IND.A.GO s.n.c.
Indagini e OpereAmbientali e Geologiche
Via Luigi Balzan, 1 - 45100 Rovigo

Elaborazione Prove Dinamiche (DP)

DP n° **1**

INPUT

M (kg)	30	massa battente
H (cm)	20	h caduta
A (cm2)	10	area cono
δ (cm)	10	avanzamento
P' (kg)	2.4	peso aste
P'' (kg)	15	peso supporto

Q=MH/Aδ	6
Qspt=7.83 kg/cmq	
β=Q/Qspt	0.76628352
Nspt=βNp	

Elaborazione dati

Prof. (cm)	Np	Rd(kg/cmq)	Nspt
10		0	0
20	6	23	5
30	14	53	11
40	38	144	29
50	35	133	27
60	43	163	33
70	55	209	42
80	55	209	42
90	49	186	38
100	29	110	22
110	39	141	30
120	18	65	14
130	20	72	15
140	19	69	15
150	14	51	11
160	15	54	11
170	14	51	11
180	100	361	77

SABBIA	**Dr**	**ϕ**	**Nspt**
m. sciolta	<0.2	<30	<4
sciolta	0.2-0.4	30-35	4_10
compatta	0.4-0.6	35-40	10_30
densa	0.6-0.8	40-45	30_50
m.densa	>0.8	>45	>50
ARGILLA	**Cu(kg/cmq)**	**Nspt**	
m. molle	<0.125	<2	
molle	0.125-0.25	2_4	
med. Comp.	0.25-0.5	4_8	
consistente	0.5-1	8_15	
m.consist.	1_2	15_30	
dura	>2	>50	

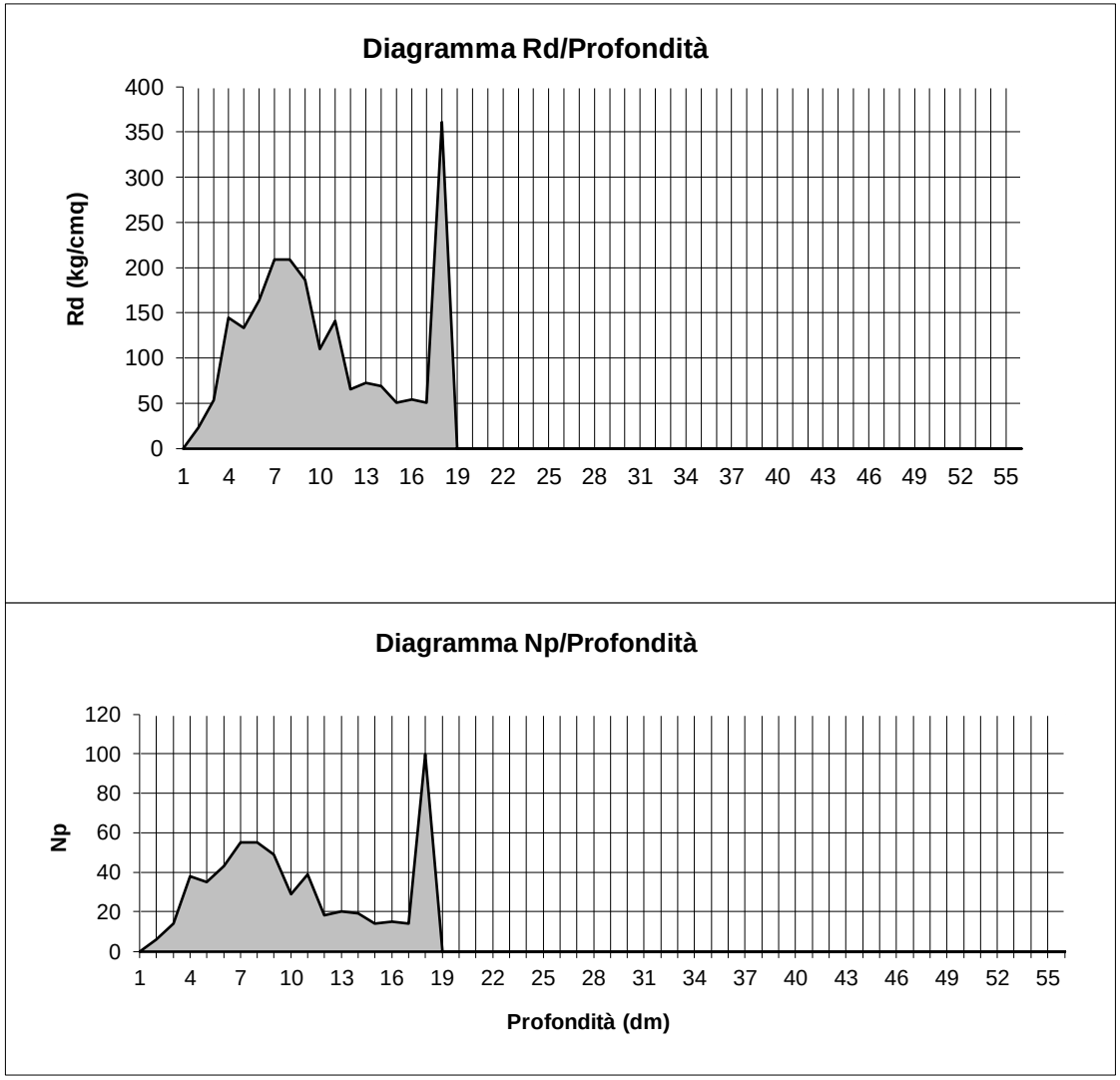
Diagramma Rd/Profondità
Rd (kg/cmq)
400
350
300
250
200
150
100
50
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55
Diagramma Np/Profondità
Np
120
100
80
60
40
20
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55
Profondità (dm)

