



YAYASAN PERGURUAN "CIKINI"
INSTITUT
SAINS DAN TEKNOLOGI
NASIONAL

FAKULTAS TEKNIK SIPIL
DAN PERENCANAAN
JURUSAN TEKNIK SIPIL

PENUGASAN
No : 10-10/PM/LM/X/04

Ketua Program Studi Teknik Sipil, Fakultas Teknik Sipil dan Perencanaan Institut Sains dan Teknologi Nasional Jakarta menugaskan kepada :

Ir. Idrus, MSc

Staff Jurusan Teknik Sipil

Untuk melakukan pekerjaan Penyelidikan Tanah sebagai bentuk kegiatan **Pengabdian Pada Masyarakat** pada :

Nama Pekerjaan : Penyelidikan Tanah Uji CBR Jababeka 5
Lokasi : Kawasan Industri Jababeka
Pemberi Tugas : PT. Soho, Cikarang

Dengan jadwal pelaksanaan pekerjaan selama 5 hari kerja (40Jam), 1 hari di lapangan dan 4 hari di Laboratorium

Kepada Ir. Idrus MSc diberikan kepercayaan penuh untuk melakukan pekerjaan Pengabdian Pada Masyarakat tersebut dan bertanggung jawab atas segala sesuatu mengenai pekerjaan tersebut

Kepada pelaksana tugas ini akan diberikan honorarium sesuai dengan ketentuan yang berlaku di Laboratorium Mekanika Tanah Institut Sains dan Teknologi Nasional.

Penugasan ini berlaku sejak dikeluarkan sampai dengan berakhirnya jangka waktu penyusunan Laporan Akhir (Final Report) diterima oleh pemberi kerja dengan baik.

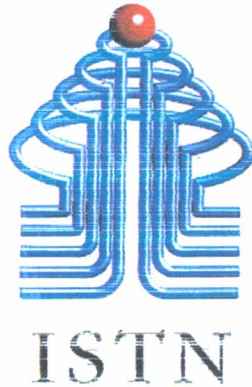
Jakarta, 10 Oktober 2004
Kaprosdi Teknik Sipil



Ir. Atjep Sudarjanto MT
NIP : 01.88609

- Tembusan :
- 1. Dekan FTSP-ISTN (sbg laporan)
 - 2. Ka. Lab. Mekanika Tanah ISTN
 - 3. Arsip

LEMBAR PENGESAHAN PENGABDIAN PADA MASYARAKAT



PENYELIDIKAN TANAH CBR JABABEKA 5 **Lokasi : Kawasan Industri Jababeka**

Oleh :
Idrus Ir, M.Sc

Mengetahui :
Ketua Jurusan Teknik Sipil



Ir. Atjep Sudarjanto, M.T

Program Studi Teknik Sipil
Institut Sain dan Teknologi Nasional
Jakarta 2004

THE UNIVERSITY OF CHICAGO



OFFICE OF THE DEAN OF THE FACULTY
540 EAST 58TH STREET, CHICAGO, ILLINOIS 60637

1990
1991

1992
1993

1994
1995

1996
1997
1998
1999

FINAL REPORT

SOIL INVESTIGATION

PROJECT :
CBR FIELD TEST
JABABEKA 5

LOCATION : CIKARANG PUSAT



LABORATORIUM MEKANIKA TANAH
INSTITUT SAINS DAN TEKNOLOGI NASIONAL

KAMPUS ISTN BHUMI SRENGSENG INDAH JALAN MOCH KAHFI 2 JAGAKARSA - JAKARTA 12640
TELPON. 021 92189554 FAX. 021 78893379



**LABORATORIUM MEKANIKA TANAH
INSTITUT SAINS DAN TEKNOLOGI NASIONAL**

KAMPUS ISTN BHUMI SRENGSENG INDAH JALAN MOCH KAHFI 2 JAGAKARSA - JAKARTA 12640
TELPON. 021 98189554 FAX 021 78893379

Jakarta 08 Oktober 2004
No:08-10.1/FR/CBR/X/04

Kepada Yth
PT. Soho
Di Cikarang

Perihal : Laporan Uji CBR Lapangan di Jababeka 5
Dengan hormat,

Sehubungan permohonan yang kami terima untuk melakukan pengujian CBR lapangan pada proyek : Jababeka 5, Cikarang Pusat ,maka kami Laboratorium Mekanika Tanah ISTN, akan melaporkan hasil pengujian yang telah kami lakukan sbb :

1. Uji CBR Lapangan kami lakukan pada 07 Oktober 2004 sebanyak 10 (sepuluh) titik pengujian pada lapisan subgrade (tanah lempung coklat) dan sirtu
2. Hasil uji sbb :

No	CBR 0,1"	Jenis tanah	Keterangan
1	31.76	Tanah Coklat	
2	36.87	Tanah Coklat	
3	12.20	Tanah Coklat	
4	24.11	Tanah Coklat	
5	9.64	Tanah Coklat	
6	33.18	Tanah Coklat	
7	31.64	Sirtu	
8	75.93	Sirtu	
9	72.77	Sirtu	
10	23.73	Sirtu	

3. Hasil uji CBR lapangan untuk subgrade berkisar antara 9.64 s/d 36.87 %.
4. Hasil uji CBR lapangan untuk sirtu antara 23.73 s/d 75.93 %.

