COMMITTENTE

I.P.S. SpA

OGGETTO DELLA COMMESSA

INDAGINI FINALIZZATE ALLA VALUTAZIONE DELLO STATO DI CONTAMINAZIONE DEL SUOLO E DEL SOTTOSUOLO E CAMPAGNA GEOGNOSTICA NELLE AREE IN LOCALITA' PERTITE NEI COMUNI DI CENGIO E MILLESIMO

SIGLA ELABORATO

3

revisione	*data elaborato*
A	30/10/2009
-	-
-	-

NOME ELABORATO

Sismica a rifrazione
Tomografia elettrica
Prova Down-Hole

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INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS1**	Data:	**ottobre-09**

RISULTATO INDAGINE

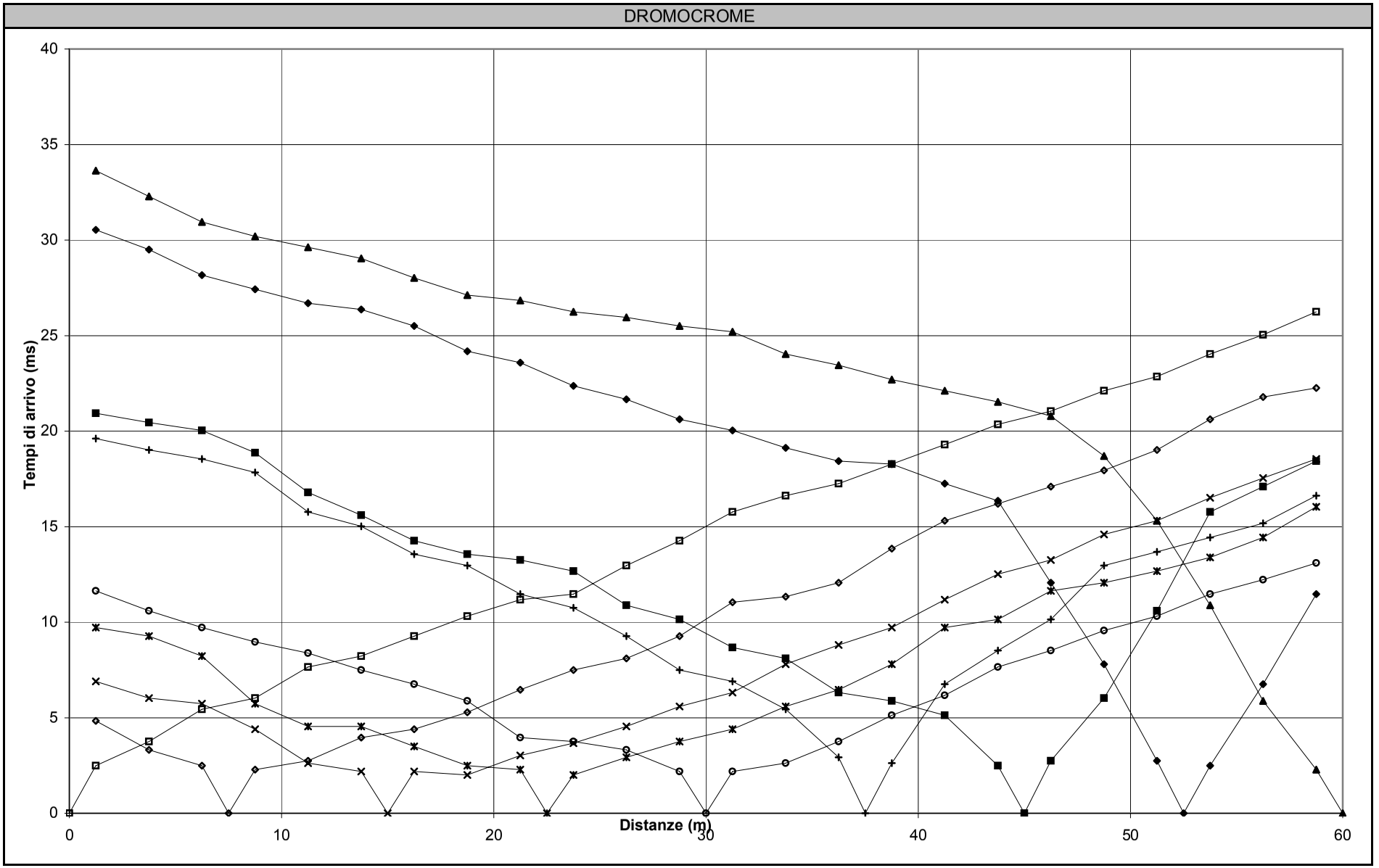
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	2.49	4.84	6.90	9.72	11.64	19.61	20.94	30.53	33.63
Geofono 2	3.75	3.76	3.32	6.03	9.27	10.60	19.02	20.45	29.50	32.29
Geofono 3	6.25	5.44	2.49	5.73	8.22	9.72	18.54	20.04	28.17	30.95
Geofono 4	8.75	6.03	2.29	4.40	5.73	8.97	17.84	18.87	27.43	30.20
Geofono 5	11.25	7.65	2.75	2.63	4.55	8.39	15.77	16.79	26.69	29.62
Geofono 6	13.75	8.22	3.96	2.19	4.55	7.50	15.02	15.60	26.37	29.04
Geofono 7	16.25	9.27	4.40	2.19	3.50	6.76	13.56	14.27	25.51	28.02
Geofono 8	18.75	10.31	5.28	2.00	2.49	5.88	12.97	13.56	24.18	27.12
Geofono 9	21.25	11.18	6.46	3.03	2.29	3.96	11.47	13.26	23.59	26.84
Geofono 10	23.75	11.47	7.50	3.67	2.00	3.76	10.75	12.67	22.37	26.25
Geofono 11	26.25	12.97	8.10	4.55	2.93	3.32	9.27	10.89	21.67	25.95
Geofono 12	28.75	14.27	9.27	5.59	3.76	2.19	7.50	10.14	20.62	25.51
Geofono 13	31.25	15.77	11.05	6.32	4.40	2.19	6.90	8.68	20.04	25.20
Geofono 14	33.75	16.62	11.34	7.80	5.59	2.63	5.44	8.10	19.12	24.04
Geofono 15	36.25	17.25	12.06	8.81	6.46	3.76	2.93	6.32	18.43	23.45
Geofono 16	38.75	18.28	13.85	9.72	7.80	5.13	2.63	5.88	18.28	22.70
Geofono 17	41.25	19.29	15.31	11.18	9.72	6.17	6.76	5.13	17.25	22.12
Geofono 18	43.75	20.35	16.20	12.52	10.14	7.65	8.52	2.49	16.36	21.53
Geofono 19	46.25	21.04	17.10	13.26	11.64	8.52	10.14	2.75	12.06	20.79
Geofono 20	48.75	22.12	17.95	14.59	12.06	9.56	12.97	6.03	7.80	18.70
Geofono 21	51.25	22.85	19.02	15.31	12.67	10.31	13.68	10.60	2.75	15.31
Geofono 22	53.75	24.04	20.62	16.51	13.39	11.47	14.43	15.77	2.49	10.89
Geofono 23	56.25	25.04	21.79	17.54	14.43	12.22	15.18	17.10	6.76	5.88
Geofono 24	58.75	26.25	22.26	18.54	16.04	13.10	16.62	18.43	11.47	2.29
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

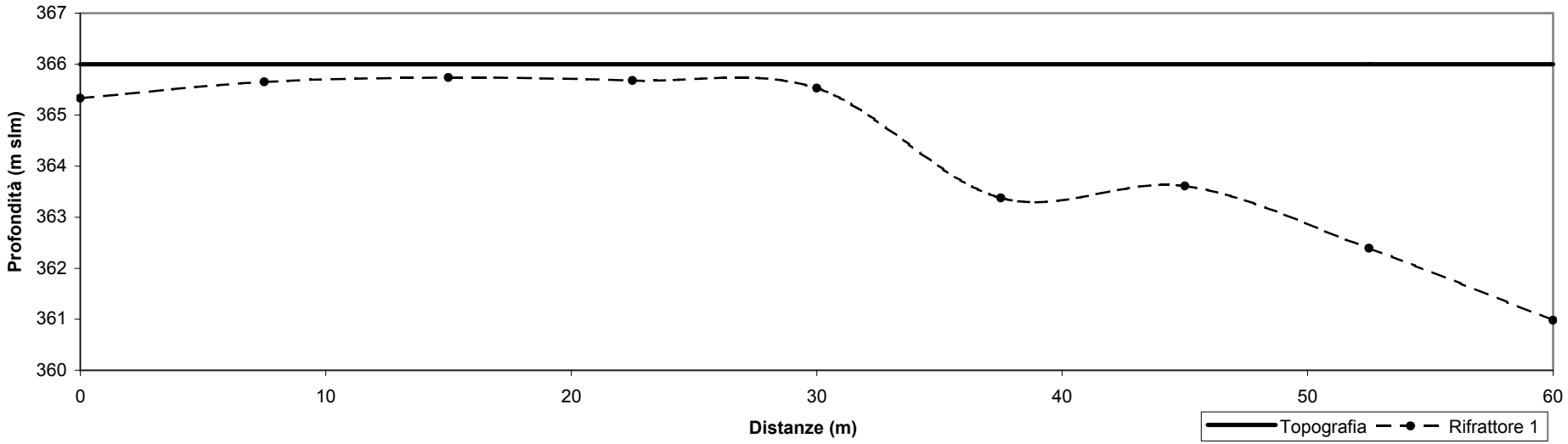
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	366.00	0.67	365.33	-	-	502	2489	-	-
2	7.50	366.00	0.35	365.65	-	-	518	2250	-	-
3	15.00	366.00	0.26	365.74	-	-	570	2456	-	-
4	22.50	366.00	0.32	365.68	-	-	573	2486	-	-
5	30.00	366.00	0.47	365.53	-	-	570	2642	-	-
6	37.50	366.00	2.62	363.38	-	-	778	2480	-	-
7	45.00	366.00	2.39	363.61	-	-	641	2114	-	-
8	52.50	366.00	3.61	362.39	-	-	538	3038	-	-
9	60.00	366.00	5.02	360.98	-	-	593	3718	-	-