ϕ'						Mo (kg/cmq)			
PROF.	Peck et al (1956)	Meyerhof (1965)	Meyerhof (1965)	Sowers (1961)	Shioi Fukuni (1982)	Mezembach e Malcev	Mezembach e Malcev	Mezembach e Malcev	Mezembach e Malcev
cm	Sabbie	Sabbie pulite	Sabbie + limo	Sabbie	Sabbie-Ghiaie	Sabbia fine	Sabbia media	Sabbia + Ghiaia	Sabbia Ghiaiosa
10	27	29	24	28	27	38.00	38.00	38.00	38.00
20	28	32	26	29	28	54.28	58.51	86.09	90.78
30	30	34	29	31	30	75.98	85.85	150.21	161.16
40	35	39	35	36	36	141.08	167.87	342.58	372.28
50	35	39	35	36	35	132.94	157.62	318.54	345.89
60	36	40	36	37	37	154.64	184.96	382.66	416.27
70	39	42	37	40	40	187.20	225.97	478.84	521.83
80	39	42	37	40	40	187.20	225.97	478.84	521.83
90	38	41	37	39	38	170.92	205.46	430.75	469.05
100	33	38	33	34	34	116.67	137.11	270.44	293.11
110	36	40	35	36	36	143.79	171.29	350.60	381.08
120	31	35	30	32	31	86.83	99.52	182.28	196.34
130	31	36	31	32	32	92.25	106.35	198.31	213.94
140	31	35	31	32	31	89.54	102.93	190.29	205.14
150	30	34	29	31	30	75.98	85.85	150.21	161.16
160	30	34	29	31	30	78.69	89.26	158.23	169.95
170	30	34	29	31	30	75.98	85.85	150.21	161.16
180	49	41	32	49	50	309.26	379.76	839.53	917.69

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Indagini e OpereAmbientali e Geologiche
Via Luigi Balzan, 1 - 45100 Rovigo

Elaborazione Prove Dinamiche (DP)

DP n° **2**

INPUT

M (kg)	30	massa battente
H (cm)	20	h caduta
A (cm2)	10	area cono
δ (cm)	10	avanzamento
P' (kg)	2.4	peso aste
P'' (kg)	15	peso supporto