Hasil uji CBR lapangan terlampir.

Demikianlah laporan ini kami buat dengan sebenar benarnya.

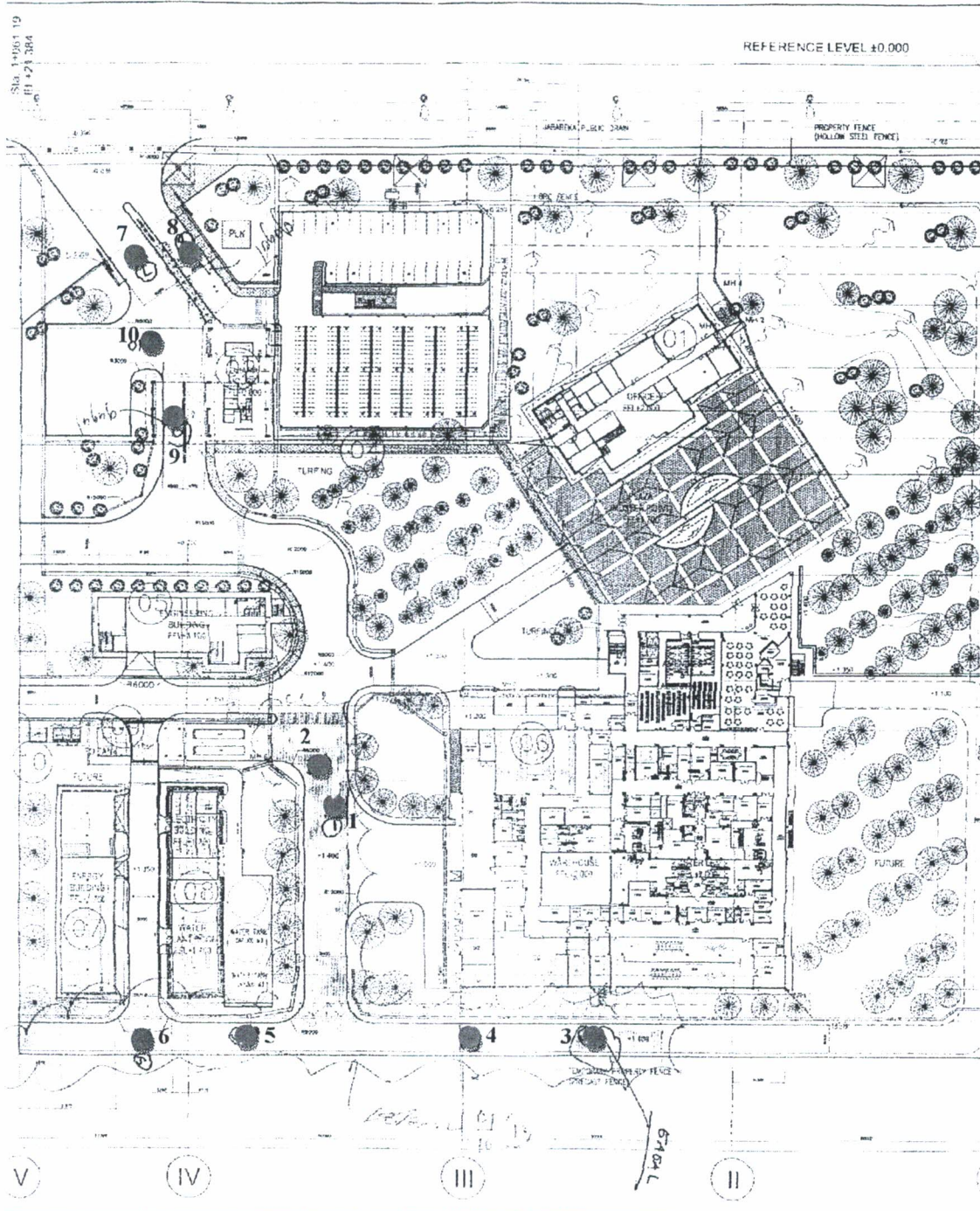
Hormat kami,
ISTN Soil Mechanics Laboratory



