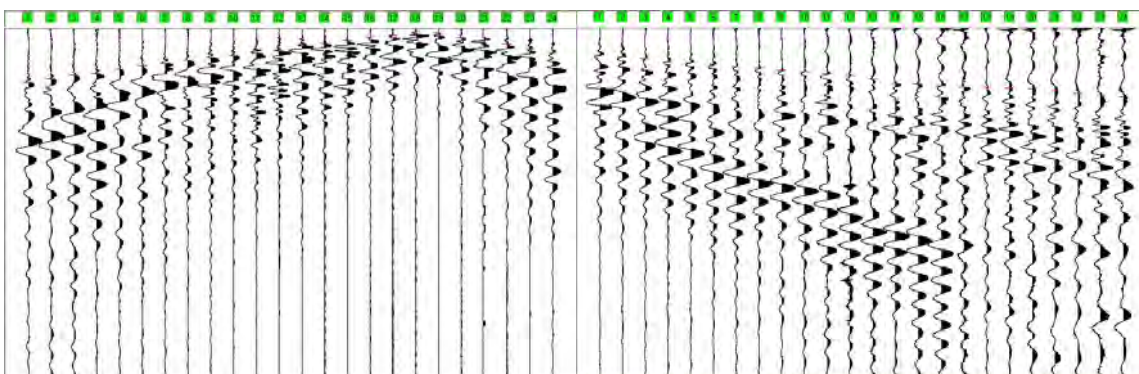
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

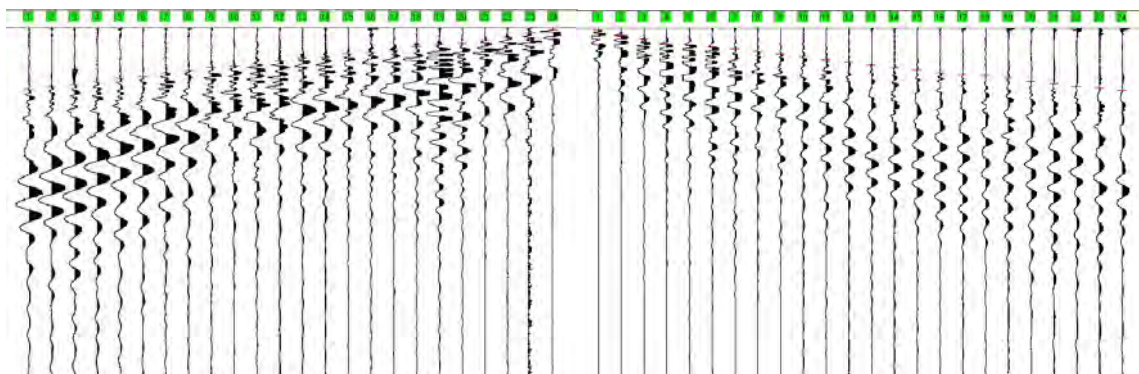
Catena geofonica 25-48

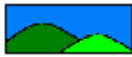


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



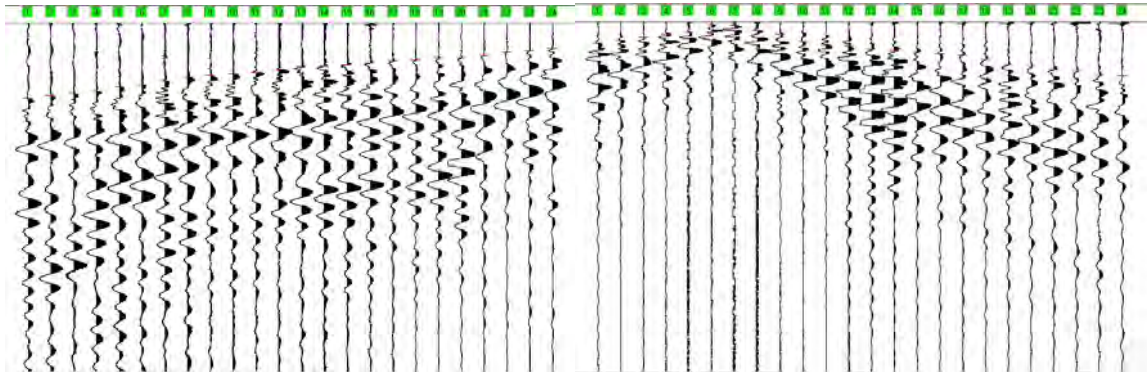


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

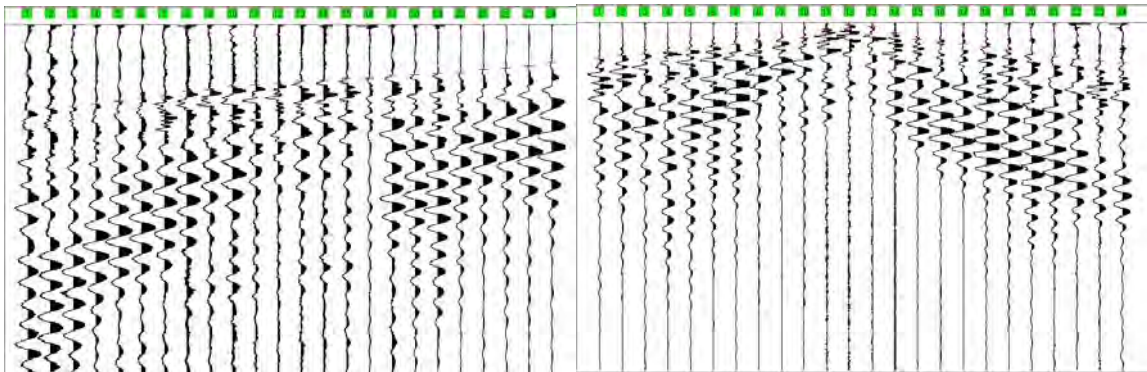
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

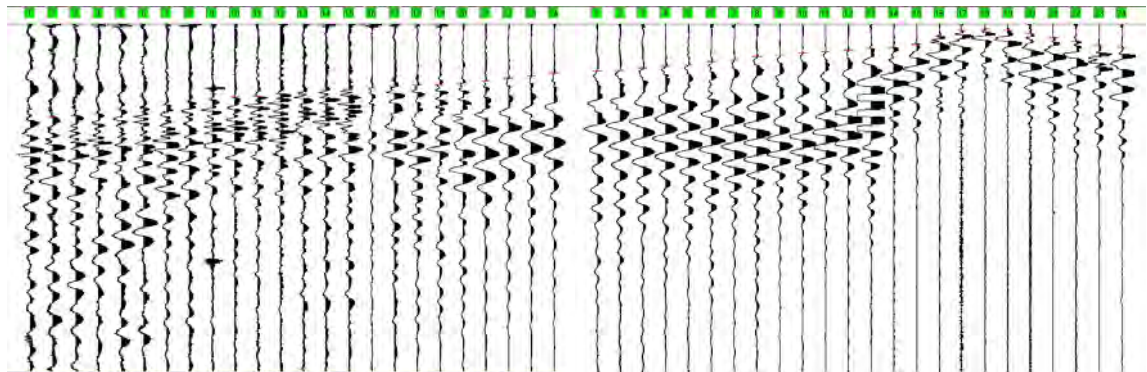
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



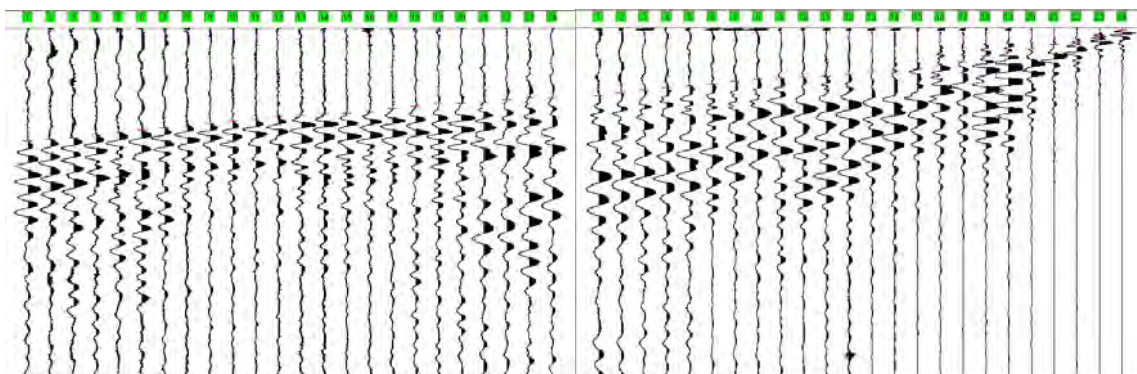


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

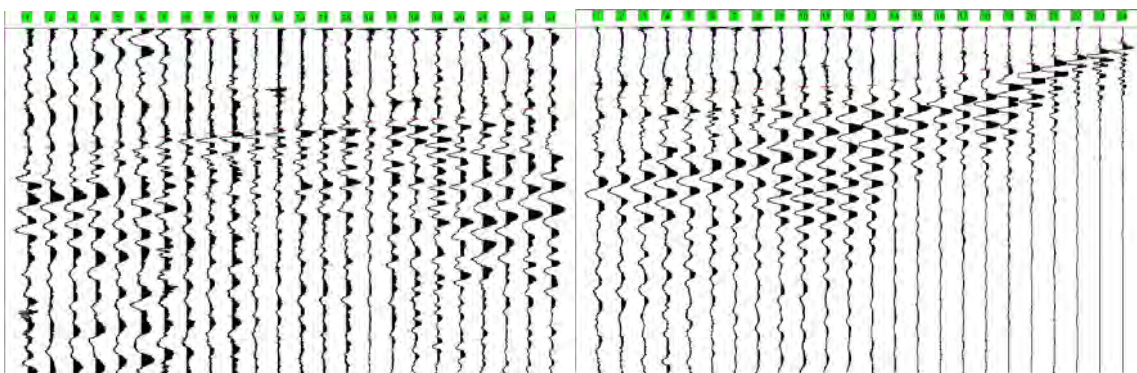
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

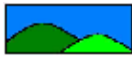
Catena geofonica 25-48



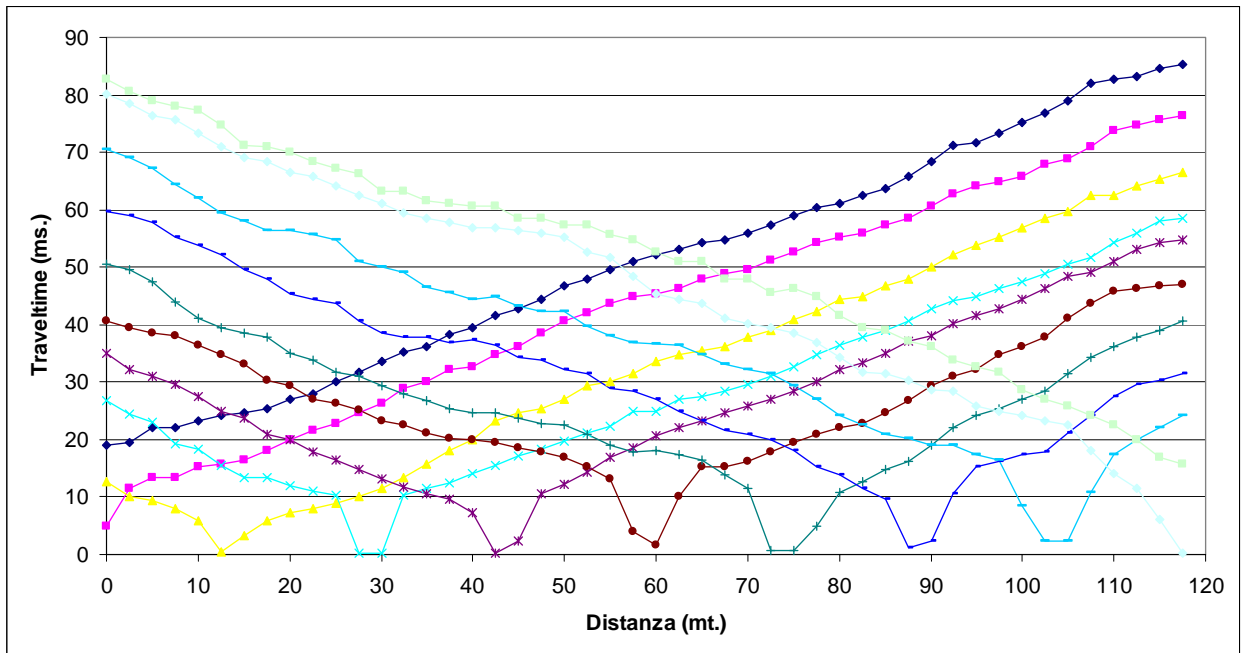


## TEMPI DI PROPAGAZIONE ONDE Sh

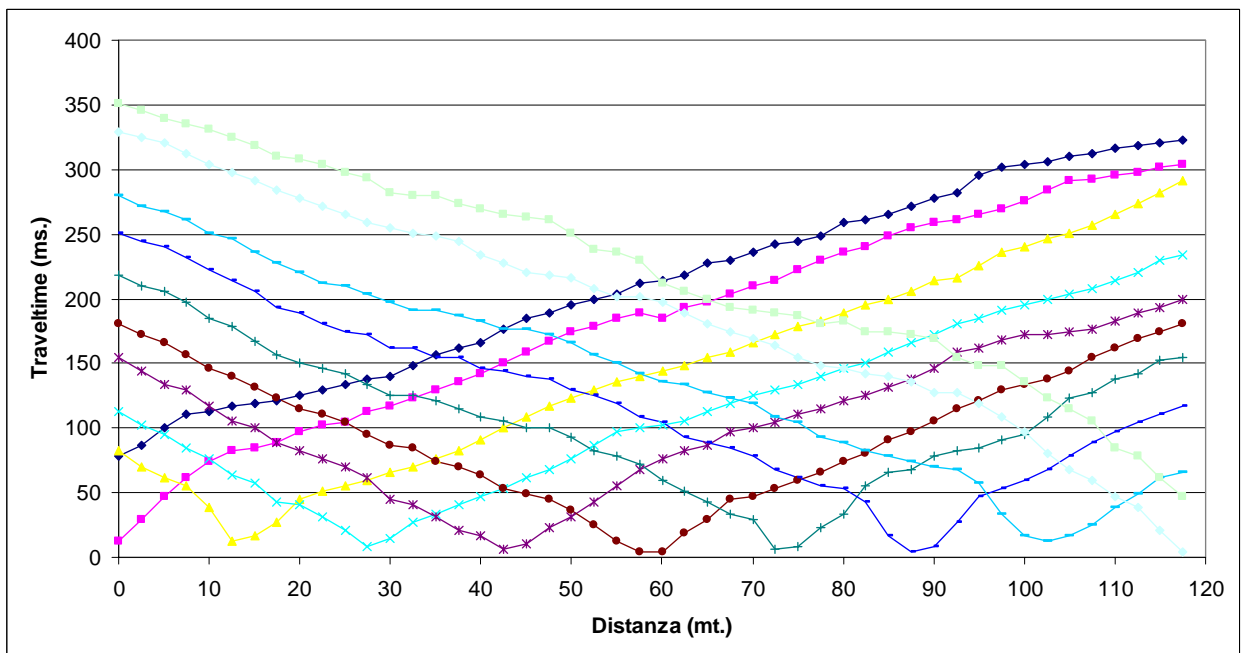
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	78.50	12.70	82.80	112.50	155.00	180.50	218.70	250.60	280.30	329.10	350.40
2	86.90	29.70	70.00	101.90	144.40	172.00	210.20	244.20	271.80	324.90	346.10
3	99.80	46.70	61.50	95.50	133.60	165.60	206.00	239.90	267.50	320.60	339.70
4	110.40	61.50	55.20	84.90	129.50	157.10	197.50	231.40	261.20	312.10	335.50
5	112.50	74.30	38.20	76.40	116.80	146.50	184.70	222.90	250.60	303.50	331.30
6	116.80	82.80	12.70	63.70	106.00	140.10	178.30	214.30	246.30	297.30	324.90
7	118.90	84.90	16.90	57.30	99.80	131.50	167.60	206.00	235.70	290.90	318.50
8	121.00	89.10	27.60	42.30	89.00	123.00	157.10	193.20	227.20	284.50	310.00
9	125.30	97.60	44.50	40.30	82.80	114.50	150.70	189.00	220.80	278.20	307.90
10	129.50	101.90	50.90	31.80	76.40	110.40	146.50	180.50	212.30	271.80	303.60
11	133.60	104.00	55.20	21.20	69.90	104.00	142.20	174.10	210.20	265.40	297.30
12	138.00	112.50	59.40	8.30	61.50	95.50	133.70	172.00	203.80	259.00	293.00
13	140.10	116.80	65.80	14.80	44.50	86.90	125.30	161.40	197.50	254.80	282.40
14	148.60	123.00	69.90	27.60	40.30	84.90	125.30	161.40	191.10	250.60	280.30
15	157.10	129.50	76.40	33.90	31.80	74.30	121.00	155.00	191.10	248.30	280.30
16	161.40	135.90	82.80	40.30	21.20	69.90	114.50	155.00	186.70	244.20	273.90
17	165.60	142.10	91.30	46.70	16.90	63.70	108.30	146.50	182.60	233.60	269.70
18	176.20	150.60	99.80	53.00	6.30	53.00	106.00	144.40	176.20	227.20	265.40
19	184.70	159.10	108.30	61.50	10.60	48.80	99.80	140.10	176.20	220.80	263.30
20	189.00	167.60	116.80	67.90	23.30	44.40	99.80	138.00	172.00	218.70	261.20
21	195.20	174.10	123.00	76.40	31.80	36.10	93.40	129.50	165.60	216.60	250.60
22	199.60	178.20	129.50	87.00	42.40	25.30	82.80	125.30	157.10	208.10	237.80
23	203.70	184.70	135.90	97.60	55.20	12.70	78.40	118.90	150.60	201.70	235.70
24	212.20	189.00	140.10	99.80	67.90	4.20	72.20	108.30	142.10	201.70	229.30
25	214.40	184.70	144.40	101.90	76.40	4.20	59.40	104.00	135.90	197.50	212.20
26	218.70	193.20	148.60	106.00	82.80	19.10	50.90	93.40	133.60	189.00	206.00
27	227.20	197.50	155.00	112.50	86.90	29.70	42.30	89.00	127.40	180.50	199.60
28	229.30	203.70	159.10	118.90	97.50	44.40	33.80	84.90	123.00	174.10	193.20
29	235.70	210.20	165.60	125.30	99.80	46.70	29.70	78.40	118.90	169.70	191.10
30	242.10	214.30	172.00	129.50	104.00	52.90	6.20	67.90	108.30	163.50	189.00
31	244.20	222.80	178.20	133.60	110.40	59.40	8.30	61.50	104.00	155.00	186.70
32	248.30	229.30	182.60	140.10	114.50	65.80	23.30	55.20	93.40	148.60	180.50
33	258.90	235.70	189.00	146.50	121.00	74.30	33.90	53.00	89.00	146.50	182.60
34	261.20	239.80	195.20	150.60	125.30	80.70	55.20	42.40	82.80	142.10	174.10
35	265.40	248.30	199.60	159.10	131.50	91.30	65.80	16.80	78.40	140.10	174.10
36	271.80	254.80	206.00	165.60	138.00	97.50	67.90	4.20	74.30	135.90	172.00
37	278.20	258.90	214.40	172.00	146.50	106.00	78.40	8.30	69.90	127.40	169.70
38	282.40	261.20	216.60	180.50	159.20	114.50	82.80	27.60	67.90	127.40	155.00
39	295.20	265.40	225.10	184.70	161.40	121.00	84.90	46.70	57.30	118.90	148.60
40	301.50	269.70	235.70	191.10	167.70	129.50	91.30	52.90	33.90	108.30	148.60
41	303.60	275.90	239.90	195.30	172.00	133.60	95.50	59.40	16.90	97.50	135.90
42	305.80	284.40	246.30	199.60	172.00	138.00	108.30	67.90	12.70	80.70	123.00
43	310.00	290.90	250.60	203.70	174.10	144.40	123.00	78.40	16.90	67.90	114.50
44	312.10	292.90	256.80	208.10	176.20	155.00	127.40	89.00	25.40	59.40	106.00
45	316.40	295.20	265.40	214.30	182.60	161.40	138.00	97.50	38.20	46.70	84.90
46	318.50	297.30	273.90	220.80	189.00	169.70	142.10	104.00	48.80	38.20	78.40
47	320.60	301.50	282.40	229.30	193.20	174.10	152.90	110.40	61.50	21.20	61.40
48	322.80	303.60	290.90	233.60	199.60	180.50	155.00	116.80	65.80	4.20	46.70



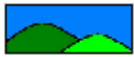
### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh







IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

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IGEA S.A.S.

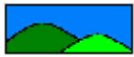
INDAGINI GEOLOGICHE ED AMBIENTALI

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REV.

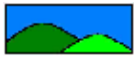
FOGLIO

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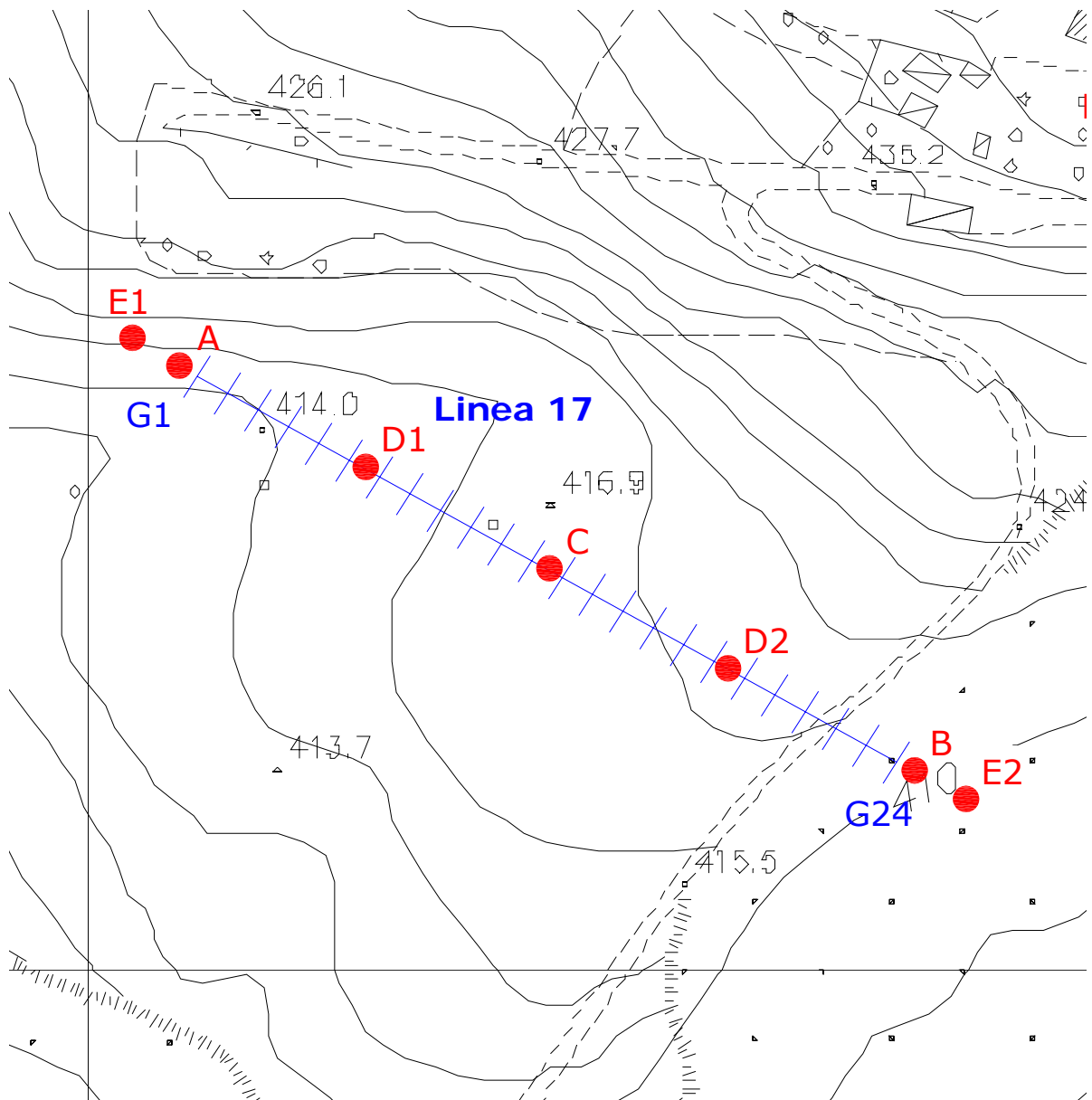


**DOCUMENTAZIONE FOTOGRAFICA LINEA 16**





**LINEA SISMICA 17**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	415.90
2	5	5	415.00
3	10	5	414.20
4	15	5	414.40
5	20	5	414.60
6	25	5	414.80
7	30	5	415.20
8	35	5	415.60
9	40	5	415.80
10	45	5	416.20
11	50	5	416.40
12	55	5	416.60
13	60	5	417.30
14	65	5	417.50
15	70	5	417.70
16	75	5	418.00
17	80	5	418.10
18	85	5	418.30
19	90	5	418.50
20	95	5	418.30
21	100	5	418.20
22	105	5	418.00
23	110	5	417.00
24	115	5	416.00

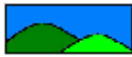
## COORDINATE GAUSS BOAGA DI G1 E G24

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1651400	4806480
<i>Geofono n. 24 (G24)</i>	1651510	4806430



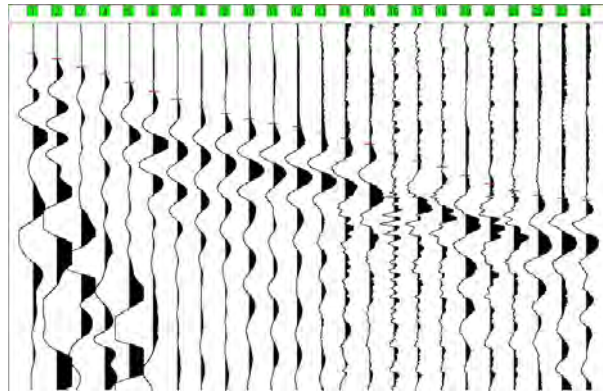
## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	418.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	416.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	30	415.00
<i>C</i>	Centrale	P 12-13.dta	S 12-13.dta	60	417.00
<i>D2</i>	Intermedio dx	P 18-19.dta	S 18-19.dta	90	418.40
<i>B</i>	Estremo dx	P 24.dta	S 24.dta	120	412.00
<i>E2</i>	Esterno dx	P 24-10.dta	S 24-10.dta	130	410.00

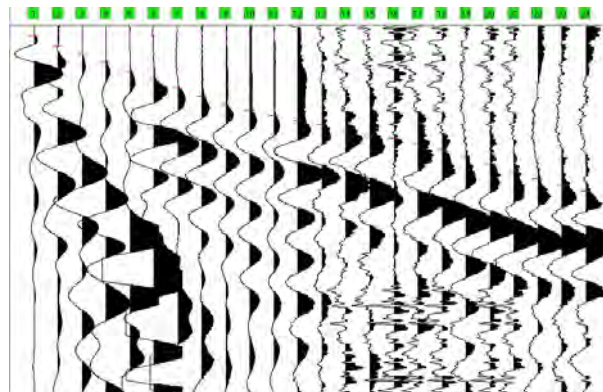


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

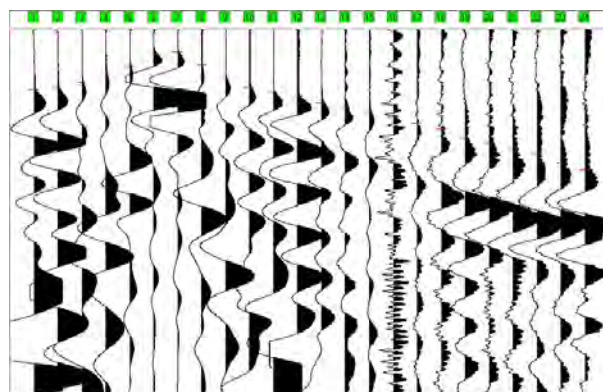
TIRO ESTERNO SX E1

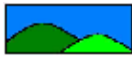


TIRO ESTREMO SX A



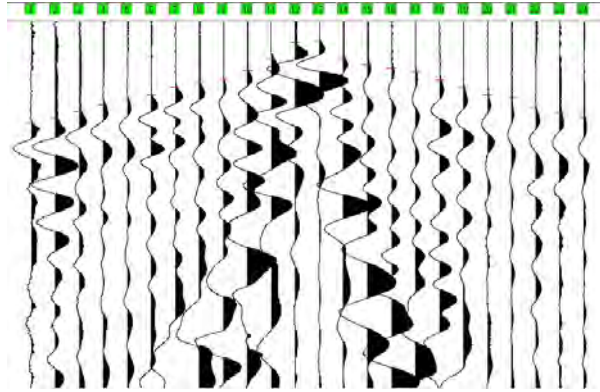
TIRO INTERMEDIO SX D1



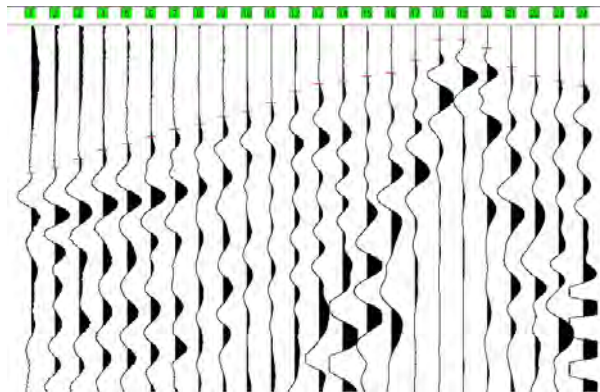


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

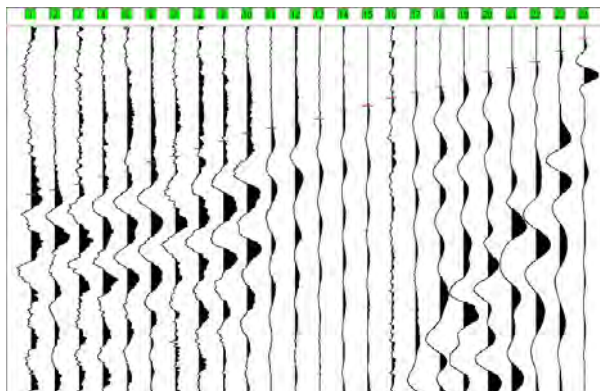
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



TIRO ESTREMO DX B

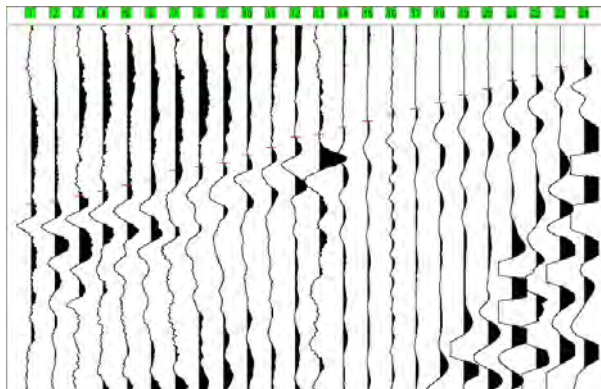






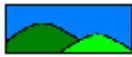
## ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

## TIRO ESTERNO DX E2



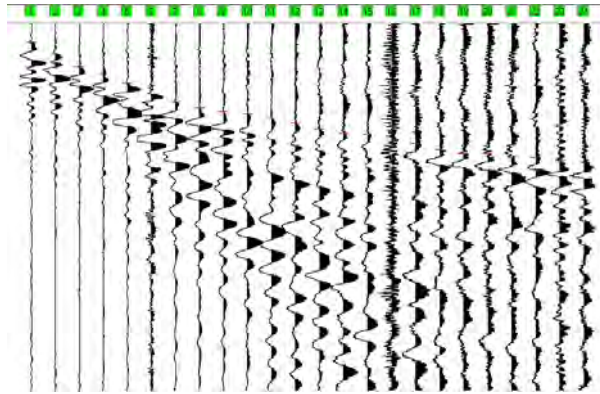
## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo						
	E1	A	D1	C	D2	B	E2
1	16.10	5.50	33.40	56.00	81.80	93.40	99.80
2	19.50	11.00	31.70	53.80	79.20	90.80	97.60
3	24.20	15.70	29.30	50.00	74.30	87.90	94.70
4	27.60	20.30	23.30	46.20	69.20	83.20	92.10
5	32.70	25.00	20.30	43.20	65.80	81.10	88.70
6	37.80	29.30	13.10	40.60	61.50	75.10	85.30
7	42.00	34.40	12.20	36.50	57.70	72.20	80.70
8	46.70	39.00	19.50	33.80	54.70	67.90	78.40
9	50.10	43.70	27.60	31.70	50.40	63.70	76.30
10	53.00	46.70	32.10	27.00	47.40	59.40	71.60
11	55.60	49.60	34.80	20.30	42.70	56.40	67.90
12	57.30	52.60	36.80	11.40	36.80	53.80	62.00
13	60.30	54.70	40.60	10.90	32.10	51.30	60.20
14	63.70	58.60	43.20	20.30	31.00	46.60	56.80
15	67.10	60.70	45.30	23.70	28.00	44.00	53.00
16	71.70	62.40	48.70	25.90	26.30	39.80	48.70
17	76.00	65.80	52.10	27.60	19.10	36.80	46.20
18	79.80	68.80	55.10	32.10	7.60	33.10	42.70
19	84.50	72.20	60.20	36.80	7.60	29.70	38.50
20	89.10	76.40	63.20	40.60	16.70	25.30	35.10
21	93.00	81.50	66.20	42.40	22.90	22.90	30.40
22	95.50	84.90	69.60	47.50	28.00	19.50	27.60
23	97.20	88.70	74.30	50.50	31.00	13.50	22.90
24	98.50	91.70	78.10	53.00	33.10	6.70	18.20

