



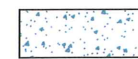
Comune di
SANT'ILARIO D'ENZA

<p>PROGETTAZIONE GENERALE</p> <p>STUDIO BININI ARCHITETTI & INGEGNERI ASSOCIATI via Gazzata 4 Reggio Emilia</p> <p>Dott. Ing. Tiziano Binini Dott. Arch. Marco Denti Dott. Ing. Isabella Caiti</p>						
<p>CONSULENZA GEOLOGICA</p> <p>GEOLOG s.c. via Emilia all'Angelo 14 Reggio Emilia</p> <p>Dott. Geol. Roberto Farioli</p>						
<p>CONSULENZA E PROGETTAZIONE AMBIENTALE</p> <p>NATURMEDIA s.r.l. via Donatello 3 Parma</p> <p>Dott. Nat. Giuliano Gandolfi Dott. Nat. Alessandro Petraglia</p>						
Committente: COMUNE DI SANT'ILARIO D'ENZA					439	
Customer:					Pratica	
Progetto: P.A.E. - PIANO DELLE ATTIVITA' ESTRATTIVE DEL COMUNE DI SANT'ILARIO D'ENZA					Varie	
Project:					Scala	
Oggetto: P.C.A. - PIANO DI COORDINAMENTO ATTUATIVO					02.PCA	
Subject: ANALISI GEOLOGICHE						
					tavola	
Aggiornamento	02					
	01					
	00	Emissione	VLT	CTA	DNT	
		Oggetto	Redazione	Verifica	Approvazione	
MARZO 2009						
Data						
<p>Progettazione generale:</p> <div><p>Binini Partners S.r.l. via Gazzata, 4 42121 Reggio Emilia tel. +39.0522.580.578 tel. +39.0522.580.586</p><p>fax +39.0522.580.557 e-mail: info@bininipartners.it www.bininipartners.it C.F. e P.IVA e R.I. 02409150352 Capitale sociale euro 100.000 i.v.</p></div>						