Idrus Muhammad Ir. M.Sc

REG LPJK : 1.2.500.2.31.09.03.000007

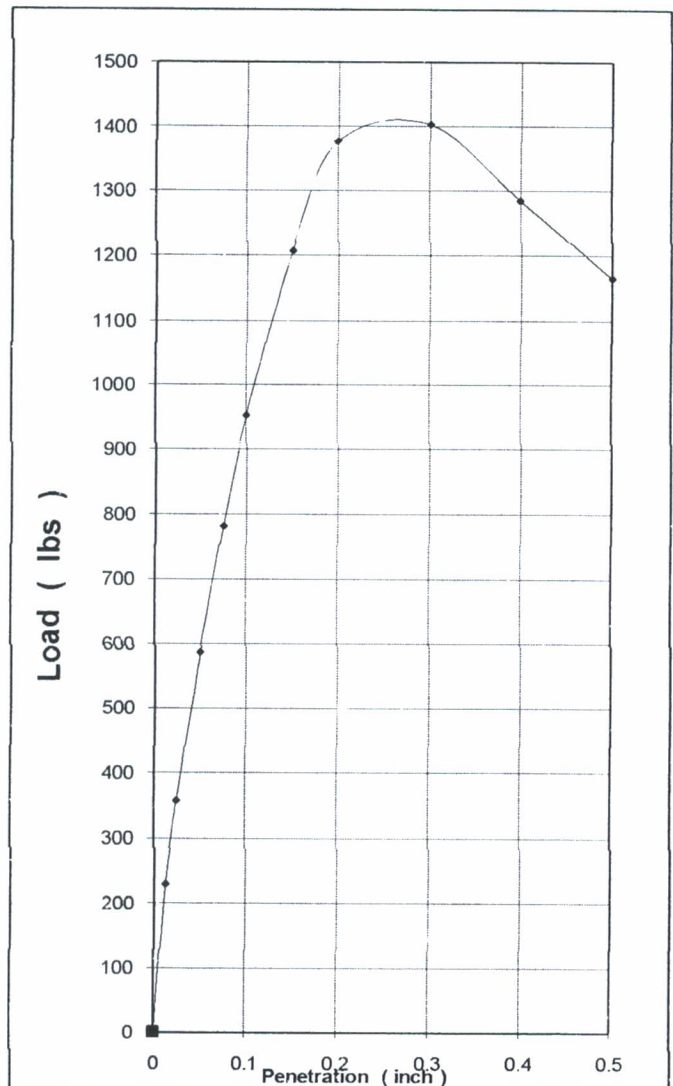
LAY-OUT TITIK CBR
 SITE : JABABEKA 5
 CIKARANG PUSAT



CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5		
LOCATION	Cikarang Pusat		
Location of Tested	No : 1	Date of Test	September 07, 2004
Soil Description	<i>Tanah Coklat (Subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	27.0	229.72
0.50	0.025	63.5	42.0	357.34
1.00	0.05	127	69.0	587.07
1.50	0.075	190.5	92.0	782.75
2.00	0.1	254	112.0	952.92
3.00	0.15	381	142.0	1208.16
4.00	0.2	508	162.0	1378.33
6.00	0.3	762	165.0	1403.85
8.00	0.4	1016	151.0	1284.74
10.00	0.5	1270	137.0	1165.62



Field Water Contant (%)

	Unit
Weight of Cointainer	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

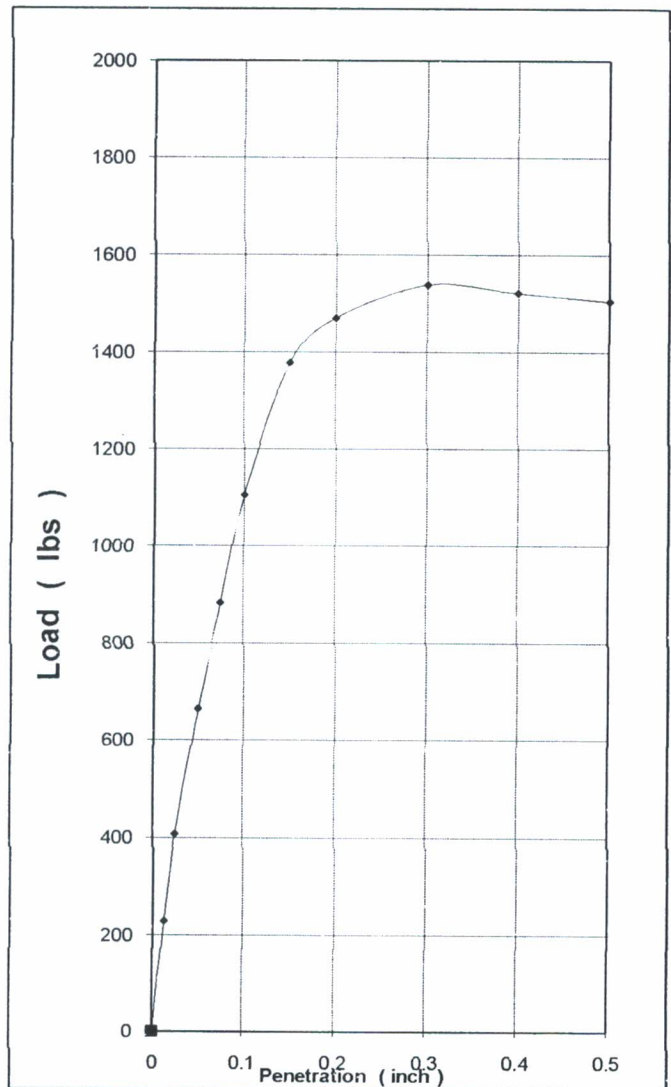
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	31.76	30.63