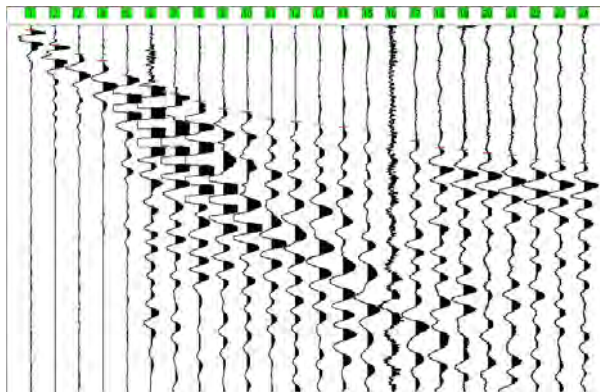


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

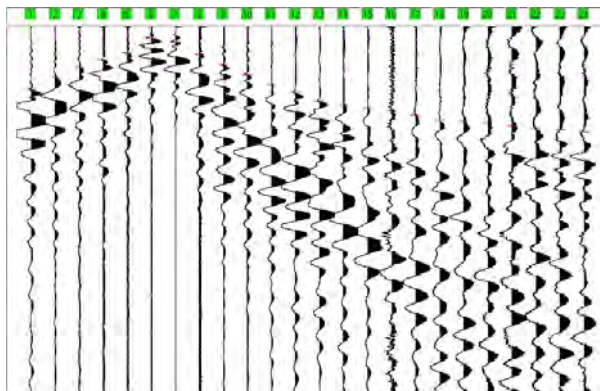
TIRO ESTERNO SX E1



TIRO ESTREMO SX A



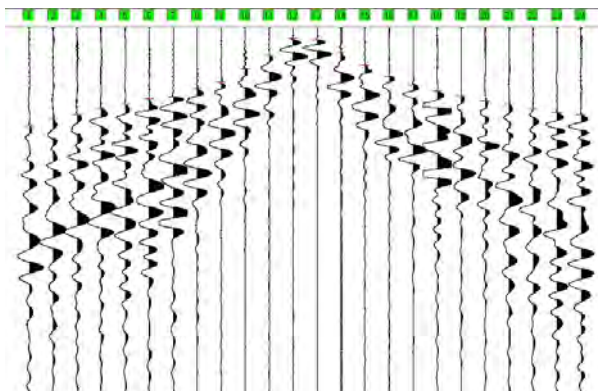
TIRO INTERMEDIO SX D1



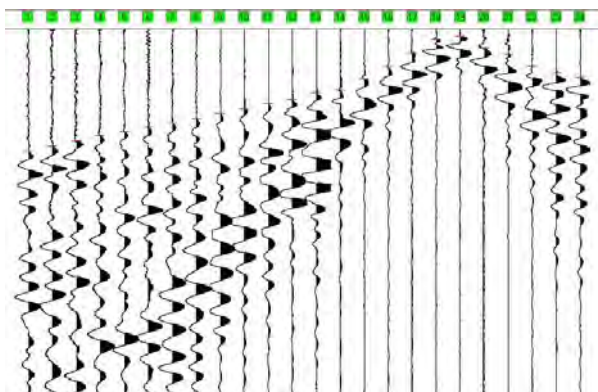


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

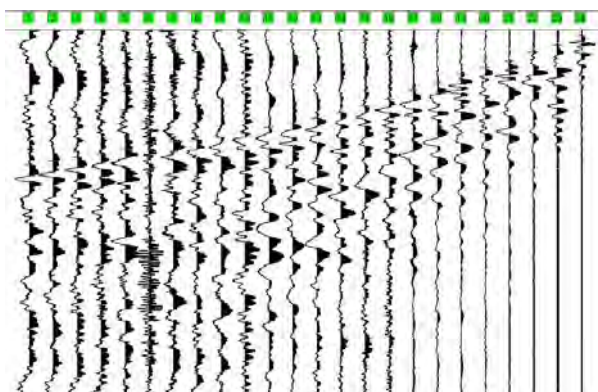
TIRO CENTRALE C



TIRO INTERMEDIO DX D2



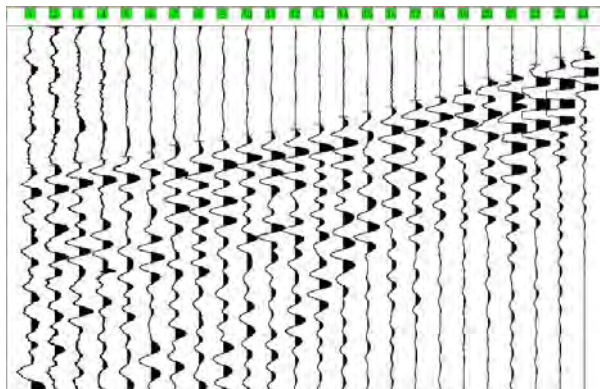
TIRO ESTREMO DX B





## ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

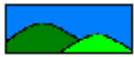
## TIRO ESTERNO DX E2



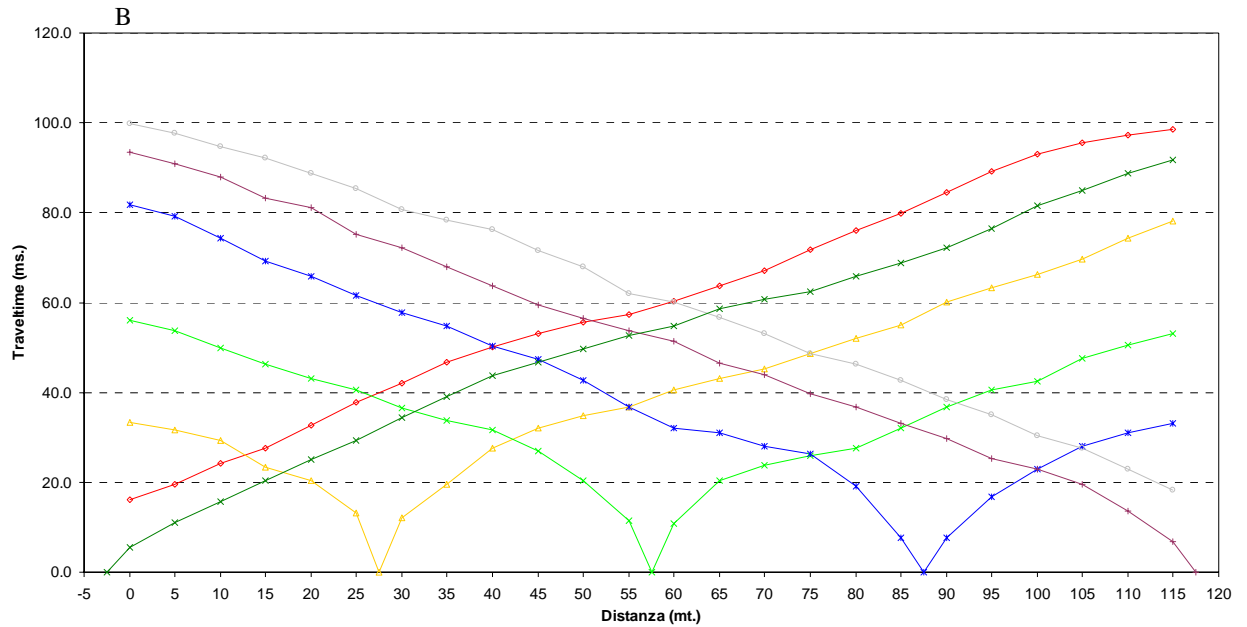
## TEMPI DI PROPAGAZIONE ONDE Sh

## Tempo di arrivo

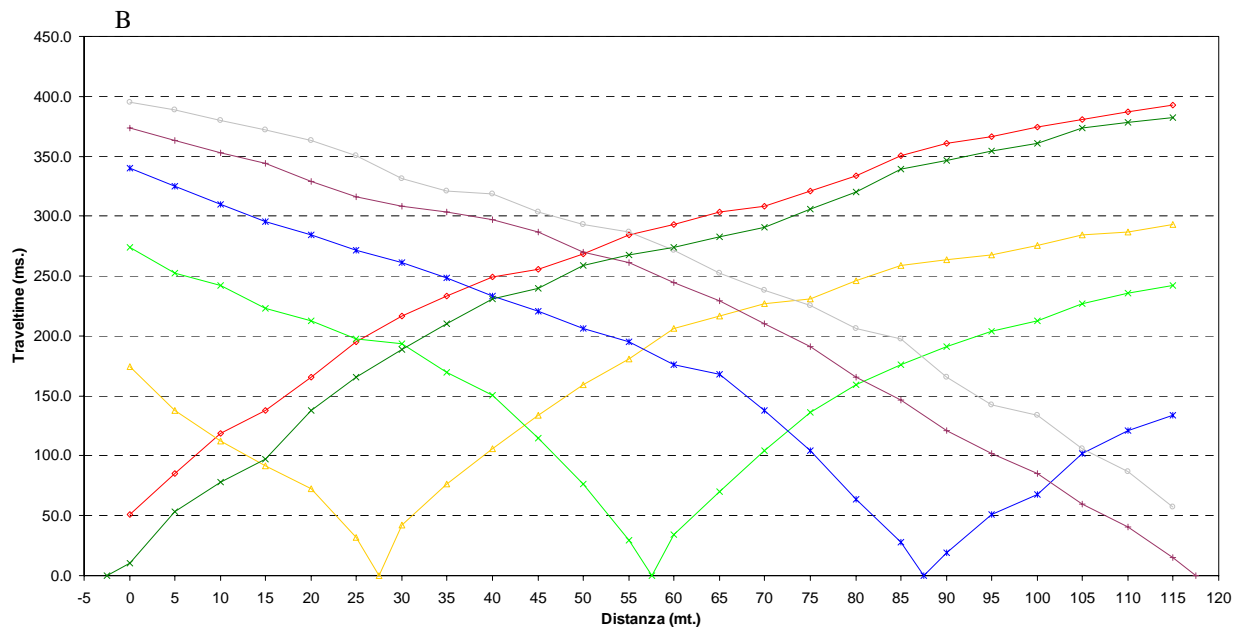
geofono	E1	A	D1	C	D2	B	E2
1	50.90	10.60	174.10	273.90	339.70	373.70	395.00
2	84.90	53.00	138.00	252.70	324.90	363.10	388.60
3	118.90	78.40	112.50	242.10	310.00	352.50	380.10
4	138.00	97.50	91.30	222.90	295.20	344.00	371.60
5	165.60	138.00	72.20	212.30	284.50	329.10	363.10
6	195.30	165.60	31.80	197.50	271.80	316.40	350.40
7	216.60	189.00	42.30	193.20	261.20	307.90	331.30
8	233.60	210.20	76.40	169.80	248.40	303.60	320.60
9	249.30	231.30	106.00	150.70	233.60	297.30	318.50
10	255.30	239.80	133.60	114.60	220.80	286.70	303.60
11	268.40	258.90	159.10	76.40	206.00	269.70	293.00
12	284.70	267.40	180.50	29.70	195.30	261.20	286.70
13	293.00	273.90	206.00	33.90	176.20	244.20	271.80
14	303.60	282.40	216.60	70.00	167.70	229.30	252.70
15	307.90	290.90	227.20	104.00	138.00	210.20	237.80
16	320.60	305.80	231.30	135.90	104.00	191.10	225.10
17	333.40	320.50	246.30	159.20	63.70	165.60	206.00
18	350.40	339.60	258.90	176.20	27.60	146.50	197.50
19	361.00	346.10	263.30	191.10	19.10	121.00	165.60
20	366.00	354.60	267.40	203.80	50.90	101.90	142.20
21	374.50	361.00	275.90	212.30	67.90	84.90	133.70
22	380.40	373.60	284.50	227.20	101.90	59.40	106.10
23	387.30	378.00	286.70	235.70	121.00	40.30	86.90
24	392.60	382.10	293.00	242.10	133.70	14.80	57.30



DROMOCRONE ONDE P



DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

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IGEA S.A.S.

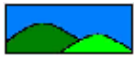
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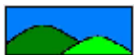
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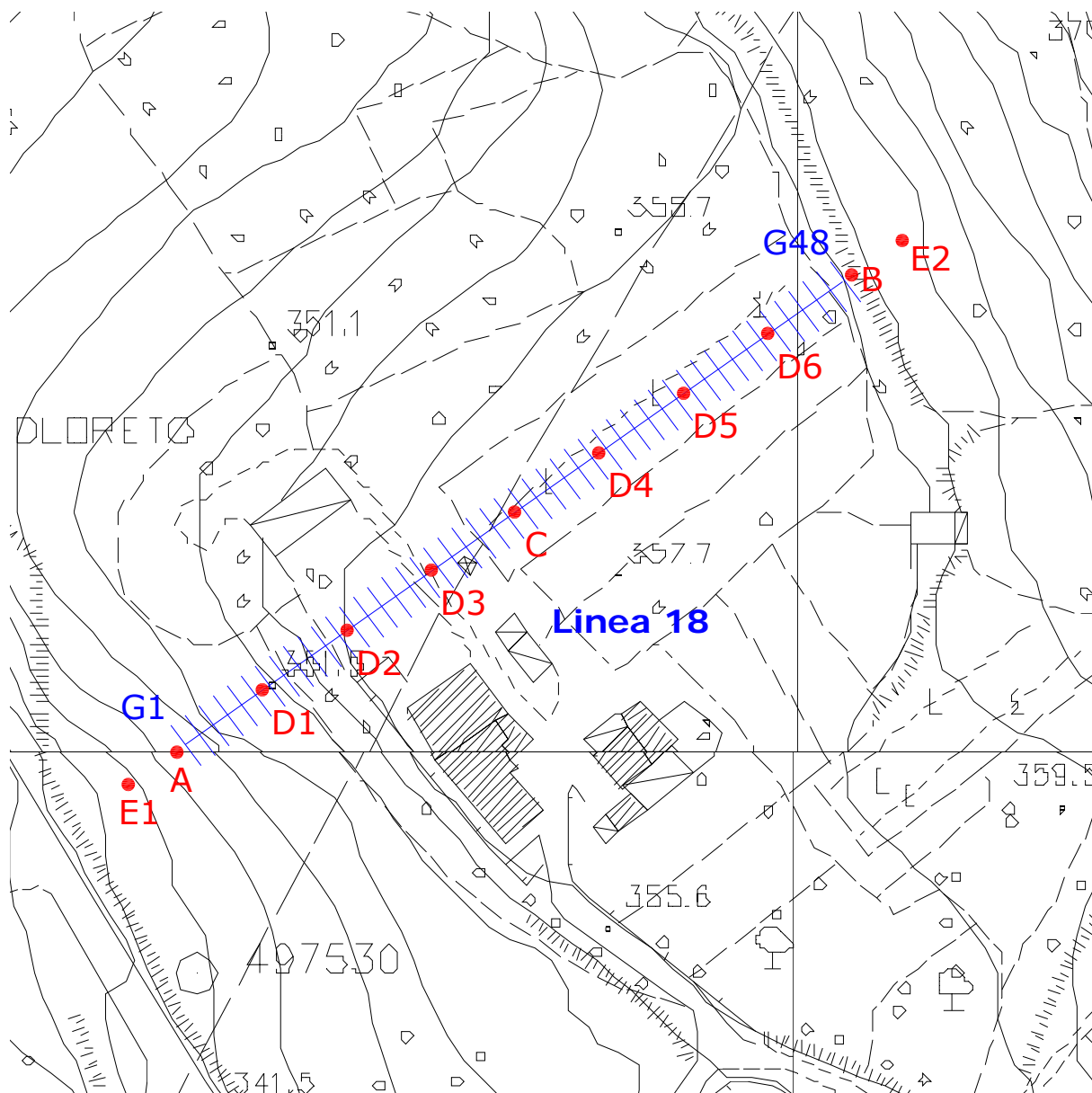
**DOCUMENTAZIONE FOTOGRAFICA LINEA 17**







**LINEA SISMICA 18**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	356.00
2	2.5	2.5	356.00
3	5	2.5	356.00
4	7.5	2.5	356.00
5	10	2.5	356.30
6	12.5	2.5	356.50
7	15	2.5	357.00
8	17.5	2.5	357.00
9	20	2.5	357.00
10	22.5	2.5	357.00
11	25	2.5	357.00
12	27.5	2.5	357.00
13	30	2.5	357.00
14	32.5	2.5	357.00
15	35	2.5	357.00
16	37.5	2.5	357.00
17	40	2.5	357.00
18	42.5	2.5	357.00
19	45	2.5	357.00
20	47.5	2.5	357.00
21	50	2.5	357.00
22	52.5	2.5	357.00
23	55	2.5	357.00
24	57.5	2.5	357.00
25	60	2.5	357.00
26	62.5	2.5	357.00
27	65	2.5	357.00
28	67.5	2.5	357.00
29	70	2.5	357.00
30	72.5	2.5	357.00
31	75	2.5	357.00
32	77.5	2.5	357.00
33	80	2.5	357.00
34	82.5	2.5	357.30
35	85	2.5	357.50



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	358.00
37	90	2.5	360.00
38	92.5	2.5	360.50
39	95	2.5	361.00
40	97.5	2.5	361.50
41	100	2.5	362.00
42	102.5	2.5	362.50
43	105	2.5	363.50
44	107.5	2.5	364.00
45	110	2.5	366.00
46	112.5	2.5	366.80
47	115	2.5	367.60
48	117.5	2.5	368.00

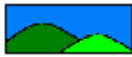
## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1649510	487200
<i>Geofono n. 48 (G48)</i>	1649610	4807270



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	354.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	356.00
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	357.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	357.00
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	357.00
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	357.00
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	357.00
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	357.00
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	359.00
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	368.20
<i>E2</i>	Esterno dx	P 48-10.dta	S 48-10.dta	130	371.00

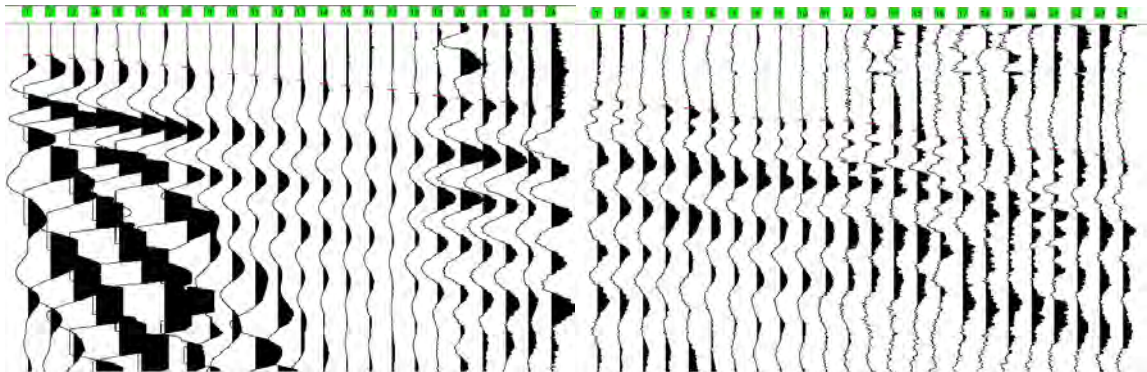


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

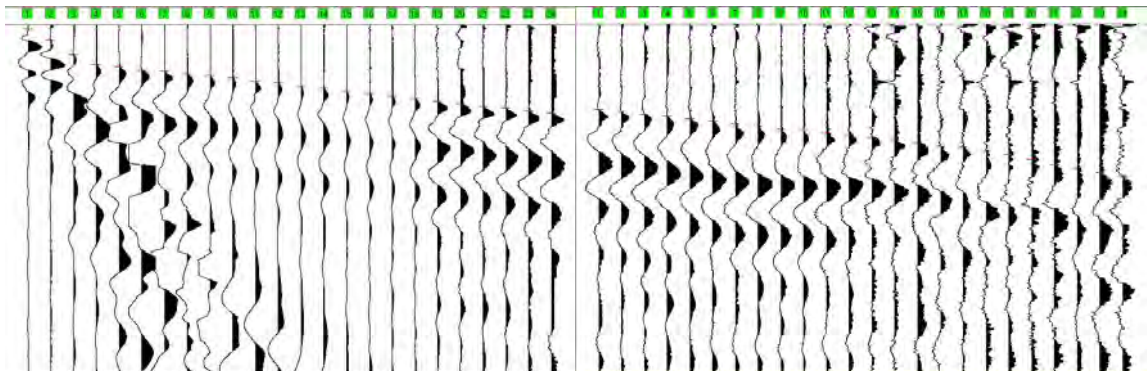
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

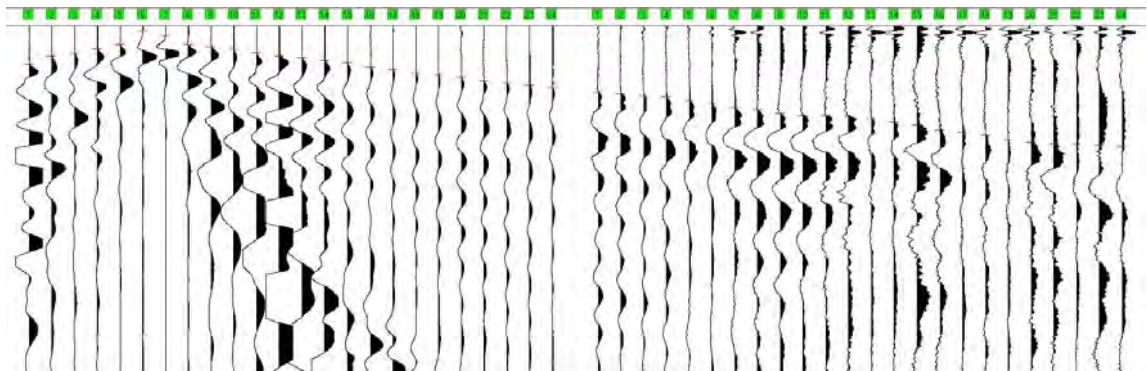
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



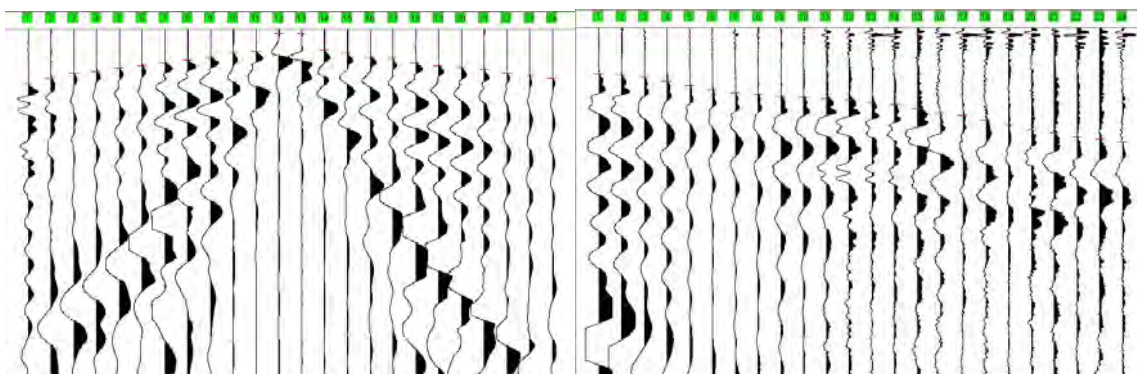


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

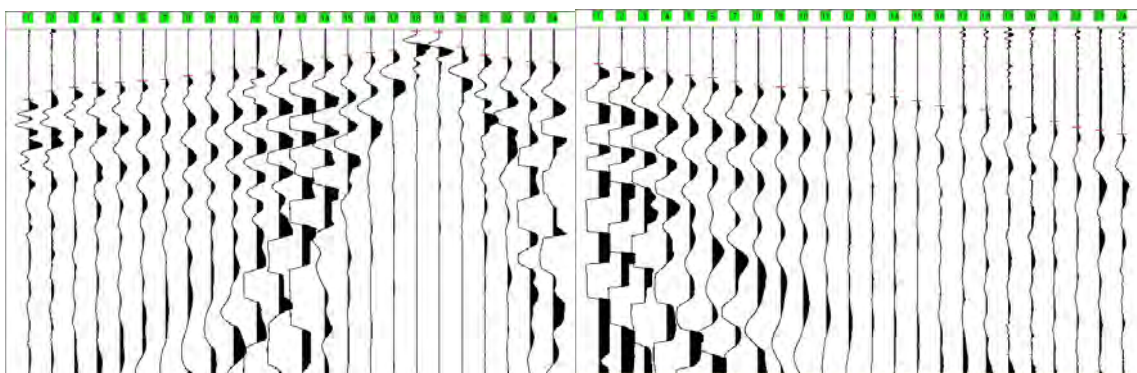
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

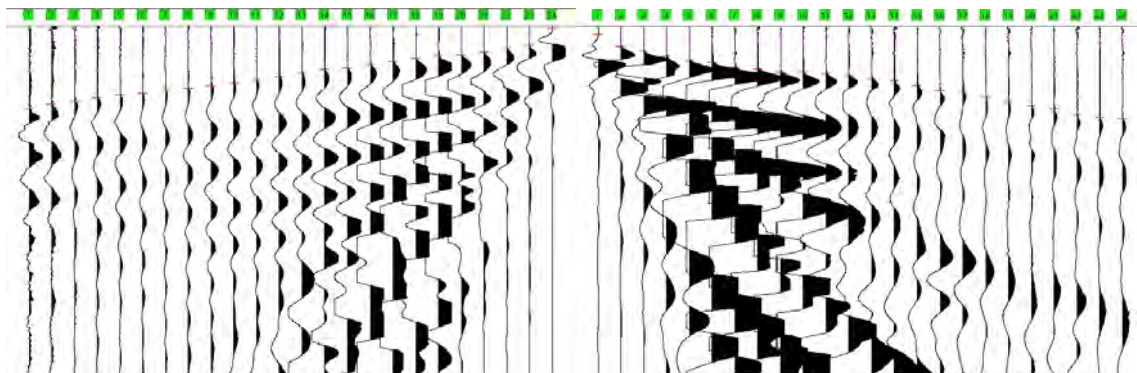
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



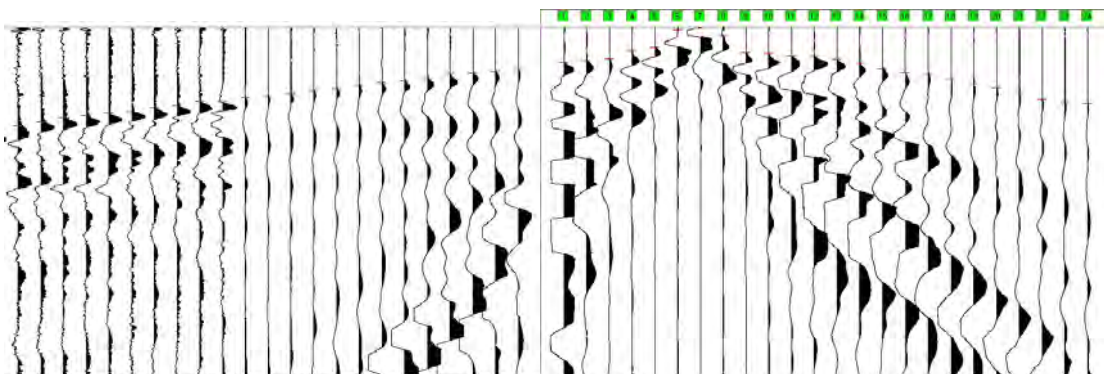


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

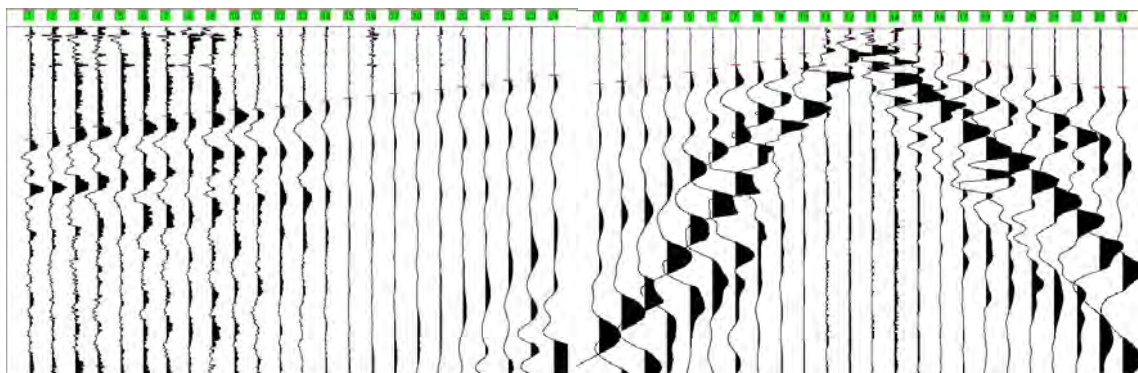
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

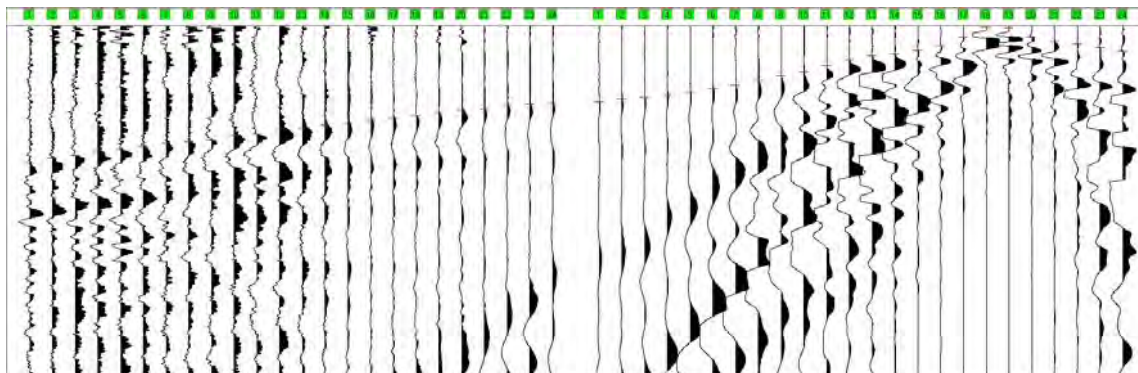
Catena geofonica 25-48

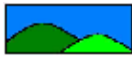


TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



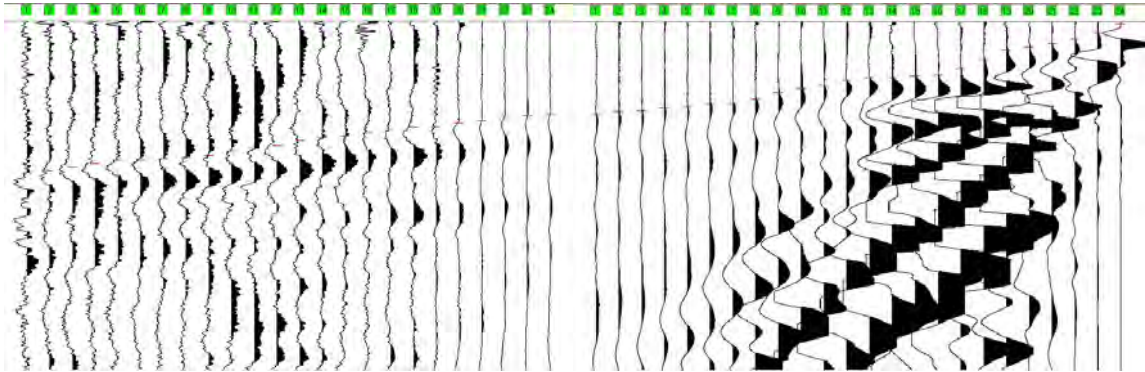


ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

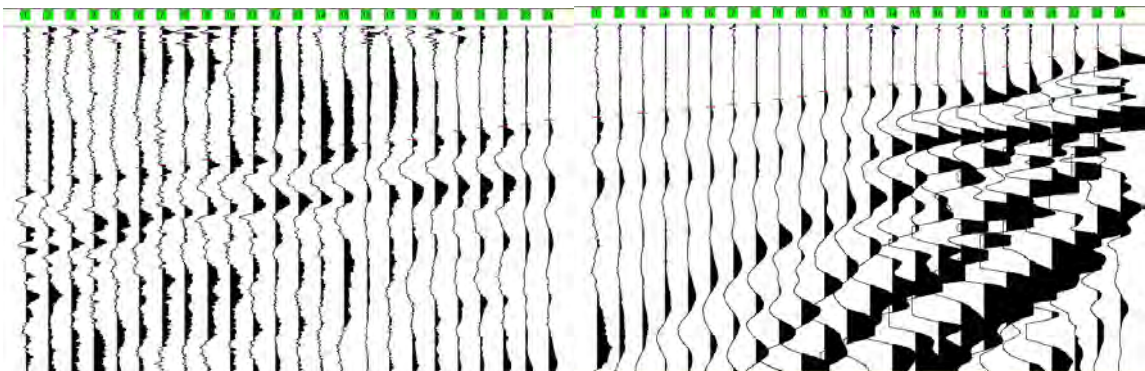
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

Catena geofonica 25-48







## TEMPI DI PROPAGAZIONE ONDE P

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	20.10	2.00	22.00	31.70	41.20	47.90	60.70	65.40	79.80	88.60	100.80
2	26.60	8.40	17.30	28.40	36.50	45.40	57.30	62.00	77.30	87.40	97.80
3	28.30	16.90	15.60	25.30	33.90	44.10	55.10	59.00	75.60	85.30	94.40
4	28.80	22.90	13.10	24.60	31.40	41.60	52.60	58.10	73.00	83.10	93.60
5	29.60	24.20	10.50	22.50	31.00	39.90	51.30	55.60	72.20	81.00	91.10
6	30.90	26.30	2.80	21.20	30.10	39.00	49.60	54.30	70.50	81.00	89.80
7	32.60	26.70	5.00	19.50	29.30	37.30	49.10	51.80	68.30	80.10	88.10
8	33.40	28.40	10.60	17.80	27.10	36.10	46.60	50.50	67.50	79.30	86.40
9	35.60	29.30	11.80	16.10	25.00	34.80	45.30	49.60	66.60	78.40	85.10
10	37.30	30.40	13.50	13.10	22.90	33.10	42.70	48.40	64.10	76.00	83.00
11	38.50	32.70	15.20	8.10	22.90	31.40	42.70	47.90	63.20	74.30	82.60
12	40.20	33.40	17.30	2.00	20.80	29.30	40.60	46.20	60.30	72.60	81.30
13	40.70	36.10	18.20	2.00	18.20	27.60	40.20	43.30	59.40	69.60	79.60
14	42.80	36.80	19.90	11.80	16.10	25.00	38.50	42.80	57.70	67.90	77.50
15	44.50	38.10	21.20	13.90	15.20	24.20	36.50	41.60	57.30	67.10	76.60
16	44.90	39.80	23.70	16.10	13.50	22.00	35.50	40.30	54.70	65.40	75.30
17	46.60	41.20	25.00	16.90	9.20	20.30	33.40	38.60	53.50	63.70	74.90
18	48.70	42.70	27.00	19.50	0.80	18.60	31.70	38.20	52.20	62.00	73.20
19	50.00	44.50	28.40	21.20	1.20	16.90	31.00	36.50	50.50	61.50	69.80
20	51.30	45.70	30.10	22.00	10.10	16.50	29.70	34.80	48.80	59.40	68.10
21	52.50	47.40	31.70	23.30	14.80	14.80	26.70	33.90	48.40	58.10	66.40
22	53.80	48.30	33.10	25.30	16.90	12.30	26.30	33.10	45.80	55.60	65.60
23	54.40	49.20	34.40	26.70	18.60	8.30	25.30	32.70	45.40	55.10	64.30
24	55.20	50.50	36.10	28.40	19.10	0.80	22.50	32.20	44.80	53.80	61.70
25	56.80	51.30	38.10	29.40	21.20	4.10	20.30	32.10	43.00	54.30	61.30
26	57.90	52.10	39.50	31.10	23.30	11.40	19.10	31.00	42.30	52.10	60.00
27	59.10	52.60	40.60	32.20	23.70	14.40	15.80	29.70	41.50	51.70	58.70
28	60.20	53.40	41.20	34.20	25.90	16.90	13.10	28.00	39.80	50.00	57.00
29	61.60	55.10	43.60	35.10	28.00	19.50	7.40	25.30	38.10	49.60	56.10
30	62.40	56.40	44.90	36.10	29.30	20.80	1.10	23.30	36.50	47.90	55.30
31	63.00	58.10	47.40	37.80	31.70	23.70	0.30	21.20	34.40	47.40	53.60
32	63.40	59.00	48.80	38.50	33.40	24.60	4.50	19.50	31.60	44.90	52.70
33	64.60	61.10	50.90	39.80	34.80	26.30	10.60	17.80	28.70	41.20	50.60
34	65.50	62.00	52.10	40.20	35.10	26.30	14.80	14.40	26.70	38.50	48.90
35	66.60	63.70	52.10	41.20	36.80	27.00	16.50	6.30	22.90	36.80	45.90
36	67.30	64.50	52.60	41.90	37.20	28.40	16.90	0.30	19.50	33.80	44.30
37	68.70	65.80	54.30	43.60	38.50	30.10	18.60	0.30	16.90	32.10	42.60
38	70.10	67.50	56.00	44.50	40.60	31.60	20.80	2.00	16.10	32.20	42.20
39	71.60	68.20	57.70	47.10	42.70	34.40	24.20	8.90	13.90	31.40	42.20
40	73.80	71.30	60.70	49.60	45.80	37.30	26.30	13.50	10.90	31.00	42.20
41	74.20	71.60	62.00	50.90	46.20	37.80	27.60	14.80	6.20	27.10	39.70
42	78.50	74.30	63.70	53.80	47.90	40.60	30.40	19.10	0.30	21.60	35.40
43	79.30	76.00	66.20	56.40	50.00	43.60	32.70	22.00	0.70	16.10	31.60
44	81.00	77.20	67.90	59.40	52.60	46.20	35.10	23.30	6.20	14.40	29.50
45	81.00	78.40	68.80	61.10	55.10	47.90	38.10	27.60	8.90	12.20	25.60
46	82.60	79.50	69.20	63.70	58.50	51.30	41.90	32.10	10.10	9.70	23.10
47	84.30	81.30	69.60	64.90	60.20	53.00	44.00	34.40	12.30	5.80	20.90
48	87.40	82.00	70.50	66.60	62.40	53.80	44.50	34.40	14.40	0.70	18.40