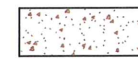
LEGENDA



Terreno vegetale



Ghiaia in matrice sabbiosa



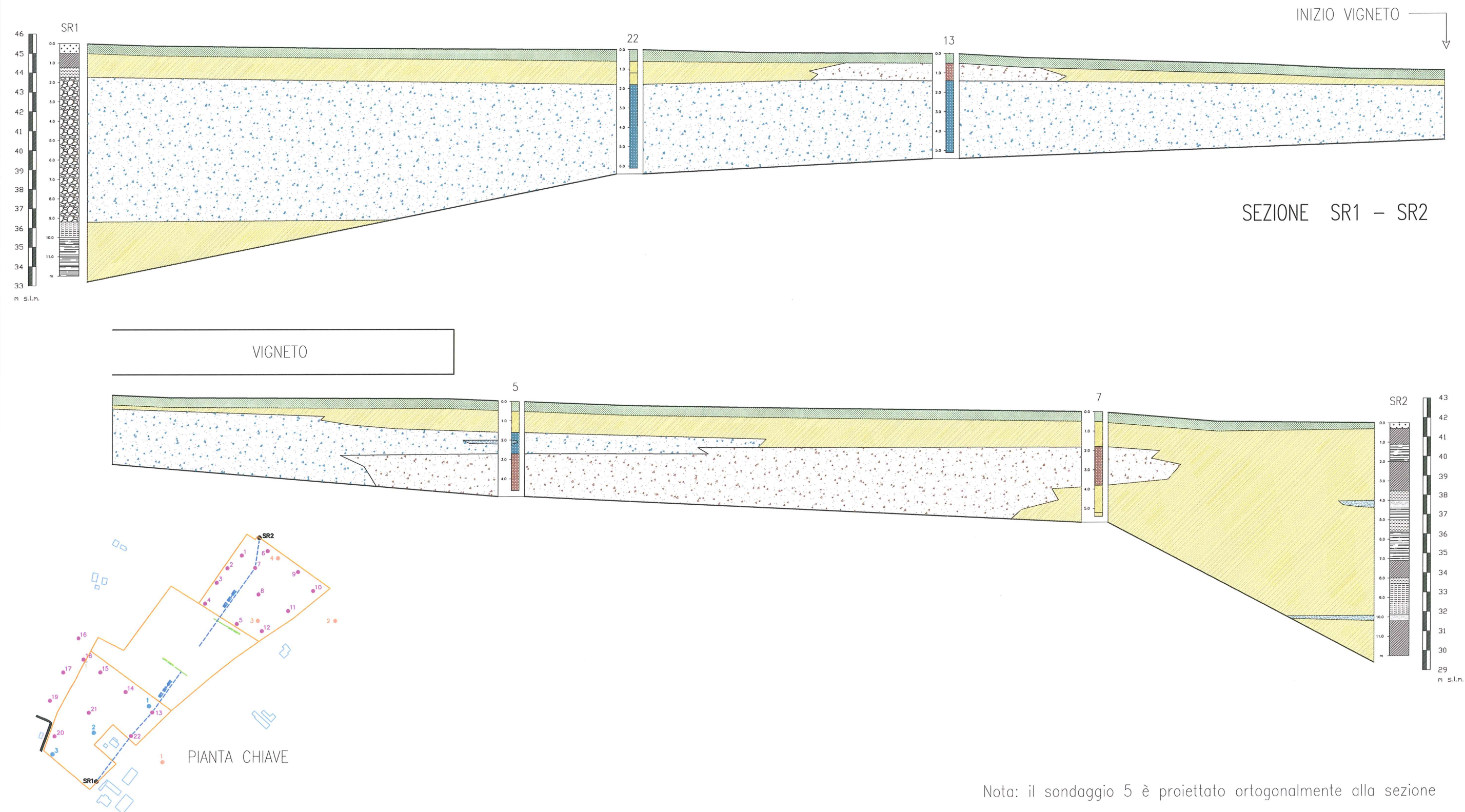
Ghiaia in matrice limo-argillosa

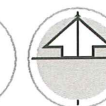


Sabbia



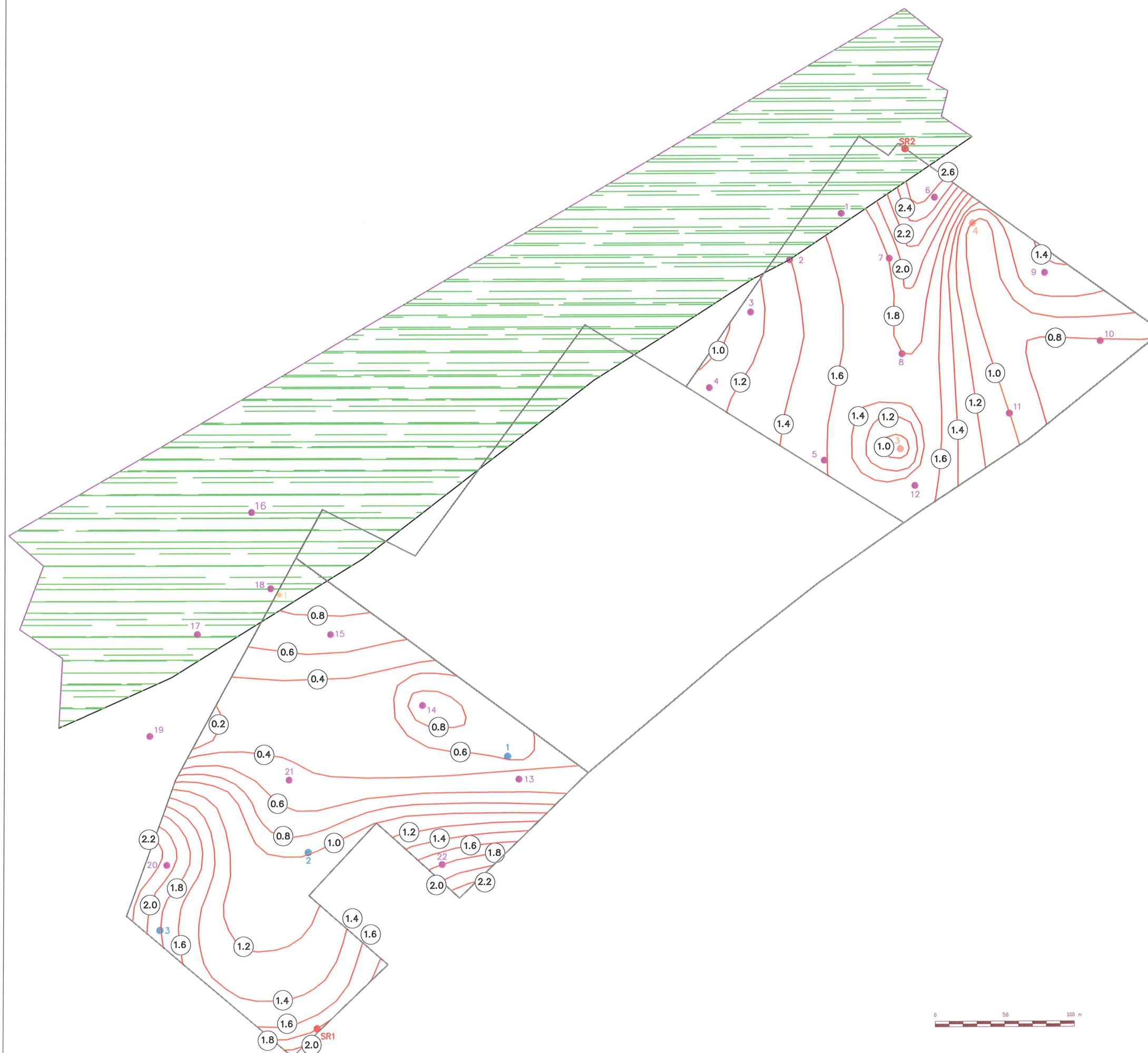
Limi e argille prevalenti





LEGENDA

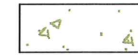
-  Saggio con escavatore (SEFRAG)
-  Carotaggio (Tecnogeofisica s.n.c.)
Aprile 2001
-  Carotaggio (Maggio 2008)
-  Saggio con escavatore
(Giugno 2008)
-  Prova penetrometrica statica
(Luglio 2008)
-  Settore privo di ghiaia
-  Soggiacenza del tetto delle ghiaie
riferita al piano campagna (m)



LEGENDA



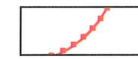
Cotenna coesiva



Ghiaia



Superfici di rottura testate



Superficie di rottura più critica

--SLOPE STABILITY ANALYSIS--
MODIFIED BISHOP METHOD OF SLICES
IRREGULAR FAILURE SURFACES

PROBLEM DESCRIPTION Polo Calerno
Input file : cal2

BOUNDARY COORDINATES
6 TOP BOUNDARIES
7 TOTAL BOUNDARIES