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5		
	0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 2	Date of Test	September 07, 2004
Soil Description	Tanah Coklat (Subgrade)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	27.0	229.72
0.50	0.025	63.5	48.0	408.39
1.00	0.05	127	78.0	663.64
1.50	0.075	190.5	104.0	884.85
2.00	0.1	254	130.0	1106.07
3.00	0.15	381	162.0	1378.33
4.00	0.2	508	173.0	1471.92
6.00	0.3	762	181.0	1539.98
8.00	0.4	1016	179.0	1522.97
10.00	0.5	1270	177.0	1505.95



Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

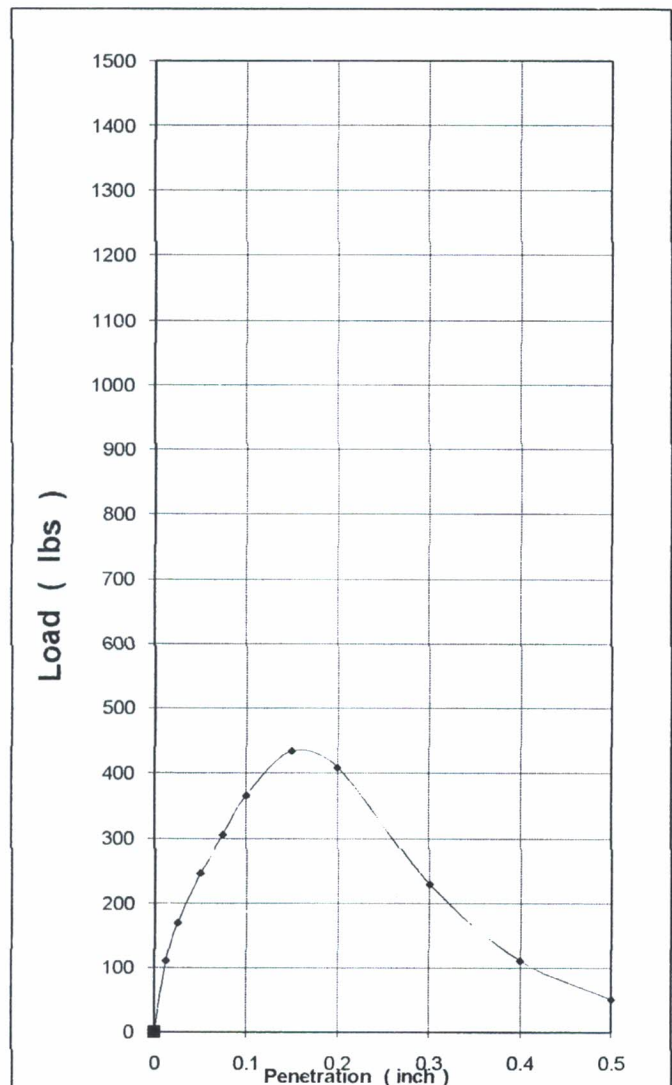
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	36.87	32.71

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5 0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 3	Date of Test	September 07, 2004
Soil Description	Tanah Coklat (Subgrade)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	8.50820
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov. Ring	Load (lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	13.0	110.61
0.50	0.025	63.5	20.0	170.16
1.00	0.05	127	29.0	246.74
1.50	0.075	190.5	36.0	306.30
2.00	0.1	254	43.0	365.85
3.00	0.15	381	51.0	433.92
4.00	0.2	508	48.0	408.39
6.00	0.3	762	27.0	229.72
8.00	0.4	1016	13.0	110.61
10.00	0.5	1270	6.0	51.05



Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

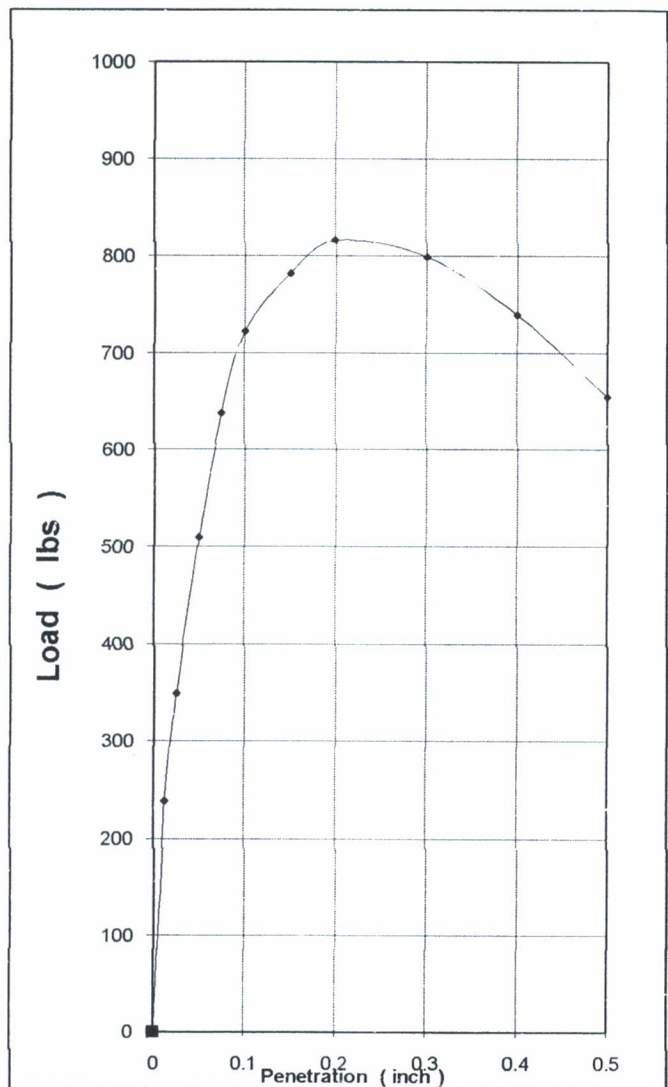
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	12.20	9.08