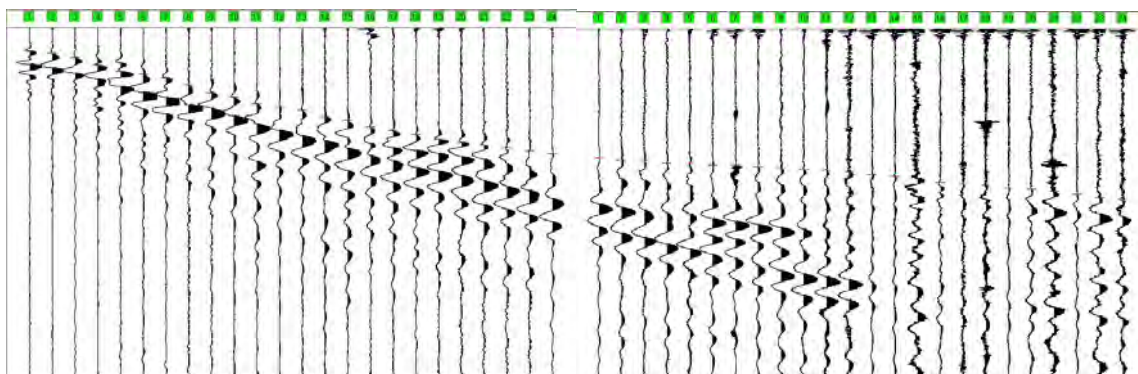


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTERNO SX E1

Catena geofonica 1-24

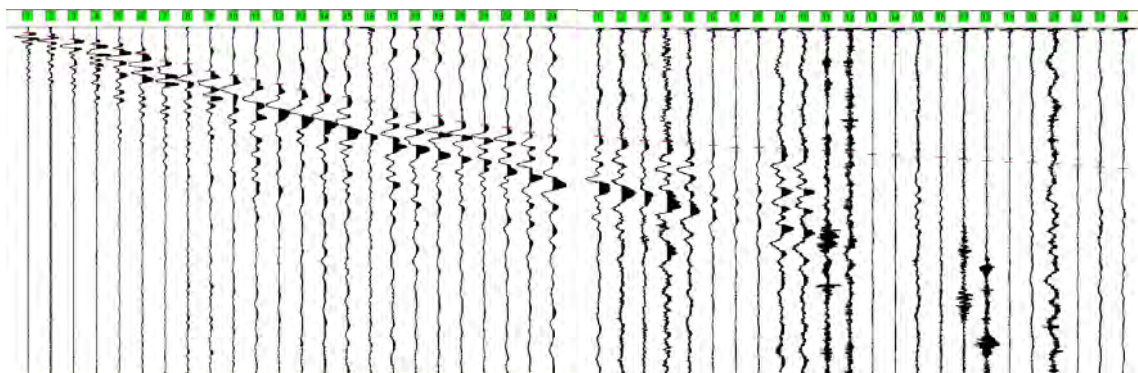
Catena geofonica 25-48



TIRO ESTREMO SX A

Catena geofonica 1-24

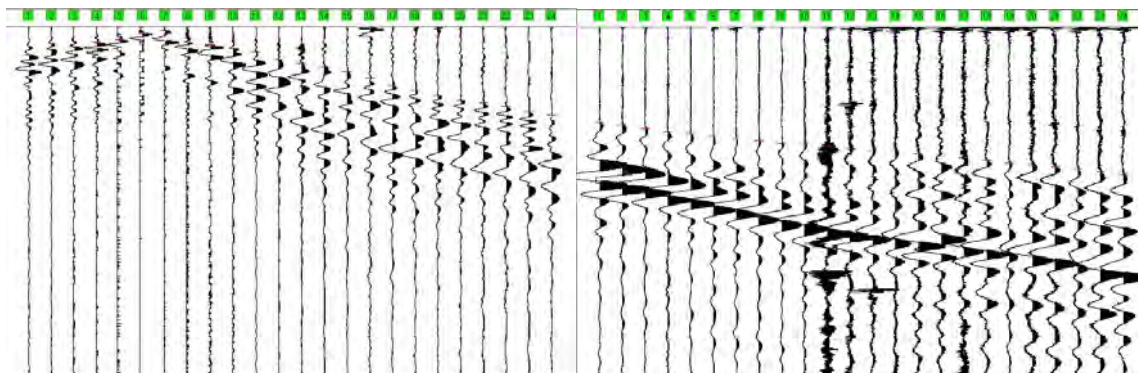
Catena geofonica 25-48



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

Catena geofonica 25-48



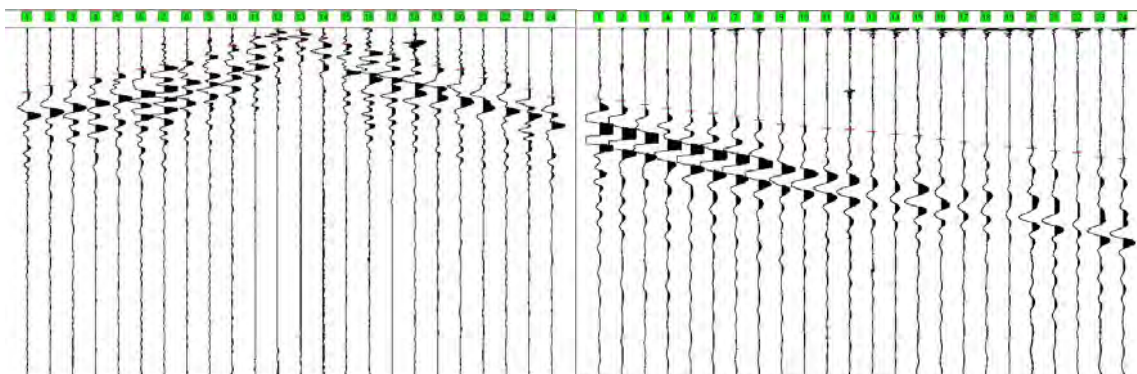


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO SX D2

Catena geofonica 1-24

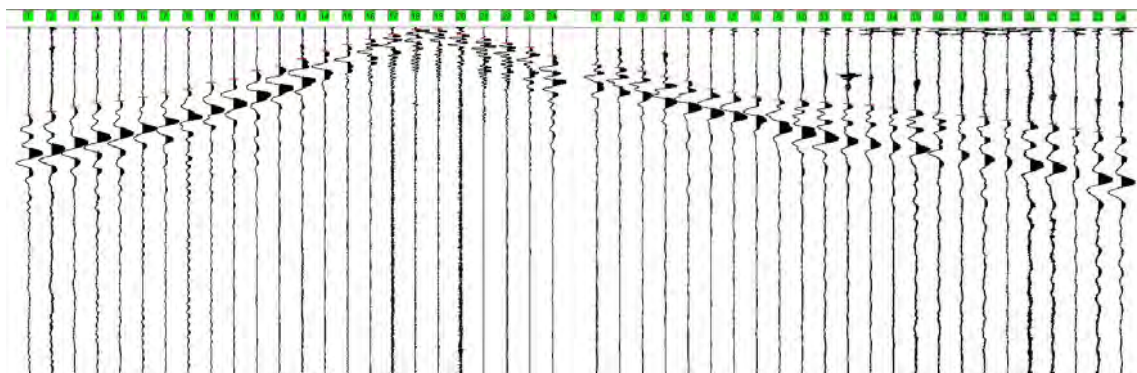
Catena geofonica 25-48



TIRO INTERMEDIO SX D3

Catena geofonica 1-24

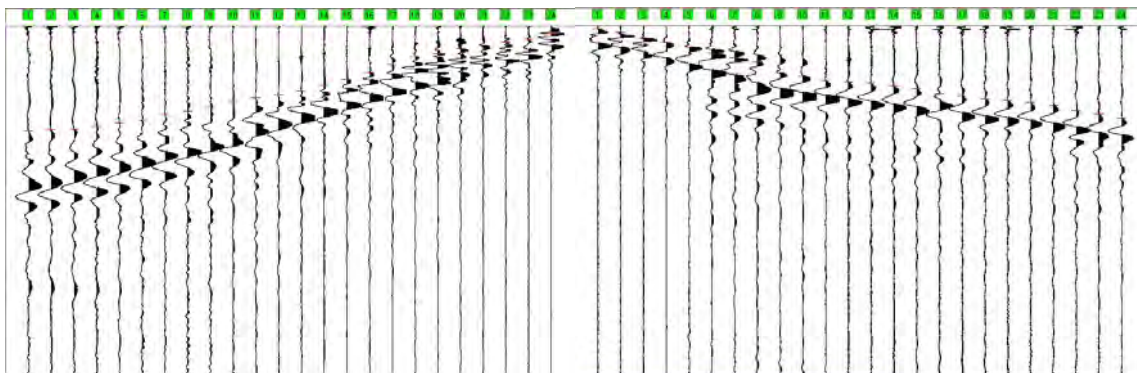
Catena geofonica 25-48



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



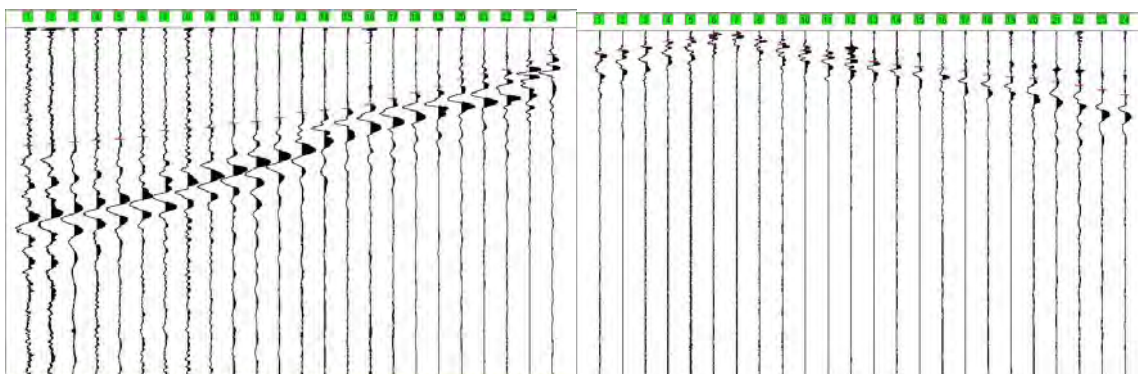


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO INTERMEDIO DX D4

Catena geofonica 1-24

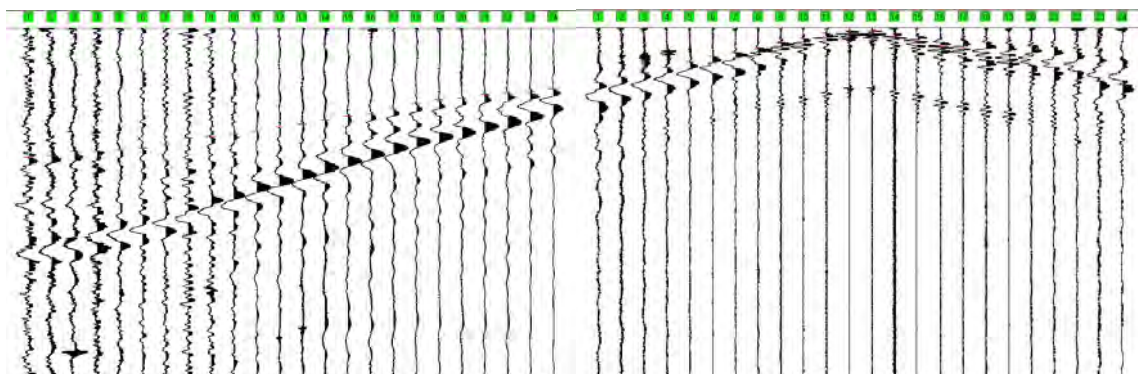
Catena geofonica 25-48



TIRO INTERMEDIO DX D5

Catena geofonica 1-24

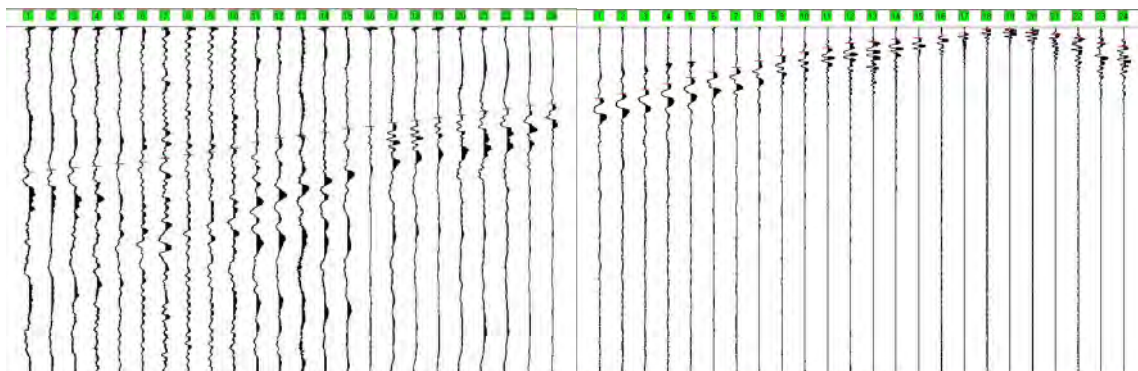
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 1-24

Catena geofonica 25-48



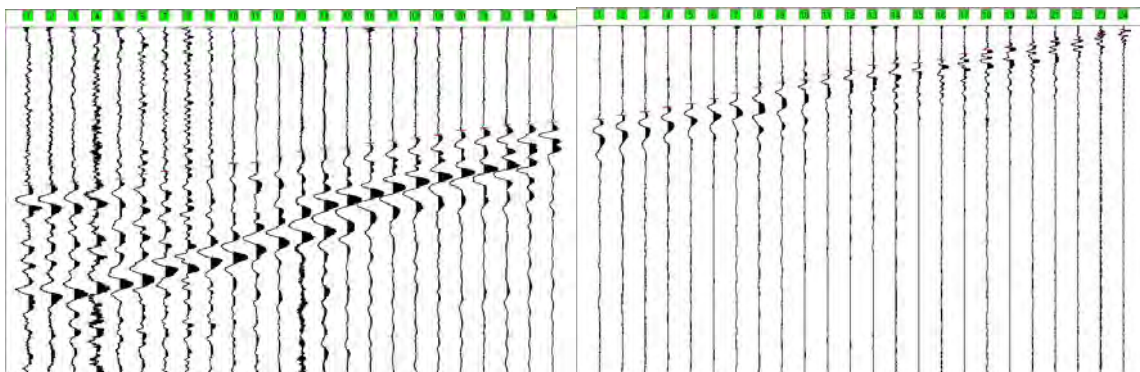


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B

Catena geofonica 1-24

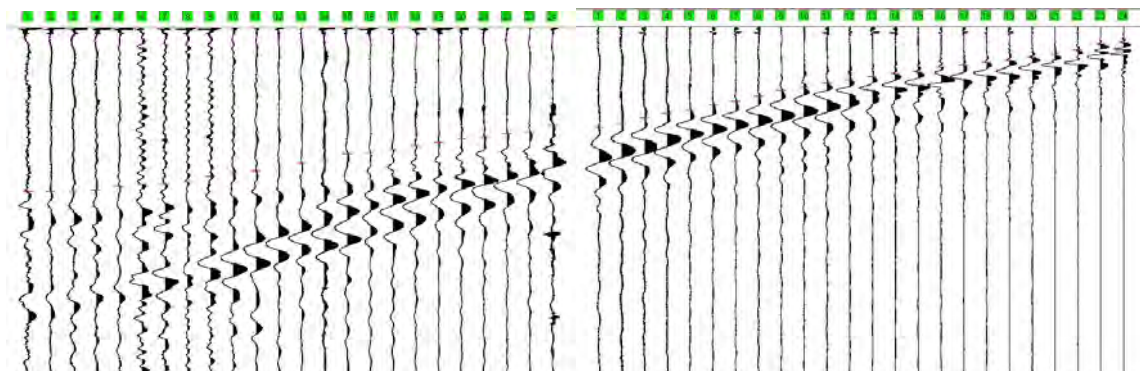
Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 1-24

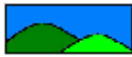
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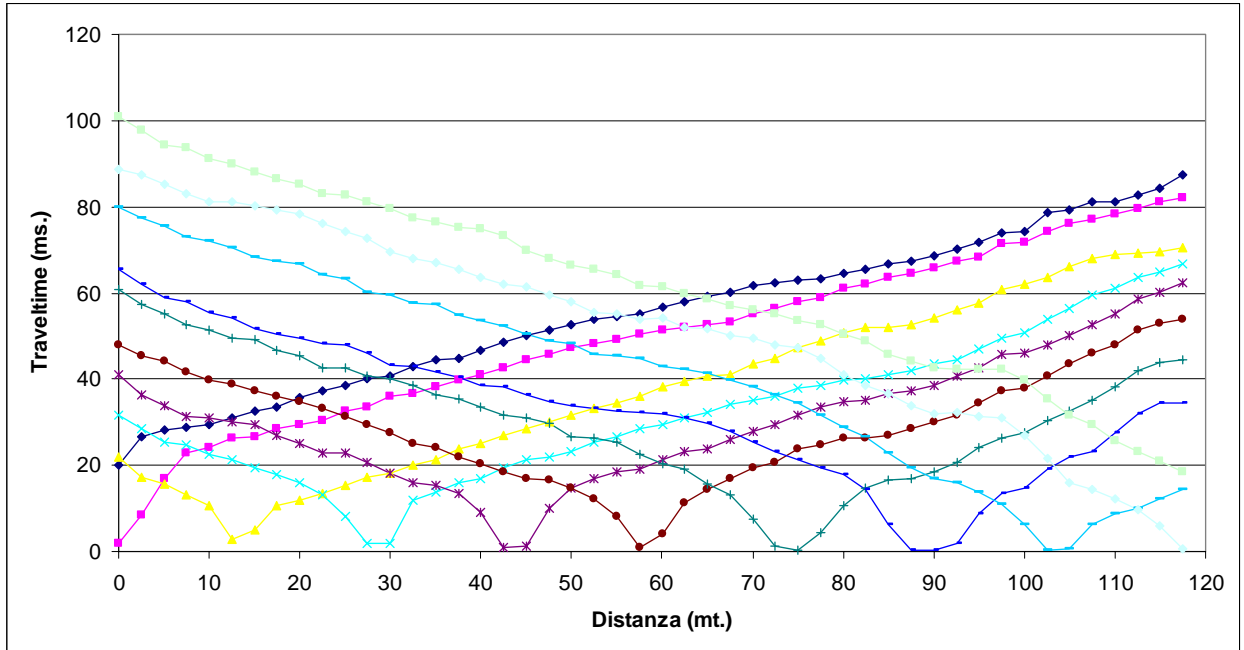


## TEMPI DI PROPAGAZIONE ONDE Sh

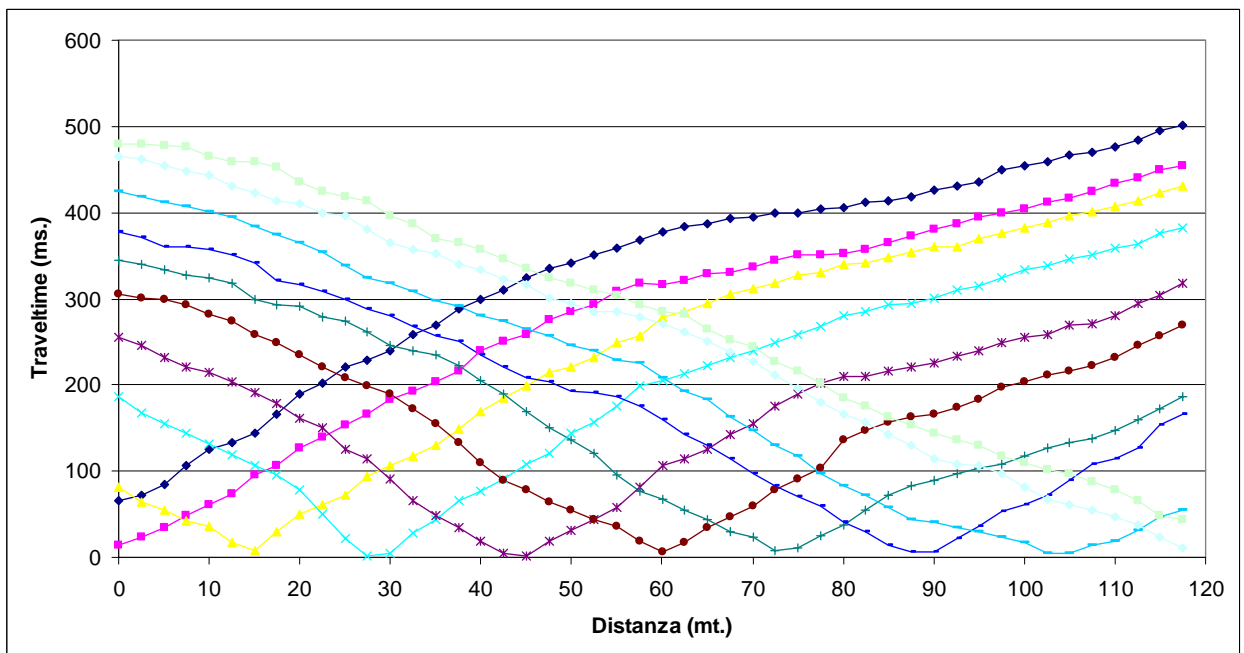
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	65.80	14.80	80.70	186.80	254.80	305.80	344.00	378.00	424.70	465.00	479.90
2	72.20	23.30	63.70	167.60	246.30	301.50	339.70	371.60	418.20	462.90	479.90
3	84.90	33.90	55.20	155.00	231.30	299.40	333.40	361.00	412.00	454.40	477.80
4	106.10	48.80	42.40	144.40	220.80	293.00	327.00	361.00	407.70	448.10	475.70
5	125.30	61.50	36.10	131.50	214.30	282.40	324.90	356.60	401.20	443.80	465.00
6	133.70	74.30	16.90	118.90	203.70	273.90	318.50	350.40	395.00	431.10	458.70
7	144.40	95.50	8.40	106.00	191.10	259.00	299.40	341.90	384.30	422.60	458.70
8	165.60	106.10	29.70	95.50	178.20	248.40	293.00	320.50	373.70	414.10	452.30
9	189.00	127.40	50.90	78.40	161.40	235.70	290.90	316.40	365.10	409.80	435.30
10	201.70	140.10	61.50	50.90	150.60	220.80	278.20	307.90	354.60	399.20	424.70
11	220.80	152.90	72.20	21.20	125.30	208.10	273.90	299.40	337.60	397.10	418.30
12	229.30	165.60	93.40	2.10	114.50	199.60	261.20	288.80	324.90	380.10	414.10
13	239.90	182.60	106.10	4.20	91.30	189.00	246.30	280.30	318.50	365.20	397.10
14	259.00	193.20	116.80	27.60	65.80	172.00	239.80	267.40	307.90	356.70	386.50
15	269.70	203.80	129.50	44.40	48.80	155.00	235.70	256.80	297.30	352.50	369.50
16	288.80	216.60	148.60	65.80	33.80	133.70	222.80	250.60	290.90	339.70	365.20
17	299.40	239.90	169.80	76.40	19.10	110.40	206.00	235.70	280.30	333.40	356.70
18	310.00	250.60	184.70	91.30	4.20	89.10	189.00	220.80	273.90	322.80	346.10
19	324.90	259.00	199.60	108.30	2.10	78.50	169.70	208.10	265.40	316.40	335.50
20	335.50	276.00	214.40	121.00	19.10	63.70	150.60	203.70	256.80	301.50	324.90
21	341.90	284.50	220.80	144.40	31.80	55.20	135.90	193.20	246.30	295.20	318.50
22	350.40	293.00	231.40	157.10	44.40	44.50	121.00	191.10	239.80	284.50	310.00
23	358.90	307.90	248.40	176.20	57.30	36.10	95.50	186.80	229.30	284.50	303.60
24	367.40	318.50	256.90	199.60	80.70	19.10	76.40	176.20	225.10	278.20	293.00
25	378.00	316.40	278.20	206.00	106.10	6.20	67.90	159.10	208.10	271.80	284.50
26	384.30	320.50	284.50	212.30	114.60	16.80	55.20	142.10	193.20	261.20	282.40
27	386.50	329.00	295.20	222.90	125.30	33.80	44.50	129.50	182.60	250.60	265.40
28	392.80	331.30	305.80	231.40	142.20	46.70	29.70	114.50	163.50	237.80	252.70
29	395.00	337.50	312.10	239.90	155.00	59.40	23.30	97.50	146.50	227.20	244.20
30	399.20	344.00	318.50	248.40	176.20	78.50	8.40	82.80	129.50	212.20	227.20
31	399.20	350.40	327.00	259.00	189.00	91.30	10.60	69.90	116.80	195.20	216.60
32	403.50	350.40	331.30	267.50	201.70	104.00	25.40	59.40	97.50	180.50	201.70
33	405.60	352.50	339.70	280.30	210.20	135.90	38.20	40.30	82.80	165.60	184.70
34	412.00	356.60	341.90	284.50	210.20	146.50	55.20	29.70	72.20	157.10	176.20
35	414.10	365.10	348.20	293.00	216.60	157.10	72.20	14.80	57.30	142.10	163.50
36	418.30	373.60	354.60	295.20	220.80	163.50	82.80	6.20	44.40	129.50	152.90
37	426.80	380.10	361.00	301.50	225.10	165.60	89.10	6.20	40.30	114.50	144.40
38	431.10	386.50	361.00	310.00	233.60	174.10	97.50	21.20	33.80	108.30	135.90
39	435.30	395.00	369.50	314.30	239.90	182.60	104.00	36.10	29.70	106.00	129.50
40	450.20	399.20	375.90	324.90	248.40	197.50	108.30	52.90	23.30	97.50	116.80
41	454.40	403.50	382.20	333.40	254.80	203.70	116.80	61.40	16.90	80.70	110.40
42	458.70	412.00	388.60	337.60	259.00	212.20	127.40	72.20	4.20	67.90	101.90
43	467.20	416.20	397.10	346.10	269.70	216.60	133.60	89.00	4.20	61.40	97.60
44	469.30	424.70	401.30	350.40	271.80	222.80	138.00	108.30	14.80	55.20	87.00
45	475.70	433.20	407.70	358.90	280.30	231.30	146.50	114.50	19.10	46.70	78.50
46	484.20	439.60	414.10	363.10	295.20	246.30	159.10	127.40	31.80	38.20	65.80
47	494.80	450.20	422.60	375.90	303.60	256.80	172.00	152.90	46.70	23.30	48.80
48	501.20	454.40	431.10	382.20	318.50	269.70	186.70	165.60	55.20	10.60	44.50



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

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FOGLIO

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IGEA S.A.S.

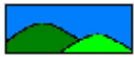
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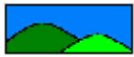
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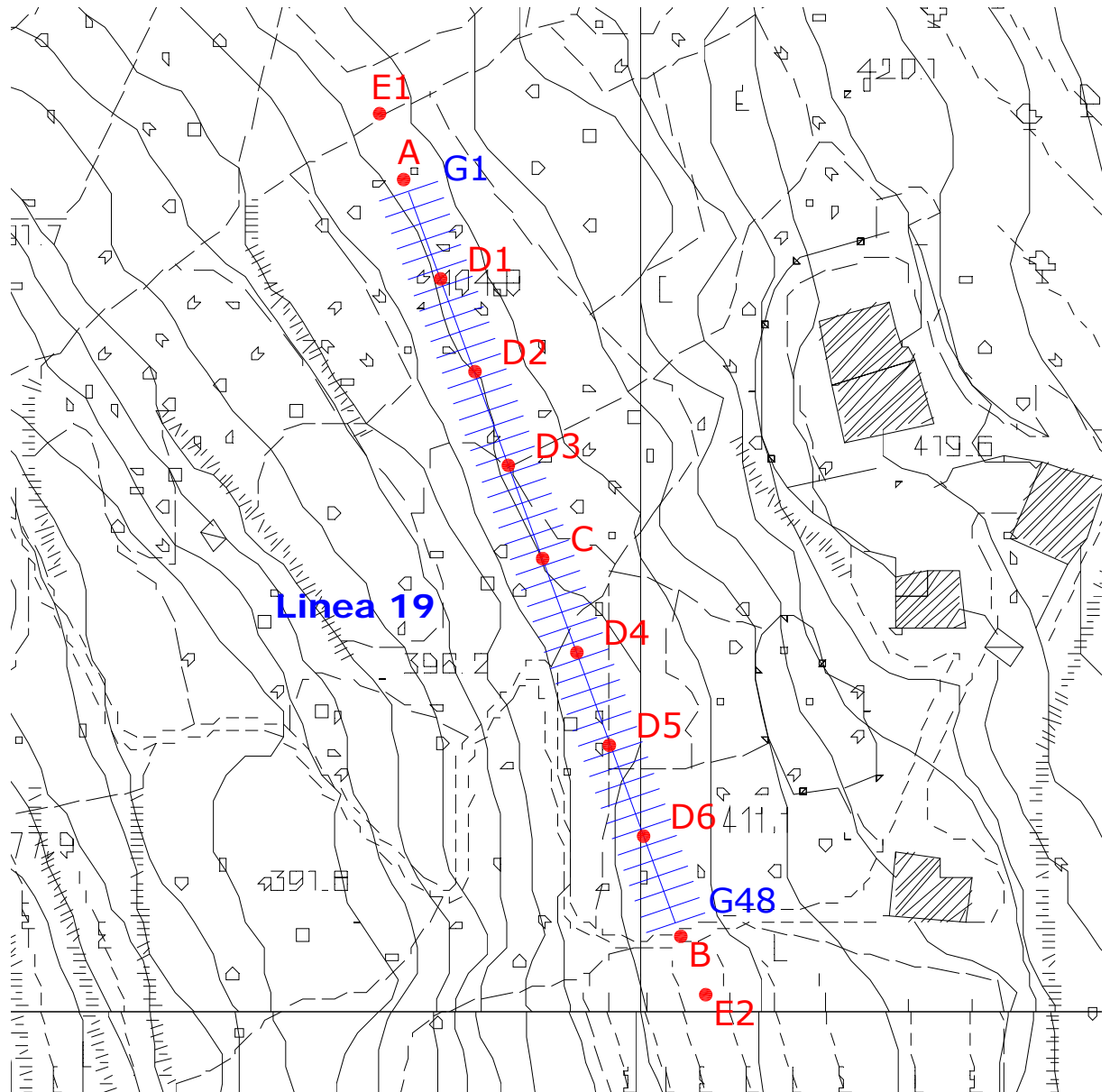


**DOCUMENTAZIONE FOTOGRAFICA LINEA 18**





**LINEA SISMICA 19**



*Ubicazione delle linea - scala 1:1000*



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	406.50
2	2.5	2.5	406.50
3	5	2.5	406.00
4	7.5	2.5	406.00
5	10	2.5	406.00
6	12.5	2.5	406.00
7	15	2.5	406.00
8	17.5	2.5	406.00
9	20	2.5	406.00
10	22.5	2.5	406.00
11	25	2.5	406.00
12	27.5	2.5	406.00
13	30	2.5	406.00
14	32.5	2.5	406.00
15	35	2.5	406.00
16	37.5	2.5	406.00
17	40	2.5	406.00
18	42.5	2.5	406.00
19	45	2.5	406.00
20	47.5	2.5	406.00
21	50	2.5	406.00
22	52.5	2.5	406.00
23	55	2.5	406.00
24	57.5	2.5	406.00
25	60	2.5	406.00
26	62.5	2.5	405.50
27	65	2.5	405.00
28	67.5	2.5	405.00
29	70	2.5	405.00
30	72.5	2.5	405.00
31	75	2.5	405.00
32	77.5	2.5	405.00
33	80	2.5	405.00
34	82.5	2.5	405.00
35	85	2.5	405.00



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	405.00
37	90	2.5	405.50
38	92.5	2.5	405.70
39	95	2.5	406.00
40	97.5	2.5	406.20
41	100	2.5	406.40
42	102.5	2.5	406.50
43	105	2.5	406.80
44	107.5	2.5	407.00
45	110	2.5	407.00
46	112.5	2.5	407.00
47	115	2.5	407.00
48	117.5	2.5	407.00

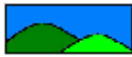
## COORDINATE GAUSS BOAGA DI G1 E G48

<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1649770	4807310
<i>Geofono n. 48 (G48)</i>	1649810	4807200



## PUNTI DI ENERGIZZAZIONE

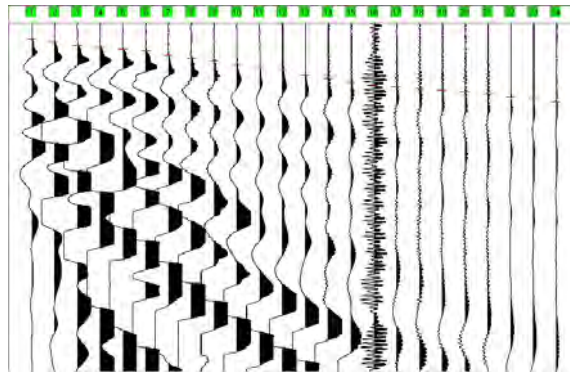
<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	407.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	406.50
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	406.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	406.00
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	406.00
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	406.00
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	405.00
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	405.30
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	406.60
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	407.00
<i>E2</i>	Esterno dx	P 48-10.dta	S 48-10.dta	130	407.00



ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

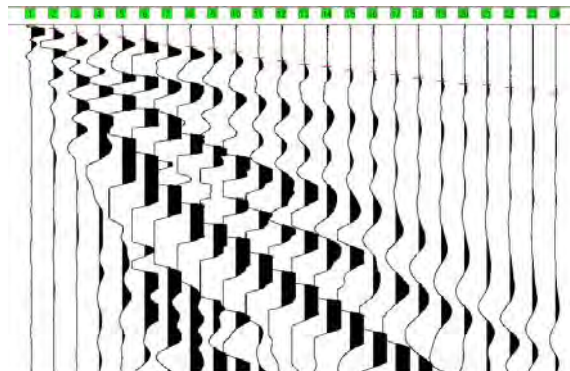
TIRO ESTERNO SX E1

Catena geofonica 1-24



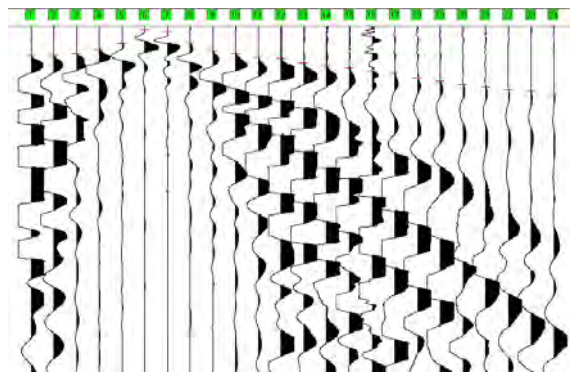
TIRO ESTREMO SX A

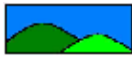
Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