Q=MH/Aδ	6
Qspt=7.83 kg/cmq	
β=Q/Qspt	0.76628352
Nspt=βNp	

Elaborazione dati

Prof. (cm)	Np	Rd(kg/cmq)	Nspt
10	5	19	4
20	10	38	8
30	16	61	12
40	18	68	14
50	17	65	13
60	23	87	18
70	115	437	88
80	60	228	46
90	18	68	14
100	16	61	12
110	10	36	8
120	11	40	8
130	11	40	8
140	10	36	8
150	12	43	9
160	8	29	6
170	8	29	6
180	6	22	5
190	10	36	8
200	10	36	8
210	14	48	11
220	11	38	8
230	15	52	11
240	13	45	10
250	10	34	8
260	25	86	19
270	26	90	20
280	34	117	26
290	40	138	31
300	60	207	46
310	74	244	57
320	61	201	47
330	61	201	47
340	89	293	68
350	130	429	100

SABBIA	**Dr**	**ϕ**	**Nspt**
m. sciolta	<0.2	<30	<4
sciolta	0.2-0.4	30-35	4_10
compatta	0.4-0.6	35-40	10_30
densa	0.6-0.8	40-45	30_50
m.densa	>0.8	>45	>50

ARGILLA	**Cu(kg/cmq)**	**Nspt**
m. molle	<0.125	<2
molle	0.125-0.25	2_4
med. Comp.	0.25-0.5	4_8
consistente	0.5-1	8_15
m.consist.	1_2	15_30
dura	>2	>50

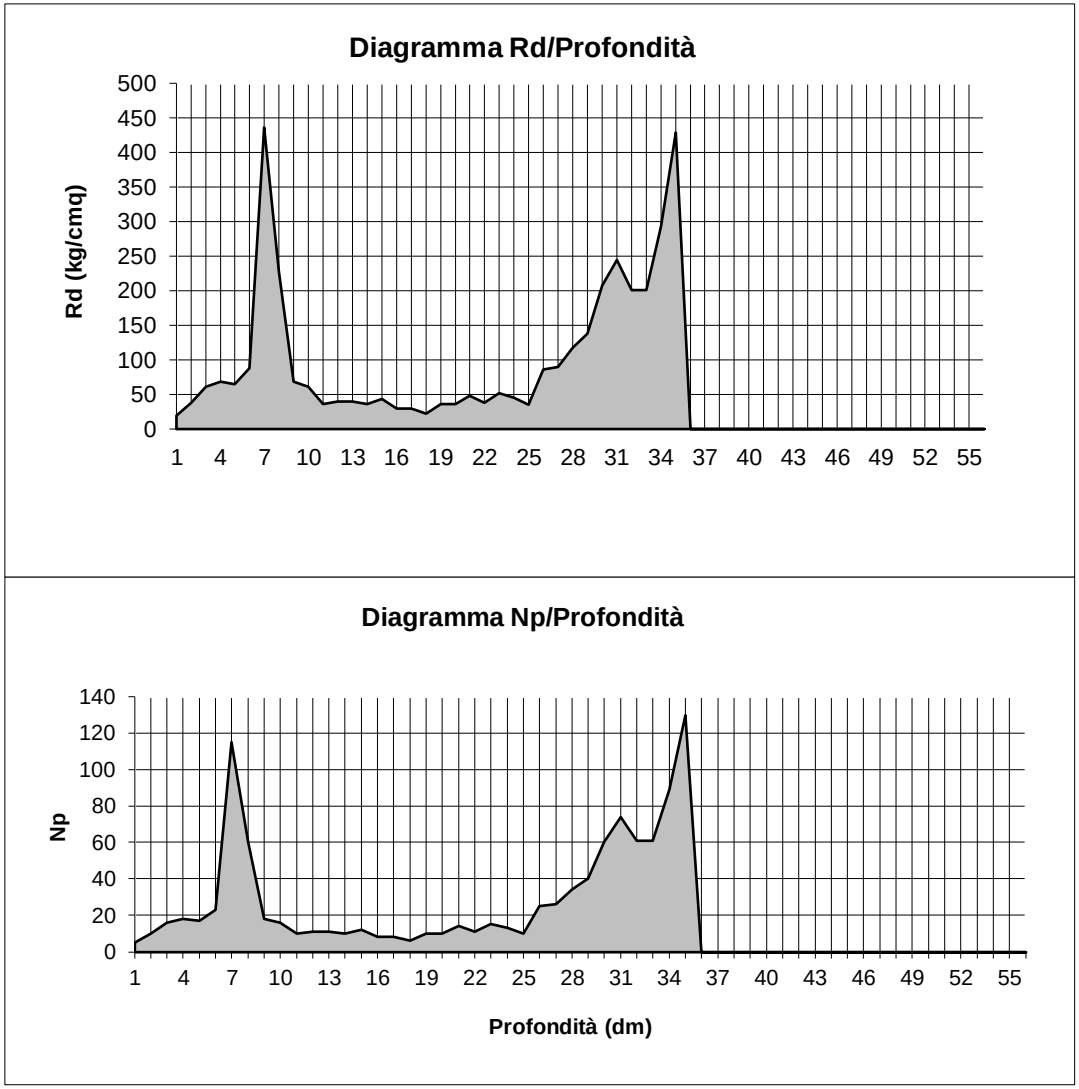
Diagramma Rd/Profondità
Rd (kg/cmq)
500
450
400
350
300
250
200
150
100
50
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55
Diagramma Np/Profondità
Np
140
120
100
80
60
40
20
0
1 4 7 10 13 16 19 22 25 28 31 34 37 40 43 46 49 52 55
Profondità (dm)