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5 0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 4	Date of Test	September 07, 2004
Soil Description	Tanah Coklat (Subgrade)	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	28.0	238.23
0.50	0.025	63.5	41.0	348.84
1.00	0.05	127	60.0	510.49
1.50	0.075	190.5	75.0	638.12
2.00	0.1	254	85.0	723.20
3.00	0.15	381	92.0	782.75
4.00	0.2	508	96.0	816.79
6.00	0.3	762	94.0	799.77
8.00	0.4	1016	87.0	740.21
10.00	0.5	1270	77.0	655.13



Field Water Content (%)

	Unit
Weight of Cointainer	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

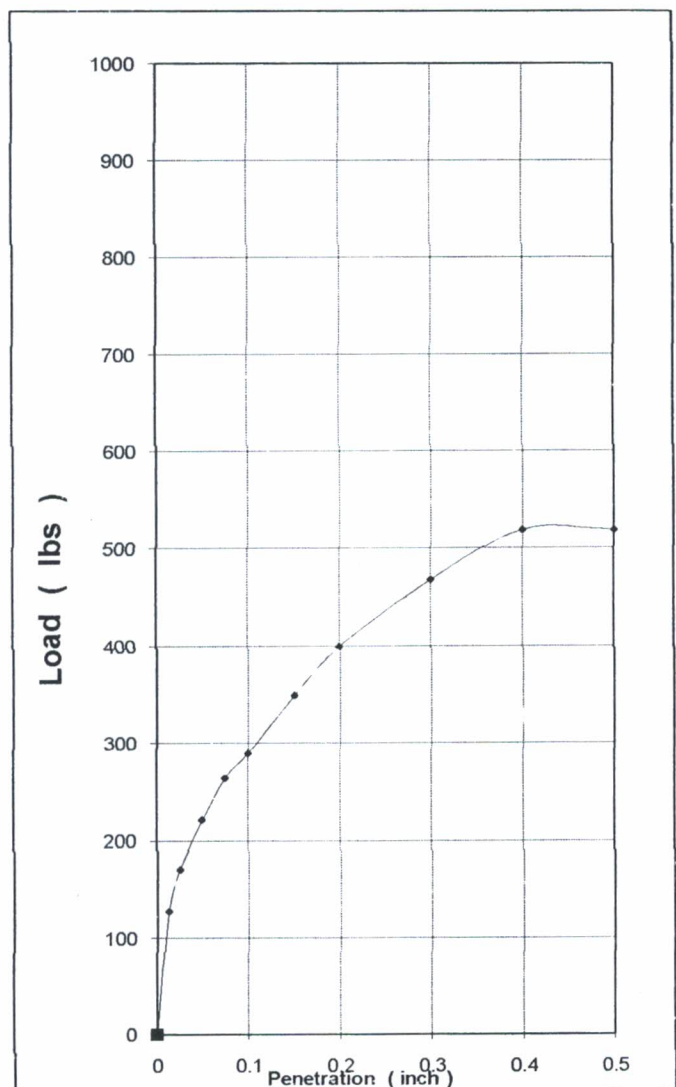
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	24.11	18.15

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5 0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 5	Date of Test	September 07, 2004
Soil Description	<i>Tanah Coklat (Subgrade)</i>	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	8.50820
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	15.0	127.62
0.50	0.025	63.5	20.0	170.16
1.00	0.05	127	26.0	221.21
1.50	0.075	190.5	31.0	263.75
2.00	0.1	254	34.0	289.28
3.00	0.15	381	41.0	348.84
4.00	0.2	508	47.0	399.89
6.00	0.3	762	55.0	467.95
8.00	0.4	1016	61.0	519.00
10.00	0.5	1270	61.0	519.00



Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

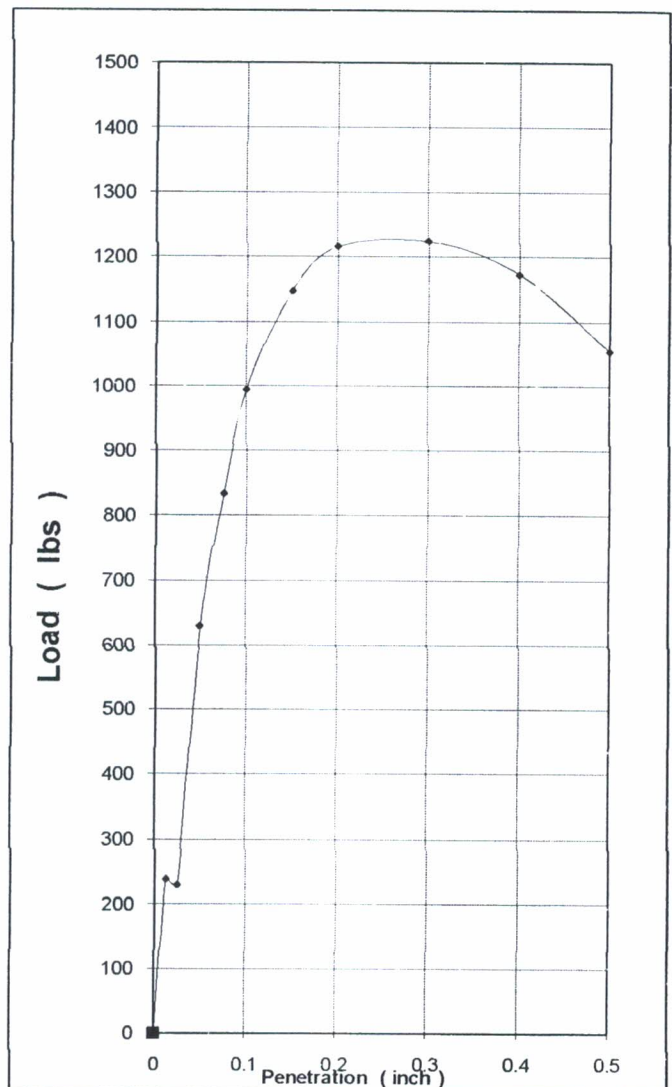
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	9.64	8.89

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5		
	0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 6 <i>Tanah Coklat (Subgrade)</i> N : E :	Date of Test	September 07, 2004
Soil Description		Tested By	Budi
Coordinate of Tested		Calibration (lbs/div)	8.5082
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	28.0	238.23
0.50	0.025	63.5	27.0	229.72
1.00	0.05	127	74.0	629.61
1.50	0.075	190.5	98.0	833.80
2.00	0.1	254	117.0	995.46
3.00	0.15	381	135.0	1148.61
4.00	0.2	508	143.0	1216.67
6.00	0.3	762	144.0	1225.18
8.00	0.4	1016	138.0	1174.13
10.00	0.5	1270	124.0	1055.02



Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

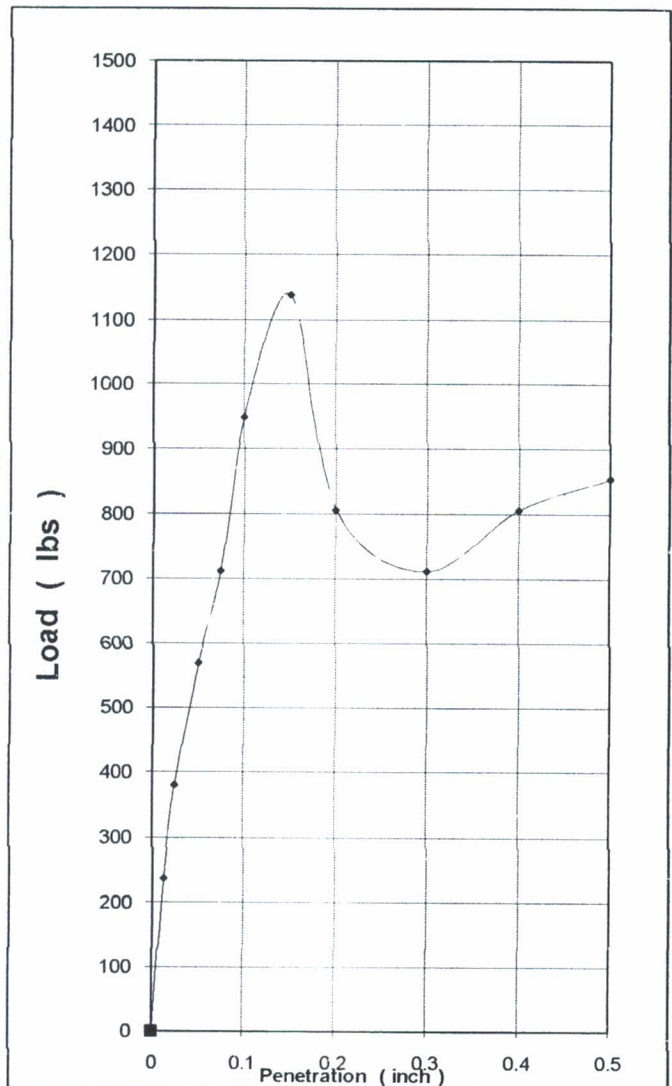
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	33.18	27.04