BOUNDARY NO.	X-LEFT (MT)	Y-LEFT (MT)	X-RIGHT (MT)	Y-RIGHT (MT)	SOIL TYPE BELOW BND
1	10.00	12.00	29.50	12.00	1
2	29.50	12.00	35.50	16.00	1
3	35.50	16.00	39.00	16.00	1
4	39.00	16.00	40.00	16.50	1
5	40.00	16.50	43.00	18.00	2
6	43.00	18.00	68.00	18.00	2
7	40.00	16.50	68.00	16.50	1

ISOTROPIC SOIL PARAMETERS

2 TYPE(S) OF SOIL

SOIL TYPE NO.	TOTAL UNIT WT. (T/MC)	SATURATED UNIT WT. (T/MC)	COHESION (T/MQ)	FRICTION ANGLE (DEG)	PORE PRESSURE CONSTANT	PRESSURE (T/MQ)	PIEZOMETRIC SURFACE NO.
1	1.7	1.7	1.0	40.0	.00	.0	1
2	2.0	2.0	1.0	25.0	.00	.0	1

A HORIZONTAL EARTHQUAKE LOADING COEFFICIENT OF .094 HAS BEEN ASSIGNED
A VERTICAL EARTHQUAKE LOADING COEFFICIENT OF -.047 HAS BEEN ASSIGNED
CAVITATION PRESSURE = .0 T/MQ

A CRITICAL FAILURE SURFACE SEARCHING METHOD, USING A RANDOM TECHNIQUE FOR GENERATING CIRCULAR SURFACES, HAS BEEN SPECIFIED.
200 TRIAL SURFACES HAVE BEEN GENERATED.
20 SURFACES INITIATE FROM EACH OF 10 POINTS EQUALLY SPACED ALONG THE GROUND SURFACE BETWEEN X = 20.00 MT.
AND X = 26.00 MT.
EACH SURFACE TERMINATES BETWEEN X = 35.00 MT.
AND X = 50.00 MT.