NOTE

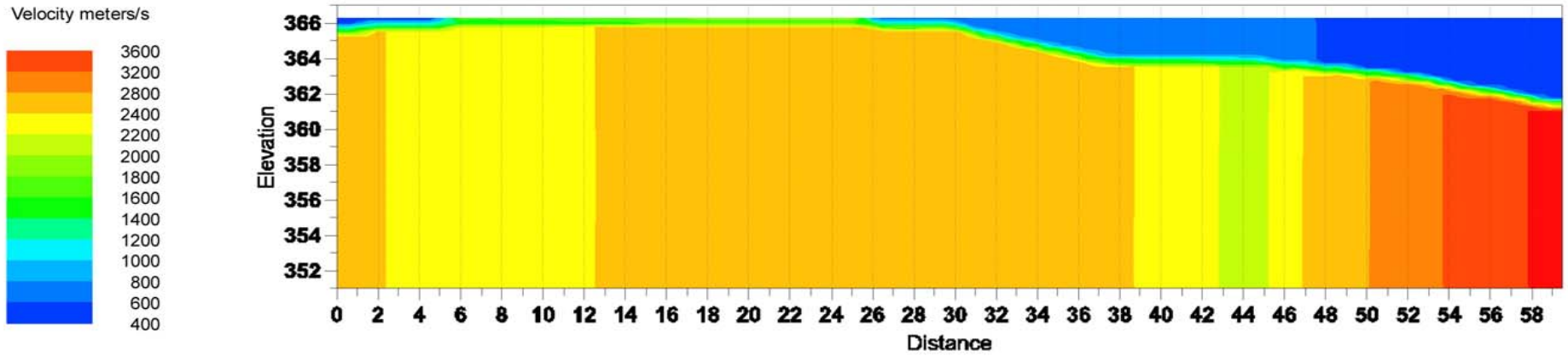
DROMOCROME


Tempi di arrivo (ms)
0
5
10
15
20
25
30
35
40
Distanze (m)
0
10
20
30
40
50
60

PROFILO RIFRATTORI



PROFILO VELOCITA' SISMICA



INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS2**	Data:	**ottobre-09**

RISULTATO INDAGINE

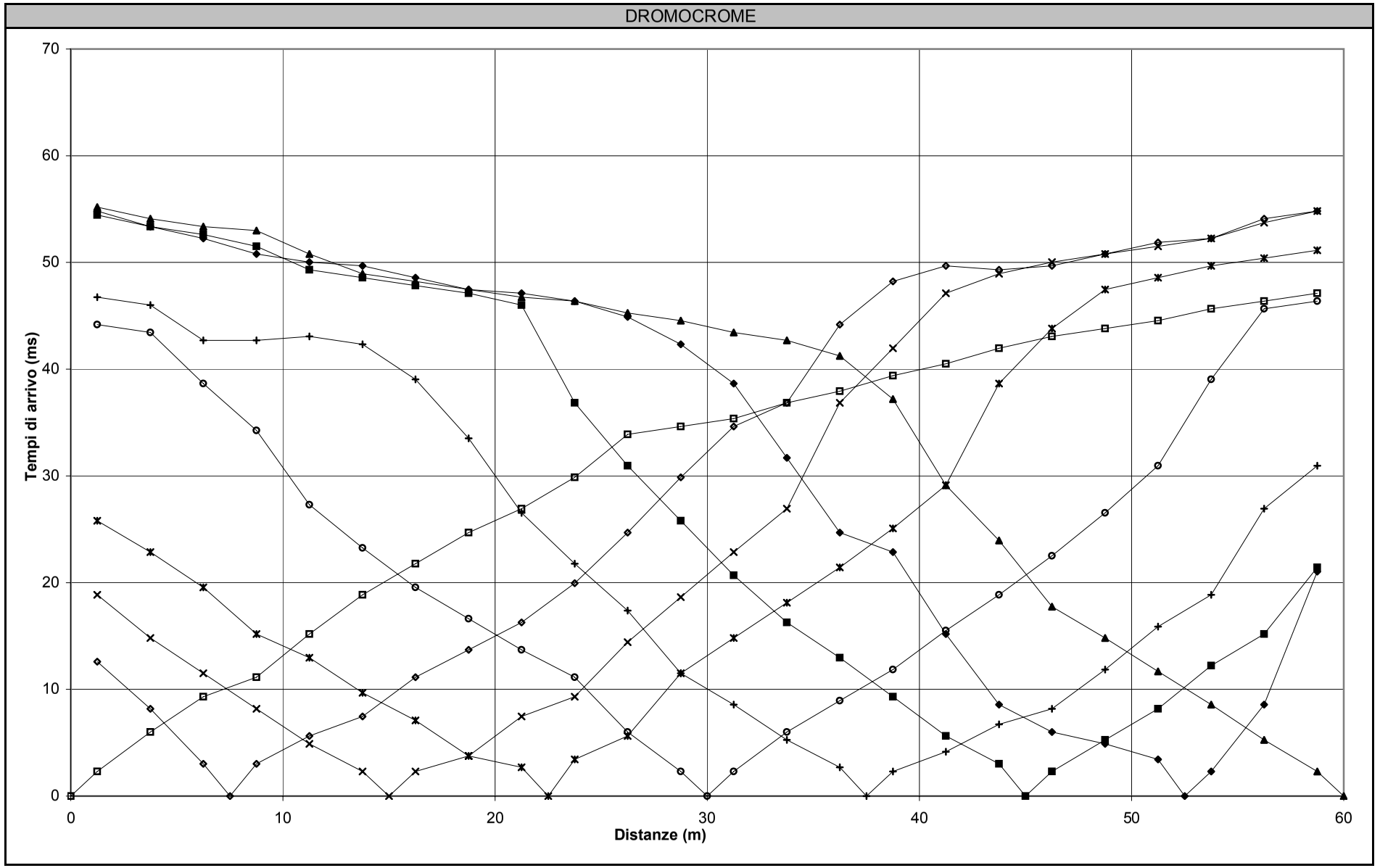
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	2.30	12.60	18.85	25.79	44.18	46.75	54.45	54.81	55.18
Geofono 2	3.75	6.00	8.18	14.81	22.87	43.43	46.00	53.36	53.36	54.09
Geofono 3	6.25	9.30	3.03	11.51	19.55	38.65	42.70	52.61	52.25	53.36
Geofono 4	8.75	11.14	3.03	8.18	15.18	34.27	42.70	51.52	50.79	52.99
Geofono 5	11.25	15.18	5.63	4.90	12.97	27.29	43.08	49.31	50.04	50.79
Geofono 6	13.75	18.85	7.46	2.30	9.67	23.25	42.34	48.58	49.68	48.95
Geofono 7	16.25	21.78	11.14	2.30	7.09	19.55	39.04	47.84	48.58	48.22
Geofono 8	18.75	24.70	13.71	3.77	3.77	16.62	33.52	47.11	47.47	47.47
Geofono 9	21.25	26.92	16.28	7.46	2.69	13.71	26.54	46.00	47.11	46.75
Geofono 10	23.75	29.86	19.95	9.30	3.43	11.14	21.78	36.84	46.38	46.38
Geofono 11	26.25	33.90	24.70	14.43	5.63	6.00	17.37	30.95	44.90	45.27
Geofono 12	28.75	34.63	29.86	18.65	11.51	2.30	11.51	25.79	42.34	44.54
Geofono 13	31.25	35.36	34.63	22.87	14.81	2.30	8.56	20.68	38.65	43.43
Geofono 14	33.75	36.84	36.84	26.92	18.11	6.00	5.26	16.28	31.70	42.70
Geofono 15	36.25	37.93	44.18	36.84	21.42	8.93	2.69	12.97	24.70	41.24
Geofono 16	38.75	39.40	48.22	41.97	25.09	11.85	2.30	9.30	22.87	37.20
Geofono 17	41.25	40.50	49.68	47.11	29.12	15.52	4.15	5.63	15.18	29.12
Geofono 18	43.75	41.97	49.31	48.95	38.65	18.85	6.73	3.03	8.56	23.96
Geofono 19	46.25	43.08	49.68	50.04	43.81	22.52	8.18	2.30	6.00	17.75
Geofono 20	48.75	43.81	50.79	50.79	47.47	26.54	11.85	5.26	4.90	14.81
Geofono 21	51.25	44.54	51.88	51.52	48.58	30.95	15.89	8.18	3.43	11.69
Geofono 22	53.75	45.65	52.25	52.25	49.68	39.04	18.85	12.22	2.30	8.56
Geofono 23	56.25	46.38	54.09	53.72	50.40	45.65	26.92	15.18	8.56	5.26
Geofono 24	58.75	47.11	54.81	54.81	51.15	46.38	30.95	21.42	21.04	2.30
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

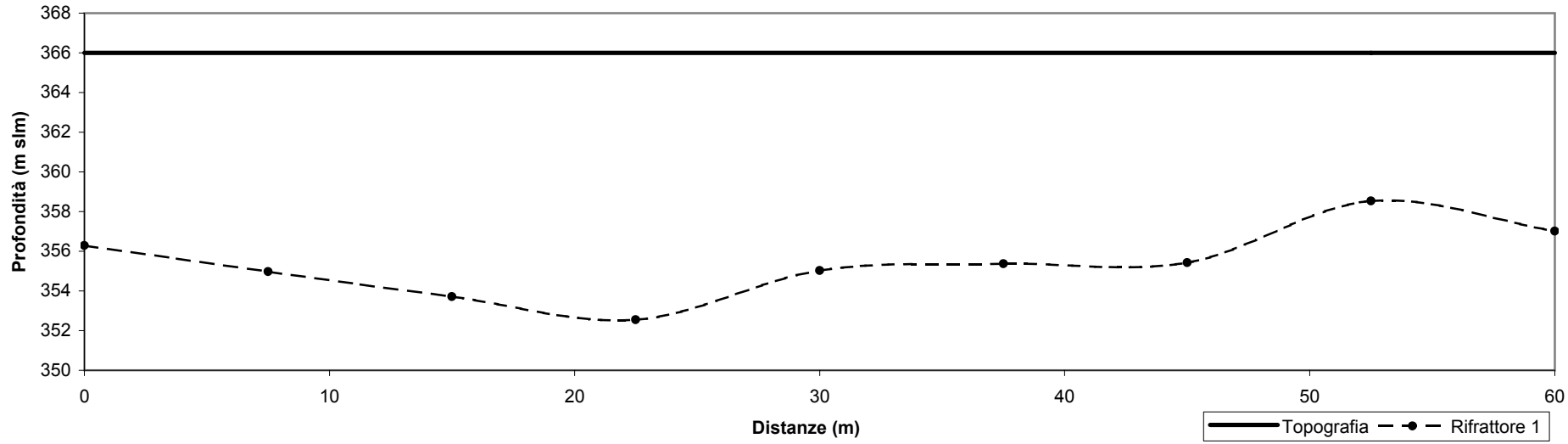
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	366.00	9.71	356.29	-	-	809	2324	-	-
2	7.50	366.00	11.03	354.97	-	-	571	3144	-	-
3	15.00	366.00	12.29	353.71	-	-	643	2466	-	-
4	22.50	366.00	13.45	352.55	-	-	687	2723	-	-
5	30.00	366.00	10.97	355.03	-	-	589	3400	-	-
6	37.50	366.00	10.63	355.37	-	-	623	2838	-	-
7	45.00	366.00	10.57	355.43	-	-	578	2307	-	-
8	52.50	366.00	7.47	358.53	-	-	428	2126	-	-
9	60.00	366.00	8.99	357.01	-	-	549	2570	-	-

NOTE

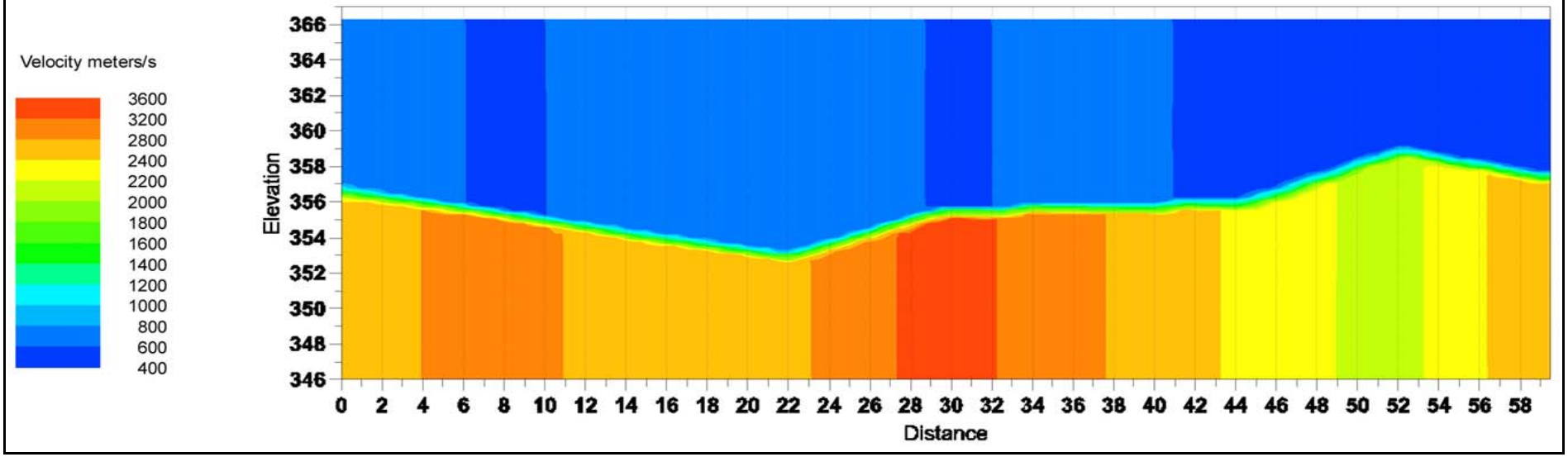
DROMOCROME



PROFILO RIFRATTORI



PROFILO VELOCITA' SISMICA



INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS3**	Data:	**ottobre-09**

RISULTATO INDAGINE

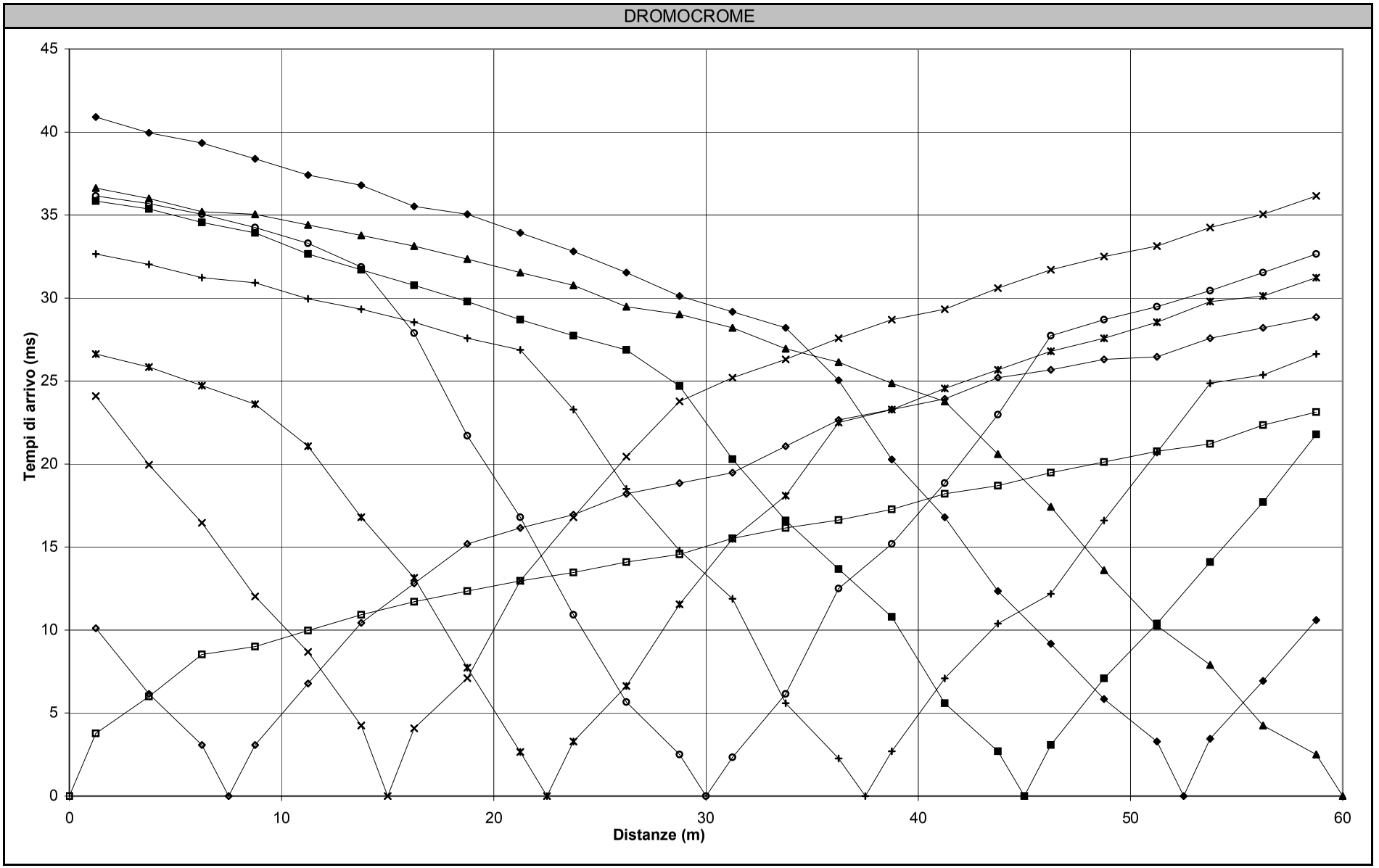
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	3.77	10.11	24.09	26.62	36.15	32.65	35.84	40.90	36.63
Geofono 2	3.75	6.00	6.15	19.95	25.84	35.68	32.02	35.36	39.95	35.99
Geofono 3	6.25	8.53	3.07	16.46	24.72	35.04	31.22	34.56	39.33	35.20
Geofono 4	8.75	9.01	3.07	12.02	23.61	34.25	30.92	33.93	38.38	35.04
Geofono 5	11.25	9.97	6.78	8.69	21.07	33.29	29.95	32.65	37.41	34.40
Geofono 6	13.75	10.92	10.43	4.25	16.79	31.87	29.32	31.70	36.79	33.77
Geofono 7	16.25	11.71	12.81	4.09	13.14	27.89	28.54	30.76	35.52	33.13
Geofono 8	18.75	12.35	15.19	7.11	7.73	21.70	27.57	29.79	35.04	32.34
Geofono 9	21.25	12.97	16.15	12.97	2.66	16.79	26.87	28.69	33.93	31.54
Geofono 10	23.75	13.46	16.95	16.79	3.29	10.92	23.29	27.73	32.81	30.76
Geofono 11	26.25	14.09	18.21	20.44	6.63	5.67	18.50	26.87	31.54	29.48
Geofono 12	28.75	14.56	18.85	23.77	11.55	2.50	14.80	24.70	30.12	29.01
Geofono 13	31.25	15.52	19.48	25.20	15.50	2.34	11.89	20.29	29.17	28.21
Geofono 14	33.75	16.15	21.07	26.30	18.10	6.15	5.59	16.60	28.21	26.95
Geofono 15	36.25	16.62	22.65	27.57	22.50	12.50	2.27	13.68	25.04	26.14
Geofono 16	38.75	17.27	23.29	28.69	23.29	15.19	2.70	10.80	20.28	24.87
Geofono 17	41.25	18.21	23.93	29.32	24.56	18.85	7.09	5.59	16.79	23.77
Geofono 18	43.75	18.69	25.20	30.60	25.68	22.97	10.39	2.70	12.35	20.60
Geofono 19	46.25	19.48	25.68	31.70	26.79	27.73	12.18	3.07	9.17	17.43
Geofono 20	48.75	20.12	26.30	32.50	27.57	28.69	16.60	7.09	5.84	13.61
Geofono 21	51.25	20.76	26.46	33.13	28.54	29.48	20.70	10.39	3.29	10.27
Geofono 22	53.75	21.22	27.57	34.25	29.79	30.44	24.87	14.10	3.46	7.90
Geofono 23	56.25	22.35	28.21	35.04	30.12	31.54	25.36	17.70	6.94	4.25
Geofono 24	58.75	23.13	28.85	36.15	31.22	32.65	26.62	21.79	10.60	2.50
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