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5		
	0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 7	Date of Test	September 07, 2004
Soil Description	Sirtu	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	5.0	237.29
0.50	0.025	63.5	8.0	379.66
1.00	0.05	127	12.0	569.49
1.50	0.075	190.5	15.0	711.87
2.00	0.1	254	20.0	949.16
3.00	0.15	381	24.0	1138.99
4.00	0.2	508	17.0	806.78
6.00	0.3	762	15.0	711.87
8.00	0.4	1016	17.0	806.78
10.00	0.5	1270	18.0	854.24



Field Water Content (%)

	Unit
Weight of Cointainer	gram
Wet Soil & Container	gram
Dry Soil & Container	gram
Field Water Content	%

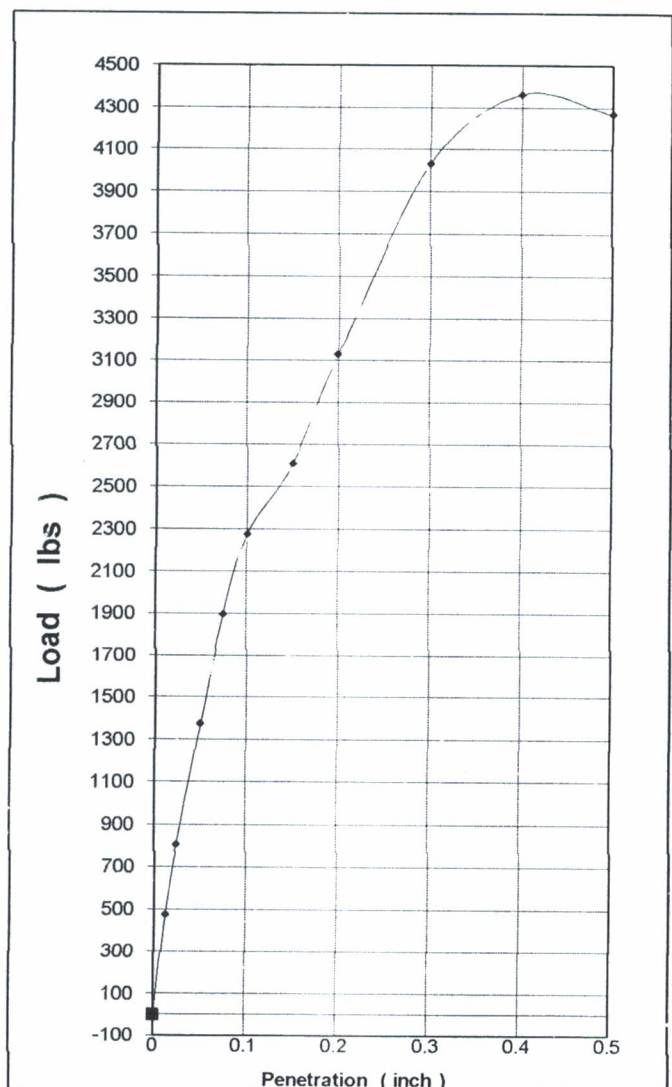
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	31.64	17.93

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5		
	0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 8	Date of Test	September 07, 2004
Soil Description	Sirtu	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	10.0	474.58
0.50	0.025	63.5	17.0	806.78
1.00	0.05	127	29.0	1376.28
1.50	0.075	190.5	40.0	1898.31
2.00	0.1	254	48.0	2277.98
3.00	0.15	381	55.0	2610.18
4.00	0.2	508	66.0	3132.22
6.00	0.3	762	85.0	4033.92
8.00	0.4	1016	92.0	4366.12
10.00	0.5	1270	90.0	4271.21



Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	grm
Field Water Content	%

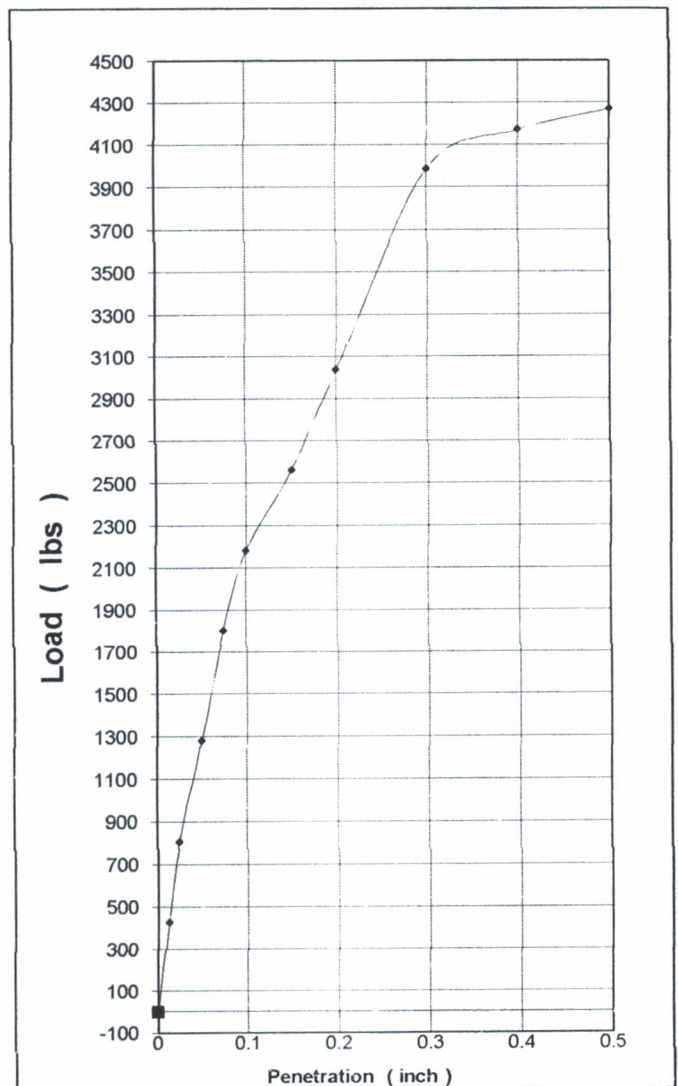
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	75.93	69.60