ϕ'						Mo (kg/cmq)			
PROF.	Peck et al (1956)	Meyerhof (1965)	Meyerhof (1965)	Sowers (1961)	Shioi Fukuni (1982)	Mezembach e Malcev	Mezembach e Malcev	Mezembach e Malcev	Mezembach e Malcev
cm	Sabbie	Sabbie pulite	Sabbie + limo	Sabbie	Sabbie-Ghiaie	Sabbia fine	Sabbia media	Sabbia + Ghiaia	Sabbia Ghiaiosa
10	28	31	26	29	28	51.56	55.09	78.08	81.98
20	29	33	28	30	29	65.13	72.18	118.15	125.97
30	31	35	30	31	31	81.40	92.68	166.25	178.75
40	31	35	30	32	31	86.83	99.52	182.28	196.34
50	31	35	30	32	31	84.11	96.10	174.26	187.55
60	32	36	32	33	32	100.39	116.61	222.35	240.33
70	52	39	27	53	53	349.95	431.03	959.76	1049.65
80	40	42	37	41	41	200.76	243.06	518.92	565.82
90	31	35	30	32	31	86.83	99.52	182.28	196.34
100	31	35	30	31	31	81.40	92.68	166.25	178.75
110	29	33	28	30	29	65.13	72.18	118.15	125.97
120	30	33	28	30	30	67.84	75.59	126.17	134.77
130	30	33	28	30	30	67.84	75.59	126.17	134.77
140	29	33	28	30	29	65.13	72.18	118.15	125.97
150	30	33	28	31	30	70.55	79.01	134.18	143.56
160	29	32	27	30	29	59.70	65.34	102.12	108.38
170	29	32	27	30	29	59.70	65.34	102.12	108.38
180	28	32	26	29	28	54.28	58.51	86.09	90.78
190	29	33	28	30	29	65.13	72.18	118.15	125.97
200	29	33	28	30	29	65.13	72.18	118.15	125.97
210	30	34	29	31	30	75.98	85.85	150.21	161.16
220	30	33	28	30	30	67.84	75.59	126.17	134.77
230	30	34	29	31	30	78.69	89.26	158.23	169.95
240	30	34	29	31	30	73.26	82.43	142.20	152.36
250	29	33	28	30	29	65.13	72.18	118.15	125.97
260	33	37	32	33	33	105.82	123.44	238.38	257.92
270	33	37	33	34	33	108.53	126.86	246.40	266.72
280	34	39	34	35	35	130.23	154.20	310.52	337.10
290	36	40	36	37	36	146.51	174.70	358.61	389.88
300	40	42	37	41	41	200.76	243.06	518.92	565.82
310	43	43	37	44	44	238.74	290.90	631.13	688.97
320	40	42	37	41	41	203.47	246.48	526.93	574.61
330	40	42	37	41	41	203.47	246.48	526.93	574.61
340	46	42	35	47	47	279.43	342.17	751.36	820.93
350	55	36	21	56	57	390.64	482.29	1079.99	1181.60