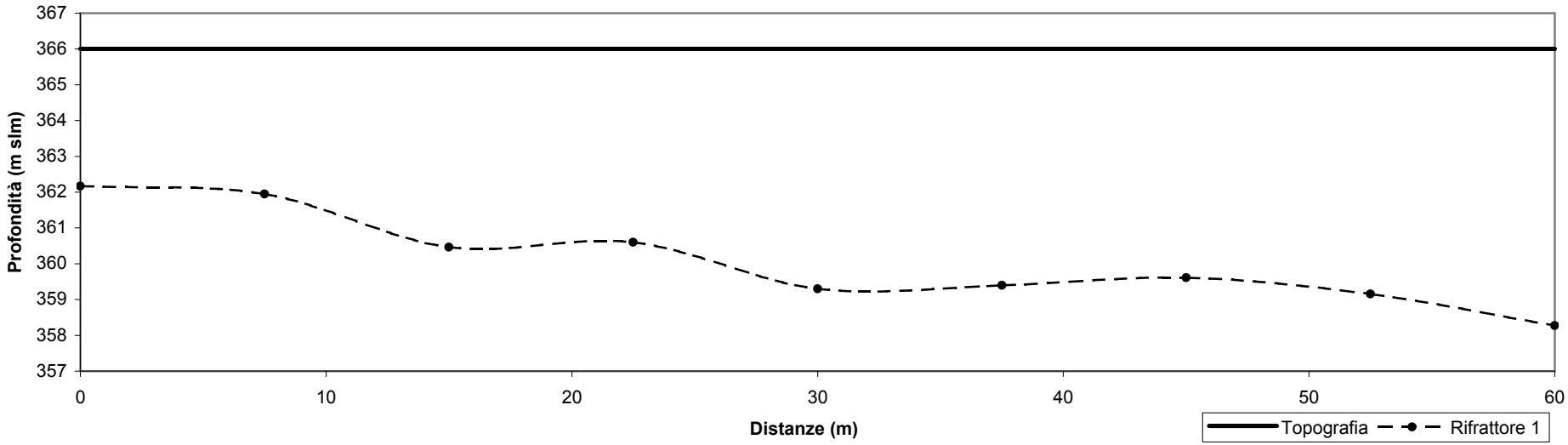
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	366.00	3.83	362.17	-	-	1050	3706	-	-
2	7.50	366.00	4.05	361.95	-	-	678	2860	-	-
3	15.00	366.00	5.54	360.46	-	-	574	2501	-	-
4	22.50	366.00	5.40	360.60	-	-	596	2502	-	-
5	30.00	366.00	6.70	359.30	-	-	547	2757	-	-
6	37.50	366.00	6.60	359.40	-	-	628	3126	-	-
7	45.00	366.00	6.39	359.61	-	-	644	2532	-	-
8	52.50	366.00	6.85	359.15	-	-	626	2549	-	-
9	60.00	366.00	7.73	358.27	-	-	800	3155	-	-

NOTE

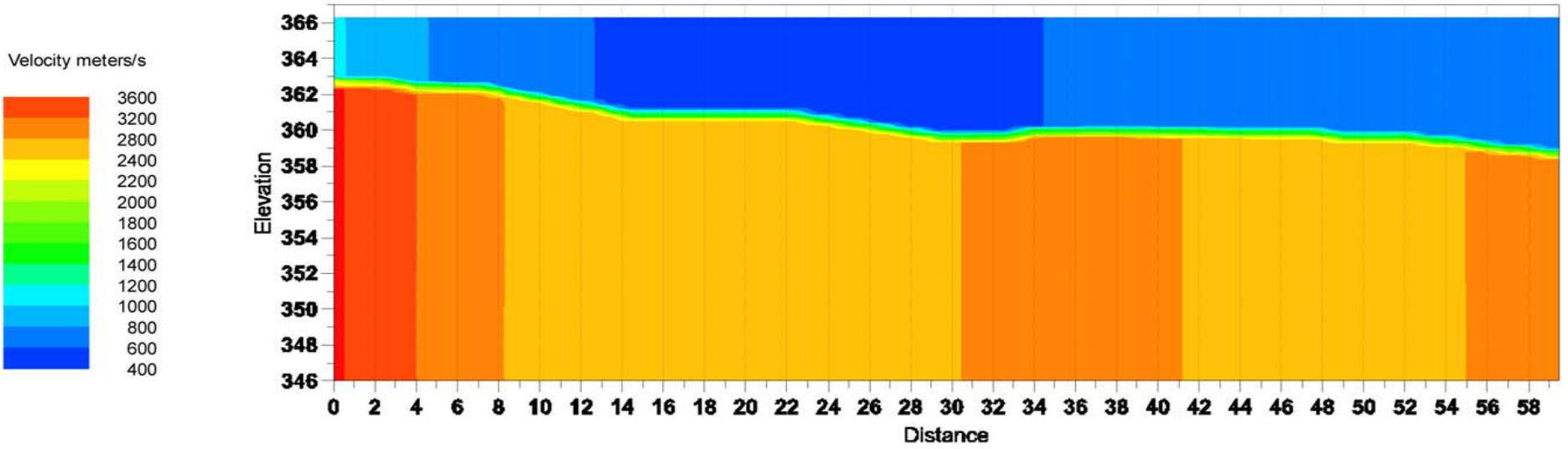
DROMOCROME


Tempi di arrivo (ms)
0
5
10
15
20
25
30
35
40
45
0
10
20
30
40
50
60
Distanze (m)

PROFILO RIFRATTORI



PROFILO VELOCITA' SISMICA



INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS4**	Data:	**ottobre-09**

RISULTATO INDAGINE

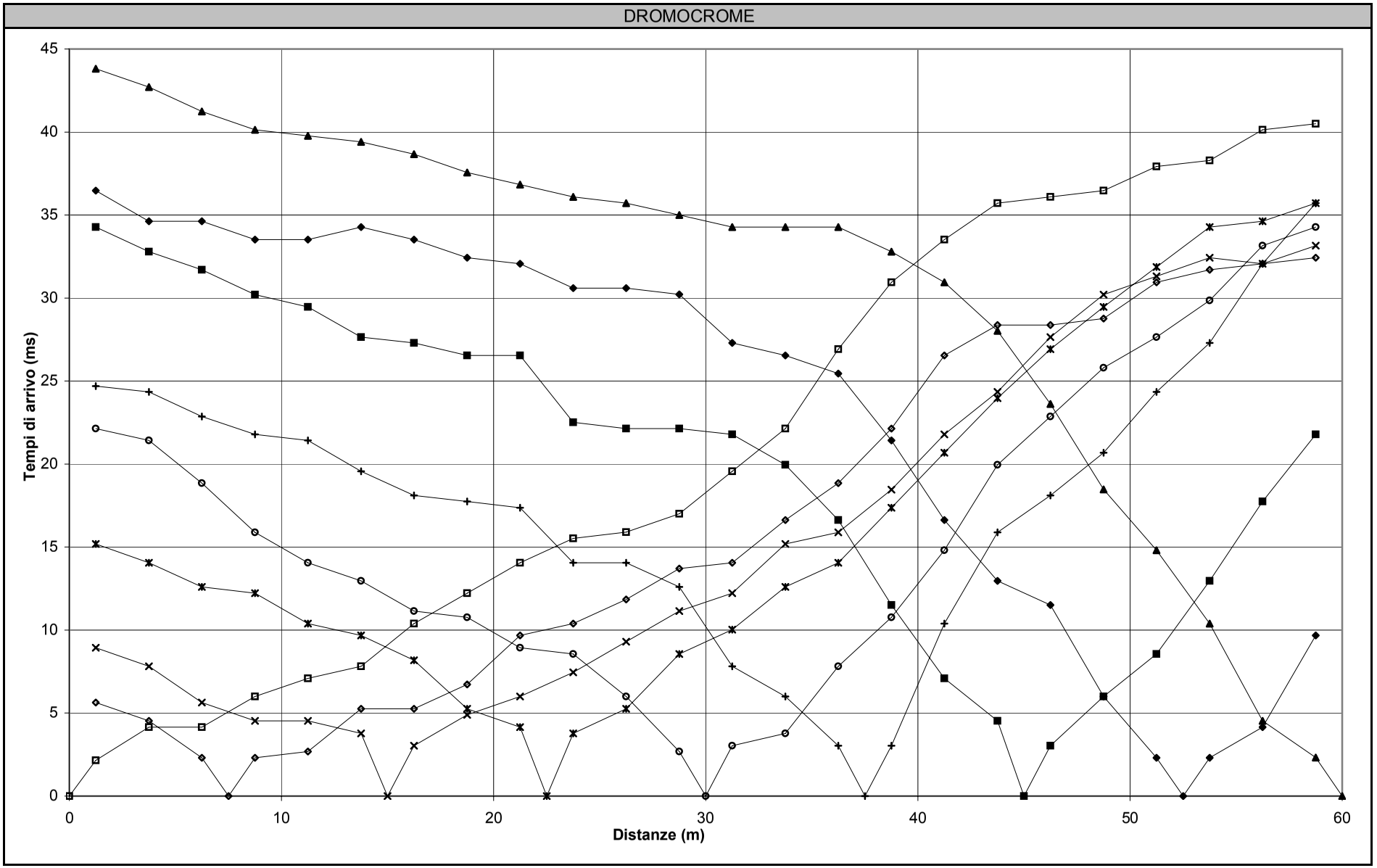
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	2.15	5.63	8.93	15.18	22.14	24.70	34.27	36.47	43.81
Geofono 2	3.75	4.15	4.53	7.82	14.06	21.42	24.35	32.79	34.63	42.70
Geofono 3	6.25	4.15	2.31	5.63	12.60	18.85	22.87	31.70	34.63	41.24
Geofono 4	8.75	6.00	2.31	4.53	12.22	15.89	21.78	30.21	33.52	40.13
Geofono 5	11.25	7.09	2.69	4.53	10.39	14.06	21.42	29.47	33.52	39.77
Geofono 6	13.75	7.82	5.26	3.78	9.67	12.97	19.56	27.64	34.27	39.40
Geofono 7	16.25	10.39	5.26	3.04	8.18	11.14	18.11	27.29	33.52	38.66
Geofono 8	18.75	12.22	6.73	4.90	5.26	10.77	17.75	26.54	32.43	37.56
Geofono 9	21.25	14.06	9.67	6.00	4.15	8.93	17.37	26.54	32.06	36.84
Geofono 10	23.75	15.52	10.39	7.46	3.78	8.56	14.06	22.52	30.60	36.09
Geofono 11	26.25	15.90	11.85	9.30	5.26	6.00	14.06	22.13	30.60	35.72
Geofono 12	28.75	17.01	13.71	11.14	8.56	2.69	12.60	22.13	30.22	35.00
Geofono 13	31.25	19.56	14.06	12.22	10.02	3.04	7.82	21.78	27.29	34.27
Geofono 14	33.75	22.14	16.62	15.18	12.60	3.78	6.00	19.95	26.54	34.27
Geofono 15	36.25	26.92	18.85	15.89	14.06	7.82	3.04	16.62	25.45	34.27
Geofono 16	38.75	30.95	22.13	18.46	17.37	10.77	3.04	11.51	21.42	32.79
Geofono 17	41.25	33.52	26.54	21.78	20.68	14.81	10.39	7.09	16.62	30.95
Geofono 18	43.75	35.72	28.37	24.35	23.97	19.95	15.89	4.53	12.97	28.03
Geofono 19	46.25	36.09	28.37	27.64	26.92	22.87	18.11	3.04	11.51	23.62
Geofono 20	48.75	36.47	28.76	30.21	29.47	25.80	20.68	6.00	6.00	18.47
Geofono 21	51.25	37.93	30.95	31.31	31.87	27.64	24.35	8.56	2.31	14.81
Geofono 22	53.75	38.29	31.70	32.43	34.27	29.86	27.29	12.97	2.31	10.39
Geofono 23	56.25	40.13	32.06	32.06	34.63	33.15	32.06	17.75	4.15	4.53
Geofono 24	58.75	40.50	32.43	33.15	35.72	34.27	35.72	21.78	9.67	2.32
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