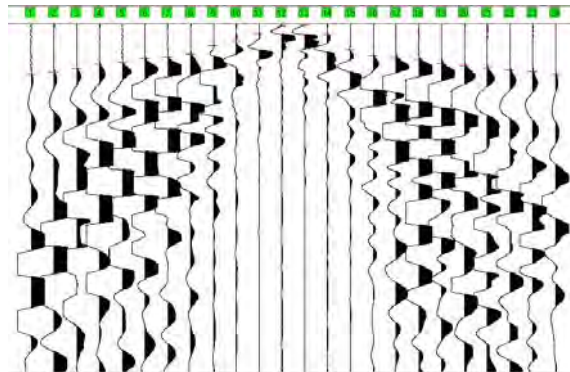




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

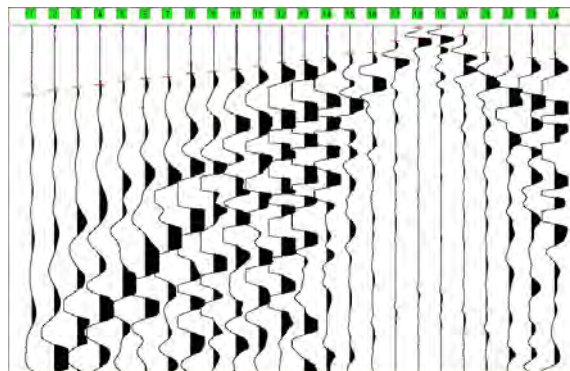
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

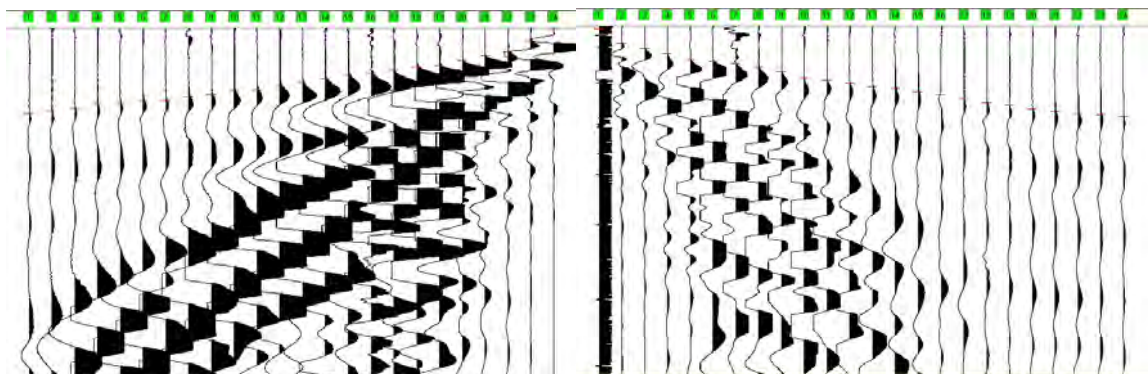
Catena geofonica 1-24



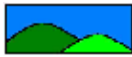
TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48



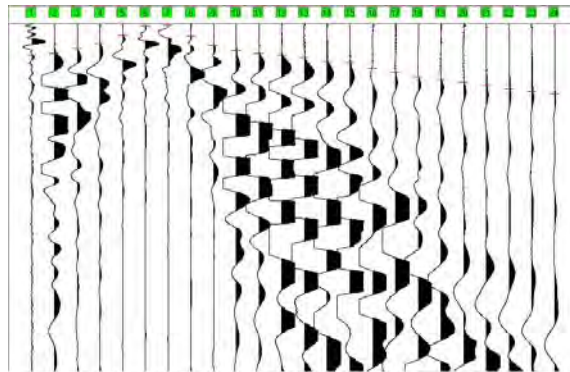




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

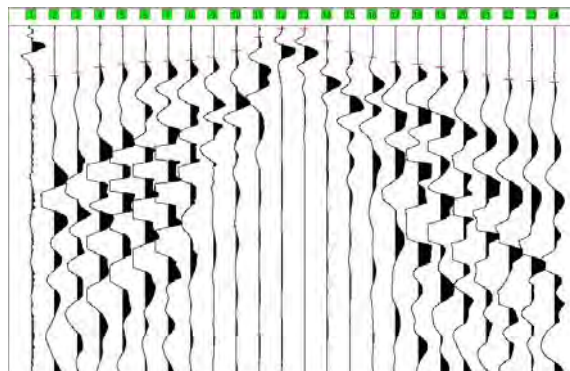
TIRO INTERMEDIO DX D4

Catena geofonica 25-48



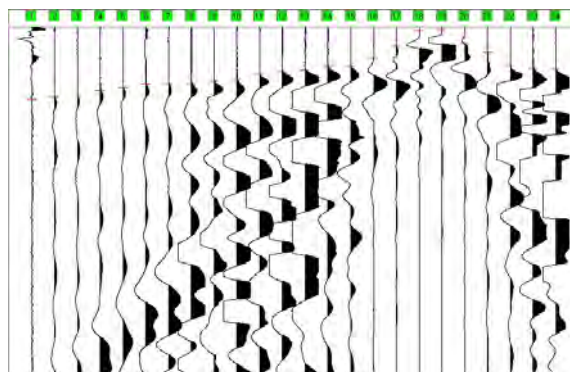
TIRO INTERMEDIO DX D5

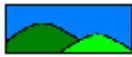
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

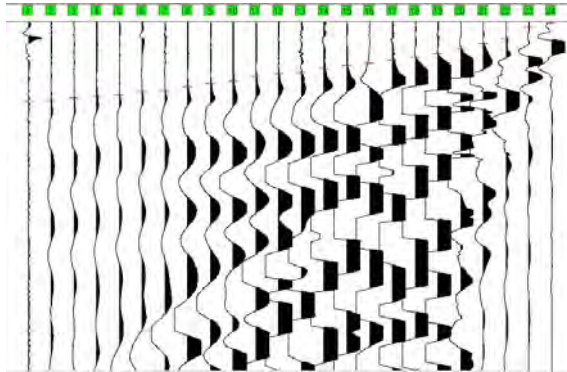




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

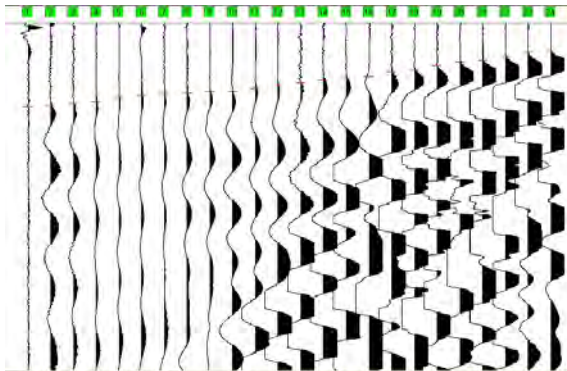
TIRO ESTREMO DX B

Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

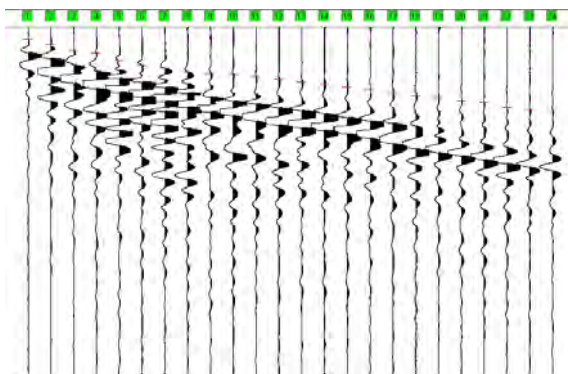
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	8.90	3.00	16.90	29.30	40.30	49.60					
2	11.00	4.60	16.90	28.00	38.20	47.90					
3	12.70	7.10	15.70	25.90	36.50	46.70					
4	14.00	8.00	13.10	23.30	34.80	44.10					
5	14.80	9.70	9.70	22.00	32.70	43.30					
6	15.70	11.00	1.60	19.90	31.00	42.30					
7	18.60	13.90	2.50	19.10	30.10	41.90					
8	20.30	15.20	9.30	17.40	28.00	39.80					
9	21.60	16.50	14.00	12.30	26.70	38.50					
10	23.70	18.60	15.70	9.70	25.40	36.50					
11	25.90	22.10	17.80	5.00	23.70	35.50					
12	26.70	23.80	18.60	0.80	21.60	33.40					
13	30.10	25.90	21.20	0.40	20.30	31.40					
14	32.20	27.20	22.90	5.90	18.60	29.30					
15	34.40	29.30	24.20	14.80	16.10	27.60					
16	36.10	30.10	25.90	18.20	15.70	25.90					
17	36.90	31.70	27.60	19.50	8.90	24.60					
18	38.20	34.00	30.10	20.30	1.20	22.50					
19	39.00	35.70	31.80	22.90	0.40	21.60					
20	39.90	37.40	33.90	24.20	5.50	18.60					
21	41.20	37.80	35.20	25.40	15.70	15.60					
22	42.80	39.50	36.90	26.70	18.20	13.50					
23	44.10	41.20	37.80	27.60	18.60	7.10					
24	45.80	42.90	39.50	29.30	19.50	0.30					
25		44.08				1.20	17.80	30.50	42.00	46.70	48.80
26		45.52				9.70	16.90	28.80	40.70	45.80	47.90
27		46.96				12.70	14.00	27.10	40.30	44.10	47.10
28		48.40				15.70	11.00	23.70	36.90	43.70	45.80
29		49.84				19.10	6.30	21.60	35.20	42.40	43.30
30		51.28				20.30	0.80	20.80	33.10	40.70	42.40
31		52.72				21.60	0.40	20.30	32.70	39.90	41.20
32		54.16				23.70	6.70	19.90	32.70	37.80	40.70
33		55.60				26.30	12.30	17.80	31.40	35.60	39.90
34		57.04				30.10	15.20	14.00	30.50	34.40	39.90
35		58.48				31.40	16.90	6.30	27.60	31.40	38.20
36		59.92				33.10	17.80	1.20	25.90	30.10	36.50
37		61.36				35.20	19.50	1.20	25.00	29.30	34.80
38		62.80				36.50	21.60	8.90	22.90	27.10	33.10
39		64.24				38.20	22.50	14.80	22.90	25.00	31.80
40		65.68				39.90	25.90	17.80	17.80	23.70	31.00
41		67.12				42.40	28.00	20.80	11.00	22.00	28.40
42		68.56				44.50	30.50	22.00	1.60	20.30	27.60
43		70.00				45.80	32.20	23.70	0.80	18.20	24.60
44		71.44				48.40	33.90	26.30	9.30	15.70	22.50
45		72.88				49.60	36.10	28.40	14.40	12.30	21.60
46		74.32				50.90	37.80	31.00	22.00	9.70	19.10
47		75.76				51.80	39.50	31.80	23.70	2.90	16.90
48		77.20				52.60	40.70	32.70	24.60	0.40	16.10



ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

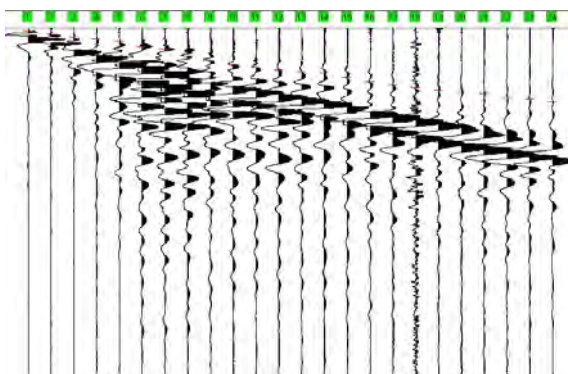
TIRO ESTERNO SX E1

Catena geofonica 1-24



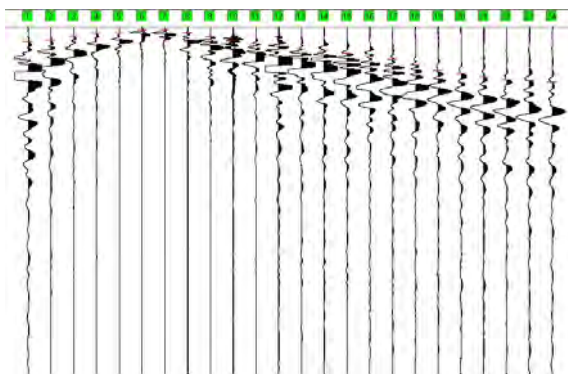
TIRO ESTREMO SX A

Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

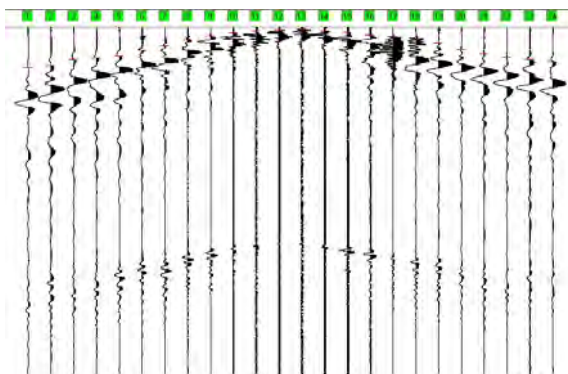




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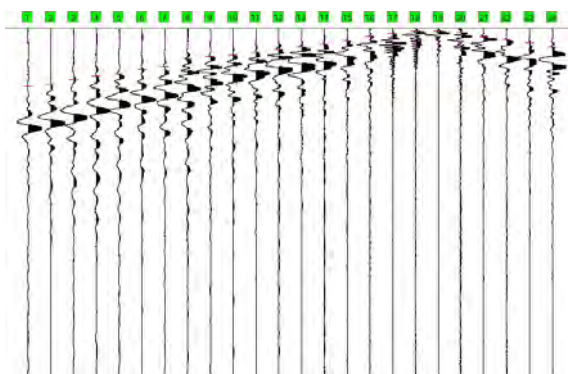
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

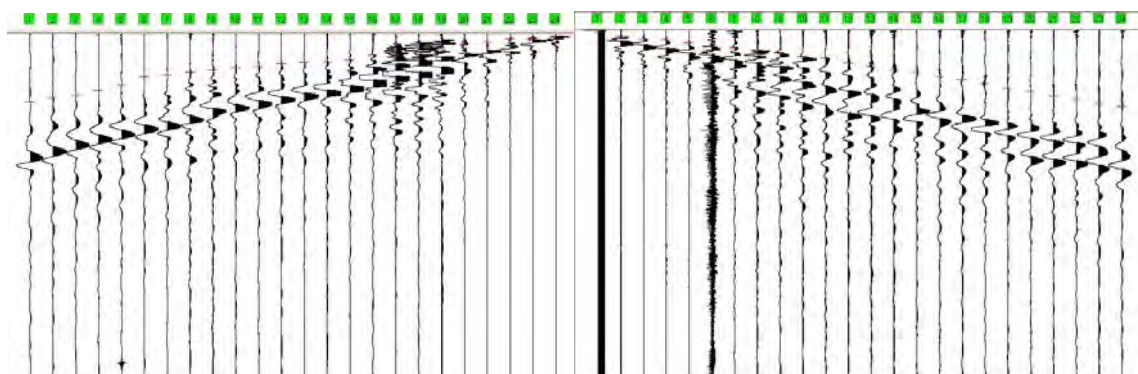
Catena geofonica 1-24

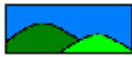


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48

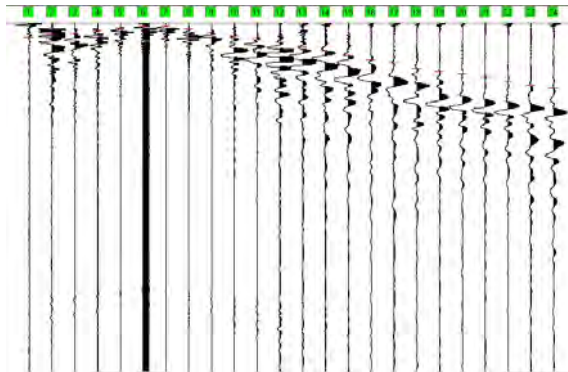




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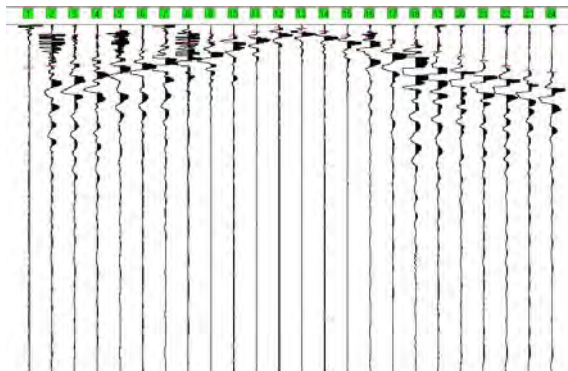
TIRO INTERMEDIO DX D4

Catena geofonica 25-48



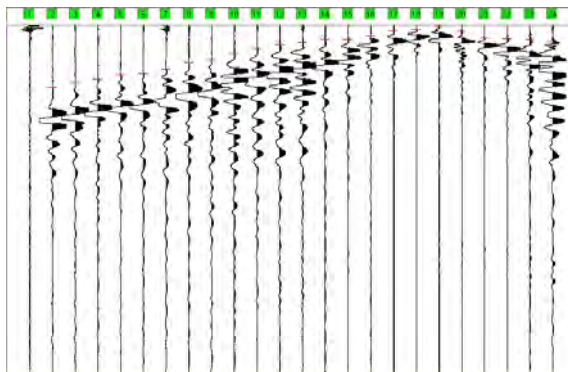
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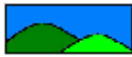
Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

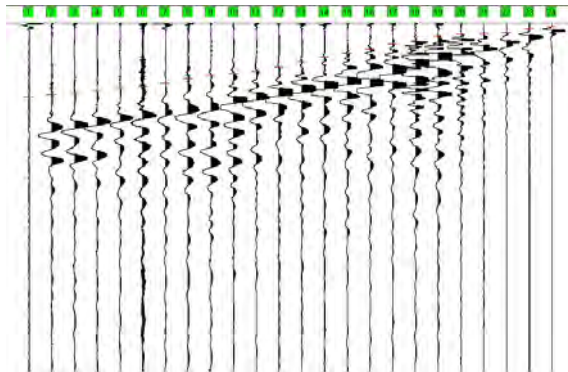




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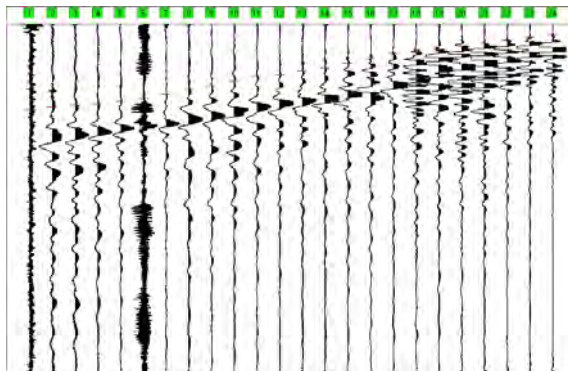
TIRO ESTREMO DX B

Catena geofonica 25-48



TIRO ESTERNO DX E2

Catena geofonica 25-48

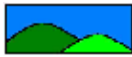




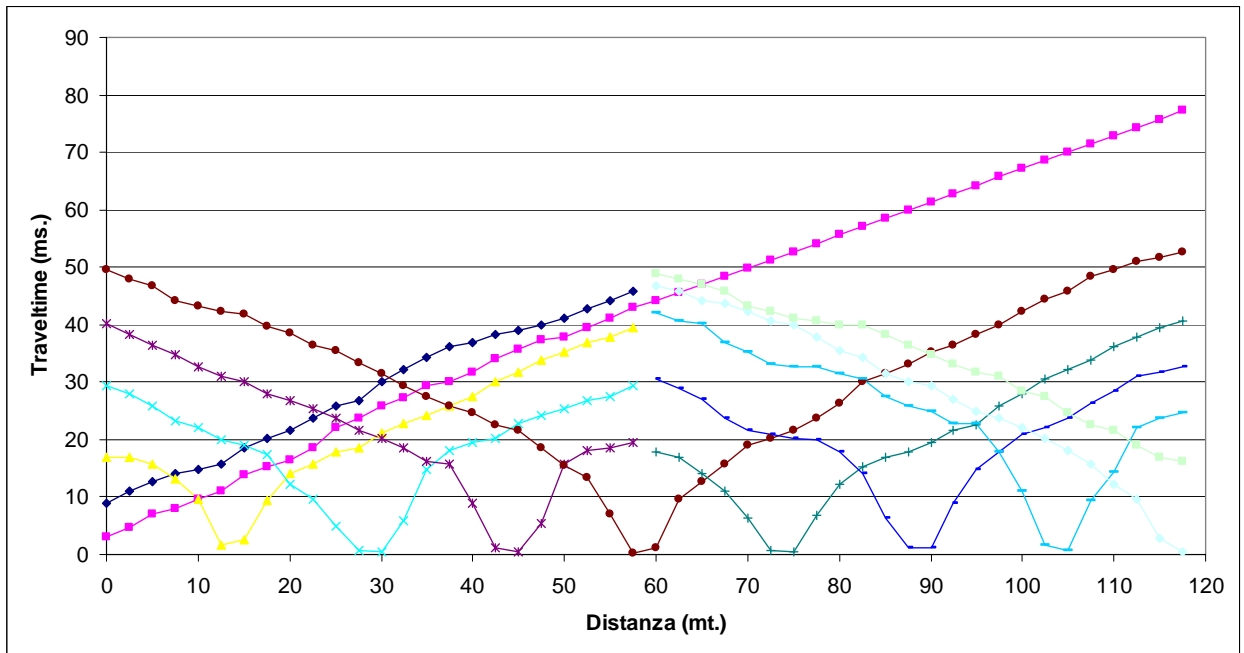
## TEMPI DI PROPAGAZIONE ONDE Sh

geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	33.80	6.20	40.30	116.80	167.70	199.60					
2	48.80	16.80	36.10	110.40	161.40	186.70					
3	65.80	23.30	23.30	93.40	148.60	178.20					
4	74.30	29.70	16.90	89.10	138.00	165.60					
5	95.50	36.10	12.70	82.80	131.60	148.60					
6	110.40	52.90	6.20	65.80	118.90	125.30					
7	118.90	59.40	6.20	53.00	110.40	121.00					
8	129.50	80.70	14.80	36.10	86.90	112.50					
9	133.60	93.40	25.40	23.30	80.70	106.10					
10	138.00	106.00	36.10	14.80	76.40	99.80					
11	144.40	114.50	46.70	8.40	67.90	95.50					
12	150.60	121.00	55.20	6.20	59.40	87.00					
13	159.10	125.30	61.50	4.20	53.00	82.80					
14	163.50	129.50	65.80	8.40	44.50	80.70					
15	174.10	142.20	74.30	12.70	33.90	76.40					
16	182.60	155.00	84.90	21.20	21.20	61.40					
17	191.10	163.50	93.40	25.40	12.70	61.40					
18	199.60	172.00	108.30	33.90	6.20	52.90					
19	206.00	180.50	125.30	44.50	6.20	44.40					
20	214.40	186.80	133.70	63.70	10.60	31.80					
21	218.70	191.10	144.40	76.40	23.30	25.30					
22	233.60	201.70	152.90	87.00	29.70	14.80					
23	239.90	206.00	155.00	93.40	40.30	12.70					
24	244.20	214.40	159.20	99.80	53.00	6.20					
25		221.85				6.20	40.30	123.10	186.70	214.40	250.60
26		229.27				19.10	31.80	118.90	180.50	208.10	242.10
27		236.69				25.30	27.60	112.50	167.60	201.70	235.70
28		244.11				25.30	19.10	104.00	157.10	197.50	231.40
29		251.53				36.10	12.70	95.50	144.40	191.10	225.10
30		258.95				46.70	6.20	74.30	140.10	184.70	216.60
31		266.37				50.90	6.20	61.50	127.40	174.10	203.80
32		273.79				57.30	14.80	53.00	108.30	161.40	191.10
33		281.21				65.80	27.60	48.80	99.80	152.90	178.30
34		288.63				76.40	36.10	29.70	80.70	146.50	163.50
35		296.05				80.70	42.30	19.10	65.80	140.10	152.90
36		303.47				95.50	55.20	6.20	55.20	127.40	146.50
37		310.89				106.00	67.90	8.30	48.80	110.40	135.90
38		318.31				116.80	80.70	16.90	40.30	97.50	127.40
39		325.73				123.00	93.40	29.70	40.30	86.90	112.50
40		333.15				135.90	106.00	36.10	29.70	74.30	99.80
41		340.57				144.40	114.50	42.40	14.80	59.40	84.90
42		347.99				157.10	131.50	57.30	10.60	50.90	78.40
43		355.41				169.80	140.10	76.40	2.10	36.10	72.20
44		362.83				180.50	146.50	89.10	16.90	29.70	61.40
45		370.25				191.10	157.10	104.00	36.10	27.60	55.20
46		377.67				203.80	167.60	118.90	38.20	25.30	46.70
47		385.09				214.40	180.50	131.60	40.30	14.80	36.10
48		392.51				222.90	189.00	138.00	46.70	8.30	27.60

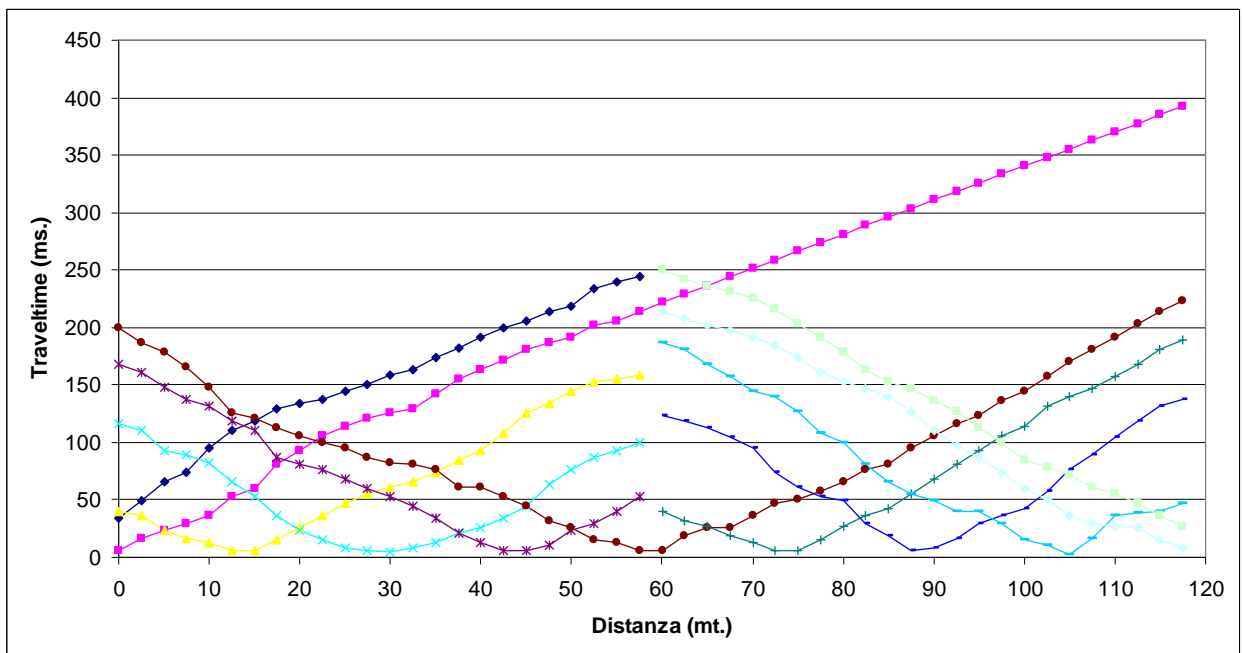




### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh





IGEA S.A.S.

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICADOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 297



IGEA S.A.S.

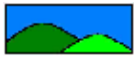
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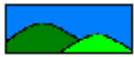
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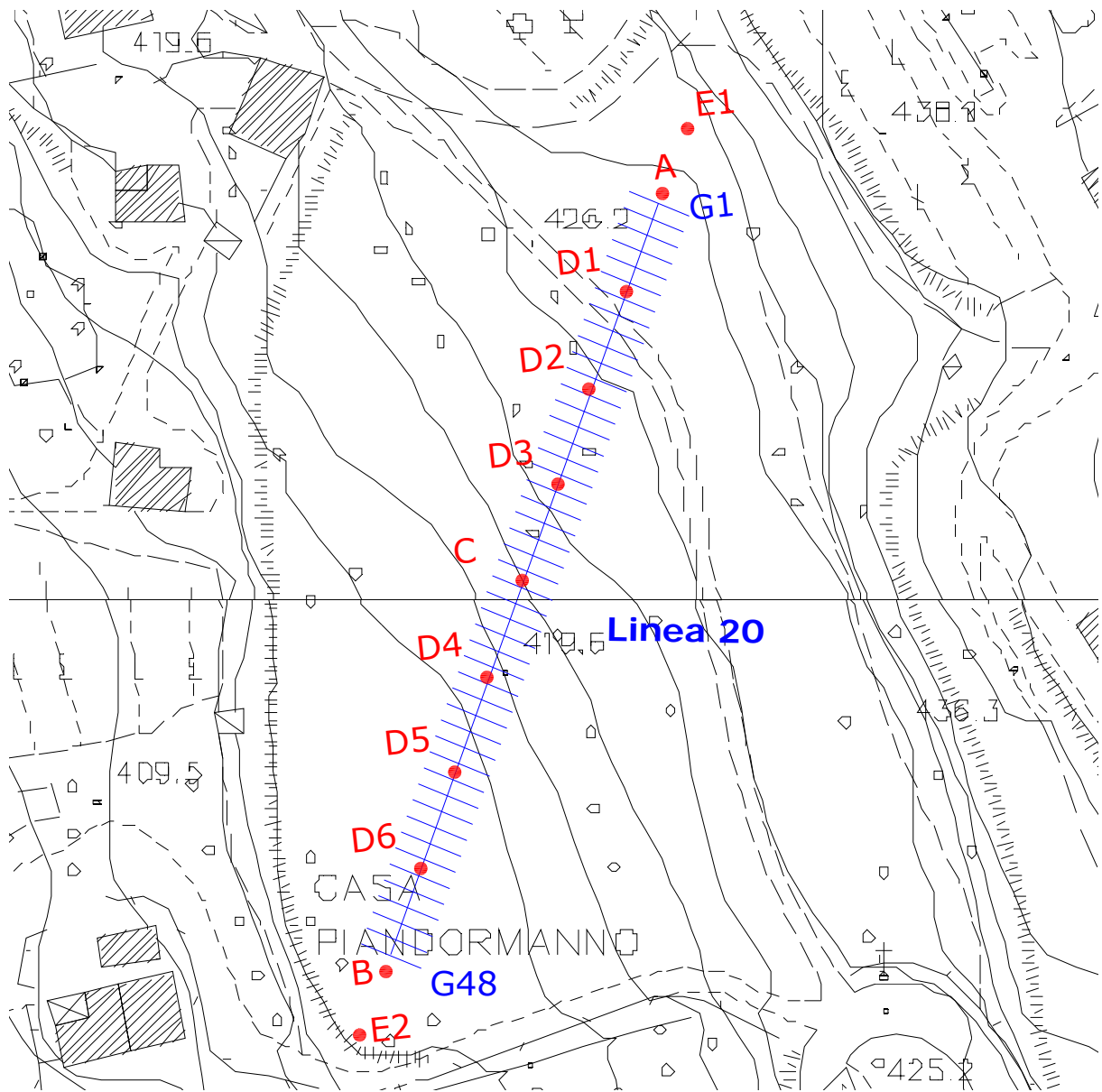


**DOCUMENTAZIONE FOTOGRAFICA LINEA 19**





**LINEA SISMICA 20**



Ubicazione delle linea - scala 1:1000



## SCHEMA DELLA LINEA DI ACQUISIZIONE

<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
1	0	0	427.70
2	2.5	2.5	427.60
3	5	2.5	427.50
4	7.5	2.5	427.40
5	10	2.5	427.30
6	12.5	2.5	427.20
7	15	2.5	426.80
8	17.5	2.5	426.60
9	20	2.5	426.40
10	22.5	2.5	426.30
11	25	2.5	426.20
12	27.5	2.5	426.00
13	30	2.5	425.40
14	32.5	2.5	425.20
15	35	2.5	425.00
16	37.5	2.5	424.80
17	40	2.5	424.60
18	42.5	2.5	424.40
19	45	2.5	424.00
20	47.5	2.5	423.70
21	50	2.5	423.50
22	52.5	2.5	423.00
23	55	2.5	422.70
24	57.5	2.5	422.50
25	60	2.5	421.70
26	62.5	2.5	421.50
27	65	2.5	421.00
28	67.5	2.5	420.50
29	70	2.5	420.00
30	72.5	2.5	419.70
31	75	2.5	419.00
32	77.5	2.5	418.70
33	80	2.5	418.50
34	82.5	2.5	418.00
35	85	2.5	417.90



<i>Geofono n.</i>	<i>Distanza progressiva (m)</i>	<i>Distanza parziale (m)</i>	<i>Quota (m)</i>
36	87.5	2.5	417.80
37	90	2.5	417.60
38	92.5	2.5	417.50
39	95	2.5	417.40
40	97.5	2.5	417.30
41	100	2.5	417.20
42	102.5	2.5	417.10
43	105	2.5	416.90
44	107.5	2.5	416.80
45	110	2.5	416.70
46	112.5	2.5	416.60
47	115	2.5	416.50
48	117.5	2.5	416.40

## COORDINATE GAUSS BOAGA DI G1 E G48

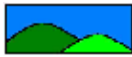
<i>Coordinate</i>	<i>X (m)</i>	<i>Y (m)</i>
<i>Geofono n. 1 (G1)</i>	1649920	4807270
<i>Geofono n. 48 (G48)</i>	1649870	4807160



## PUNTI DI ENERGIZZAZIONE

<i>Sparo</i>		<i>Onde P</i>	<i>Onde SH</i>	<i>Posizione dallo sparso A (m)</i>	<i>Quota (m)</i>
<i>E1</i>	Esterno sx	P 1-10.dta	S 1-10.dta	-10	429.00
<i>A</i>	Estremo sx	P 1.dta	S 1.dta	0	427.80
<i>D1</i>	Intermedio sx	P 6-7.dta	S 6-7.dta	15	427.00
<i>D2</i>	Intermedio sx	P 12-13.dta	S 12-13.dta	30	425.60
<i>D3</i>	Intermedio sx	P 18-19.dta	S 18-19.dta	45	424.20
<i>C</i>	Centrale	P 24-25.dta	S 24-25.dta	60	422.00
<i>D4</i>	Intermedio dx	P 30-31.dta	S 30-31.dta	75	419.50
<i>D5</i>	Intermedio dx	P 36-37.dta	S 36-37.dta	90	417.70
<i>D6</i>	Intermedio dx	P 42-43.dta	S 42-43.dta	105	417.00
<i>B</i>	Estremo dx	P 48.dta	S 48.dta	120	416.30
<i>E2</i>	Esterno dx	P 48-10.dta	S 48-10.dta	130	416.00