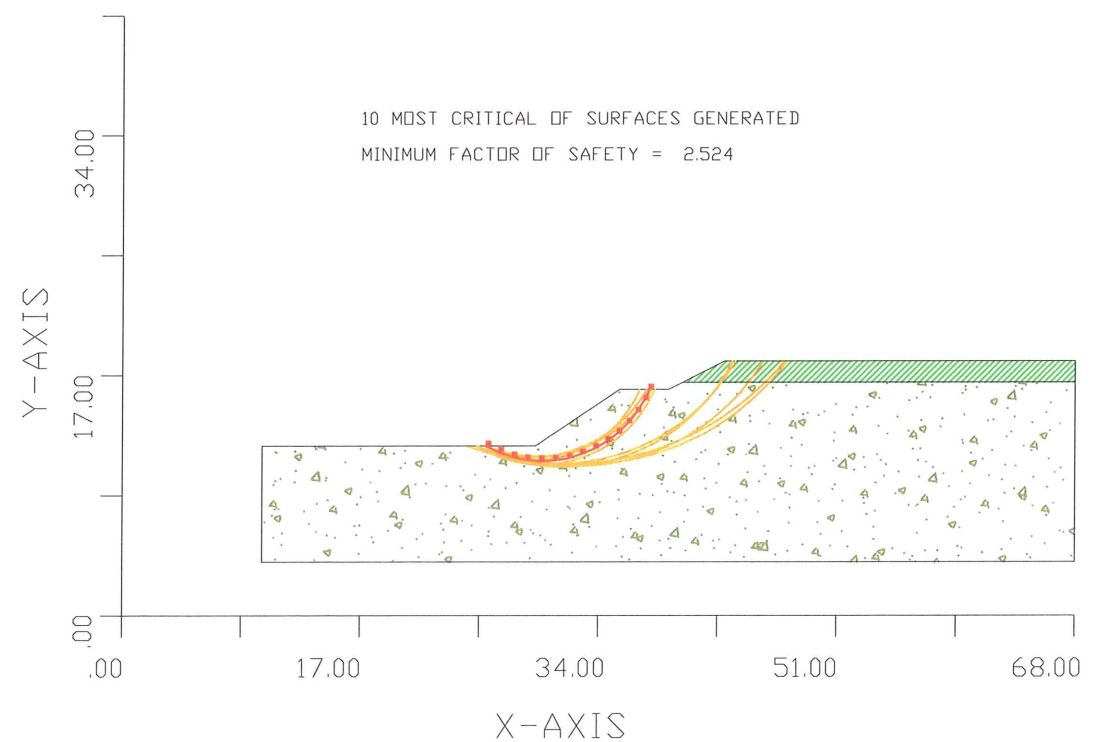
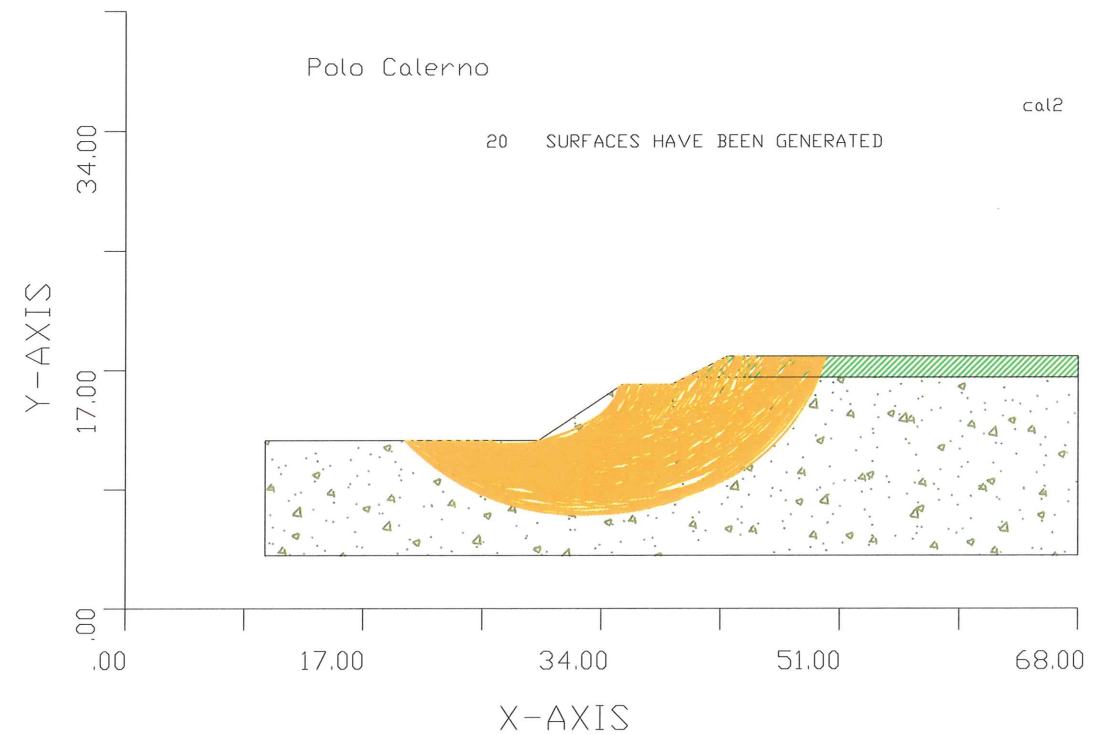
UNLESS FURTHER LIMITATIONS WERE IMPOSED, THE MINIMUM ELEVATION AT WHICH A SURFACE EXTENDS IS Y = .00 MT.
1.00 MT. LINE SEGMENTS DEFINE EACH TRIAL FAILURE SURFACE.