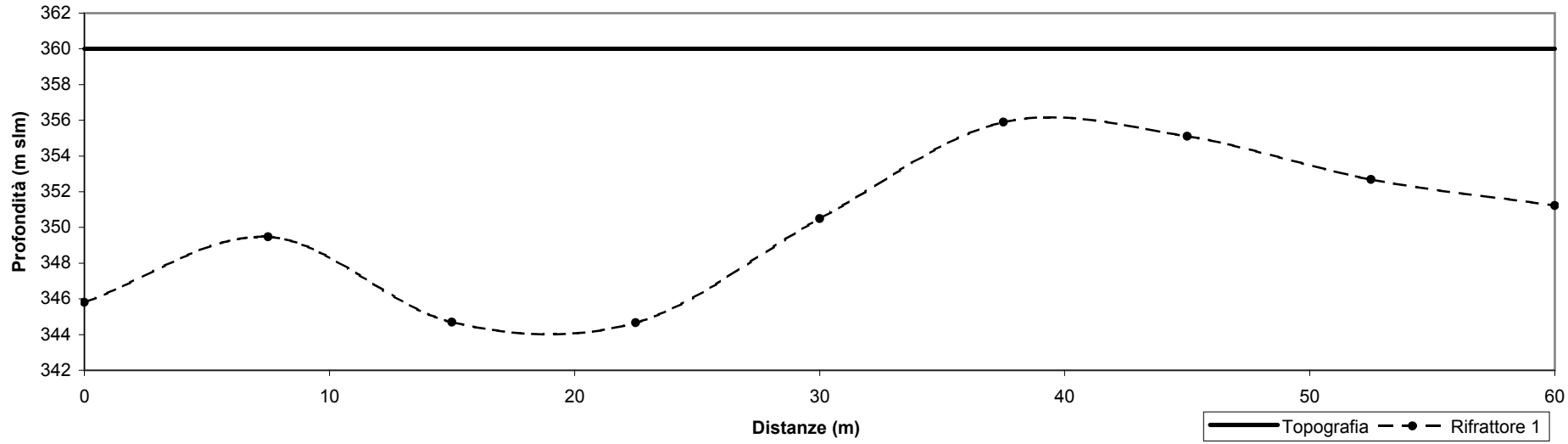
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	360.00	14.20	345.80	-	-	1269	2886	-	-
2	7.50	360.00	10.52	349.48	-	-	1193	3125	-	-
3	15.00	360.00	15.30	344.70	-	-	1327	3793	-	-
4	22.50	360.00	15.34	344.66	-	-	1155	3424	-	-
5	30.00	360.00	9.51	350.49	-	-	1008	2692	-	-
6	37.50	360.00	4.10	355.90	-	-	764	2463	-	-
7	45.00	360.00	4.89	355.11	-	-	631	2316	-	-
8	52.50	360.00	7.31	352.69	-	-	642	3624	-	-
9	60.00	360.00	8.78	351.22	-	-	652	3620	-	-

NOTE

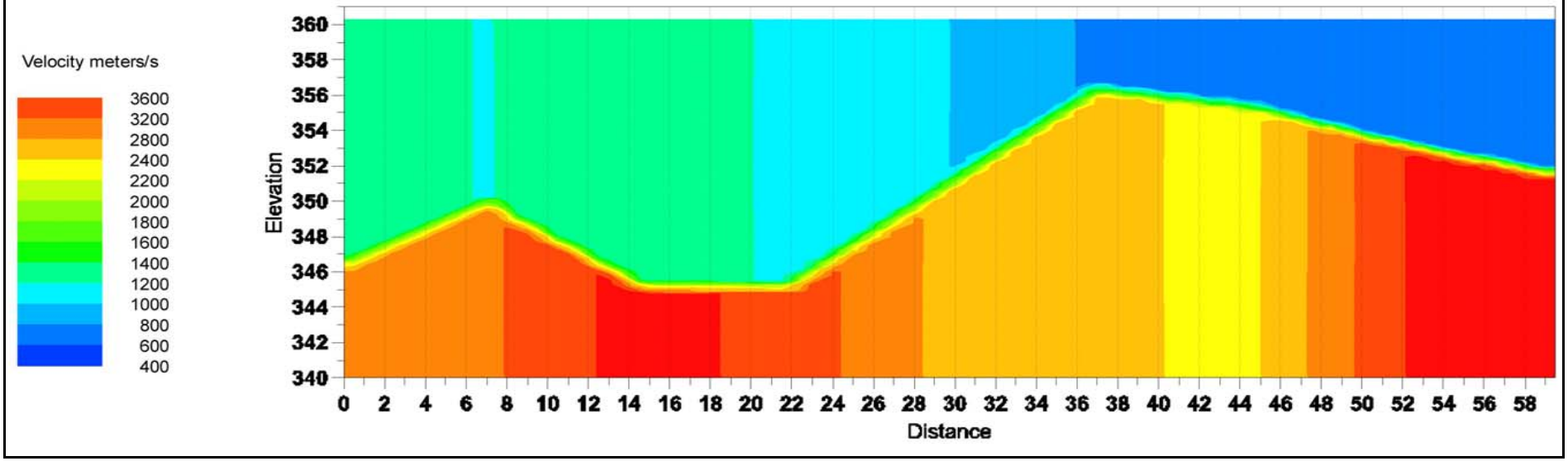
DROMOCROME


Tempi di arrivo (ms)
0
5
10
15
20
25
30
35
40
45
0
10
20
30
40
50
60
Distanze (m)

PROFILO RIFRATTORI



PROFILO VELOCITA' SISMICA



INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS5**	Data:	**ottobre-09**

RISULTATO INDAGINE

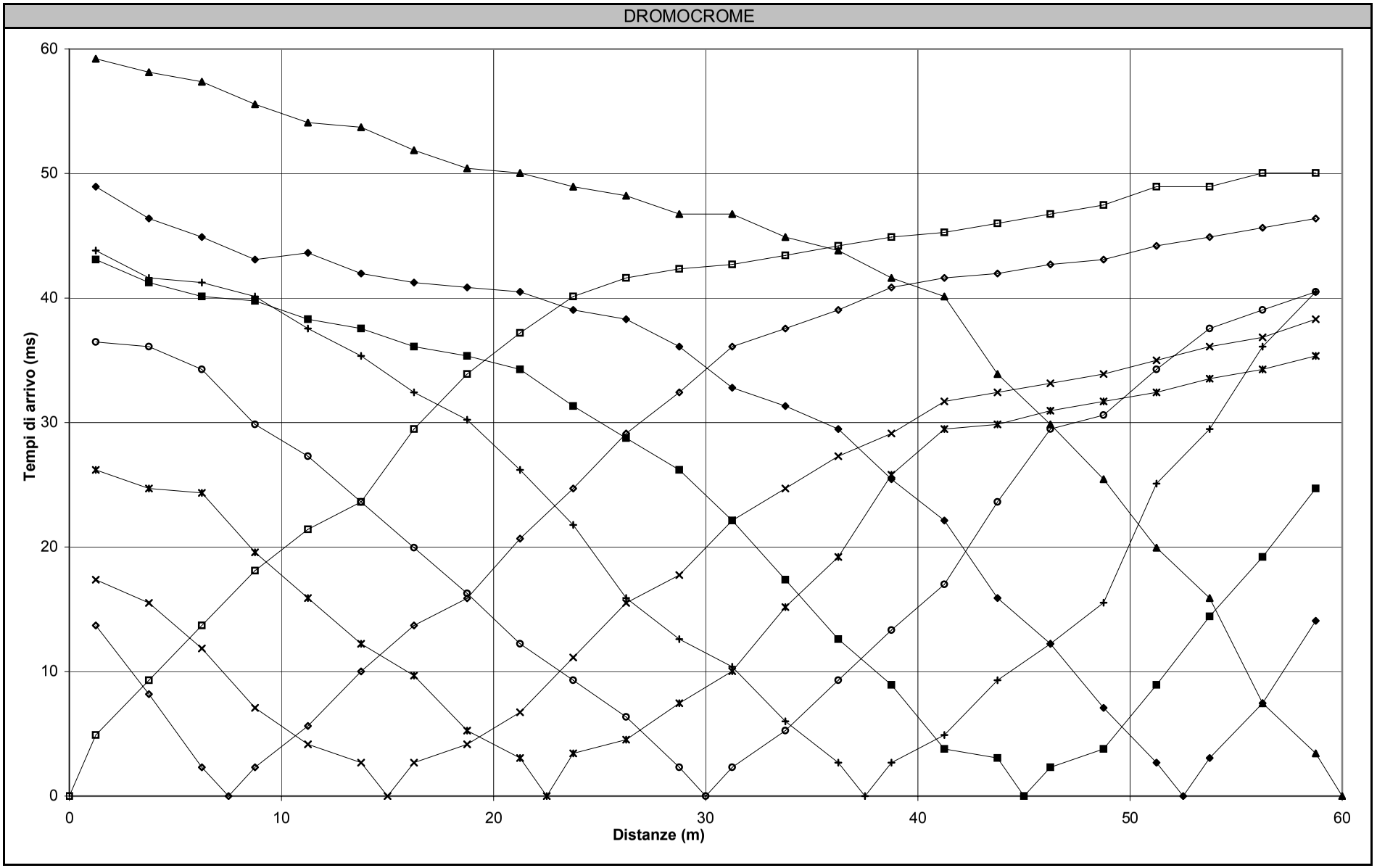
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	4.90	13.71	17.37	26.19	36.47	43.81	43.08	48.95	59.22
Geofono 2	3.75	9.30	8.18	15.52	24.71	36.09	41.61	41.24	46.38	58.13
Geofono 3	6.25	13.71	2.31	11.85	24.35	34.27	41.24	40.13	44.90	57.38
Geofono 4	8.75	18.11	2.31	7.09	19.57	29.86	40.13	39.77	43.08	55.56
Geofono 5	11.25	21.42	5.63	4.15	15.90	27.29	37.56	38.29	43.64	54.09
Geofono 6	13.75	23.62	10.02	2.69	12.23	23.62	35.36	37.56	41.97	53.72
Geofono 7	16.25	29.47	13.71	2.69	9.67	19.95	32.43	36.09	41.24	51.88
Geofono 8	18.75	33.90	15.89	4.15	5.26	16.28	30.22	35.36	40.86	50.41
Geofono 9	21.25	37.20	20.68	6.73	3.05	12.23	26.19	34.27	40.50	50.04
Geofono 10	23.75	40.13	24.70	11.14	3.43	9.30	21.78	31.32	39.04	48.95
Geofono 11	26.25	41.61	29.12	15.52	4.53	6.36	15.90	28.76	38.29	48.22
Geofono 12	28.75	42.34	32.43	17.75	7.46	2.32	12.60	26.19	36.09	46.75
Geofono 13	31.25	42.70	36.09	22.13	10.03	2.32	10.39	22.14	32.79	46.75
Geofono 14	33.75	43.43	37.56	24.70	15.18	5.26	6.00	17.37	31.32	44.90
Geofono 15	36.25	44.18	39.04	27.29	19.20	9.30	2.69	12.60	29.48	43.81
Geofono 16	38.75	44.90	40.86	29.12	25.81	13.34	2.69	8.93	25.45	41.61
Geofono 17	41.25	45.27	41.61	31.70	29.48	17.01	4.90	3.79	22.14	40.13
Geofono 18	43.75	46.00	41.97	32.43	29.86	23.62	9.30	3.05	15.90	33.90
Geofono 19	46.25	46.75	42.70	33.15	30.95	29.48	12.23	2.32	12.23	29.86
Geofono 20	48.75	47.47	43.08	33.90	31.70	30.60	15.53	3.79	7.09	25.45
Geofono 21	51.25	48.95	44.18	35.00	32.43	34.27	25.09	8.93	2.69	19.95
Geofono 22	53.75	48.95	44.90	36.09	33.52	37.56	29.48	14.43	3.05	15.90
Geofono 23	56.25	50.04	45.65	36.84	34.27	39.04	36.09	19.20	7.46	7.46
Geofono 24	58.75	50.04	46.38	38.29	35.36	40.50	40.50	24.71	14.07	3.43
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

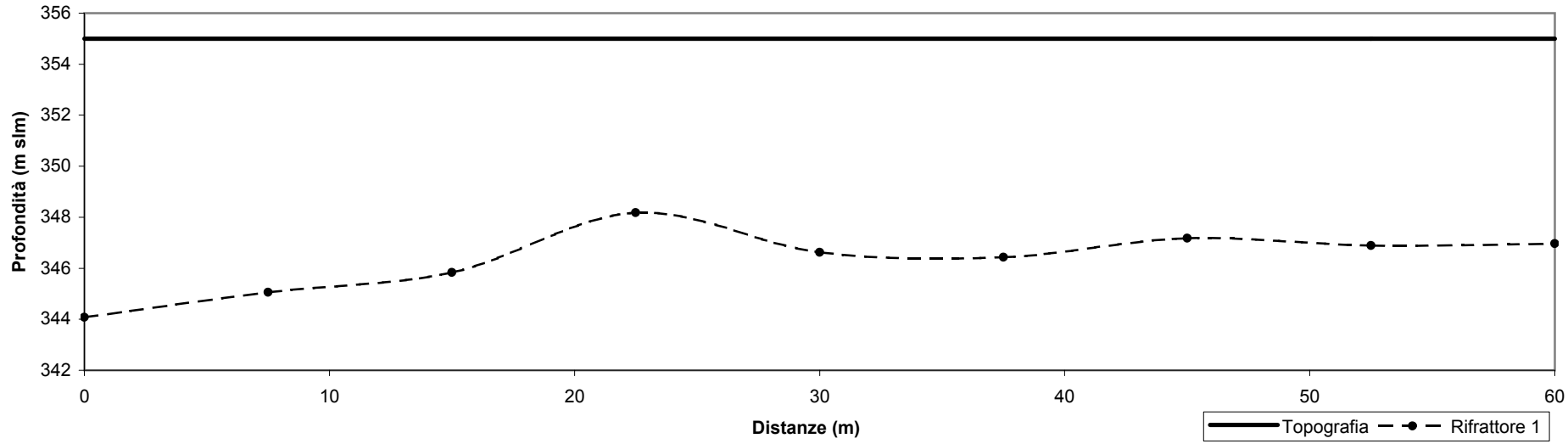
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	355.00	10.92	344.08	-	-	634	3564	-	-
2	7.50	355.00	9.94	345.06	-	-	609	3083	-	-
3	15.00	355.00	9.16	345.84	-	-	809	2688	-	-
4	22.50	355.00	6.82	348.18	-	-	651	2819	-	-
5	30.00	355.00	8.38	346.62	-	-	662	1942	-	-
6	37.50	355.00	8.57	346.43	-	-	620	2673	-	-
7	45.00	355.00	7.82	347.18	-	-	624	2377	-	-
8	52.50	355.00	8.11	346.89	-	-	564	2681	-	-
9	60.00	355.00	8.03	346.97	-	-	482	2207	-	-