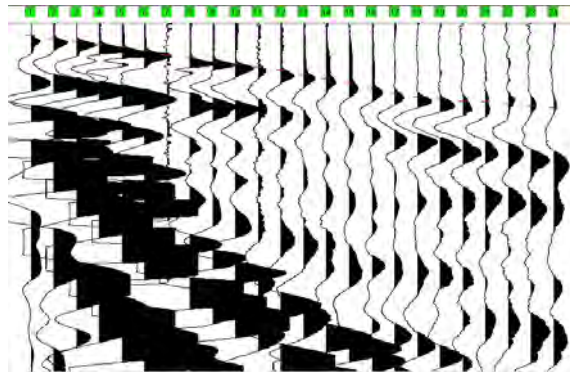




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

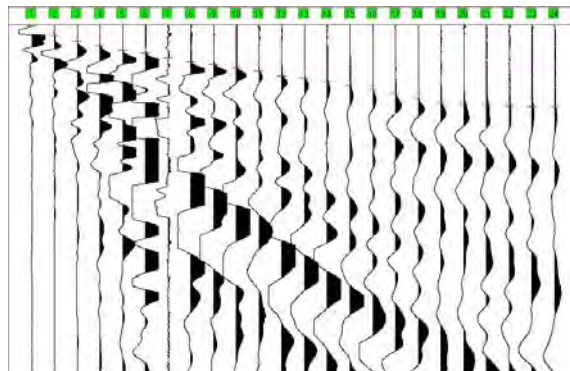
TIRO ESTERNO SX E1

Catena geofonica 1-24



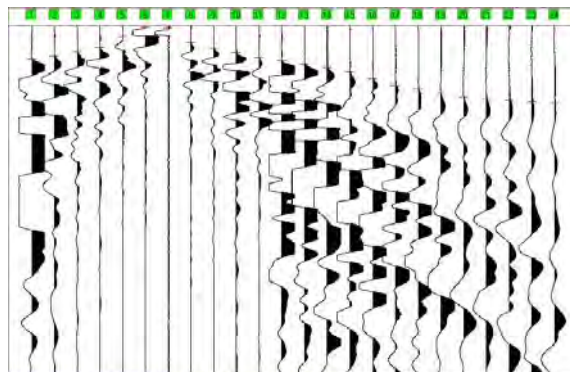
TIRO ESTREMO SX A

Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

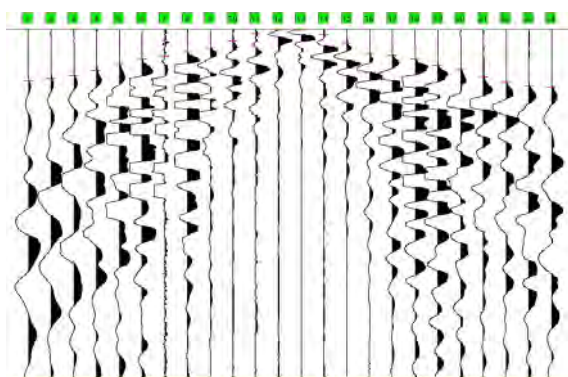




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

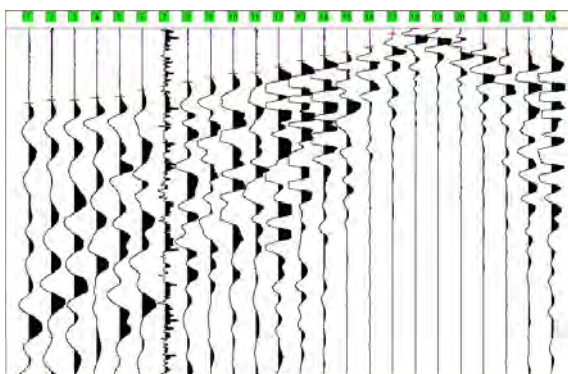
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

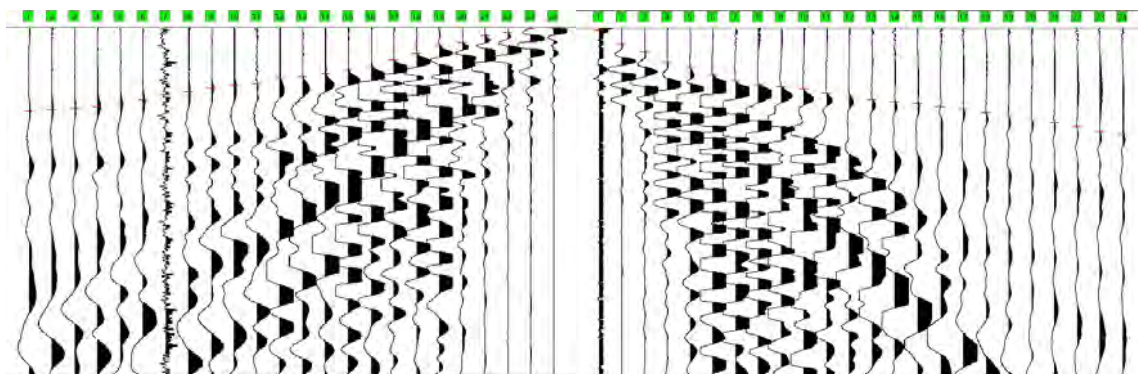
Catena geofonica 1-24

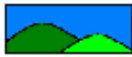


TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48

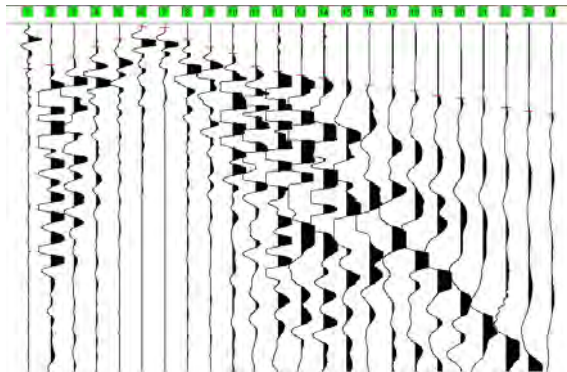




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

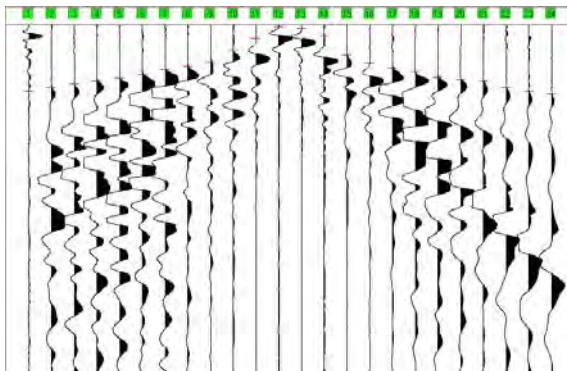
TIRO INTERMEDIO DX D4

Catena geofonica 25-48



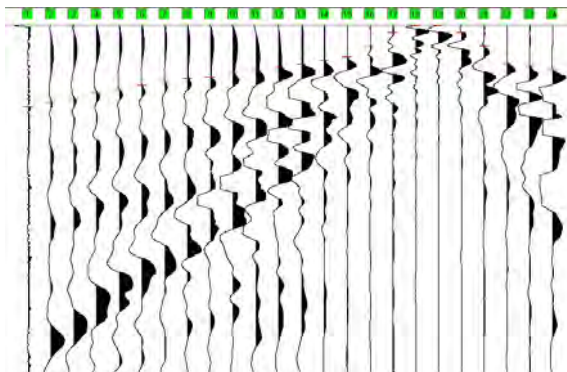
TIRO INTERMEDIO DX D5

Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

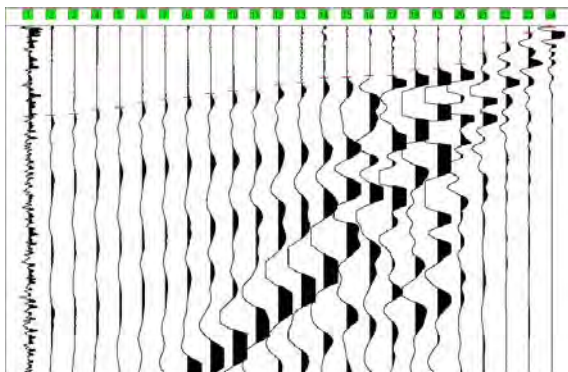




ONDE P: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

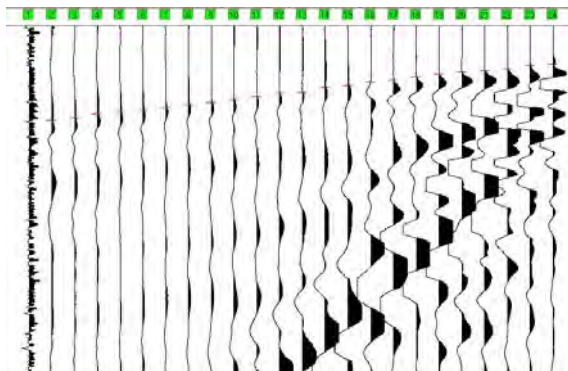
TIRO ESTREMO DX B

Catena geofonica 25-48



TIRO ESTERNO DX E2

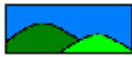
Catena geofonica 25-48





## TEMPI DI PROPAGAZIONE ONDE P

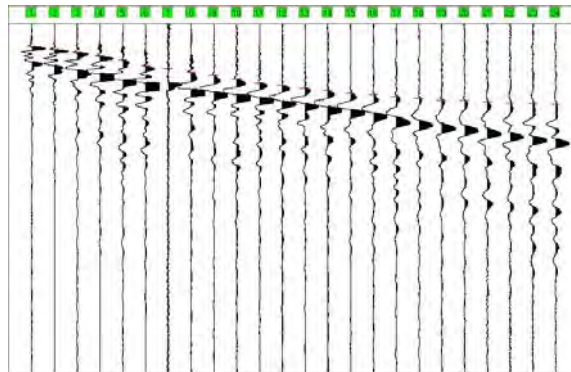
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	11.70	0.30	19.10	29.70	43.70	48.80					
2	13.40	5.80	17.40	28.40	42.00	47.90					
3	15.10	9.20	14.80	26.70	42.00	47.10					
4	17.20	11.80	12.30	23.70	40.70	46.20					
5	18.50	14.40	5.90	19.50	39.90	44.50					
6	20.60	16.10	0.40	16.90	36.50	42.00					
7	23.20	19.10	0.80	15.20	33.90	39.00					
8	24.90	21.20	9.30	12.70	31.40	37.30					
9	27.00	22.90	12.70	10.60	28.80	35.20					
10	28.70	24.60	15.20	6.30	26.30	33.50					
11	30.30	26.70	18.20	2.10	25.90	32.70					
12	32.00	29.70	19.90	0.00	22.50	29.30					
13	34.70	30.40	22.00	0.00	18.60	28.40					
14	37.10	33.10	24.20	2.50	15.70	26.70					
15	39.40	35.20	26.70	7.60	14.00	25.00					
16	42.20	37.30	30.50	13.50	11.00	22.50					
17	45.20	39.90	34.80	14.80	2.90	18.60					
18	47.70	42.80	36.90	16.90	0.00	14.80					
19	49.00	45.00	39.00	20.80	0.00	10.50					
20	50.30	46.80	41.60	23.30	5.00	8.40					
21	50.80	47.60	42.80	27.60	8.40	4.10					
22	52.10	48.10	43.30	30.50	12.30	2.40					
23	53.40	49.50	44.10	32.70	14.00	0.90					
24	54.20	50.90	45.00	33.50	16.10	0.00					
25		52.20				0.30	26.30	38.60	47.50	53.00	55.60
26		53.60				8.40	24.20	36.50	45.00	52.20	55.20
27		54.97				13.50	19.90	34.40	43.30	51.30	53.50
28		56.34				19.90	13.10	32.70	39.50	48.80	51.30
29		57.71				22.90	8.40	31.00	38.20	47.50	50.50
30		59.08				26.70	1.60	28.80	34.80	45.00	48.80
31		60.45				30.40	2.10	25.90	32.70	42.80	47.50
32		61.82				32.70	9.30	24.20	31.00	41.60	45.80
33		63.19				33.80	14.00	21.60	30.10	39.50	44.50
34		64.56				35.10	17.40	14.80	27.60	37.80	42.80
35		65.93				37.80	25.00	7.60	25.90	37.30	41.20
36		67.30				39.50	28.00	0.80	24.60	34.40	39.00
37		68.67				41.50	30.10	1.60	22.50	33.10	38.60
38		70.04				42.70	31.80	5.90	20.30	30.10	35.60
39		71.41				43.60	33.50	17.40	18.20	29.70	34.80
40		72.78				45.70	35.60	22.00	12.30	28.80	32.70
41		74.15				47.00	37.30	25.00	3.80	28.80	31.40
42		75.52				49.20	39.50	27.10	0.00	25.40	29.70
43		76.89				51.80	42.00	30.50	0.00	24.60	28.00
44		78.26				53.00	43.70	31.80	3.80	22.00	26.70
45		79.63				55.20	45.00	32.70	11.80	15.70	25.90
46		81.00				57.30	49.20	36.50	22.00	9.70	24.60
47		82.37				60.30	51.30	38.60	23.70	3.80	22.90
48		83.74				61.50	53.00	40.30	25.90	0.40	22.00



ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

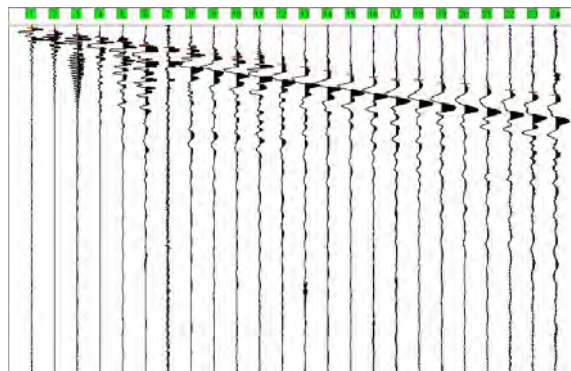
TIRO ESTERNO SX E1

Catena geofonica 1-24



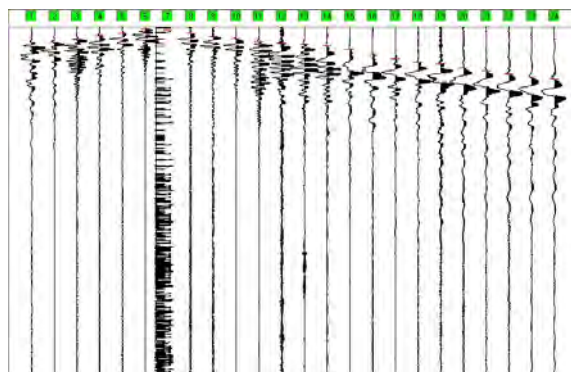
TIRO ESTREMO SX A

Catena geofonica 1-24



TIRO INTERMEDIO SX D1

Catena geofonica 1-24

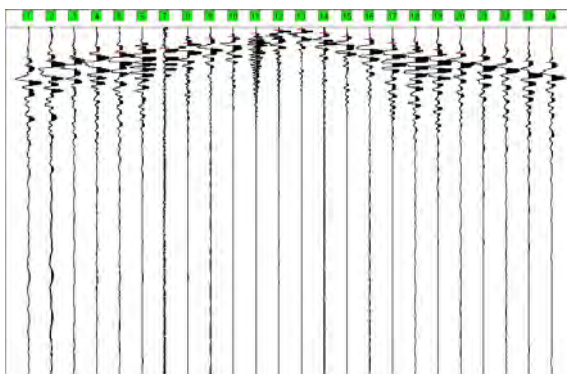




ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

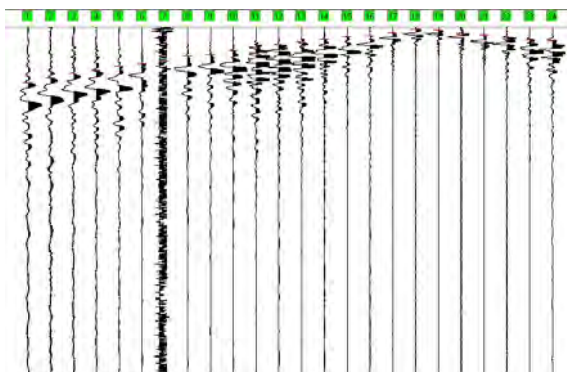
TIRO INTERMEDIO SX D2

Catena geofonica 1-24



TIRO INTERMEDIO SX D3

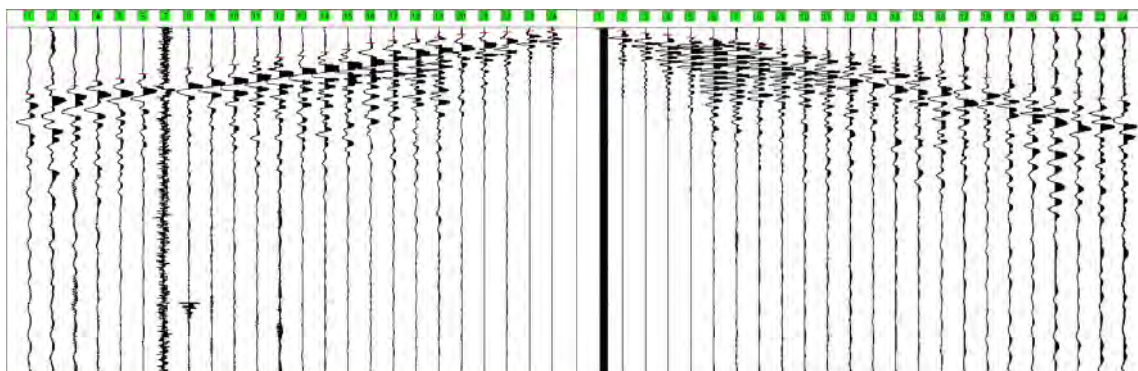
Catena geofonica 1-24



TIRO CENTRALE C

Catena geofonica 1-24

Catena geofonica 25-48

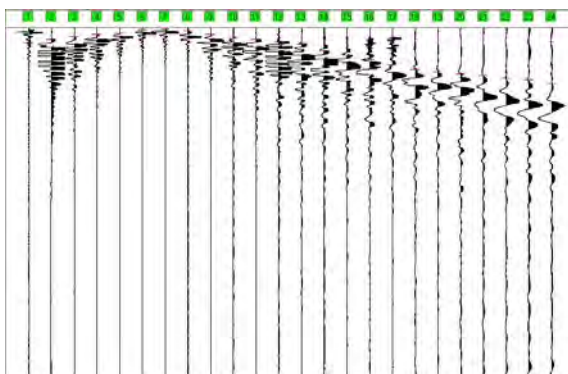




ONDE Sh: STAMPA Istantanea DELLE REGISTRAZIONI DI CAMPAGNA

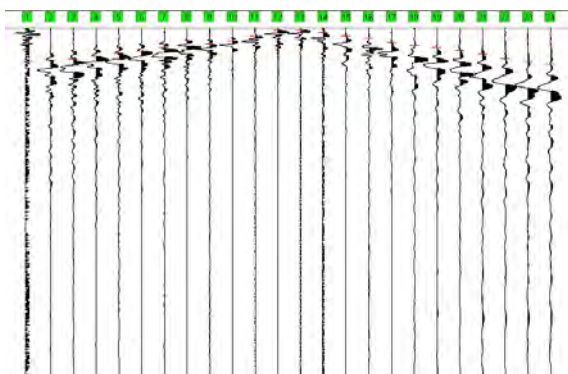
TIRO INTERMEDIO DX D4

Catena geofonica 25-48



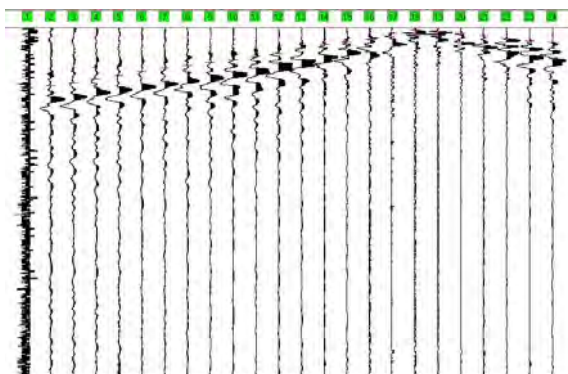
TIRO INTERMEDIO DX D5

Catena geofonica 25-48



TIRO INTERMEDIO DX D6

Catena geofonica 25-48

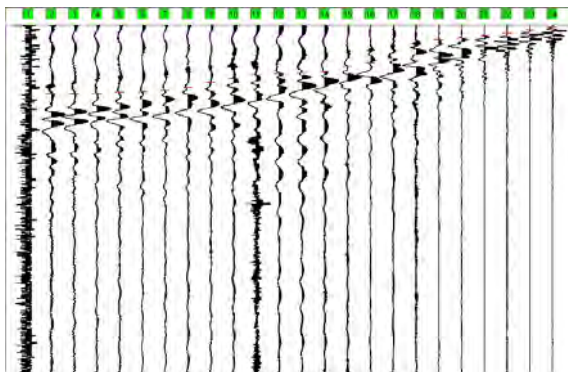




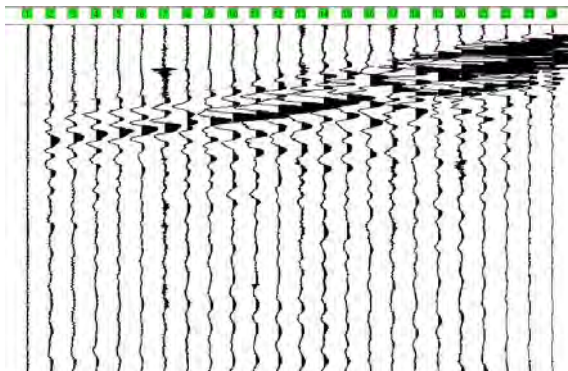


ONDE Sh: STAMPA ISTANTANEA DELLE REGISTRAZIONI DI CAMPAGNA

TIRO ESTREMO DX B  
Catena geofonica 25-48



TIRO ESTERNO DX E2  
Catena geofonica 25-48



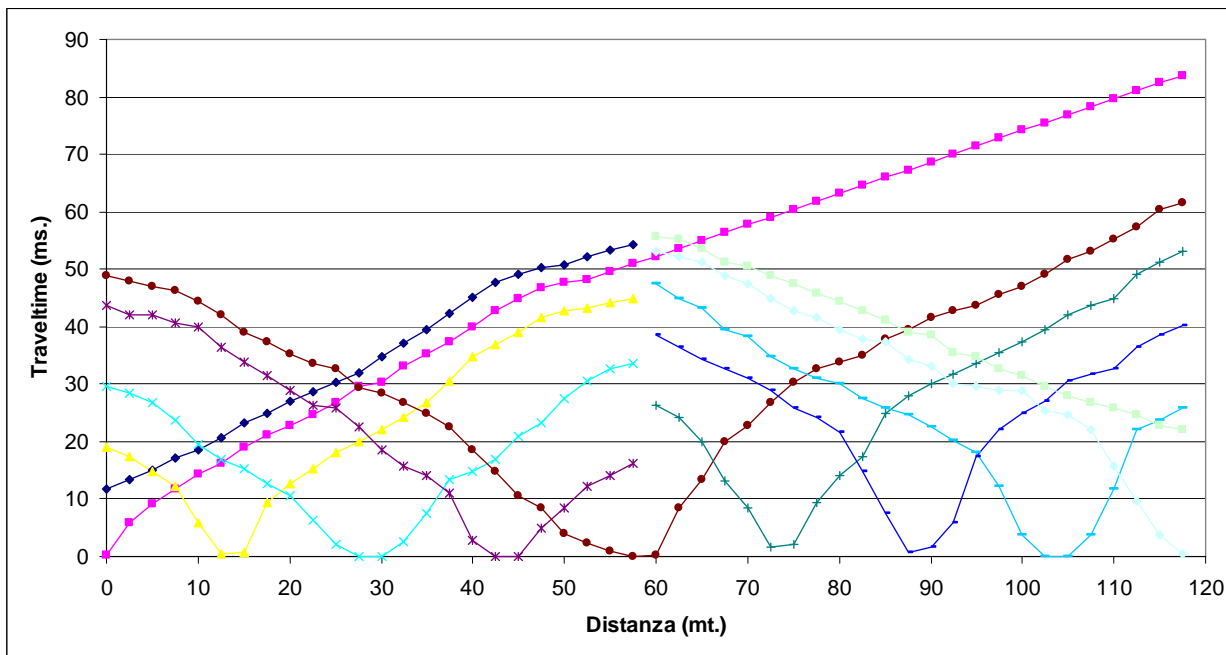


## TEMPI DI PROPAGAZIONE ONDE Sh

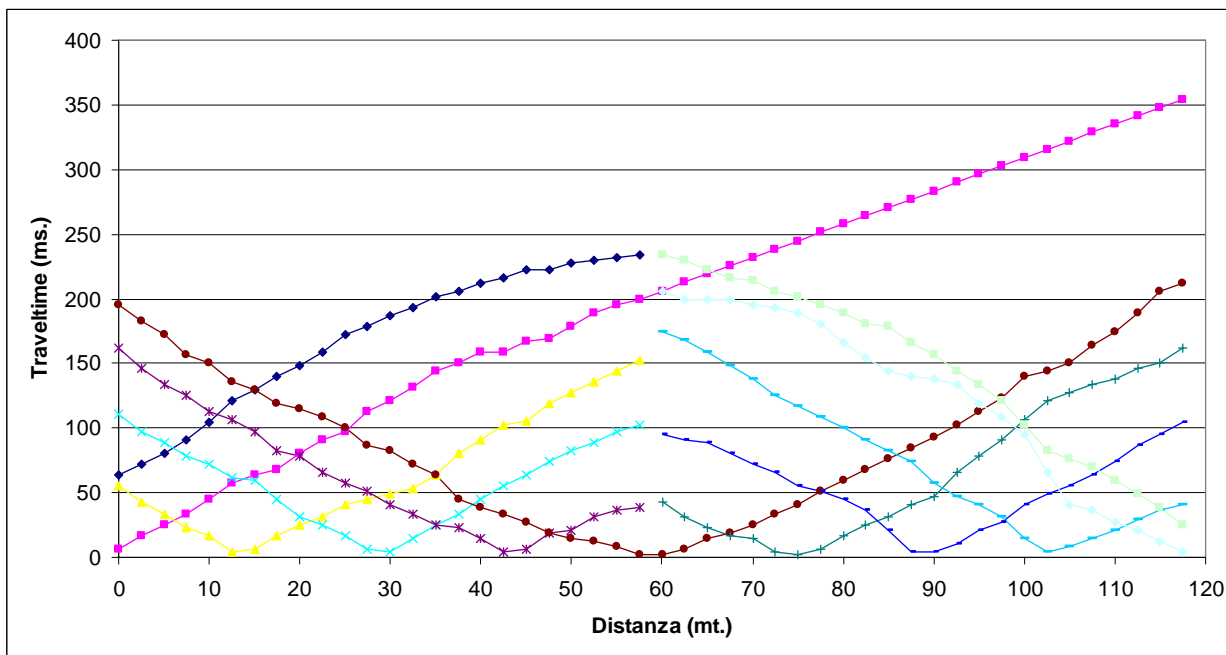
geofono	Tempo di arrivo										
	E1	A	D1	D2	D3	C	D4	D5	D6	B	E2
1	63.70	6.20	55.20	110.40	161.40	195.30					
2	72.20	16.80	42.30	97.60	146.50	182.60					
3	80.70	25.30	33.80	89.10	133.70	172.00					
4	91.30	33.80	23.30	78.50	125.30	157.10					
5	104.00	44.40	16.80	72.20	112.50	150.60					
6	121.00	57.30	4.20	61.50	106.10	135.90					
7	129.50	63.70	6.20	59.40	97.60	129.50					
8	140.10	67.90	16.80	44.50	82.80	118.90					
9	148.60	80.70	25.30	31.80	78.50	114.50					
10	159.10	91.30	31.80	25.40	65.80	108.30					
11	172.00	97.50	40.30	16.90	57.30	99.80					
12	178.20	112.50	44.40	6.20	50.90	86.90					
13	186.70	121.00	48.80	4.20	40.30	82.80					
14	193.20	131.50	52.90	14.80	33.90	72.20					
15	201.70	144.40	63.70	25.40	25.40	63.70					
16	206.00	150.60	80.70	33.90	23.30	44.40					
17	212.20	159.10	91.30	44.50	14.80	38.20					
18	216.60	159.10	101.90	55.20	4.20	33.80					
19	222.80	167.60	106.00	63.70	6.30	27.60					
20	222.90	169.70	118.90	74.30	19.10	19.10					
21	227.20	178.20	127.40	82.80	21.20	14.80					
22	229.30	189.00	135.90	89.10	31.80	12.70					
23	231.40	195.20	144.40	97.60	36.10	8.30					
24	233.60	199.60	152.90	101.90	38.20	2.10					
25		206.24				2.10	42.40	95.50	174.10	206.00	233.60
26		212.67				6.20	31.80	91.30	167.70	199.60	229.30
27		219.11				14.80	23.30	89.10	159.10	199.60	222.80
28		225.54				19.10	16.90	80.70	148.60	199.60	216.60
29		231.97				25.40	14.80	72.20	138.00	195.30	214.30
30		238.41				33.90	4.20	65.80	125.30	193.20	206.00
31		244.84				40.30	2.10	55.20	116.80	189.00	201.70
32		251.27				50.90	6.20	50.90	108.30	180.50	195.20
33		257.71				59.40	16.90	44.50	99.80	165.60	189.00
34		264.14				67.90	25.40	36.10	91.30	155.00	180.50
35		270.57				76.40	31.80	21.20	82.80	144.40	178.20
36		277.01				84.90	40.30	4.20	74.30	140.10	165.60
37		283.44				93.40	46.70	4.20	57.30	138.00	157.10
38		289.88				101.90	65.80	10.60	46.70	133.70	144.40
39		296.31				112.50	78.50	21.20	40.30	118.90	133.60
40		302.74				123.10	91.30	27.60	31.80	108.30	121.00
41		309.18				140.10	106.10	40.30	14.80	95.50	101.90
42		315.61				144.40	121.00	48.80	4.20	65.80	82.80
43		322.04				150.70	127.40	55.20	8.30	40.30	76.40
44		328.48				163.50	133.70	63.70	14.80	36.10	69.90
45		334.91				174.10	138.00	74.30	21.20	27.60	59.40
46		341.34				189.00	146.50	87.00	29.70	21.20	48.80
47		347.78				206.00	150.70	95.50	36.10	12.70	38.20
48		354.21				212.20	161.40	104.00	40.30	4.20	25.30



### DROMOCRONE ONDE P



### DROMOCRONE ONDE Sh

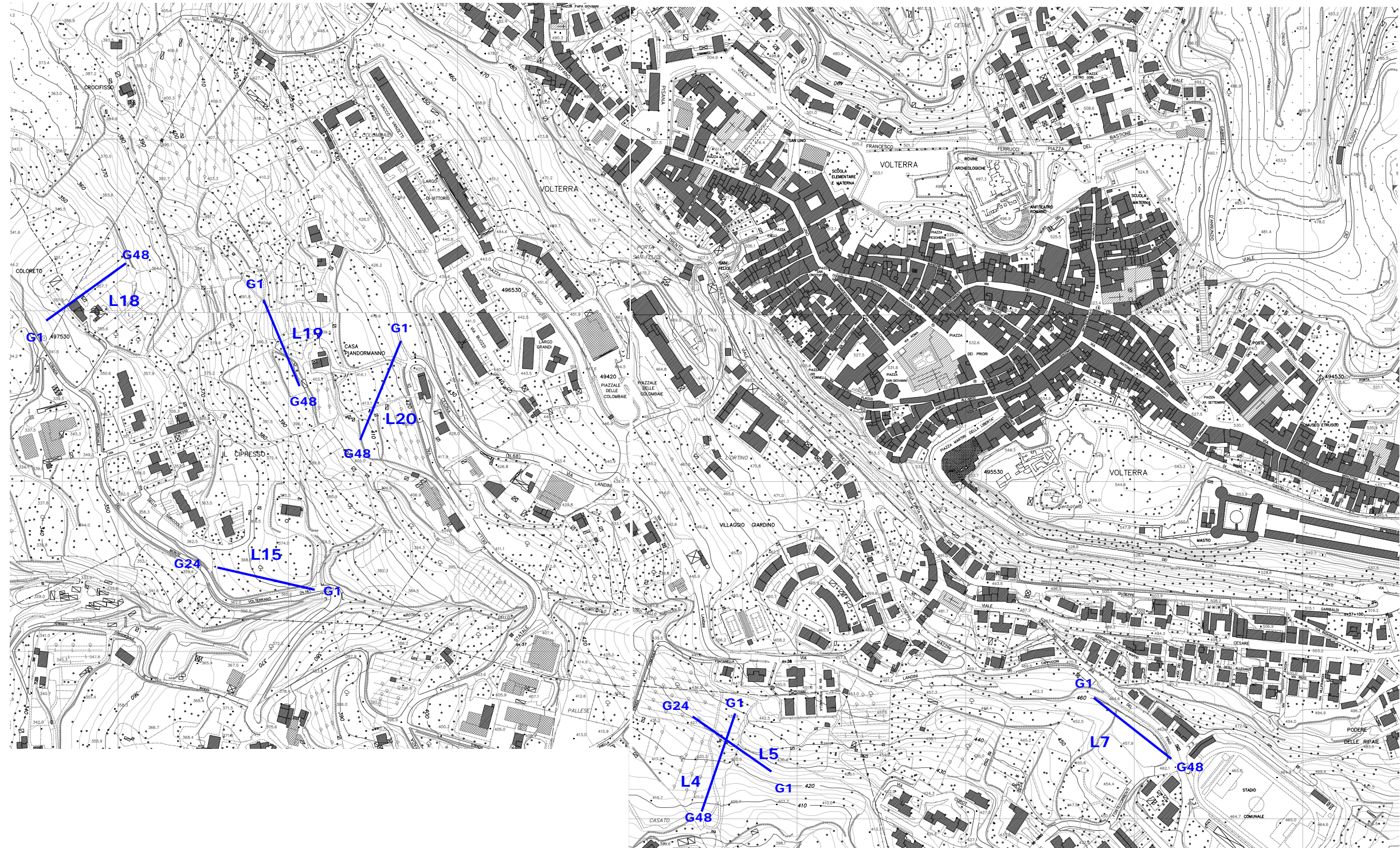




**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO		REV.	FOGLIO
C	DOCUMENTI 2008 SAS2008 20 08 001	1	6



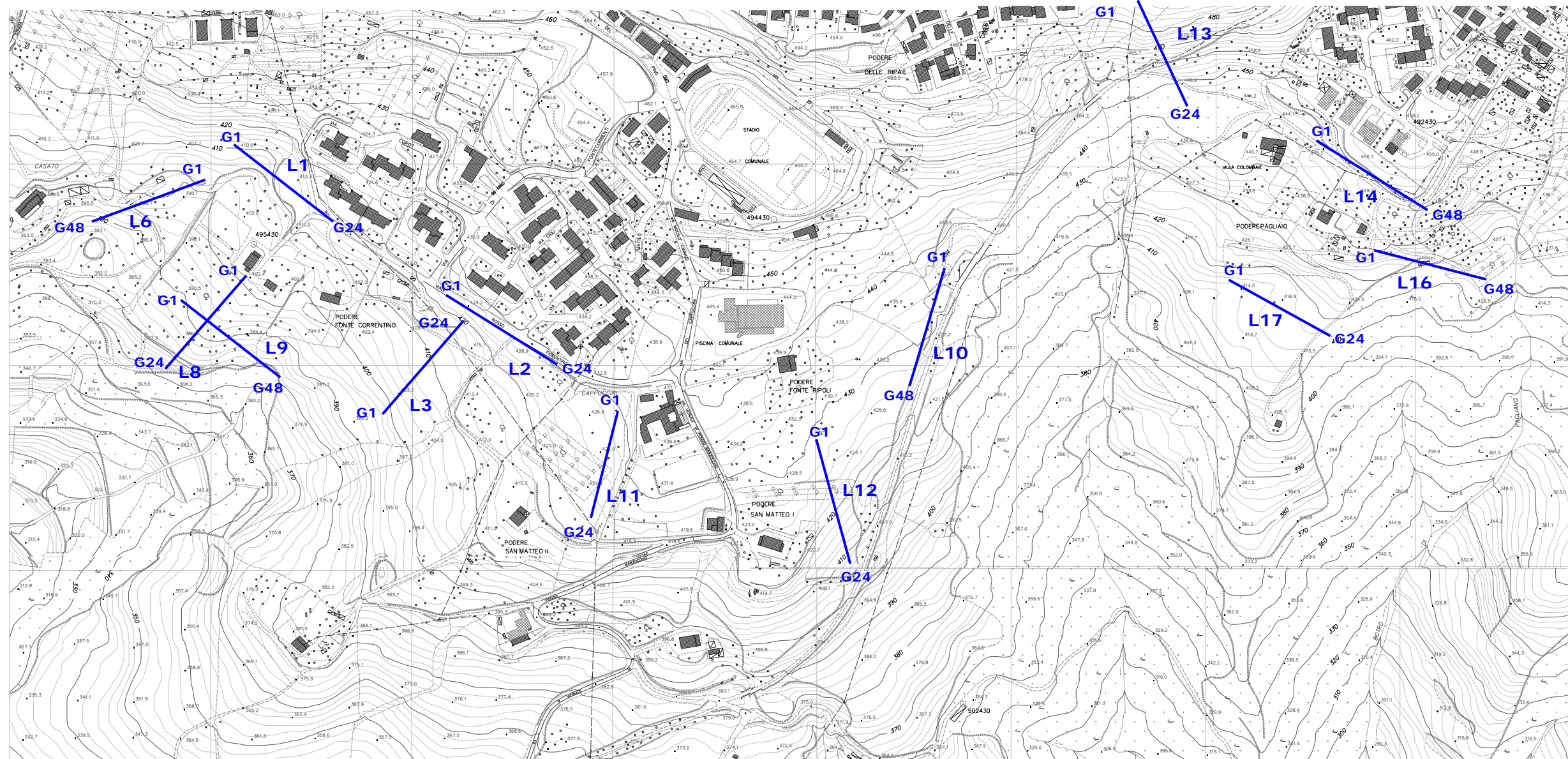
Ubicazione delle indagini - scala 1:5000