FOLLOWING IS DISPLAYED THE MOST CRITICAL OF THE TRIAL FAILURE SURFACES EXAMINED

FAILURE SURFACE SPECIFIED BY 15 COORDINATE POINTS

POINT NO.	X-SURF (MT)	Y-SURF (MT)
1	26.00	12.00
2	26.90	11.56
3	27.85	11.24
4	28.83	11.04
5	29.82	10.95
6	30.82	10.99
7	31.81	11.14
8	32.77	11.42
9	33.69	11.81
10	34.56	12.31
11	35.36	12.91
12	36.08	13.60
13	36.71	14.38
14	37.24	15.22
15	37.61	16.00

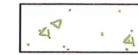
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LEGENDA



Cotenna coesiva



Ghiaia



Superfici di rottura testate



Superficie di rottura più critica

--SLOPE STABILITY ANALYSIS--
MODIFIED BISHOP METHOD OF SLICES
IRREGULAR FAILURE SURFACES

PROBLEM DESCRIPTION Polo Calerno
Input file : cal3

BOUNDARY COORDINATES

6 TOP BOUNDARIES

7 TOTAL BOUNDARIES

BOUNDARY NO.	X-LEFT (MT)	Y-LEFT (MT)	X-RIGHT (MT)	Y-RIGHT (MT)	SOIL TYPE BELOW BND
1	10.00	10.00	26.50	10.00	1
2	26.50	10.00	35.50	16.00	1
3	35.50	16.00	39.00	16.00	1
4	39.00	16.00	40.00	16.50	1
5	40.00	16.50	43.00	18.00	2
6	43.00	18.00	68.00	18.00	2
7	40.00	16.50	68.00	16.50	1

ISOTROPIC SOIL PARAMETERS

2 TYPE(S) OF SOIL

SOIL TYPE NO.	TOTAL UNIT WT. (T/MC)	SATURATED UNIT WT. (T/MC)	COHESION INTERCEPT (T/MQ)	FRICTION ANGLE (DEG)	PORE PRESSURE CONSTANT (T/MQ)	PRESSURE CONSTANT (T/MQ)	PIEZOMETRIC SURFACE NO.
1	1.7	1.7	1.0	40.0	.00	.0	1
2	2.0	2.0	1.0	25.0	.00	.0	1

A HORIZONTAL EARTHQUAKE LOADING COEFFICIENT

OF .094 HAS BEEN ASSIGNED

A VERTICAL EARTHQUAKE LOADING COEFFICIENT

OF -.047 HAS BEEN ASSIGNED

CAVITATION PRESSURE = .0 T/MQ

A CRITICAL FAILURE SURFACE SEARCHING METHOD, USING A RANDOM TECHNIQUE FOR GENERATING CIRCULAR SURFACES, HAS BEEN SPECIFIED. 200 TRIAL SURFACES HAVE BEEN GENERATED.

20 SURFACES INITIATE FROM EACH OF 10 POINTS EQUALLY SPACED

ALONG THE GROUND SURFACE BETWEEN X = 20.00 MT.

AND X = 26.00 MT.

EACH SURFACE TERMINATES BETWEEN X = 35.00 MT.

AND X = 50.00 MT.

UNLESS FURTHER LIMITATIONS WERE IMPOSED, THE MINIMUM ELEVATION AT WHICH A SURFACE EXTENDS IS Y = .00 MT.

1.00 MT. LINE SEGMENTS DEFINE EACH TRIAL FAILURE SURFACE.

FOLLOWING IS DISPLAYED THE MOST CRITICAL OF THE TRIAL FAILURE SURFACES EXAMINED

FAILURE SURFACE SPECIFIED BY 16 COORDINATE POINTS

POINT NO.	X-SURF (MT)	Y-SURF (MT)
1	25.33	10.00
2	26.31	9.79
3	27.30	9.67
4	28.30	9.65
5	29.30	9.73
6	30.29	9.90
7	31.25	10.16
8	32.19	10.51
9	33.08	10.96
10	33.93	11.48
11	34.73	12.09
12	35.46	12.77
13	36.13	13.52
14	36.72	14.32
15	37.23	15.18
16	37.61	16.00

*** 1.978 ***