NOTE

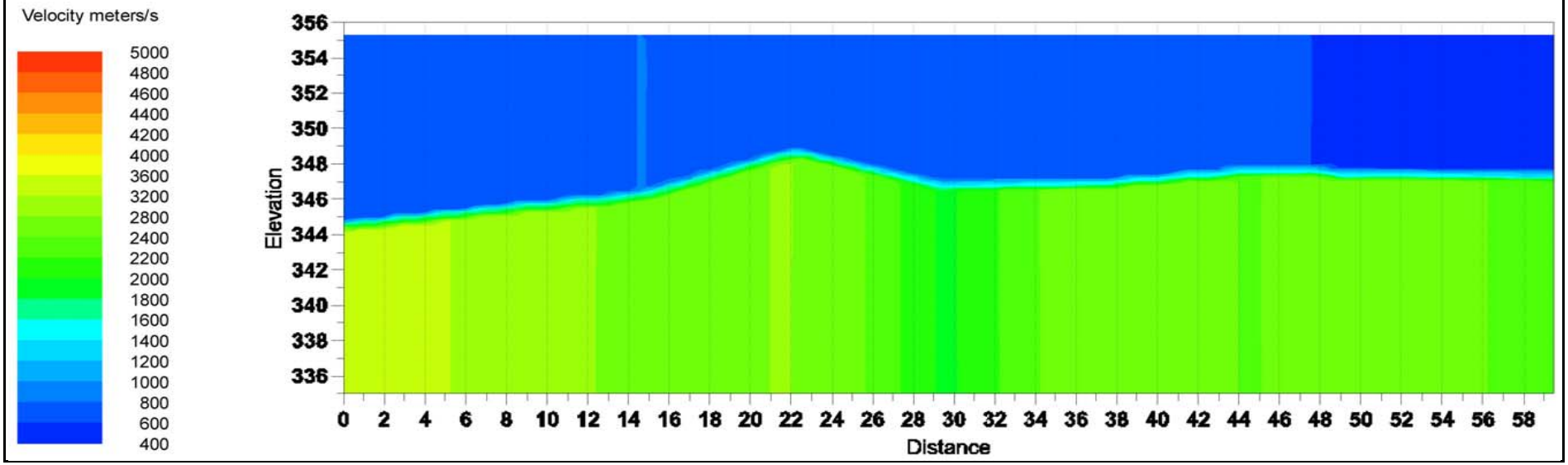
DROMOCROME


Tempi di arrivo (ms)
0
10
20
30
40
50
60
Distanze (m)
0
10
20
30
40
50
60

PROFILO RIFRATTORI



PROFILO VELOCITA' SISMICA



INDAGINE SISIMICA A RIFRAZIONE

Committente:	**I.P.S. SpA**	Sistema di acquisizione:	**Pasi**
Località:	**Pertite - Millesimo (SV)**	Sistema energizzazione:	**Fucile**
Stendimento:	**PS6**	Data:	**ottobre-09**

RISULTATO INDAGINE

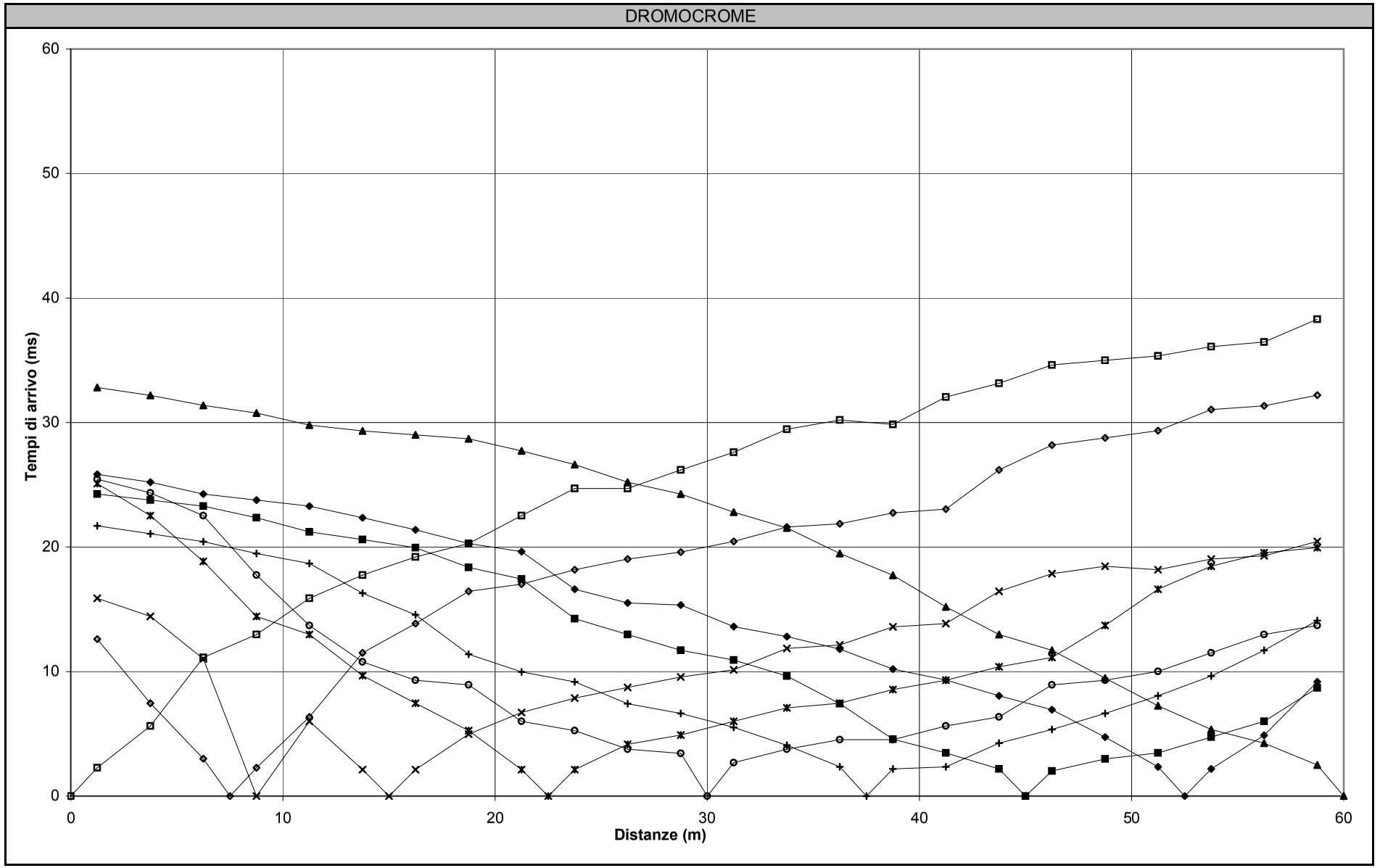
Numero geofono	Dist. (m)	Tempi di primo arrivo (ms)								
		SC1	SC2	SC3	SC4	SC5	SC6	SC7	SC8	SC9
Geofono 1	1.25	2.28	12.60	15.88	25.09	25.45	21.70	24.25	25.84	32.81
Geofono 2	3.75	5.63	7.46	14.43	22.52	24.35	21.07	23.77	25.20	32.18
Geofono 3	6.25	11.14	3.01	11.01	18.85	22.52	20.44	23.29	24.25	31.38
Geofono 4	8.75	12.97	2.28	0.00	14.43	17.75	19.48	22.35	23.77	30.76
Geofono 5	11.25	15.89	6.36	6.00	12.97	13.71	18.69	21.22	23.29	29.79
Geofono 6	13.75	17.75	11.51	2.13	9.67	10.77	16.30	20.60	22.35	29.32
Geofono 7	16.25	19.20	13.85	2.13	7.46	9.30	14.56	19.95	21.38	29.01
Geofono 8	18.75	20.29	16.45	4.98	5.26	8.93	11.39	18.37	20.28	28.69
Geofono 9	21.25	22.52	17.02	6.71	2.13	6.00	9.97	17.43	19.64	27.73
Geofono 10	23.75	24.70	18.17	7.86	2.13	5.26	9.17	14.25	16.62	26.62
Geofono 11	26.25	24.70	19.03	8.72	4.15	3.76	7.42	12.97	15.52	25.20
Geofono 12	28.75	26.19	19.60	9.56	4.90	3.43	6.63	11.71	15.35	24.25
Geofono 13	31.25	27.62	20.45	10.14	6.00	2.69	5.51	10.92	13.61	22.81
Geofono 14	33.75	29.45	21.61	11.85	7.09	3.76	4.09	9.64	12.81	21.54
Geofono 15	36.25	30.20	21.87	12.14	7.46	4.53	2.34	7.42	11.80	19.48
Geofono 16	38.75	29.86	22.75	13.59	8.56	4.53	2.19	4.57	10.20	17.73
Geofono 17	41.25	32.06	23.04	13.85	9.30	5.63	2.34	3.46	9.32	15.19
Geofono 18	43.75	33.15	26.19	16.45	10.39	6.36	4.25	2.19	8.06	12.97
Geofono 19	46.25	34.63	28.19	17.87	11.14	8.93	5.36	2.02	6.94	11.71
Geofono 20	48.75	35.00	28.77	18.45	13.71	9.30	6.63	2.98	4.73	9.48
Geofono 21	51.25	35.36	29.34	18.17	16.62	10.02	8.06	3.46	2.34	7.26
Geofono 22	53.75	36.09	31.04	19.03	18.45	11.51	9.64	4.73	2.19	5.36
Geofono 23	56.25	36.47	31.34	19.29	19.54	12.97	11.71	6.00	4.88	4.25
Geofono 24	58.75	38.29	32.20	20.45	19.95	13.71	14.09	8.69	9.17	2.50
Distanza scoppi m		0.00	7.50	15.00	22.50	30.00	37.50	45.00	52.50	60.00

ELABORAZIONE (Metodo delle intercette)

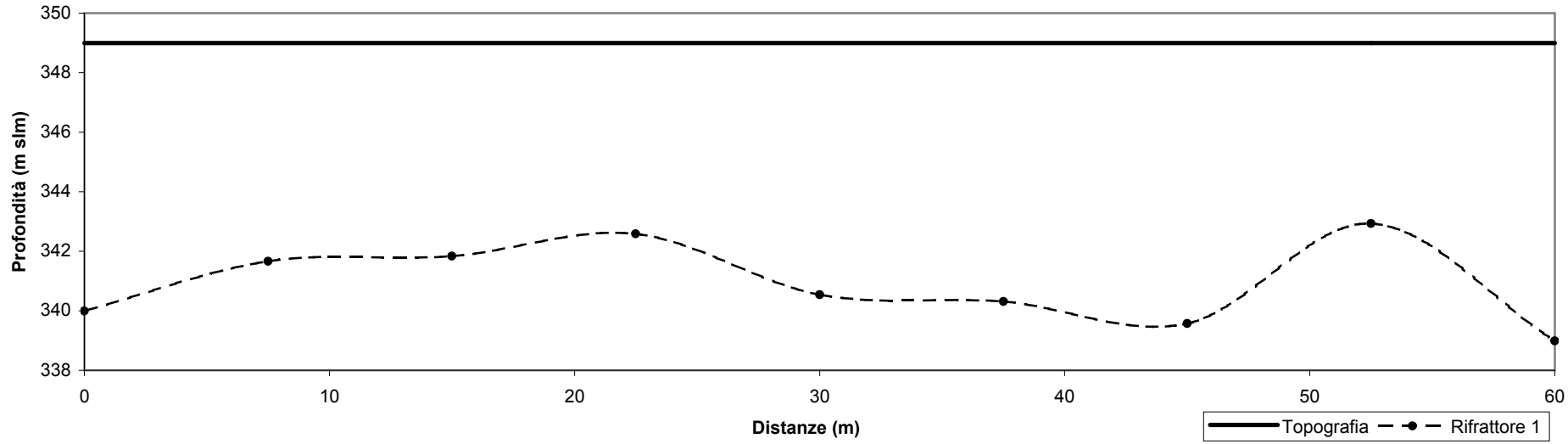
Scoppio n°	Ubicazione (m)	Quota (m slm)	Rifrattore 1		Rifrattore 2		Velocità onde sismiche (m/s)			
			Profondità (m)	Quota (m slm)	Profondità m	Quota (m slm)	Strato 1	Strato 2	Strato 3	Strato 4
1	0.00	349.00	9.01	339.99	-	-	1068	2534	-	-
2	7.50	349.00	7.34	341.66	-	-	935	2969	-	-
3	15.00	349.00	7.16	341.84	-	-	1306	4533	-	-
4	22.50	349.00	6.42	342.58	-	-	1268	3401	-	-
5	30.00	349.00	8.46	340.54	-	-	1550	2676	-	-
6	37.50	349.00	8.69	340.31	-	-	1456	3277	-	-
7	45.00	349.00	9.43	339.57	-	-	1510	3290	-	-
8	52.50	349.00	6.07	342.93	-	-	1135	3215	-	-
9	60.00	349.00	10.01	338.99	-	-	1294	3044	-	-