**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO					REV.	FOGLIO		
C	DOCUMENTI	2008	SAS2008	20	08	001	1	7



Ubicazione delle indagini - scala 1:5000

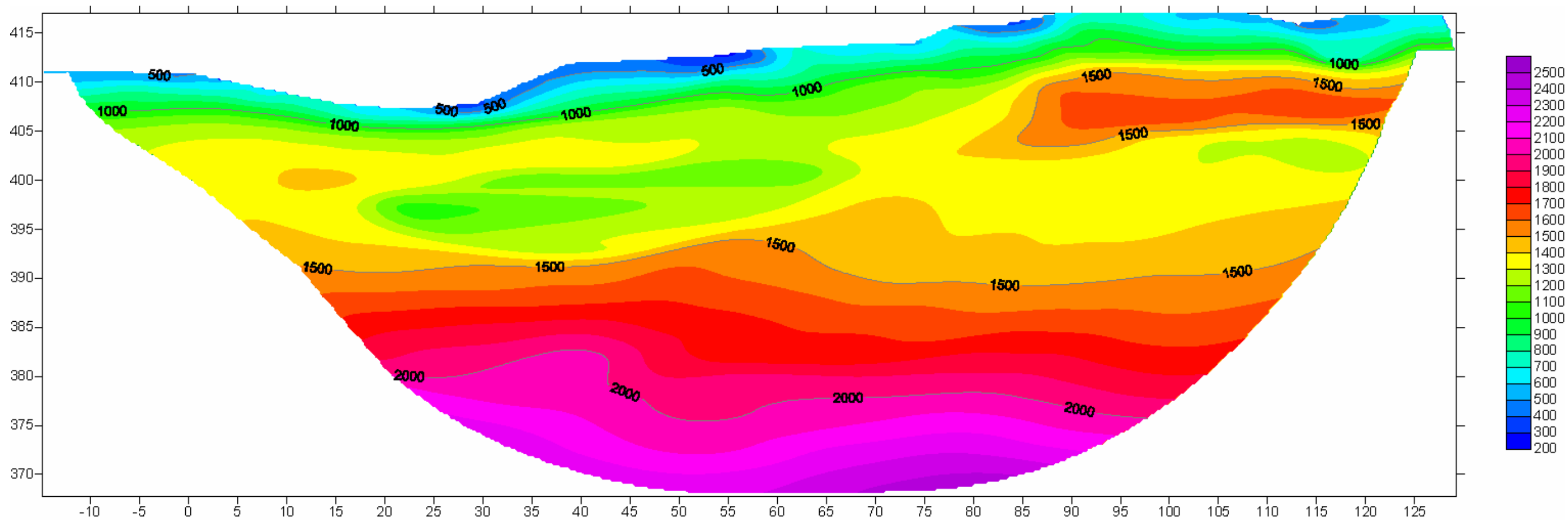


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	18

LINEA 1  
ELABORAZIONE TOMOGRAFICA ONDE P



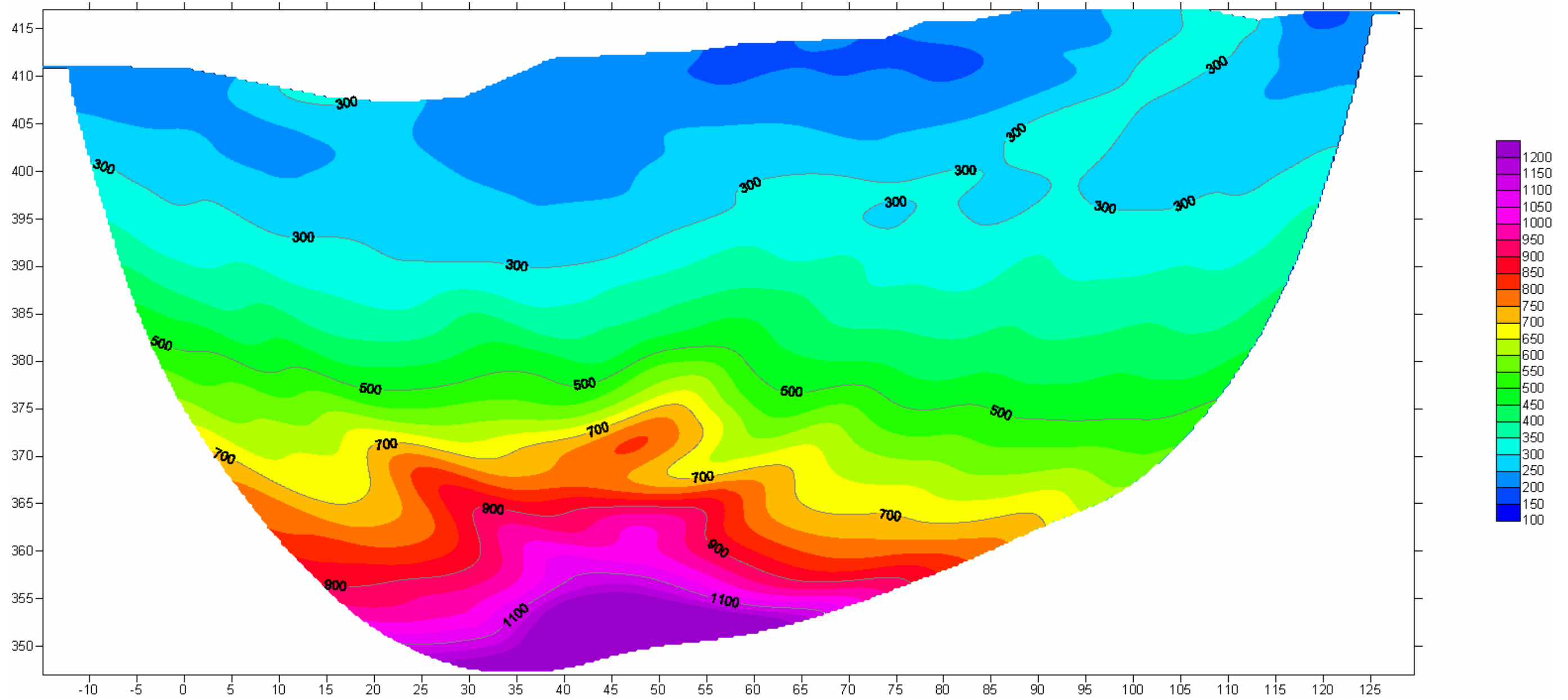


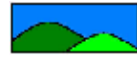
**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	19

LINEA 1  
ELABORAZIONE TOMOGRAFICA ONDE SH



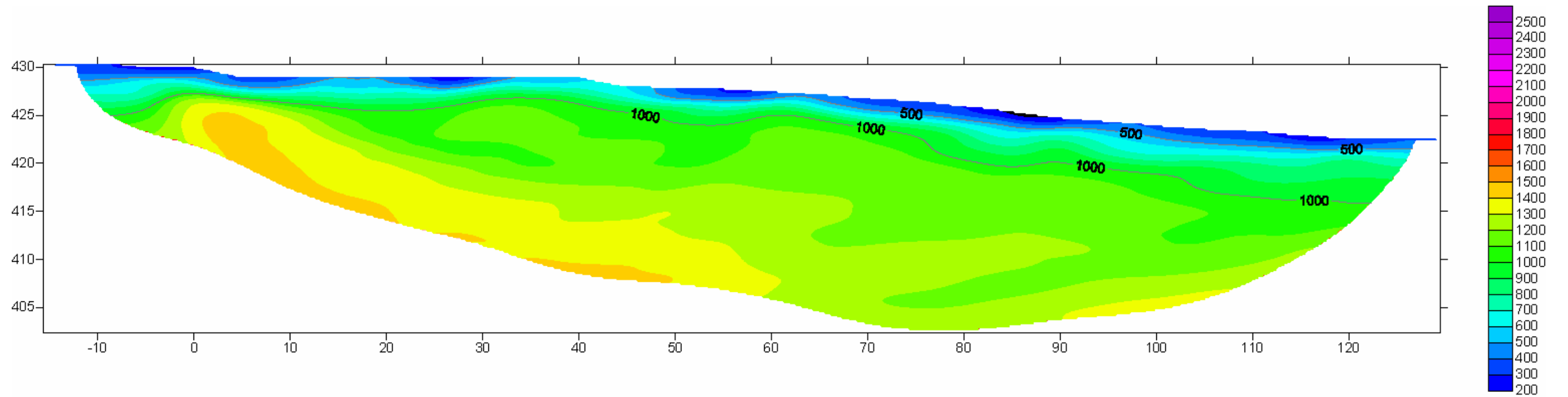


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	31

LINEA 2  
ELABORAZIONE TOMOGRAFICA ONDE P





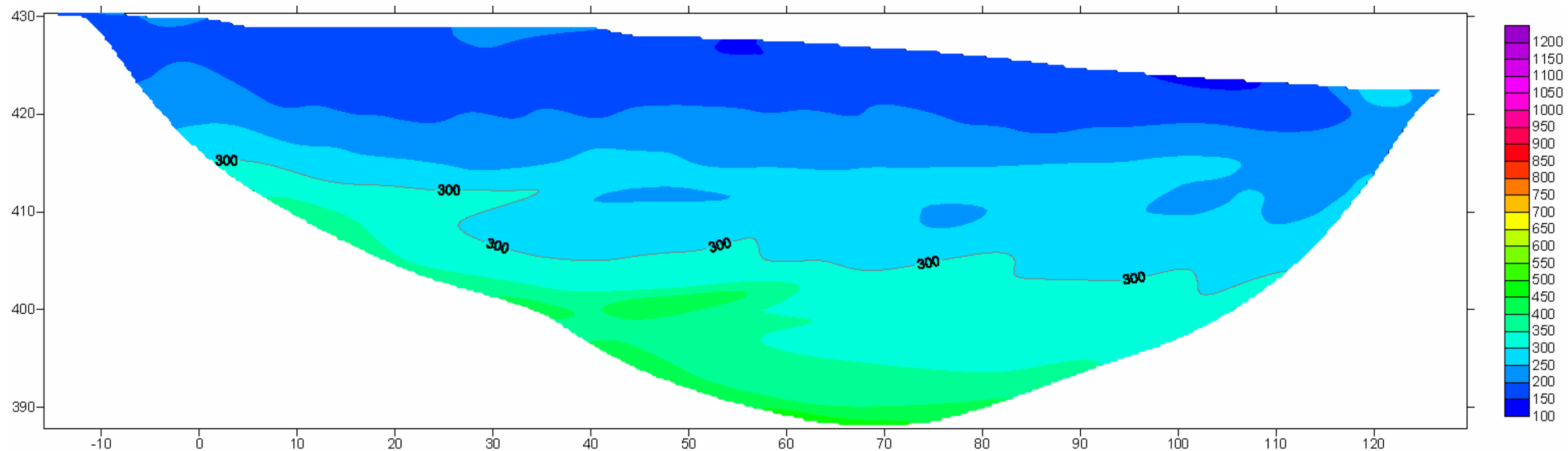


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	32

LINEA 2  
ELABORAZIONE TOMOGRAFICA ONDE SH



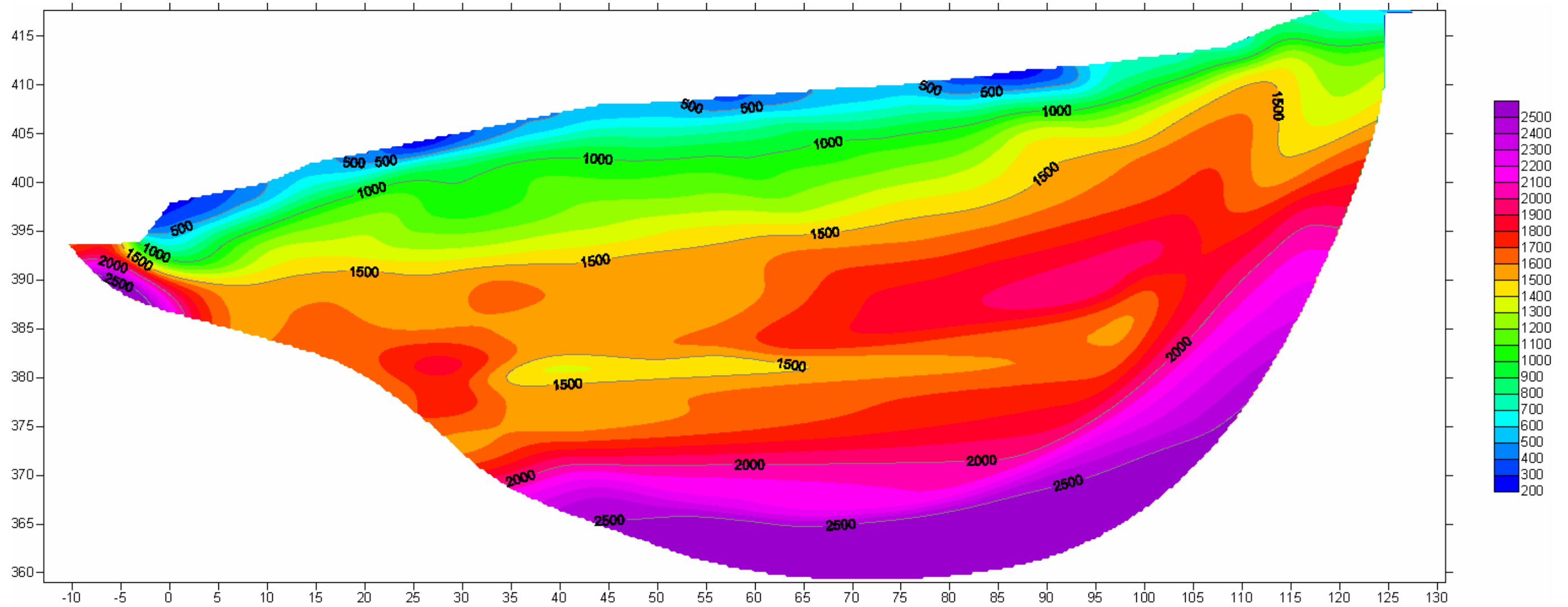


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	44

LINEA 3  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

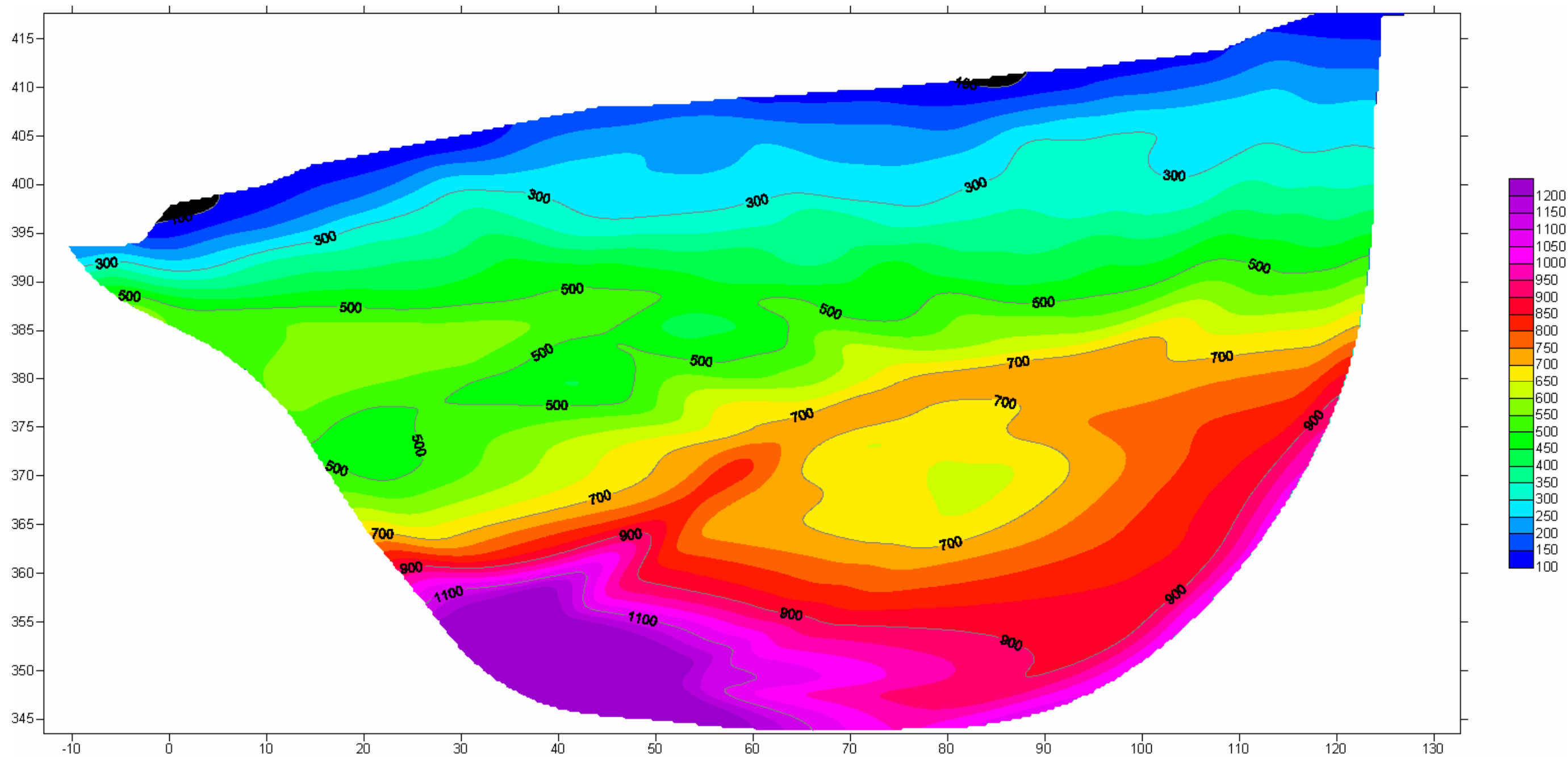
FOGLIO

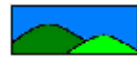
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45

LINEA 3

ELABORAZIONE TOMOGRAFICA ONDE SH



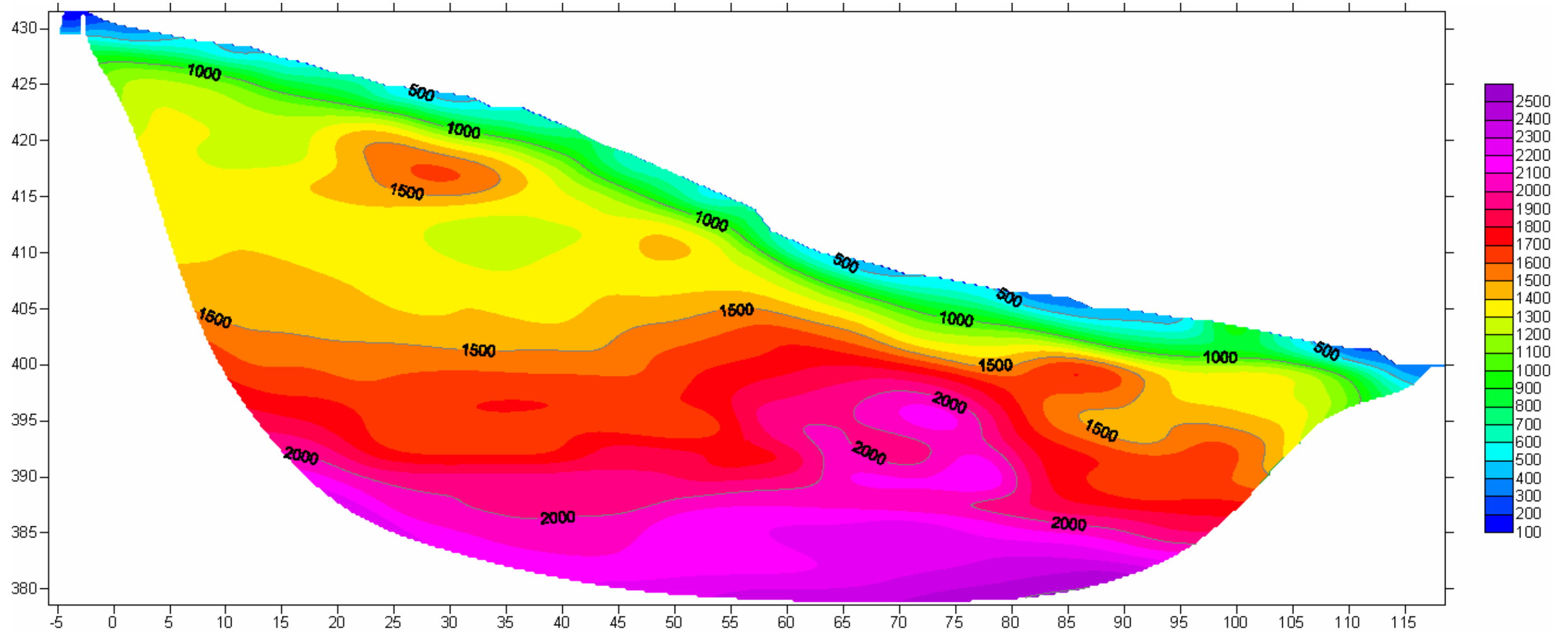


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	62

LINEA 4  
ELABORAZIONE TOMOGRAFICA ONDE P





**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

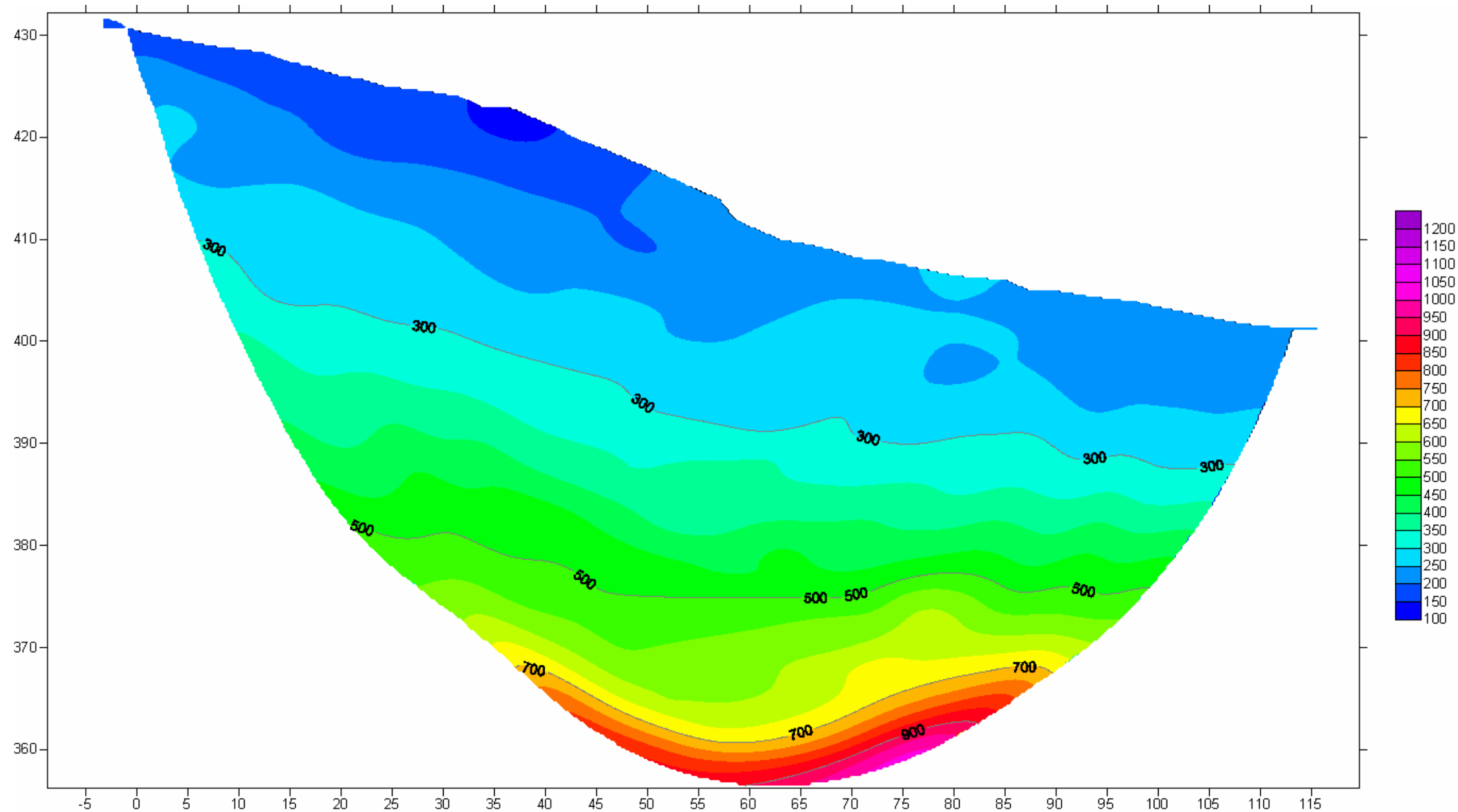
REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 63

LINEA 4

ELABORAZIONE TOMOGRAFICA ONDE SH



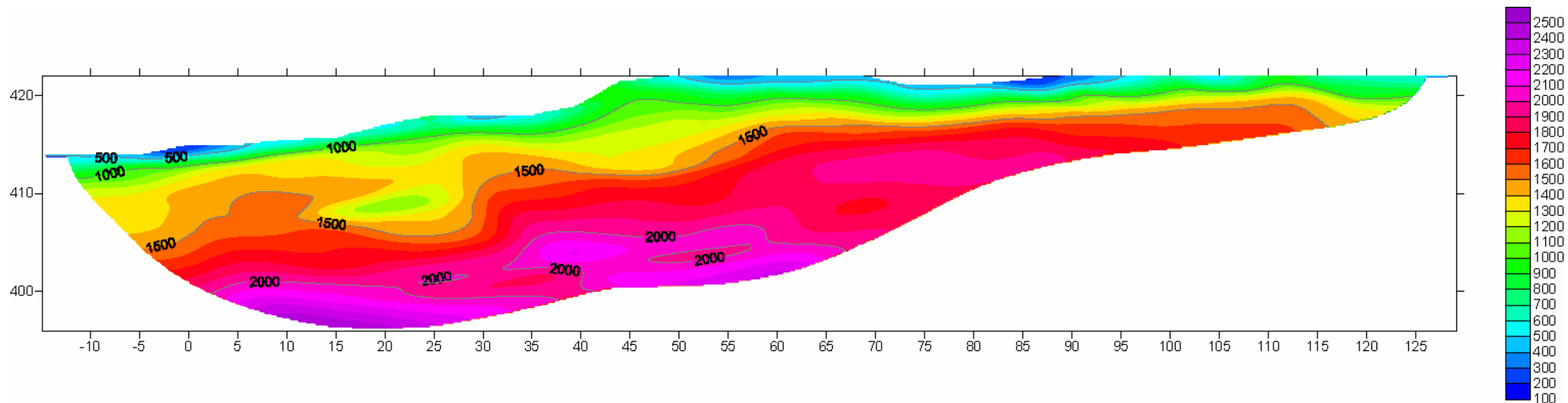


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 5  
ELABORAZIONE TOMOGRAFICA ONDE P





**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

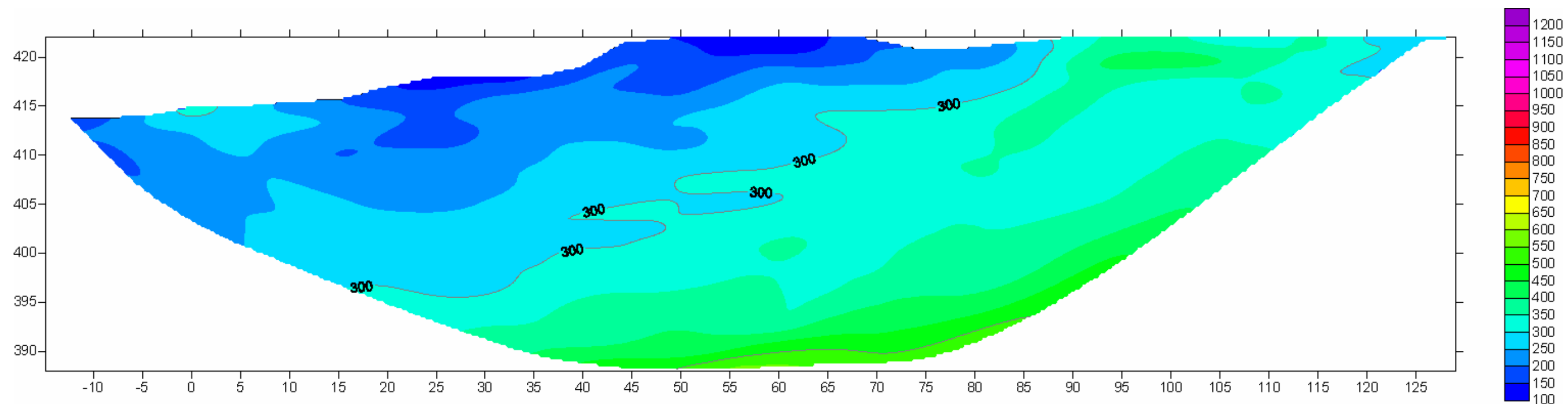
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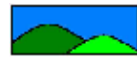
C DOCUMENTI 2008 SAS2008 20 08 001 1

76

LINEA 5

ELABORAZIONE TOMOGRAFICA ONDE SH



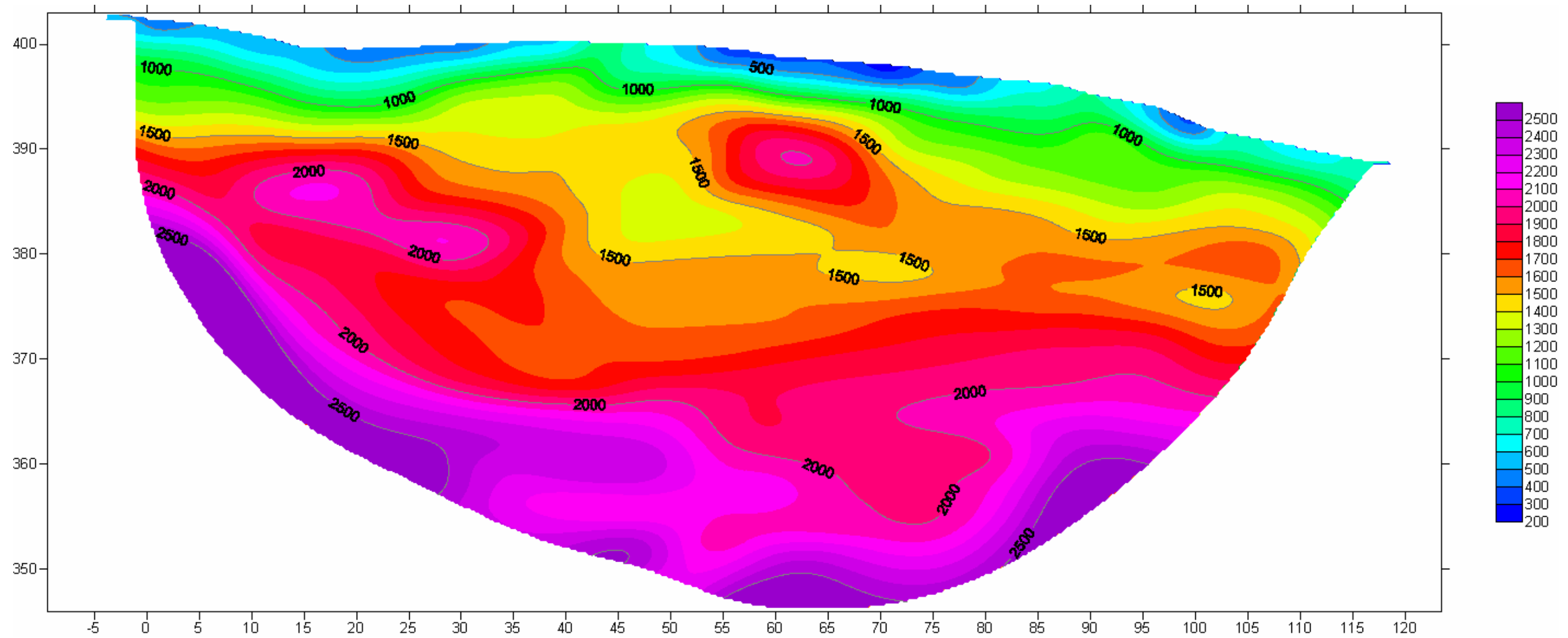


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	93

LINEA 6  
ELABORAZIONE TOMOGRAFICA ONDE P





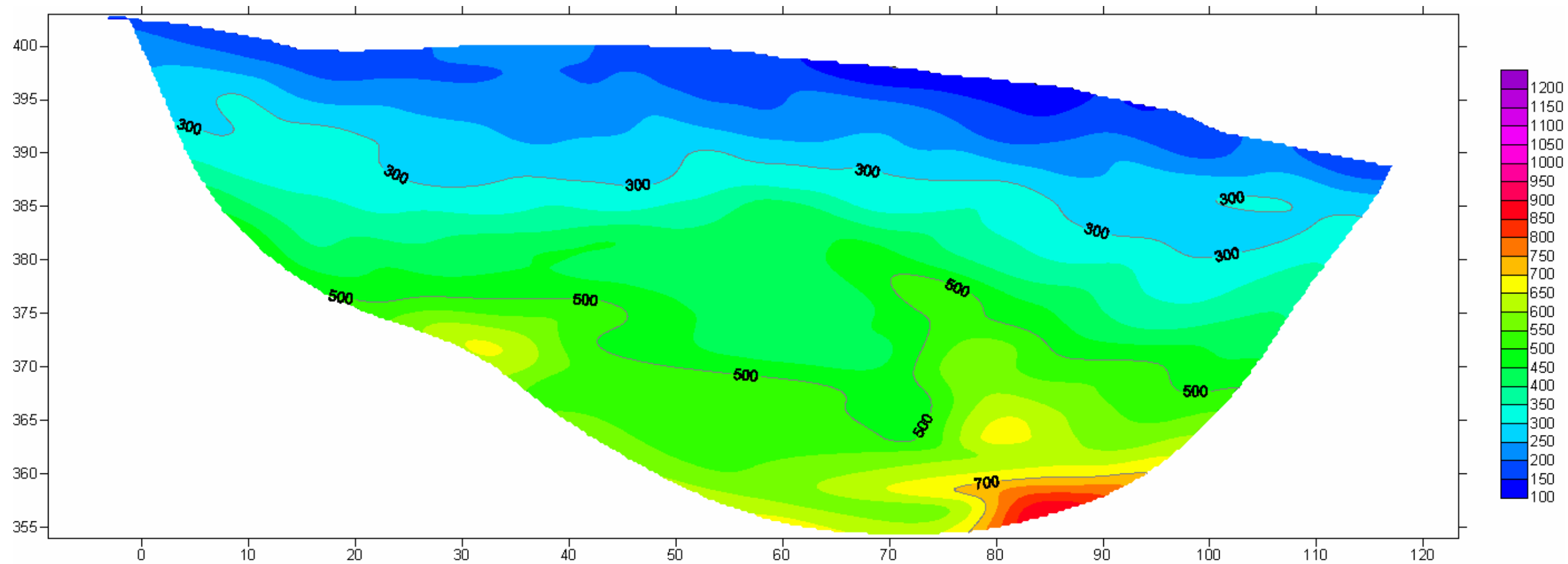


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 6  
ELABORAZIONE TOMOGRAFICA ONDE SH