NOTE

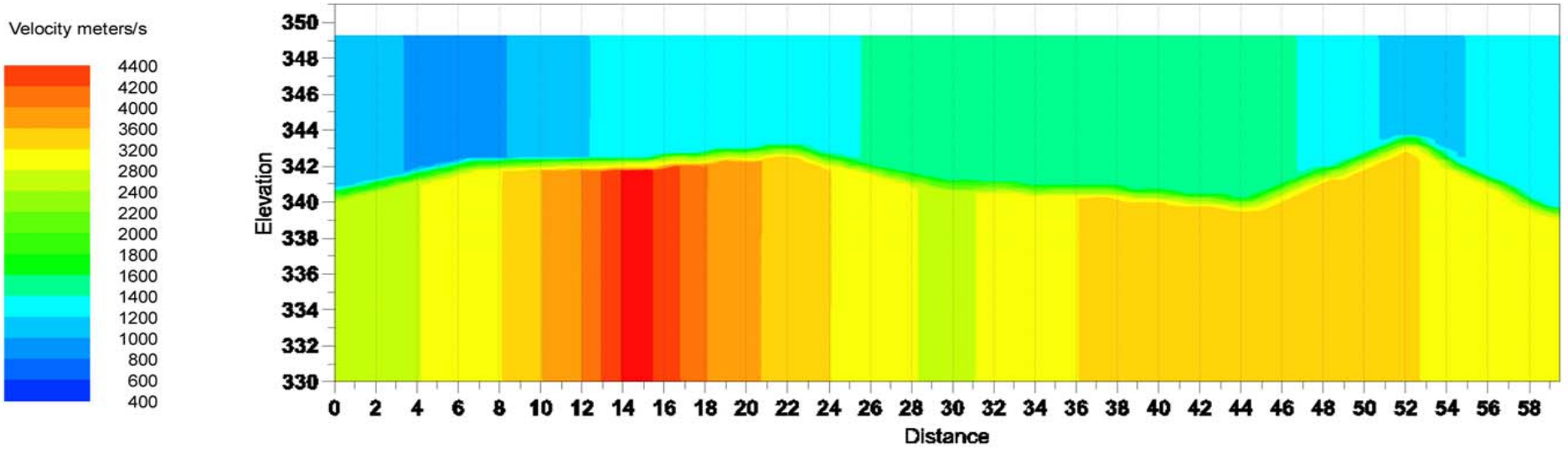
DROMOCROME



PROFILO RIFRATTORI

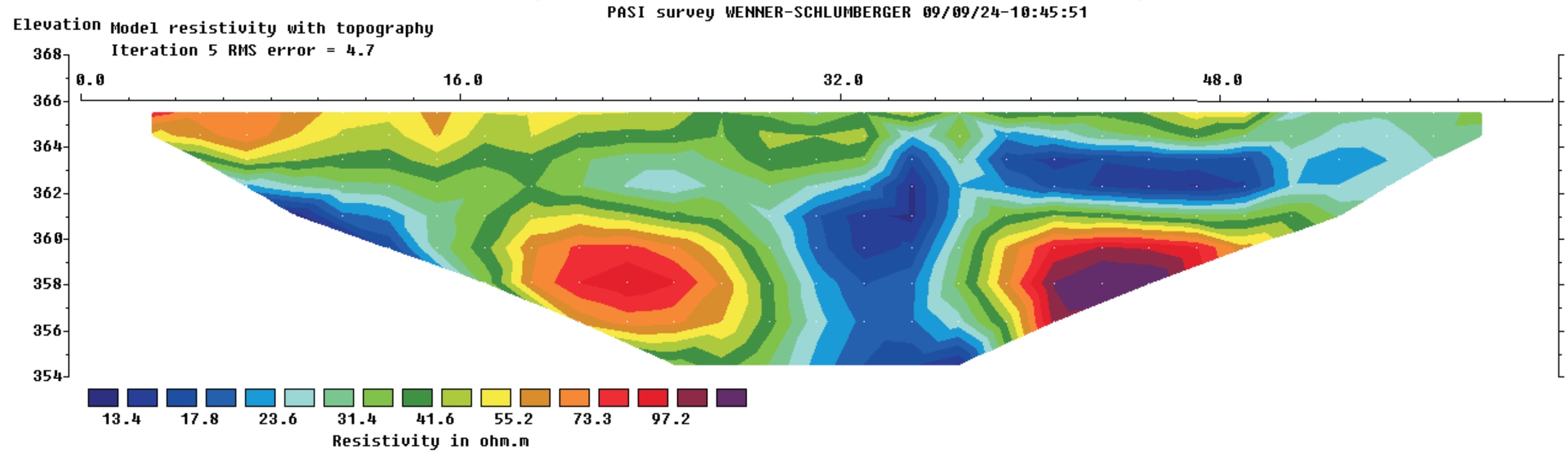


PROFILO VELOCITA' SISMICA



Stendimento T1 metodo Wenner-Schlumberger

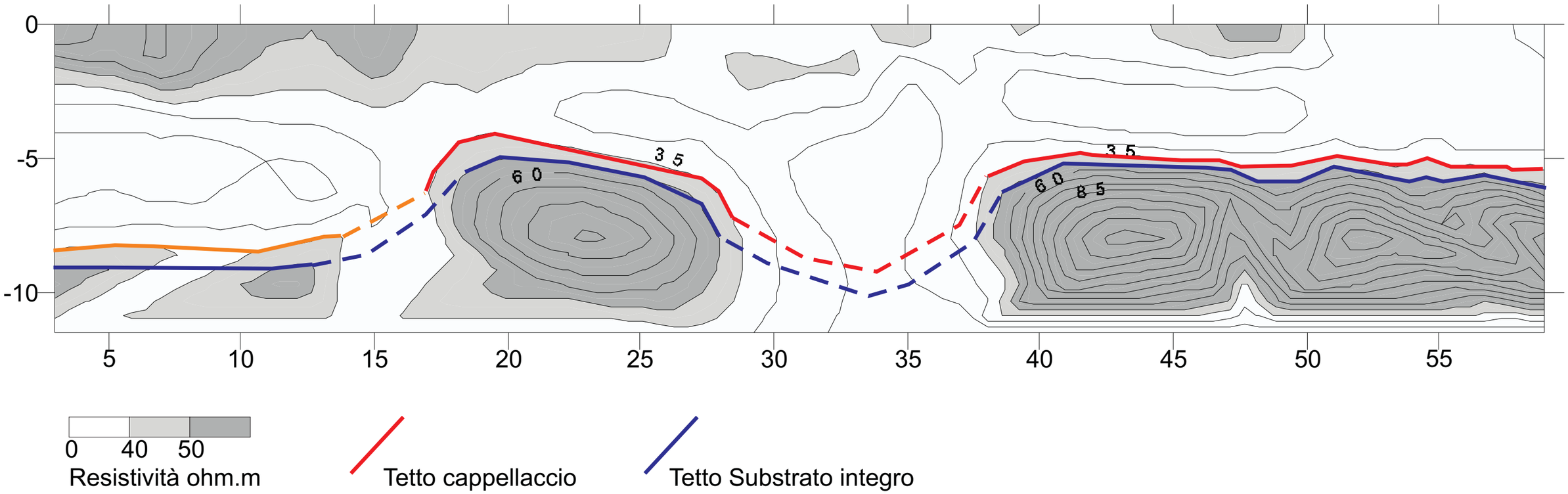
Profilo tomografia elettrica con correzione topografica



Horizontal scale is 38.68 pixels per unit spacing
Vertical exaggeration in model section display = 0.97
First electrode is located at 0.0 m.
Last electrode is located at 62.0 m.

Stendimento T1 metodo Wenner-Schlumberger

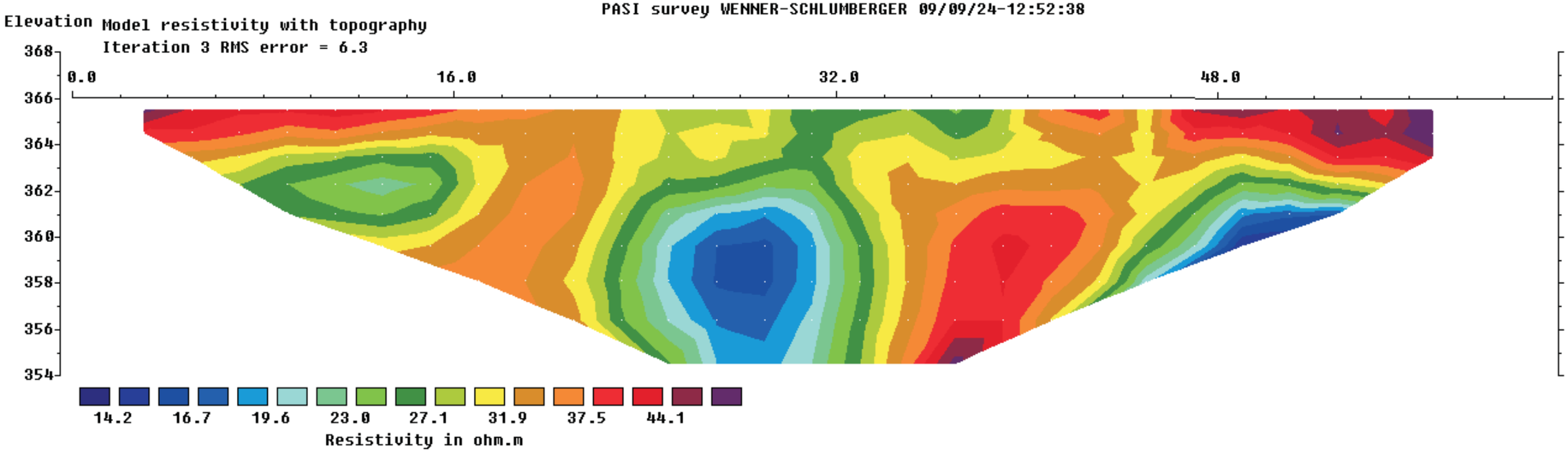
Profilo interpretativo



Scala 1:150

Stendimento T2 metodo Wenner-Schlumberger

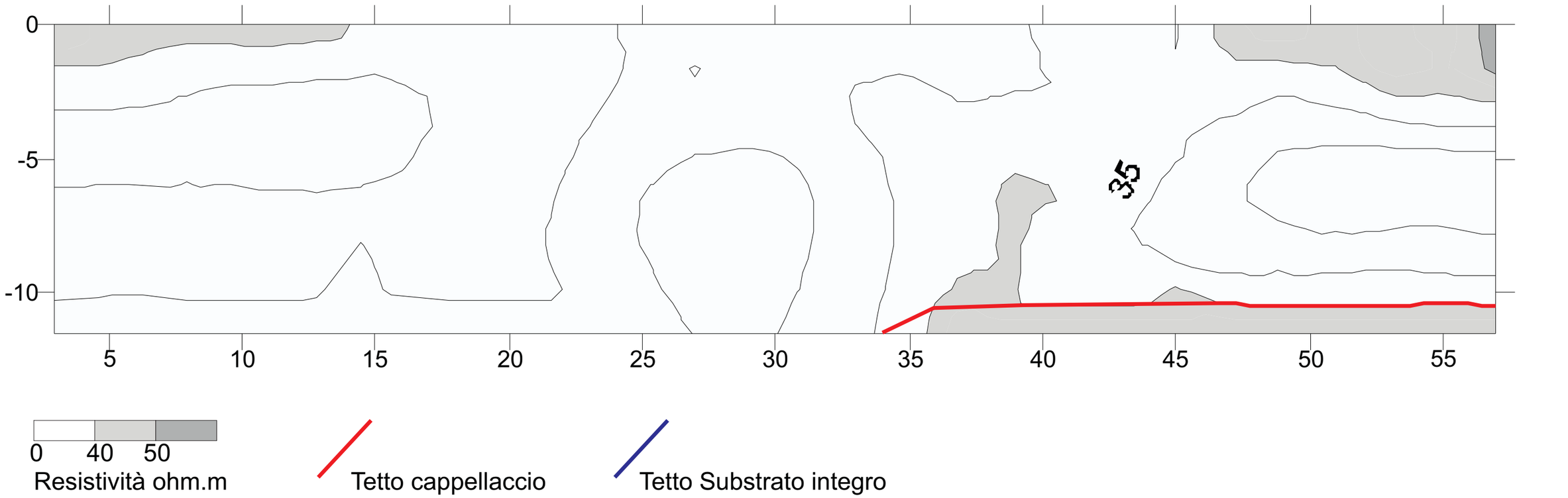
Profilo tomografia elettrica con correzione topografica



Horizontal scale is 38.68 pixels per unit spacing
Vertical exaggeration in model section display = 0.97
First electrode is located at 0.0 m.
Last electrode is located at 62.0 m.

Stendimento T2 metodo Wenner-Schlumberger

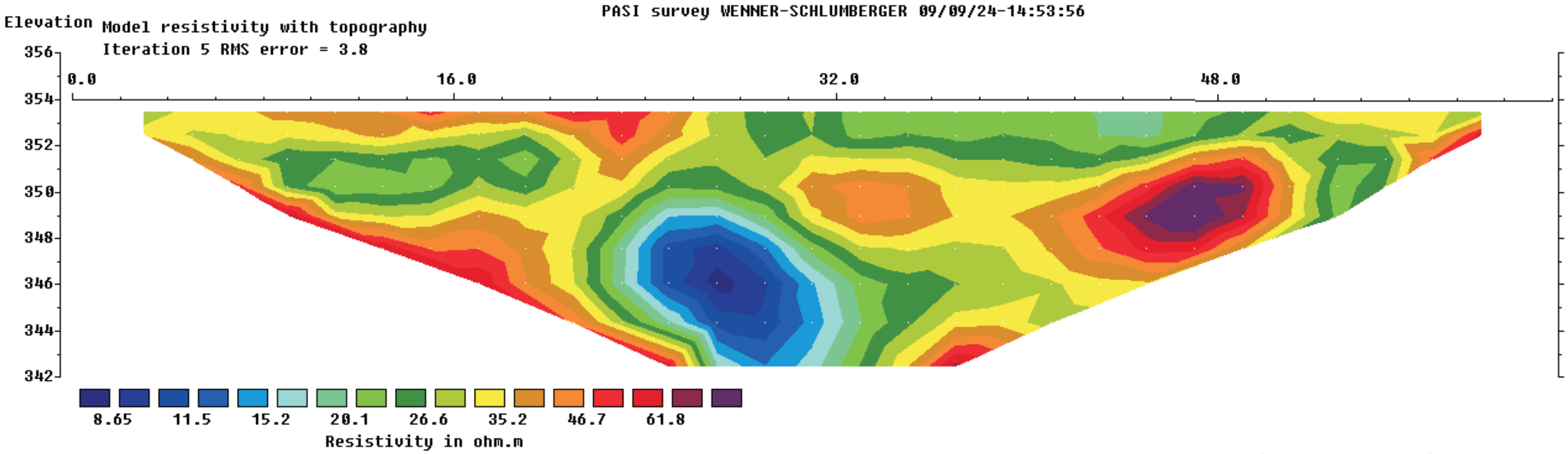
Profilo interpretativo



Scala 1:150

Stendimento T3 metodo Wenner-Schlumberger

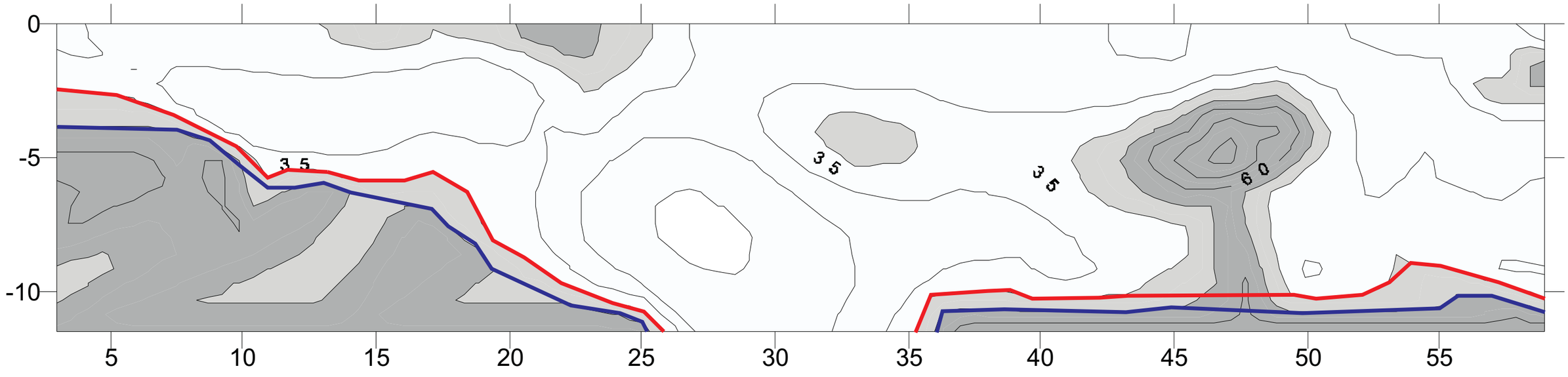
Profilo tomografia elettrica con correzione topografica



Horizontal scale is 38.68 pixels per unit spacing
Vertical exaggeration in model section display = 0.97
First electrode is located at 0.0 m.
Last electrode is located at 62.0 m.

Stendimento T3 metodo Wenner-Schlumberger

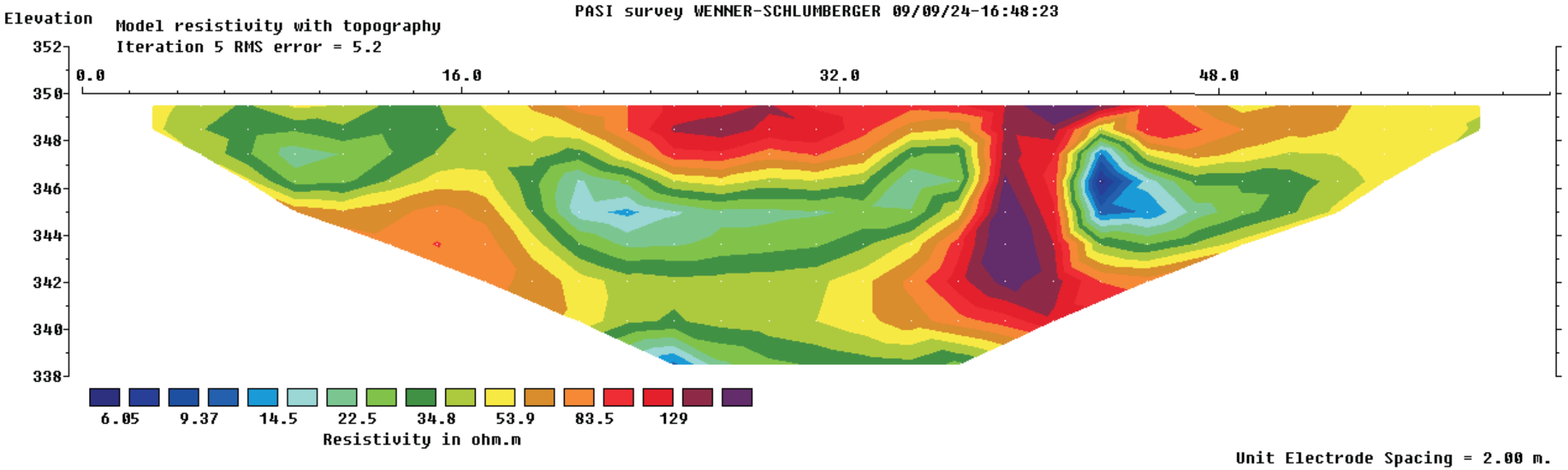
Profilo interpretativo



Scala 1:150

Stendimento T4 metodo Wenner-Schlumberger

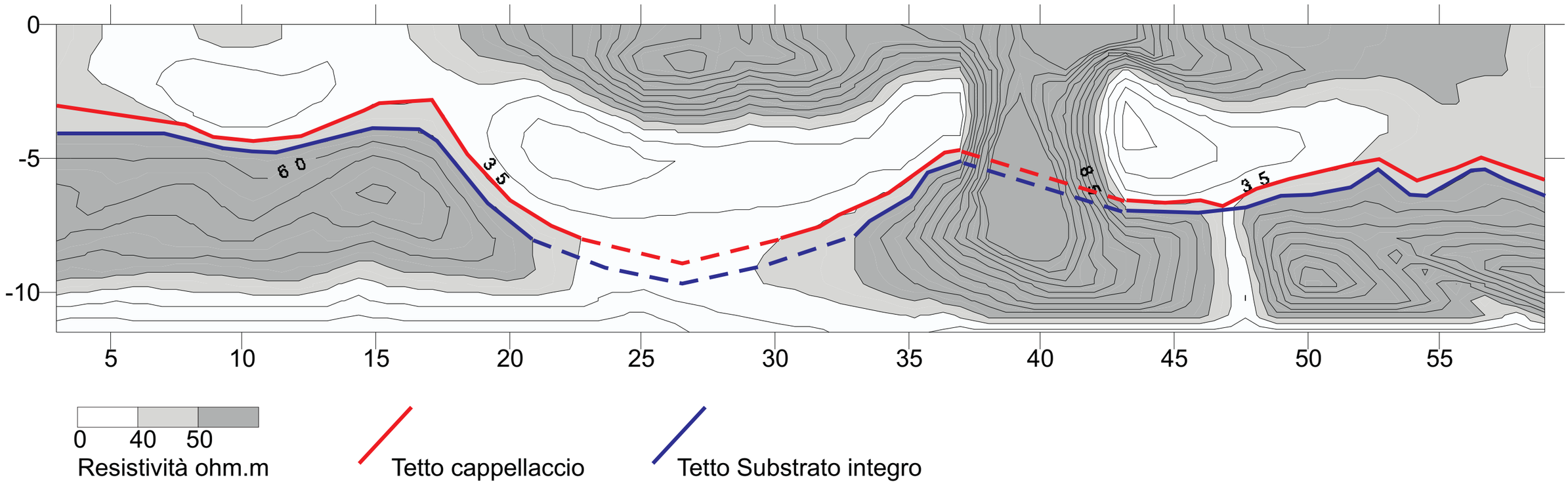
Profilo tomografia elettrica con correzione topografica



Horizontal scale is 38.32 pixels per unit spacing
Vertical exaggeration in model section display = 1.00
First electrode is located at 0.0 m.
Last electrode is located at 62.0 m.

Stendimento T4 metodo Wenner-Schlumberger

Profilo interpretativo



Scala 1:150

PROVA DOWN-HOLE

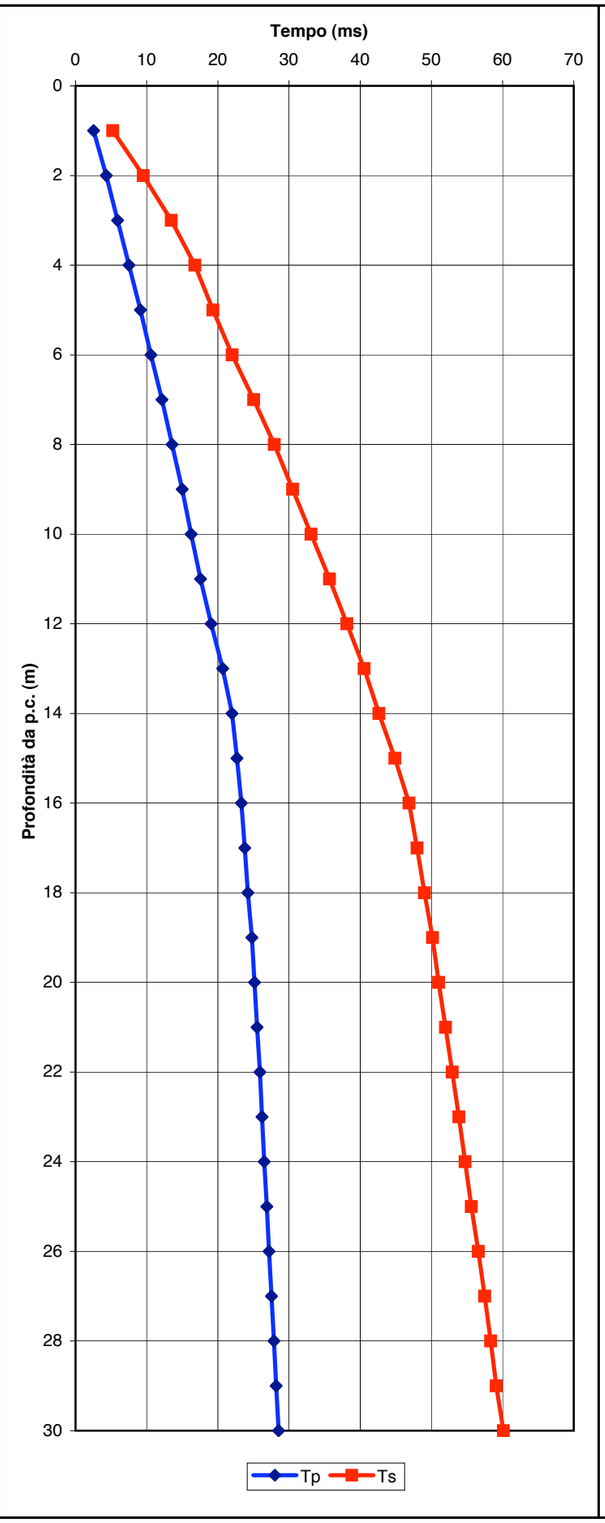
Committente:	I.P.S. SpA	Data:	13/10/2009
Località:	Millesimo (SV)	Energizzatore:	10kg

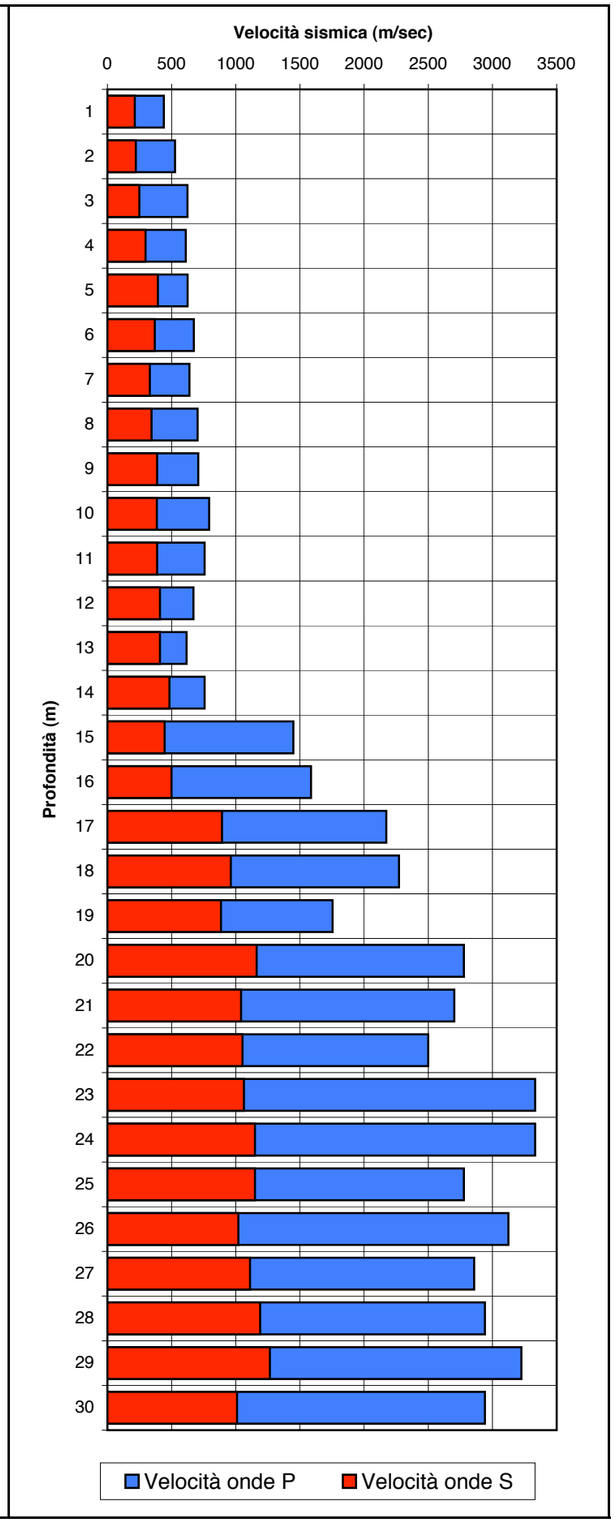
Scoppio	Tempi		Profondità reali		Velocità sismiche				Parametri				
	Tp	Ts	p	s	Vp	Vp/m	Vs	Vs/m	Vp/Vs	ρ	Poisson	E din	G din
(n°)	(ms)	(ms)	m	m	(m/s)	(m/s)	(m/s)					Mpa	Mpa
1	2.54	5.24	1.12	1.12	440	440	213	213	2.06	1.8	0.35	220.67	81.94
2	4.33	9.51	2.06	2.06	476	527	217	221	2.39	1.8	0.39	244.92	87.89
3	5.90	13.45	3.04	3.04	515	624	226	249	2.51	1.8	0.41	312.95	111.32
4	7.52	16.78	4.03	4.03	536	611	240	297	2.06	1.8	0.34	427.74	159.01
5	9.11	19.31	5.02	5.02	552	625	260	393	1.59	1.8	0.17	651.91	277.74
6	10.59	22.01	6.02	6.02	569	673	274	369	1.82	1.8	0.29	629.44	244.87
7	12.15	25.03	7.02	7.02	578	639	280	330	1.94	1.8	0.32	517.17	196.19
8	13.57	27.93	8.02	8.02	591	703	287	344	2.04	1.8	0.34	572.04	213.08
9	14.98	30.51	9.01	9.01	602	708	295	387	1.83	1.8	0.29	693.68	269.48
10	16.24	33.10	10.01	10.01	617	793	302	386	2.06	1.8	0.34	719.80	267.59
11	17.56	35.68	11.01	11.01	627	757	309	387	1.95	1.8	0.32	713.74	269.80
12	19.05	38.12	12.01	12.01	630	671	315	409	1.64	1.8	0.20	725.86	301.77
13	20.67	40.56	13.01	13.01	629	617	321	410	1.51	1.8	0.11	667.61	301.85
14	21.99	42.63	14.01	14.01	637	757	329	483	1.57	1.8	0.16	971.02	419.50
15	22.68	44.87	15.01	15.01	662	1448	334	446	3.25	1.8	0.45	1037.37	358.31
16	23.31	46.87	16.01	16.01	687	1586	342	500	3.17	1.8	0.44	1299.08	449.53
17	23.77	47.99	17.01	17.01	715	2173	354	892	2.43	1.8	0.40	4009.99	1433.63
18	24.21	49.03	18.01	18.01	744	2272	367	961	2.36	1.8	0.39	4626.00	1662.84
19	24.78	50.16	19.01	19.01	767	1754	379	885	1.98	1.8	0.33	3745.16	1408.63
20	25.14	51.02	20.01	20.01	796	2777	392	1162	2.39	1.8	0.39	6779.71	2432.15
21	25.51	51.98	21.01	21.01	823	2702	404	1041	2.59	1.8	0.41	5515.35	1951.96
22	25.91	52.93	22.01	22.01	849	2499	416	1052	2.38	1.8	0.39	5550.59	1993.38
23	26.21	53.87	23.01	23.01	878	3333	427	1064	3.13	1.8	0.44	5877.43	2036.11
24	26.51	54.74	24.01	24.01	906	3333	439	1149	2.90	1.8	0.43	6810.35	2377.04
25	26.87	55.61	25.00	25.00	931	2777	450	1149	2.42	1.8	0.40	6640.28	2377.13
26	27.19	56.59	26.00	26.00	956	3124	460	1020	3.06	1.8	0.44	5396.90	1873.50
27	27.54	57.49	27.00	27.00	981	2857	470	1111	2.57	1.8	0.41	6268.47	2221.43
28	27.88	58.33	28.00	28.00	1004	2941	480	1190	2.47	1.8	0.40	7150.87	2550.18
29	28.19	59.12	29.00	29.00	1029	3225	491	1266	2.55	1.8	0.41	8125.02	2883.27
30	28.53	60.11	30.00	30.00	1052	2941	499	1010	2.91	1.8	0.43	5262.55	1836.02