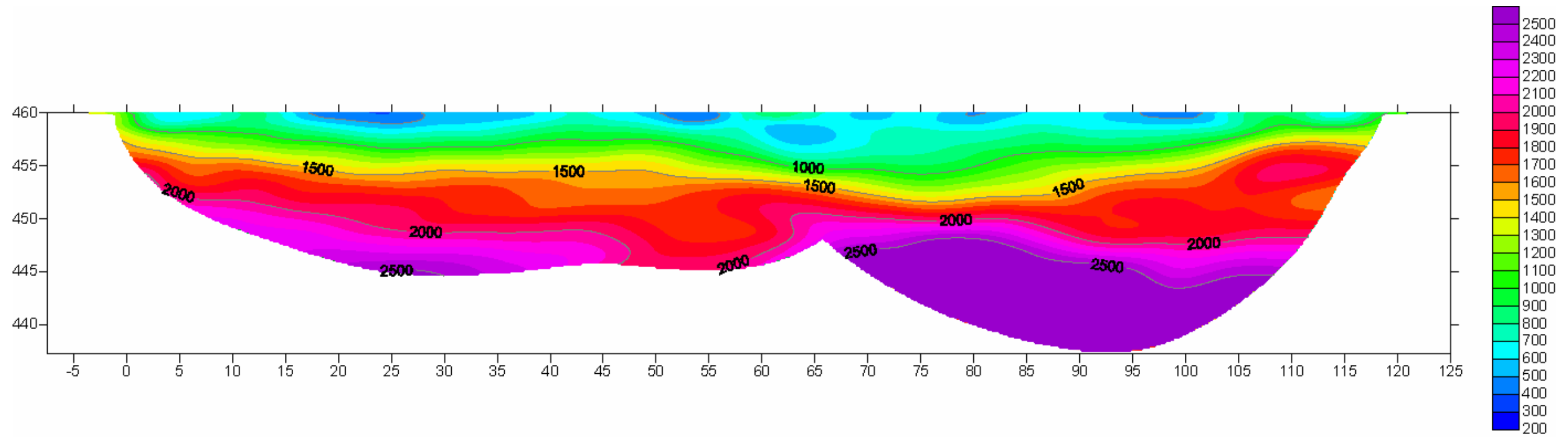


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	111

LINEA 7  
ELABORAZIONE TOMOGRAFICA ONDE P





**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

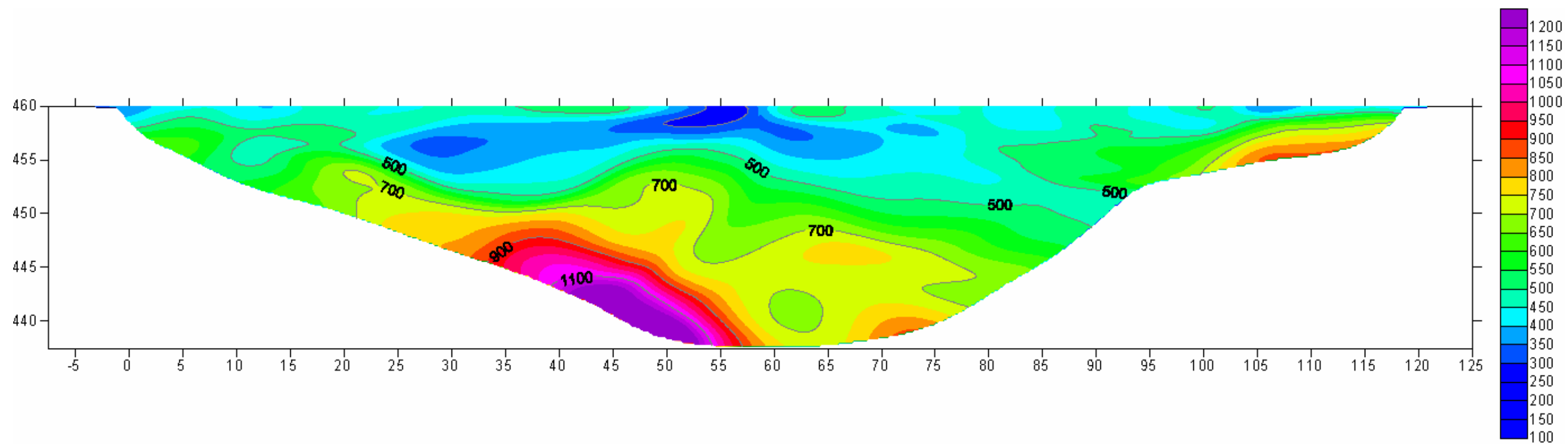
REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1

112

LINEA 7  
ELABORAZIONE TOMOGRAFICA ONDE SH



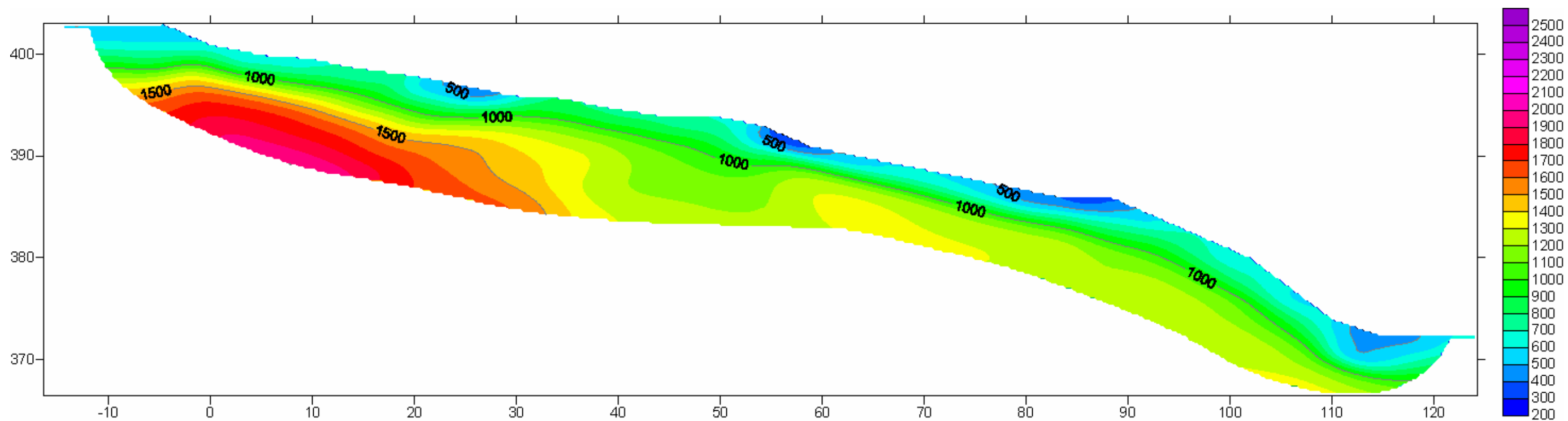


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	124

LINEA 8  
ELABORAZIONE TOMOGRAFICA ONDE P





**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

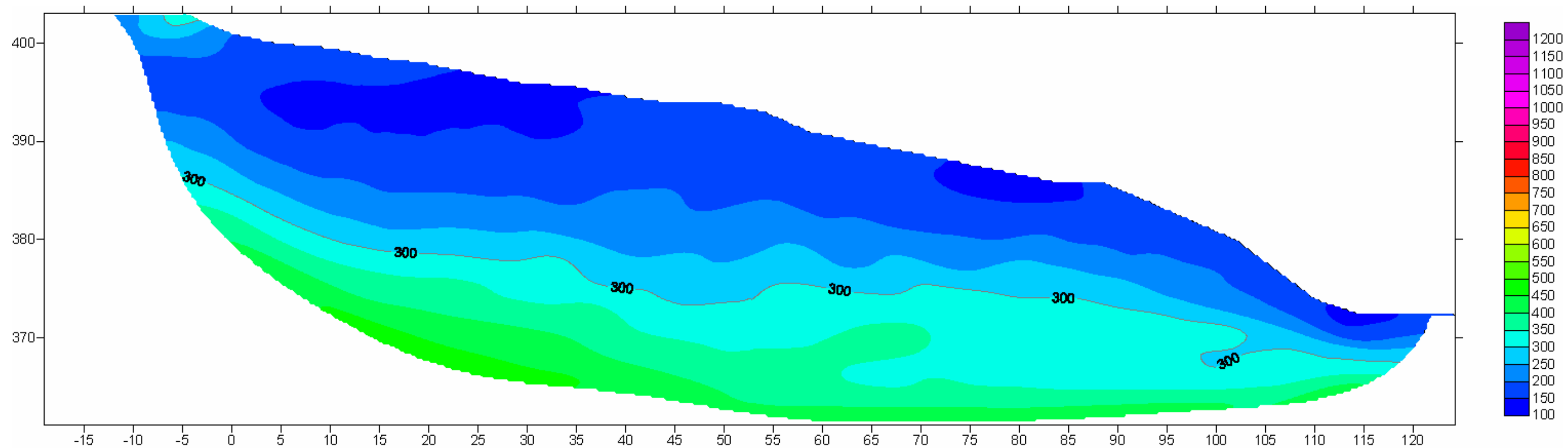
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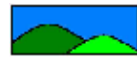
REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 125

LINEA 8  
ELABORAZIONE TOMOGRAFICA ONDE SH



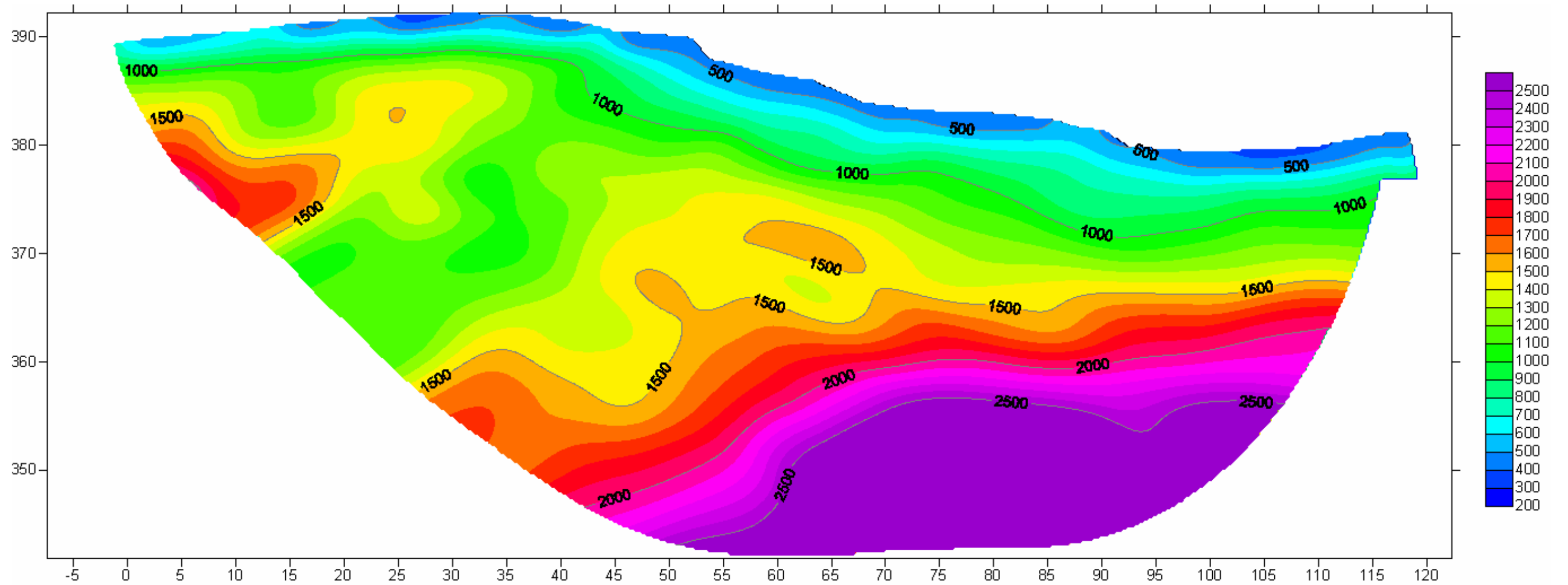


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	142

LINEA 9  
ELABORAZIONE TOMOGRAFICA ONDE P



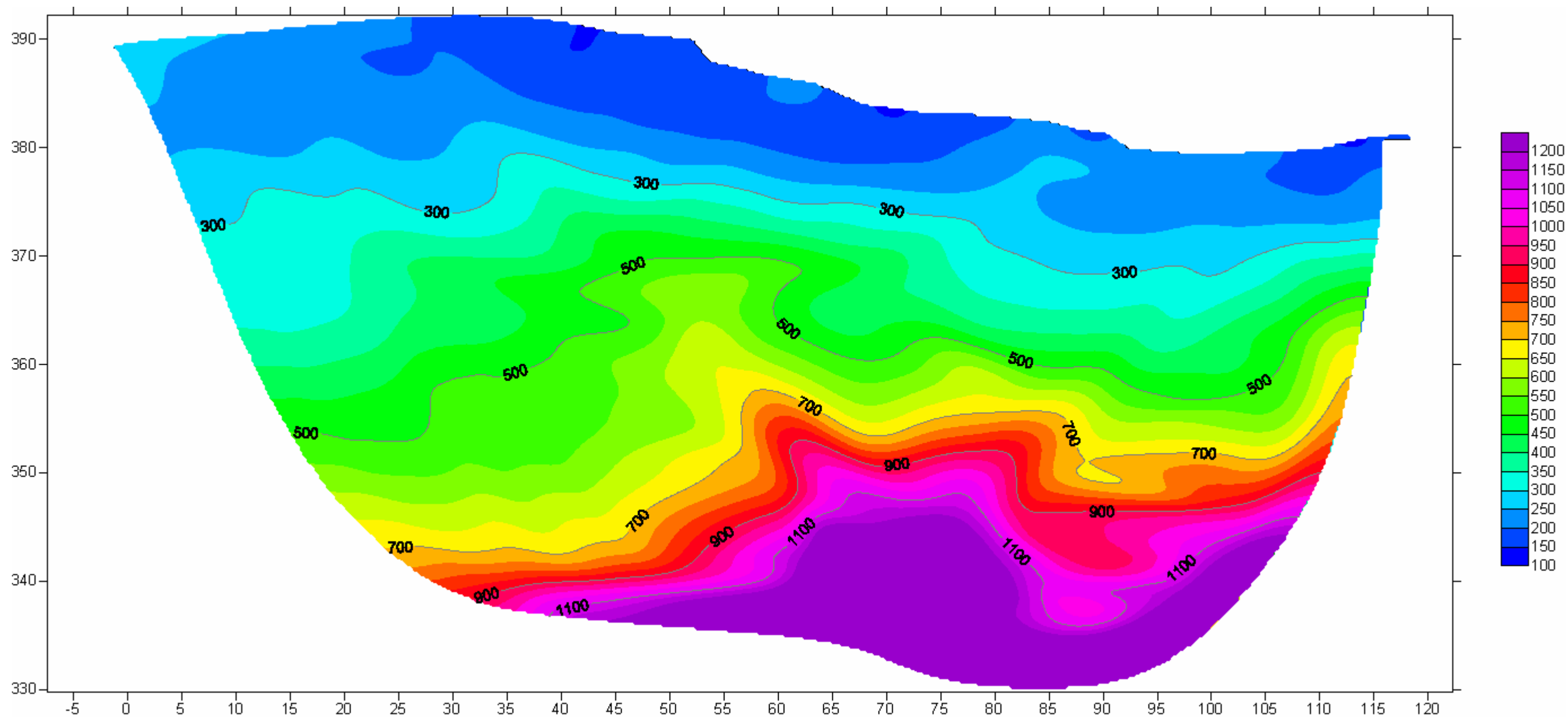


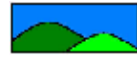
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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	143

LINEA 9  
ELABORAZIONE TOMOGRAFICA ONDE SH



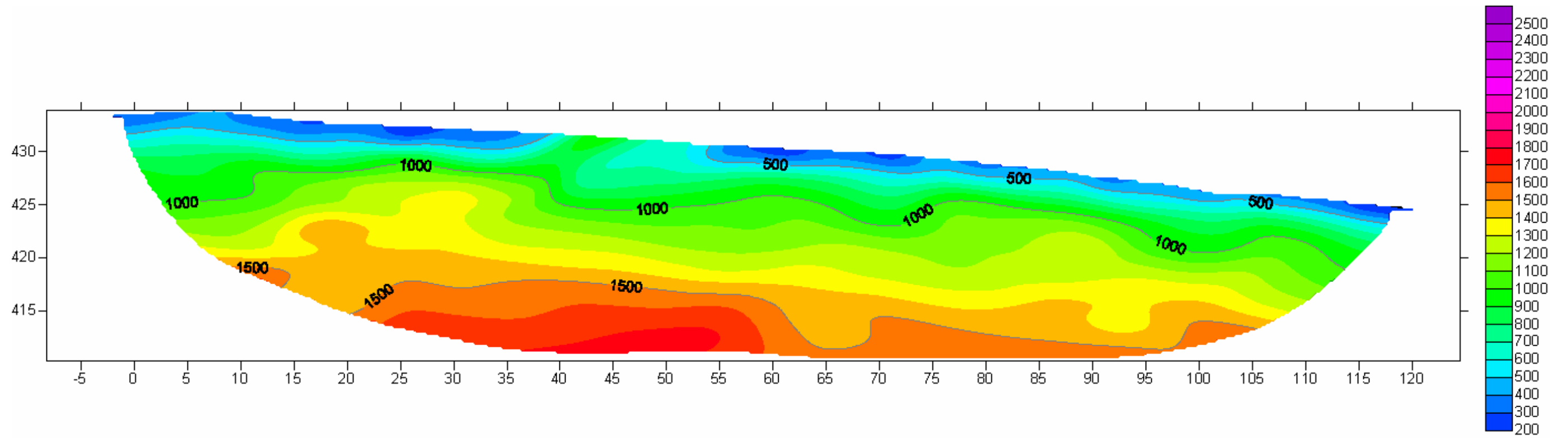


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 10  
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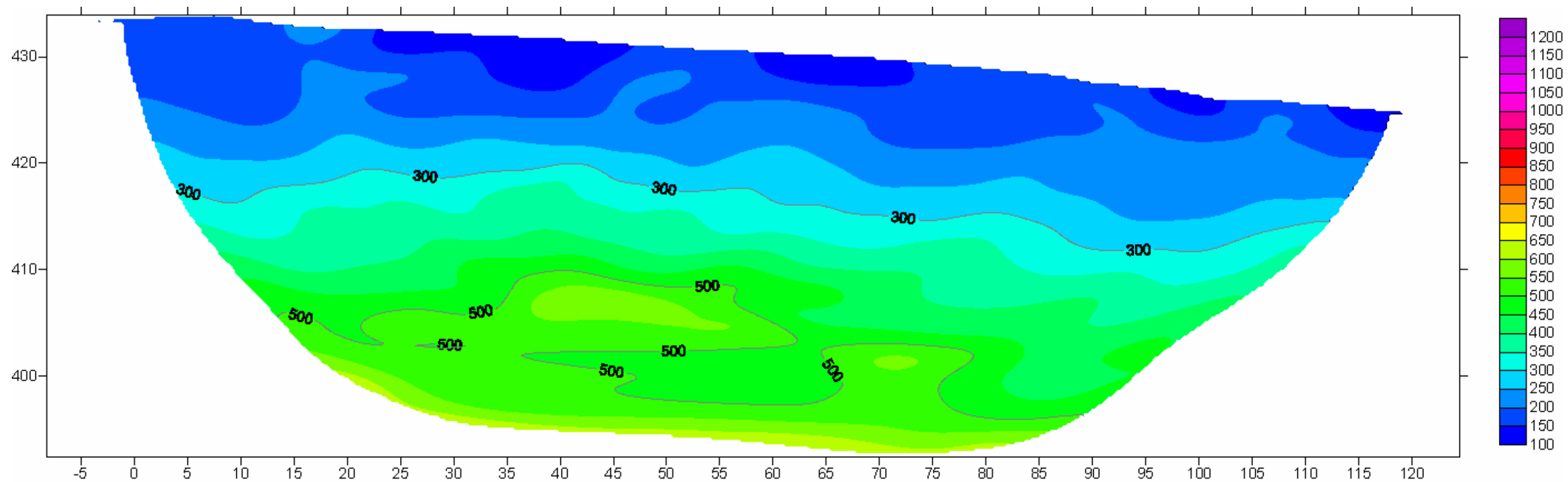


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	161

LINEA 10  
ELABORAZIONE TOMOGRAFICA ONDE SH



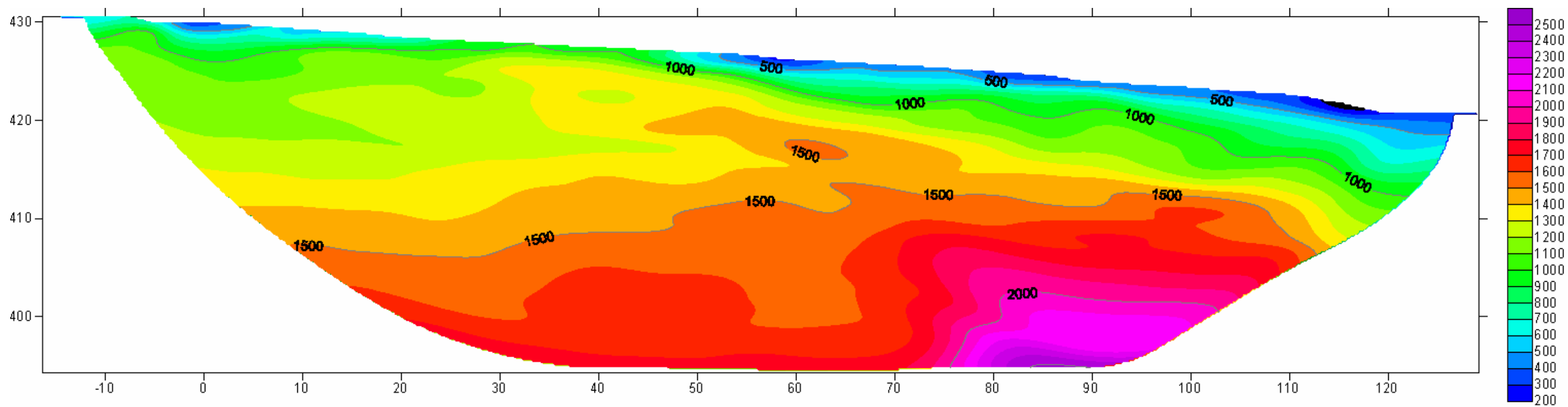


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	173

LINEA 11  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

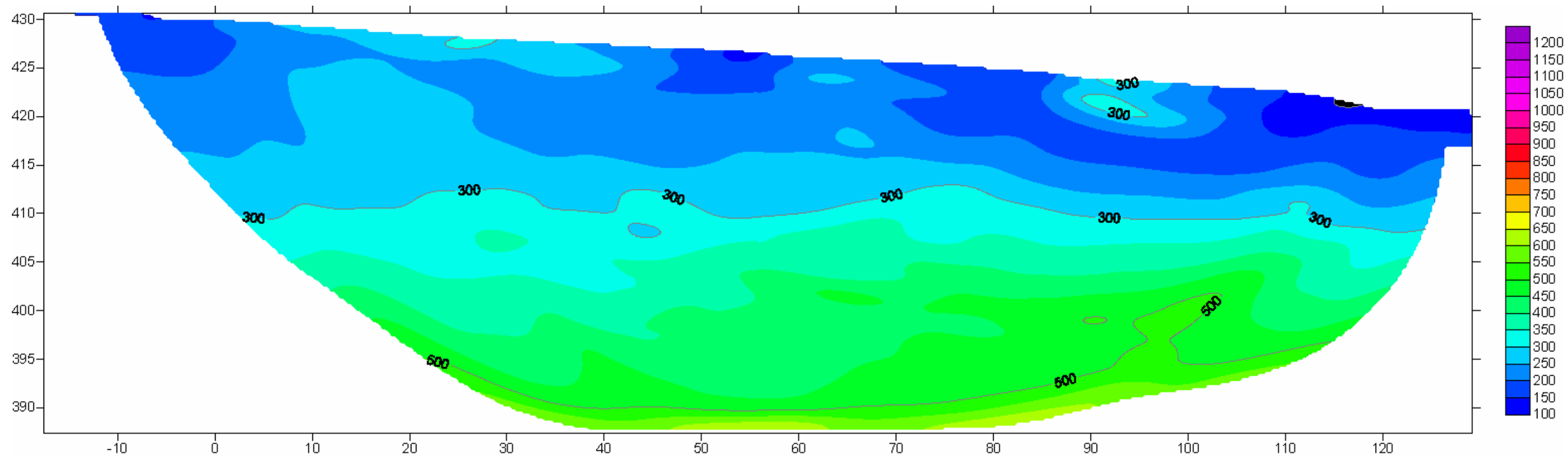
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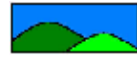
REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 174

LINEA 11  
ELABORAZIONE TOMOGRAFICA ONDE SH



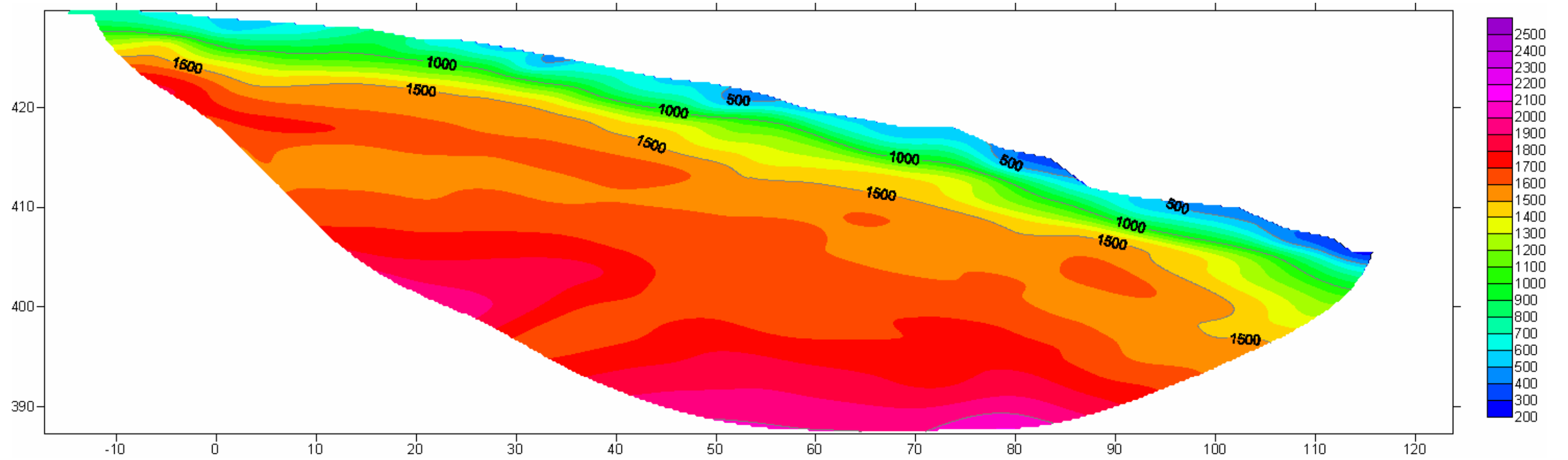


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	186

LINEA 12  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

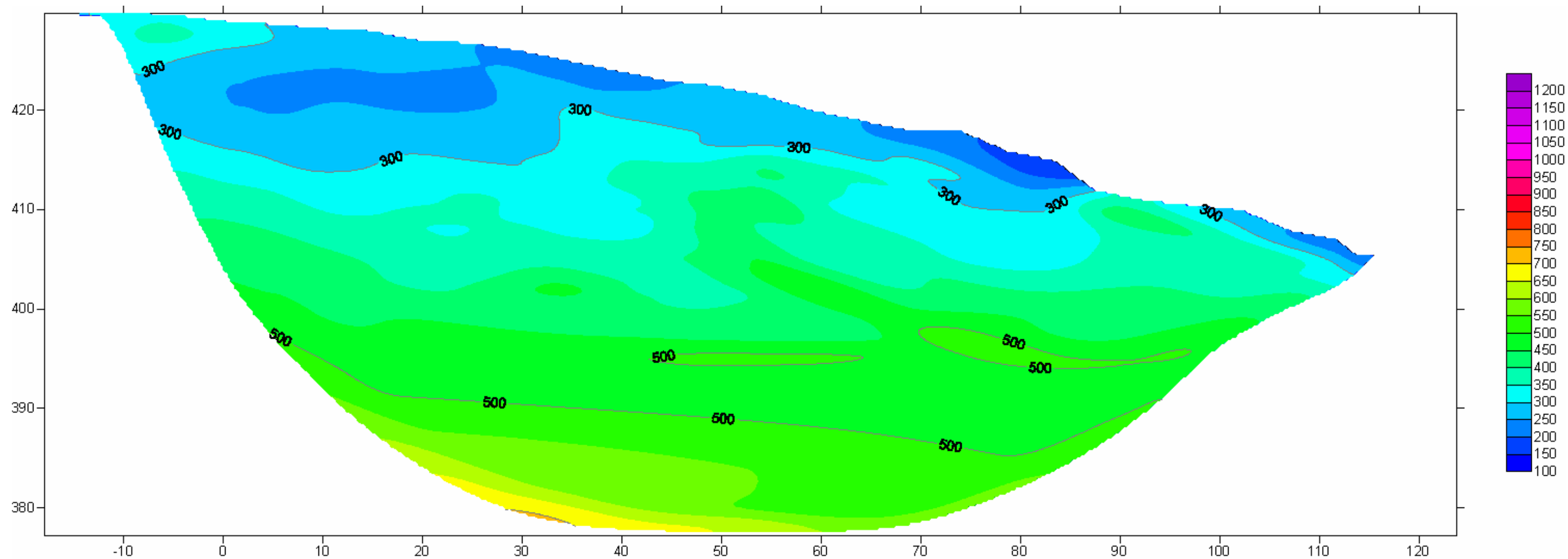
REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 187