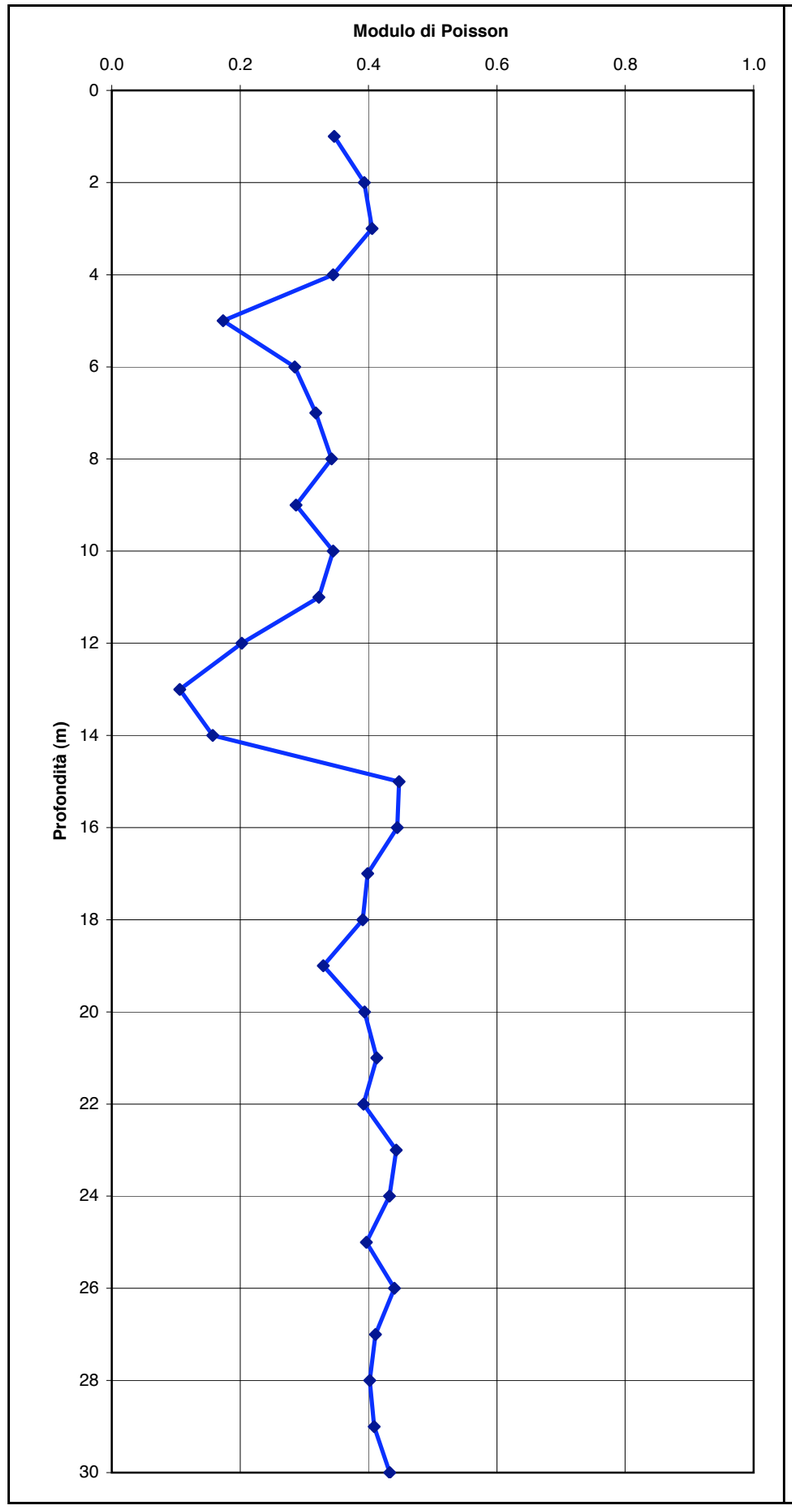
Dove:

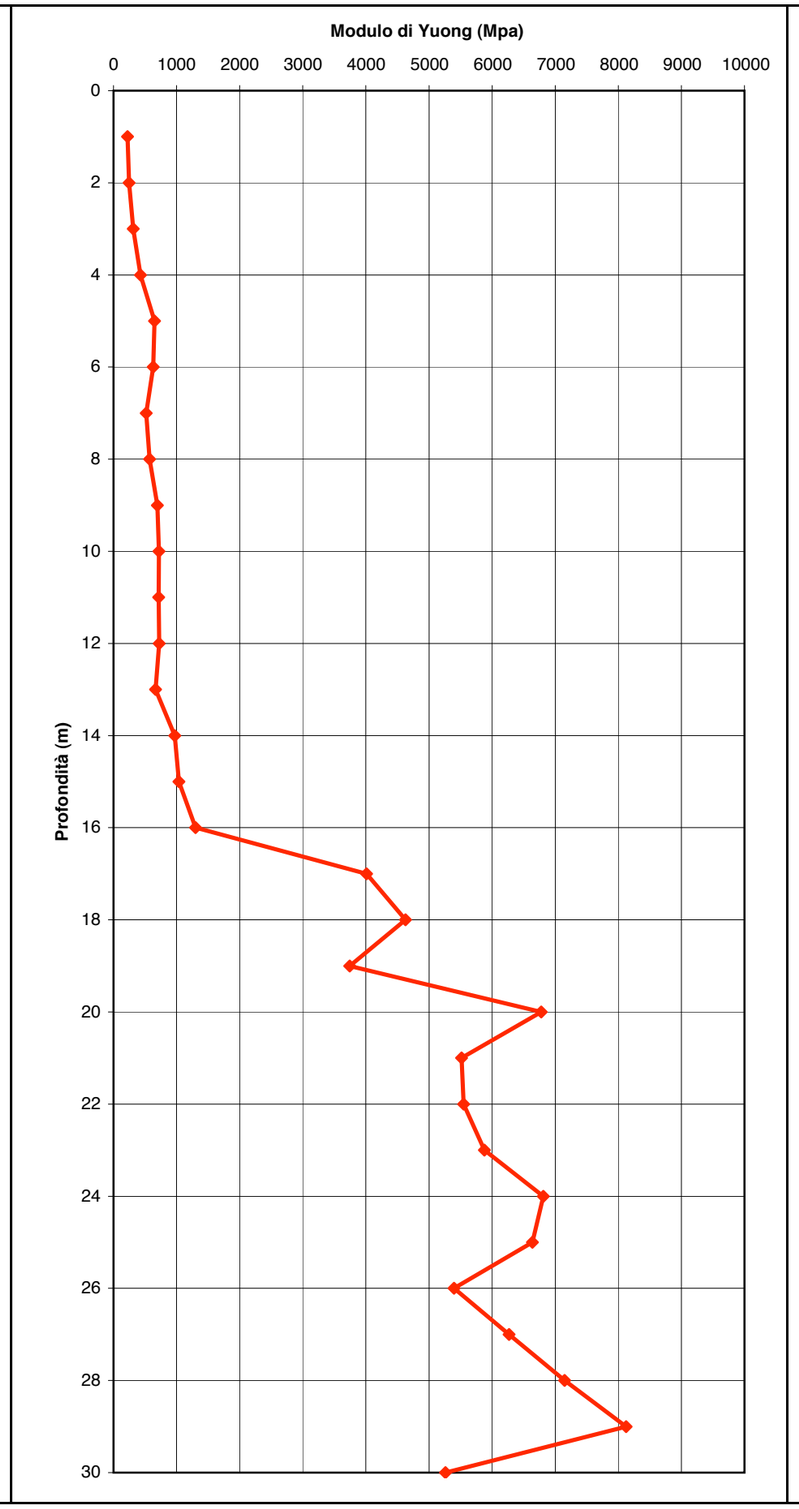
ρ: Peso di volume
Poisson: Modulo di Poisson
E din: Modulo di Yuong
G din: Modulo di deformazione al taglio

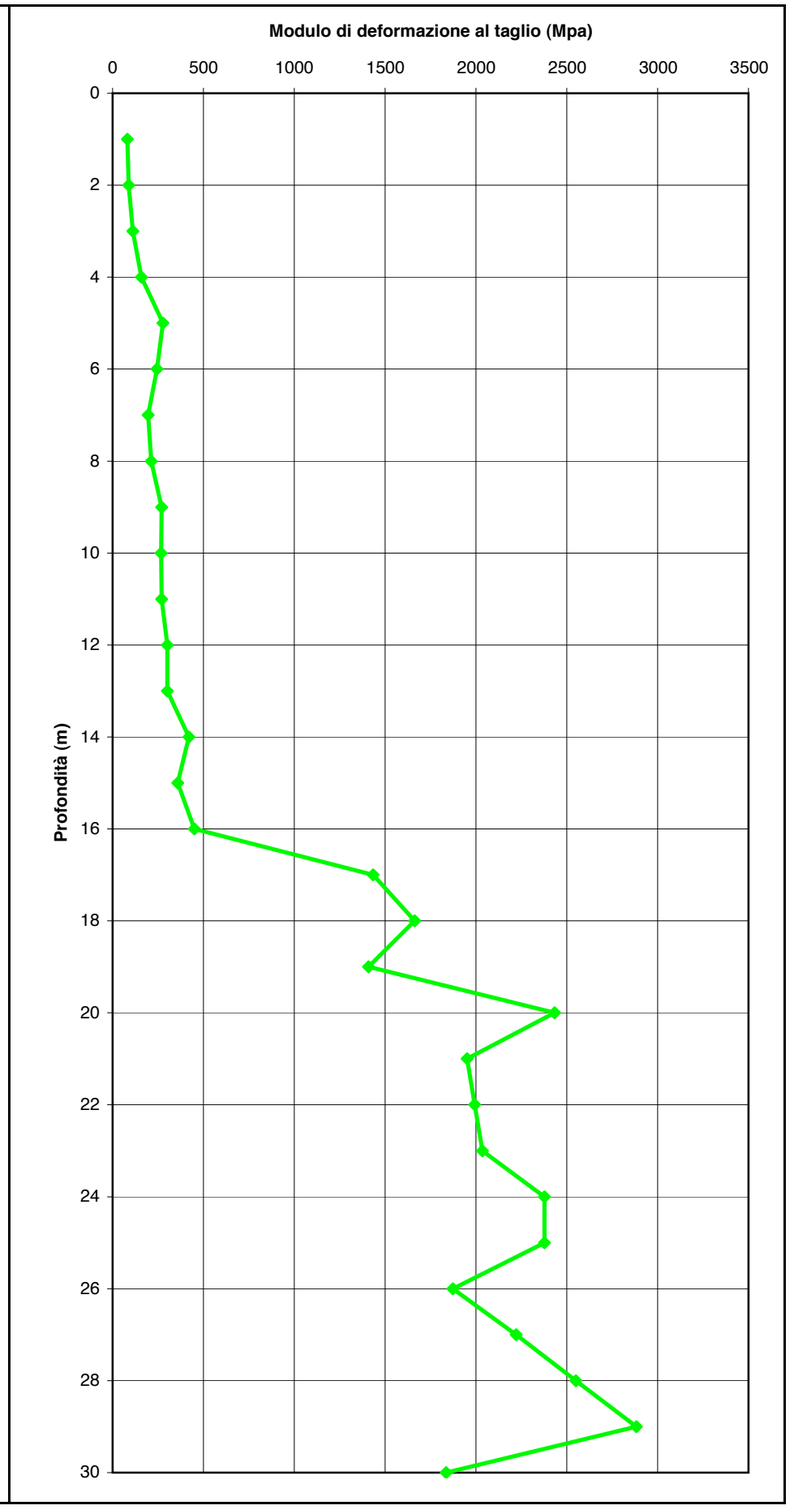
Vs30	500






Modulo di Poisson
0.0
0.2
0.4
0.6
0.8
1.0
Profondità (m)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30


Modulo di Yuong (Mpa)
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10000
Profondità (m)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30


Modulo di deformazione al taglio (Mpa)
0
500
1000
1500
2000
2500
3000
3500
Profondità (m)
0
2
4
6
8
10
12
14
16
18
20
22
24
26
28
30