LINEA 12

ELABORAZIONE TOMOGRAFICA ONDE SH



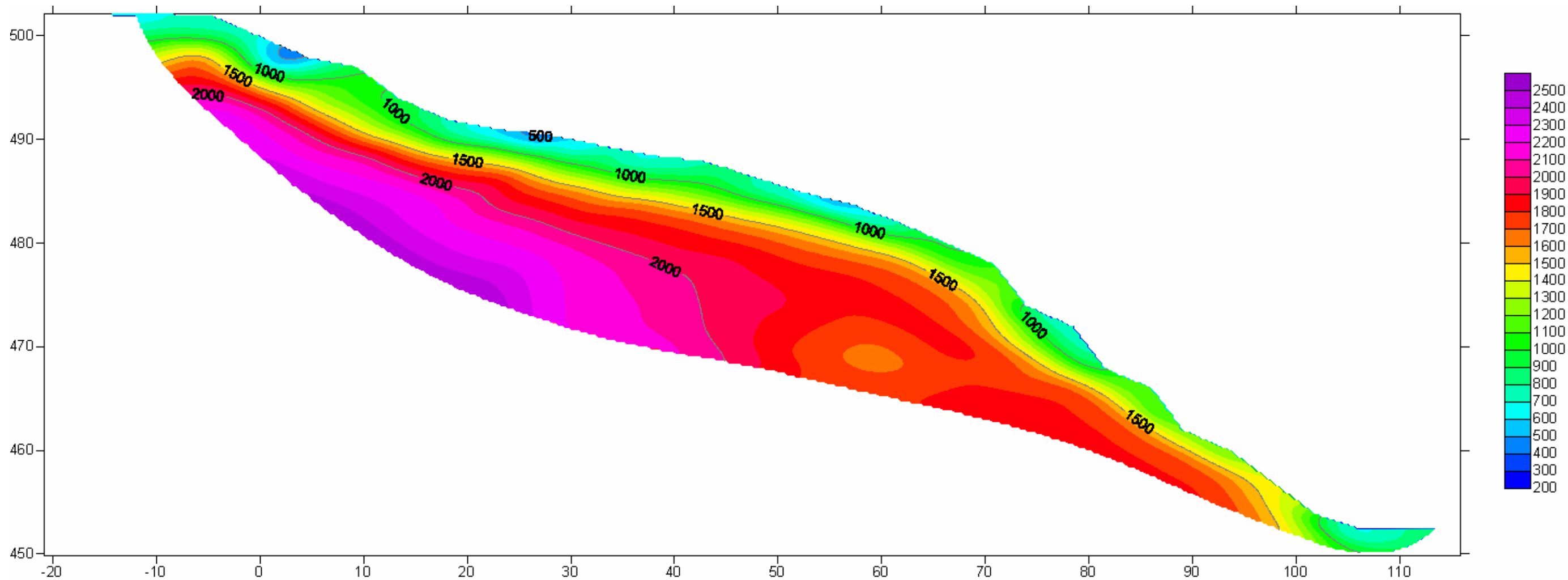


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	199

LINEA 13  
ELABORAZIONE TOMOGRAFICA ONDE P



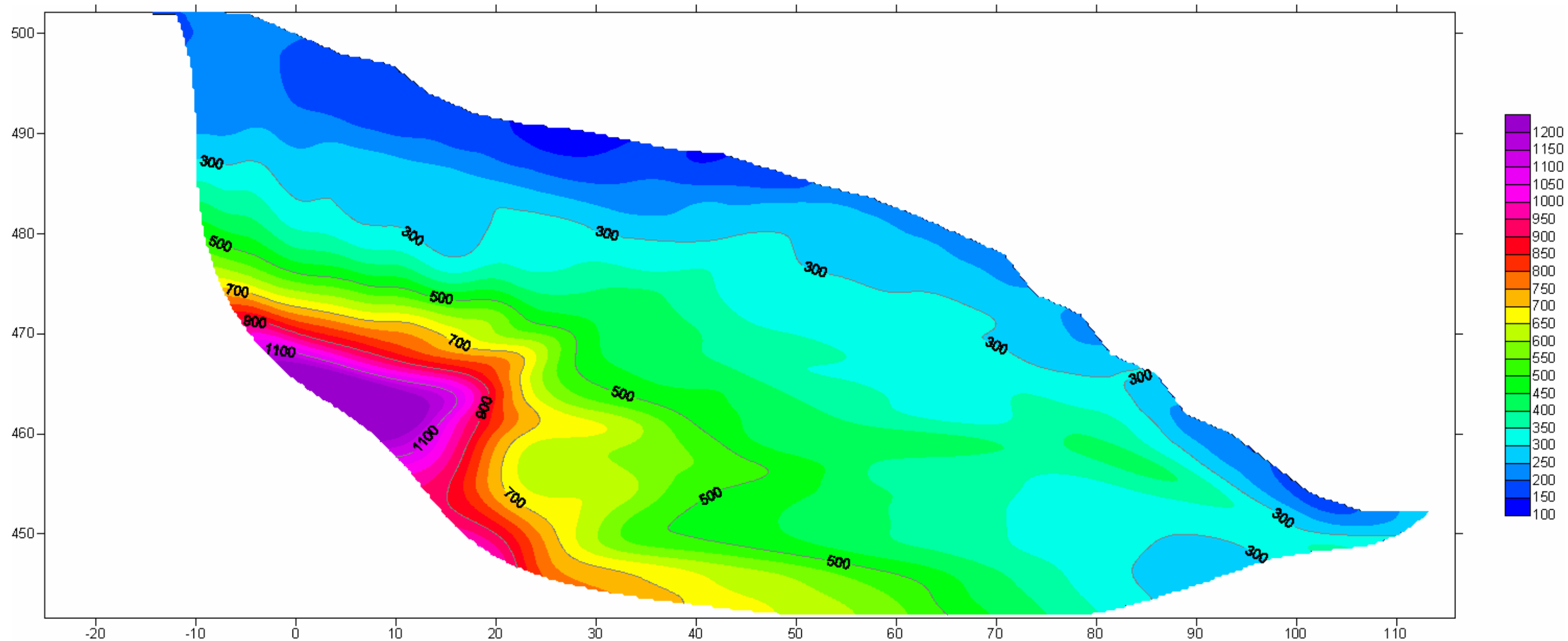


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 13  
ELABORAZIONE TOMOGRAFICA ONDE SH



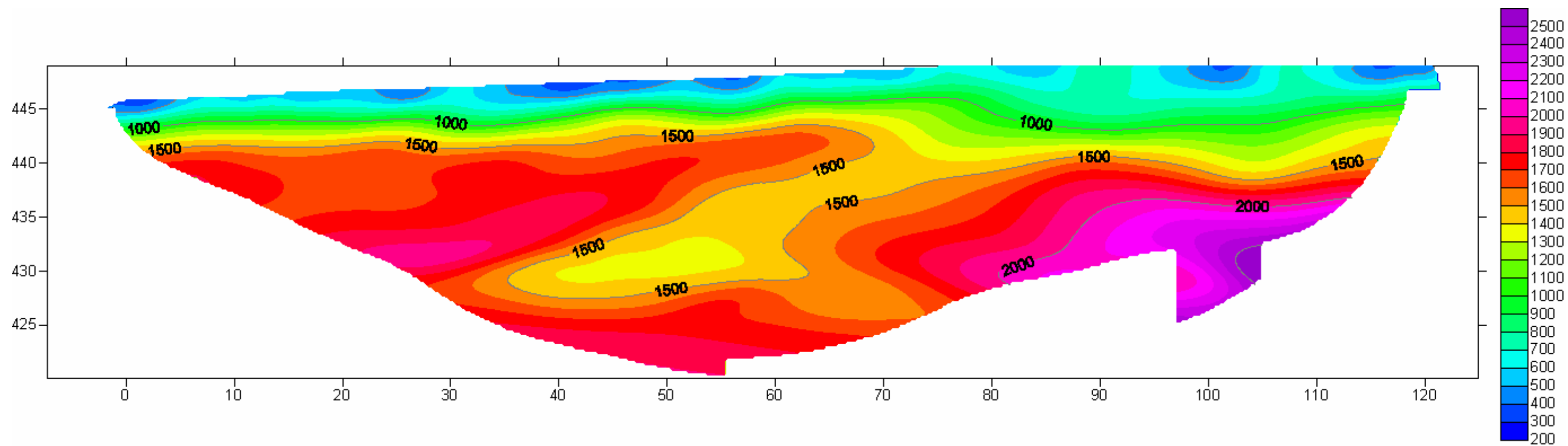


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 14  
ELABORAZIONE TOMOGRAFICA ONDE P







**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

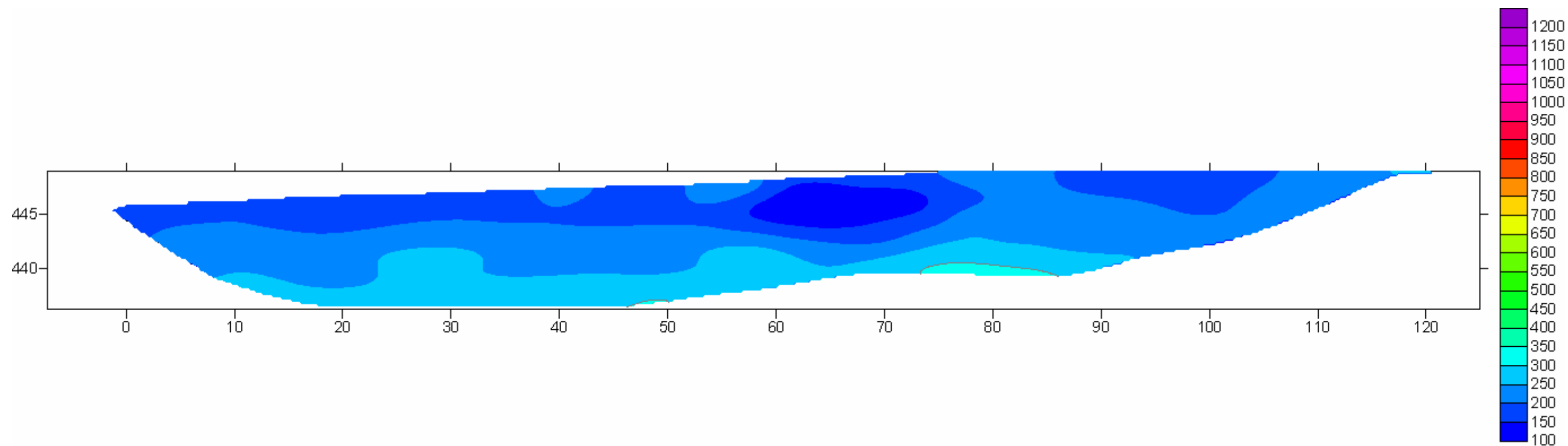
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218

LINEA 14

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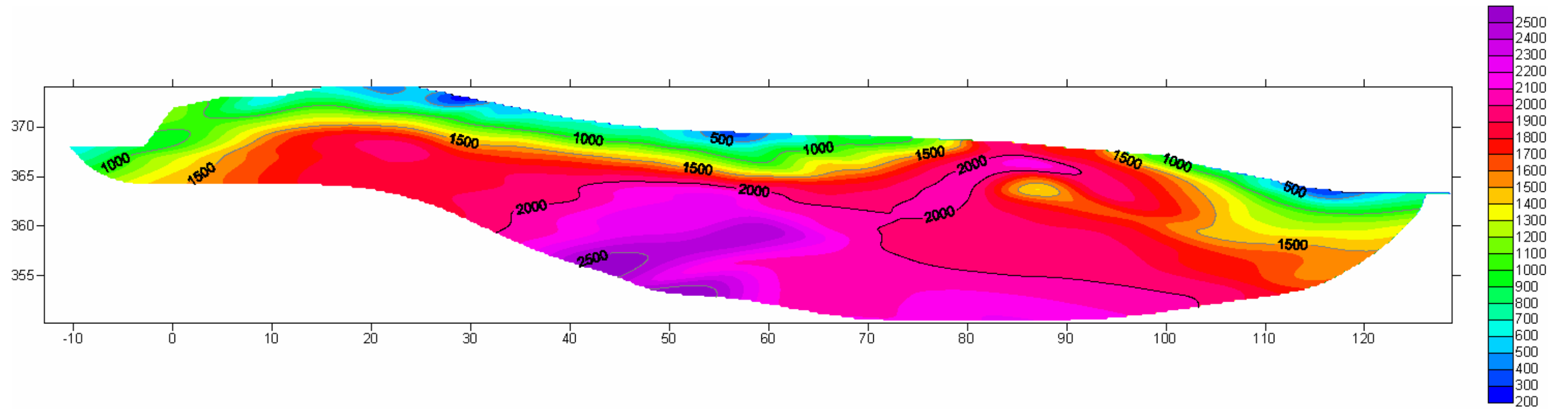


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 15  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

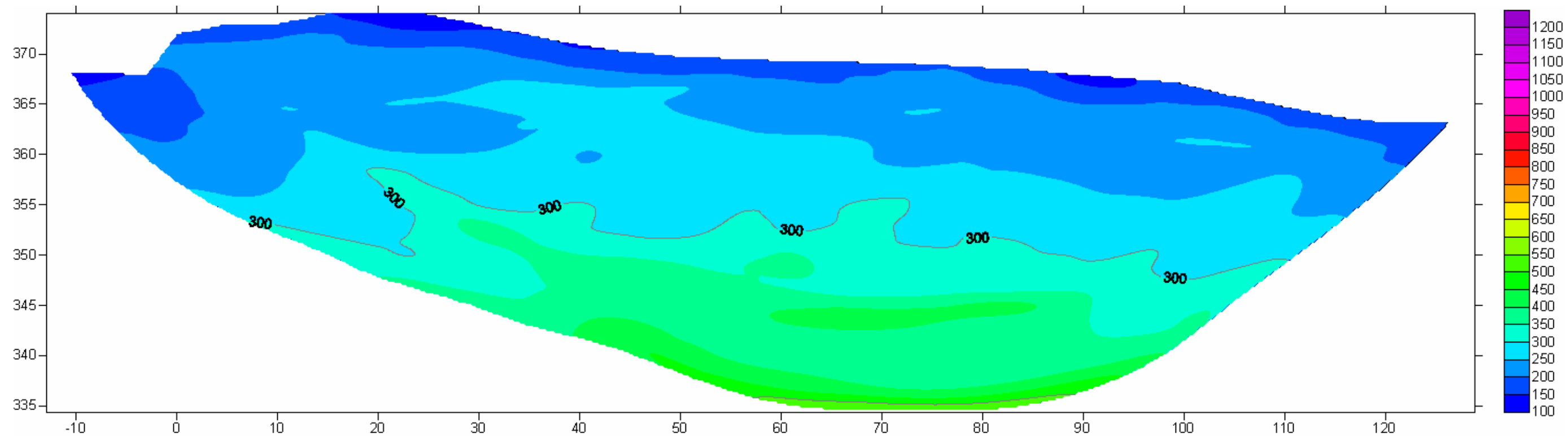
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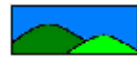
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LINEA 15

ELABORAZIONE TOMOGRAFICA ONDE SH



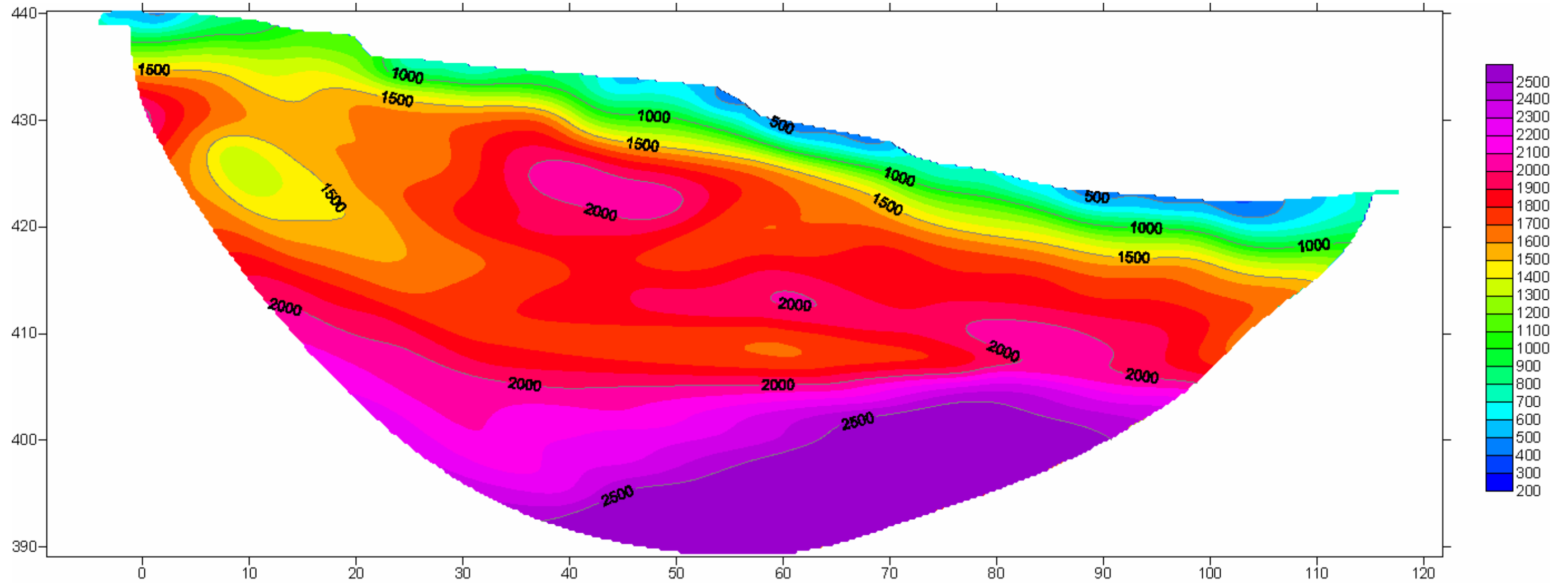


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	248

LINEA 16  
ELABORAZIONE TOMOGRAFICA ONDE P





**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

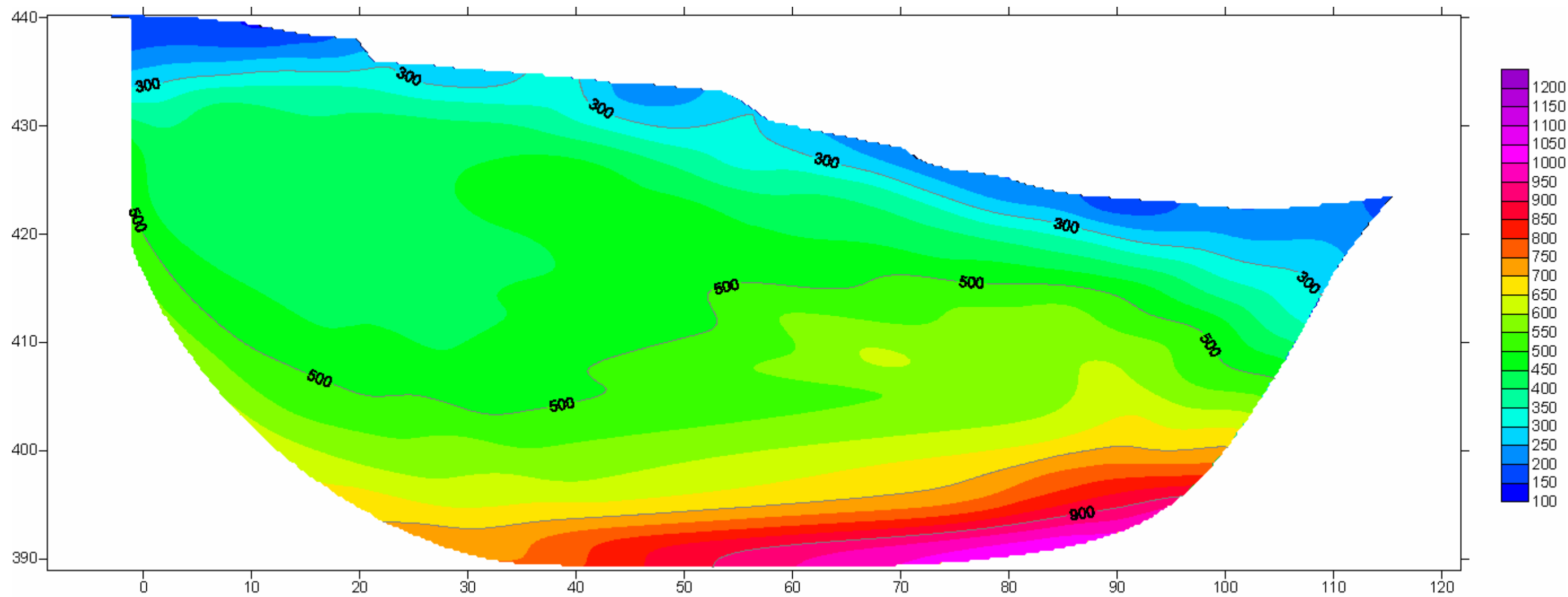
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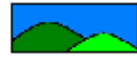
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249

LINEA 16

ELABORAZIONE TOMOGRAFICA ONDE SH



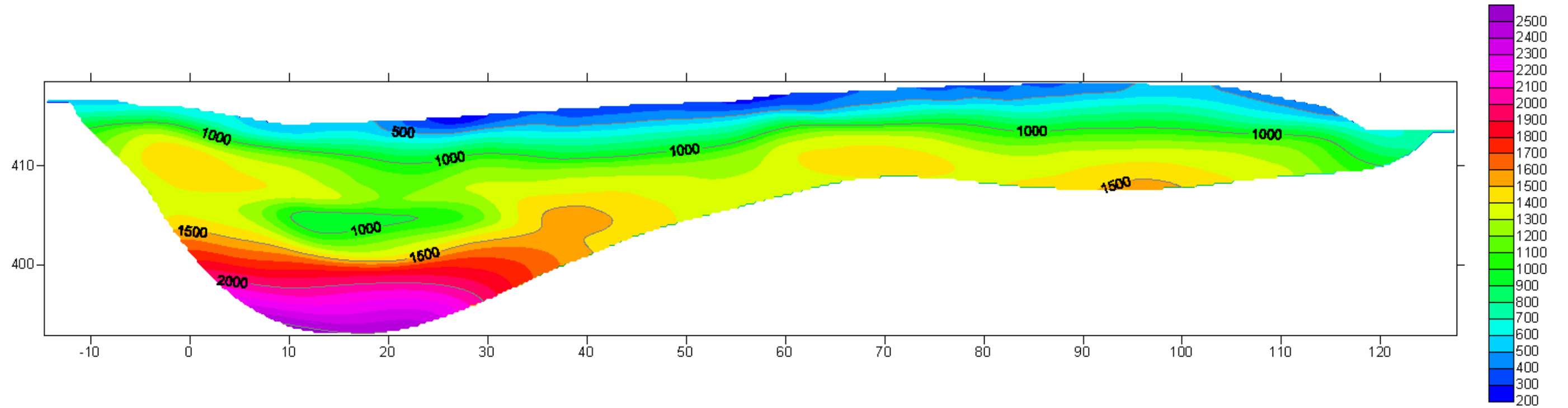


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INDAGINI GEOLOGICHE ED AMBIENTALI

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LINEA 17  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

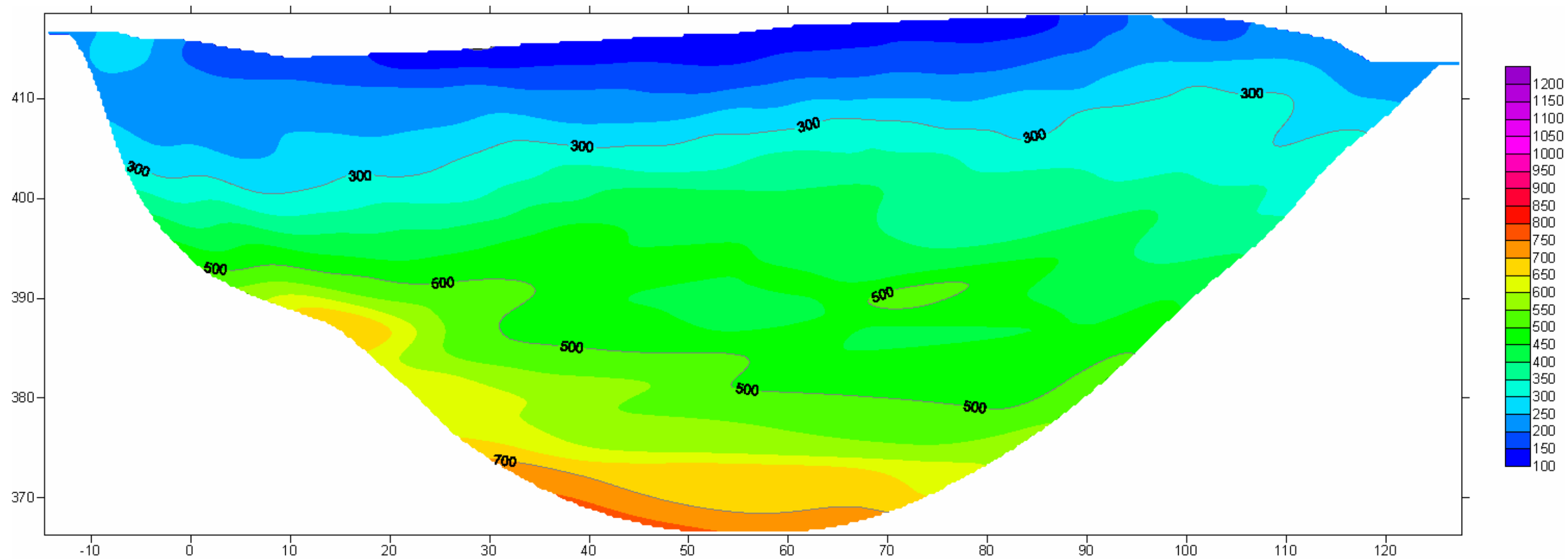
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LINEA 17

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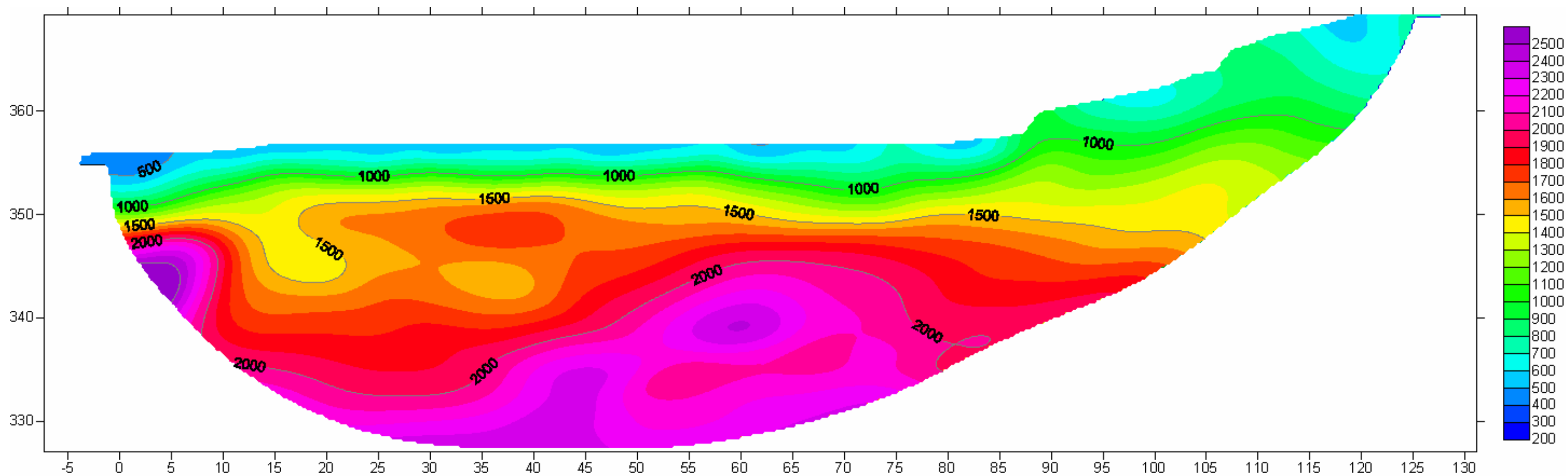


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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
C	DOCUMENTI	2008	SAS2008	20	08	001	1	279

LINEA 18  
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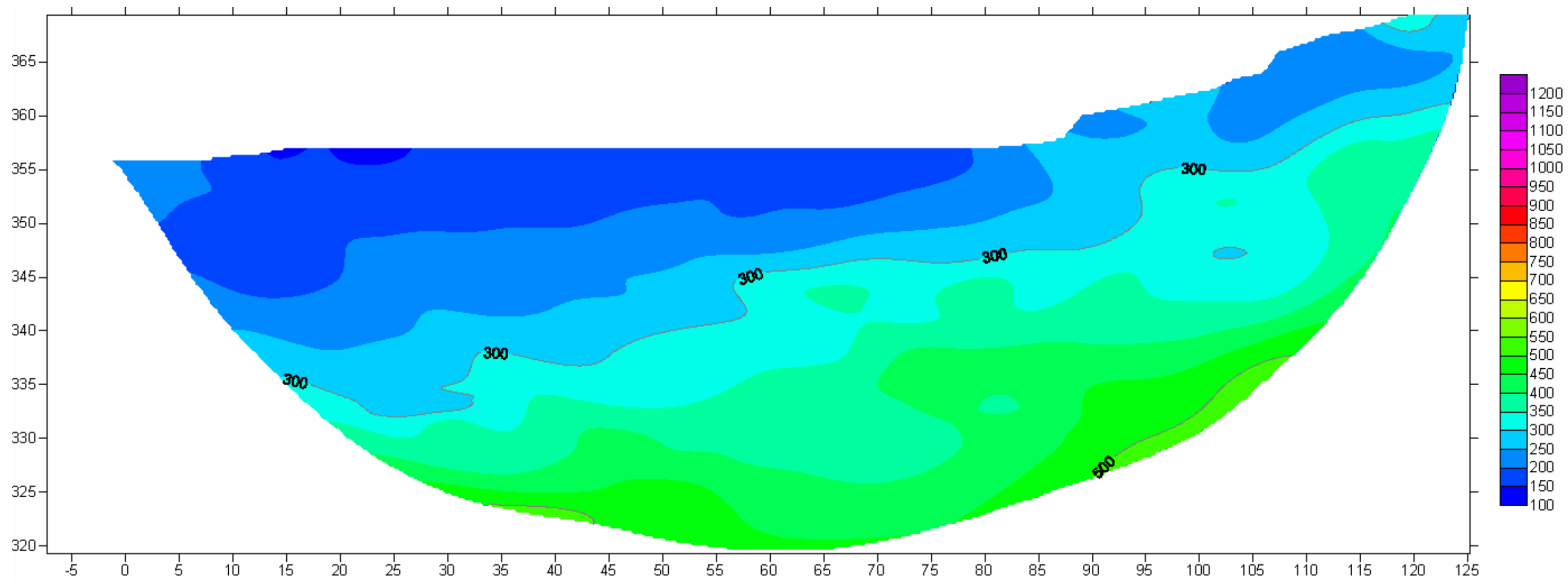


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INDAGINI GEOLOGICHE ED AMBIENTALI

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LINEA 18  
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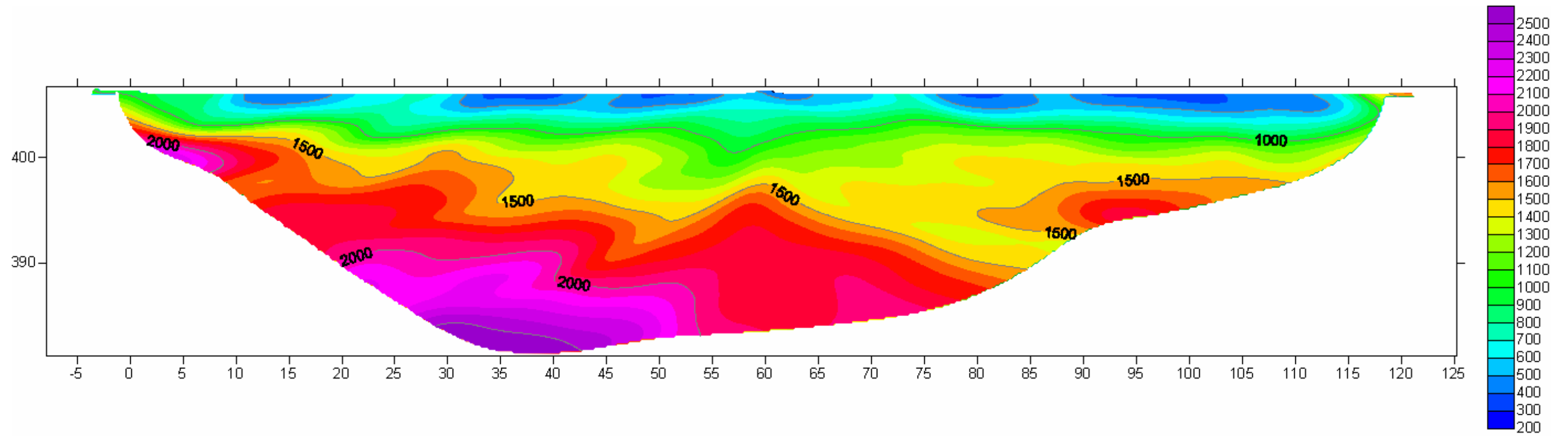


**IGEA S.A.S.**

INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO						REV.	FOGLIO	
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LINEA 19  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

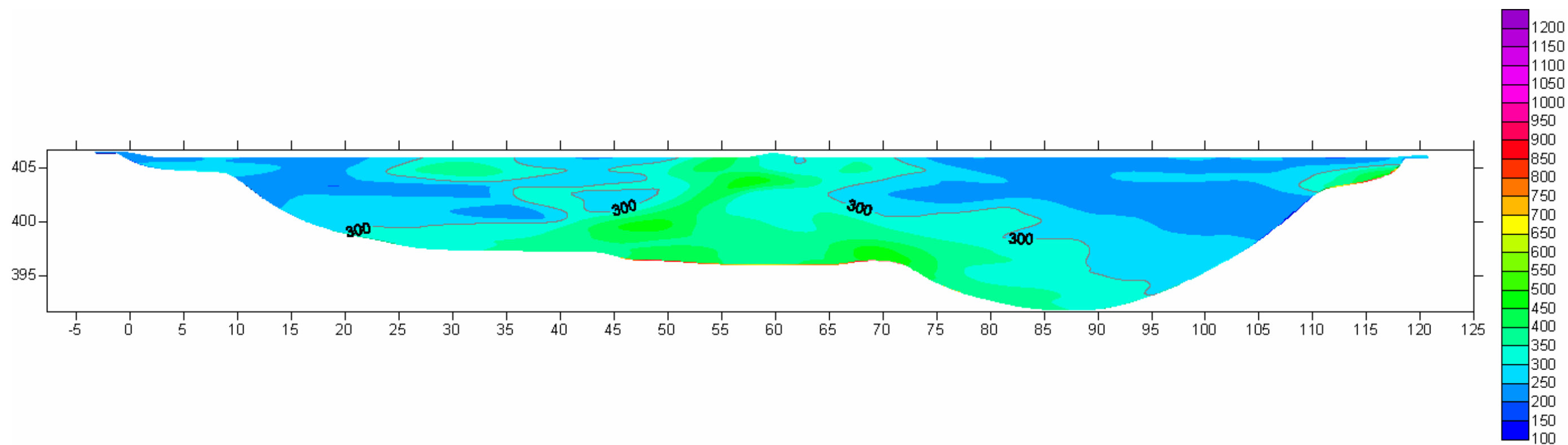
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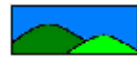
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LINEA 19

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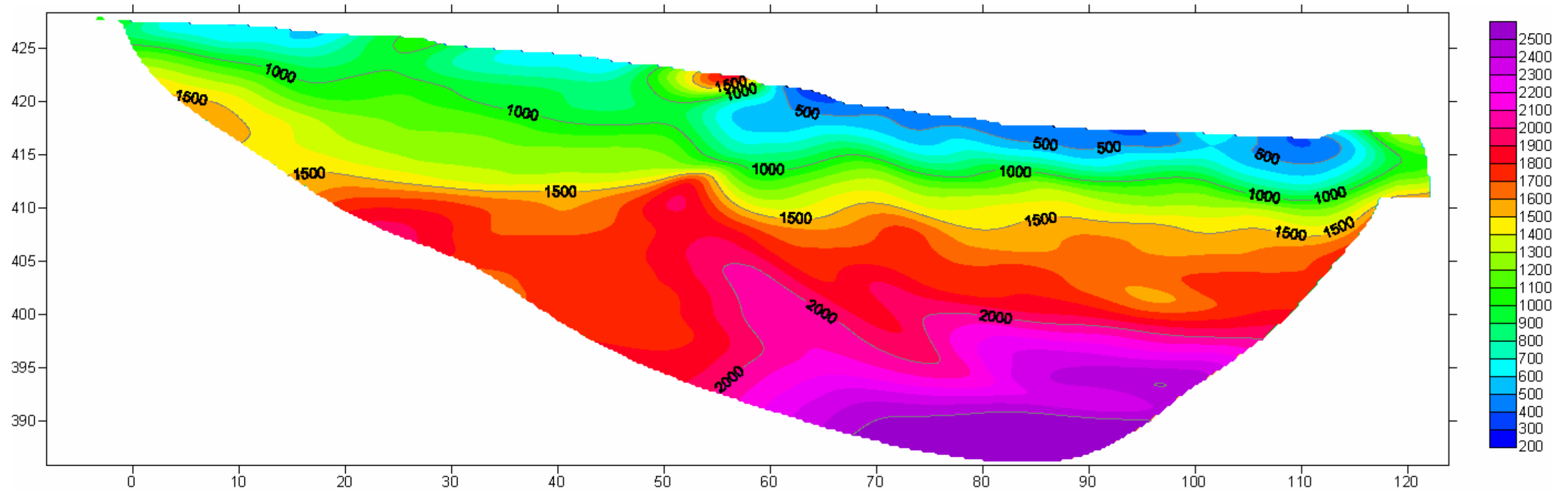


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INDAGINI GEOLOGICHE ED AMBIENTALI

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LINEA 20  
ELABORAZIONE TOMOGRAFICA ONDE P





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INDAGINI GEOLOGICHE ED AMBIENTALI

CODIFICA DOCUMENTO

REV.

FOGLIO

C DOCUMENTI 2008 SAS2008 20 08 001 1 316

LINEA 20

ELABORAZIONE TOMOGRAFICA ONDE SH