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5 0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 9	Date of Test	September 07, 2004
Soil Description	Sirtu	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	9.0	427.12
0.50	0.025	63.5	17.0	806.78
1.00	0.05	127	27.0	1281.36
1.50	0.075	190.5	38.0	1803.40
2.00	0.1	254	46.0	2183.06
3.00	0.15	381	54.0	2562.72
4.00	0.2	508	64.0	3037.30
6.00	0.3	762	84.0	3986.46
8.00	0.4	1016	88.0	4176.29
10.00	0.5	1270	90.0	4271.21



Field Water Content (%)

	Unit
Weight of Cointainer	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

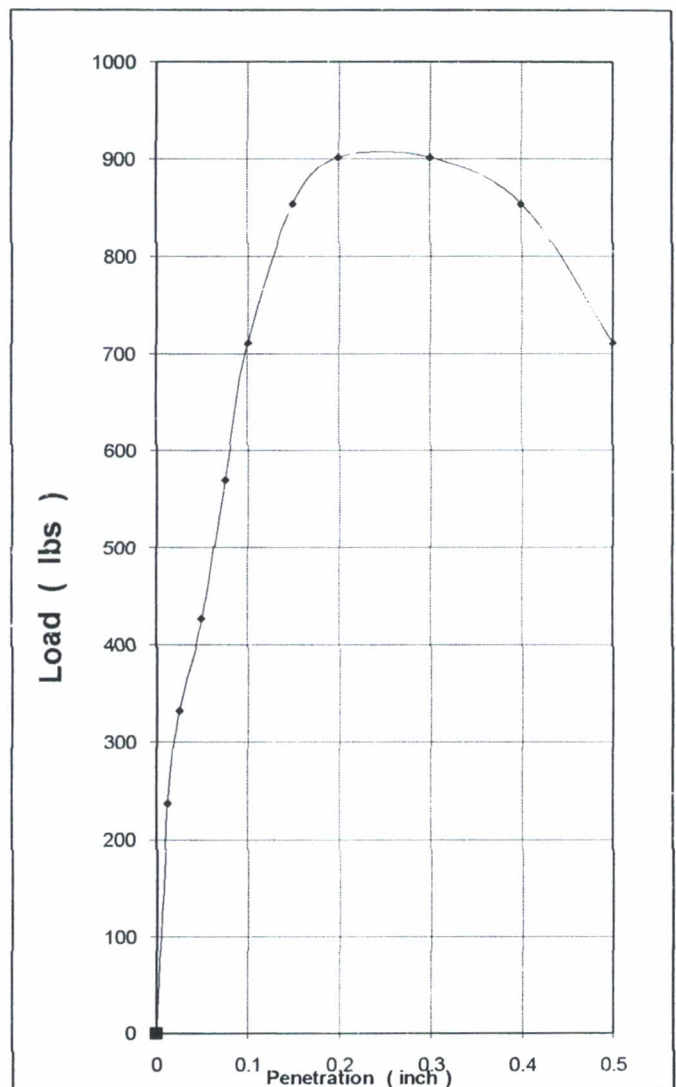
C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	72.77	67.50

CALIFORNIA BEARING RATIO FIELD TEST

PROJECT	JABABEKA 5 0		
LOCATION	Cikarang Pusat		
Location of Tested	No : 10	Date of Test	September 07, 2004
Soil Description	Sirtu	Tested By	Budi
Coordinate of Tested	N : E :	Calibration (lbs/div)	47.45784
Elevation		Standard of Test	ASTM

Time Minute	Penetration		Load	
	(inch)	(Dial mm/100)	Prov.Ring	Load(lbs)
0.00	0	0	0.0	0
0.25	0.0125	31.75	5.0	237.29
0.50	0.025	63.5	7.0	332.20
1.00	0.05	127	9.0	427.12
1.50	0.075	190.5	12.0	569.49
2.00	0.1	254	15.0	711.87
3.00	0.15	381	18.0	854.24
4.00	0.2	508	19.0	901.70
6.00	0.3	762	19.0	901.70
8.00	0.4	1016	18.0	854.24
10.00	0.5	1270	15.0	711.87



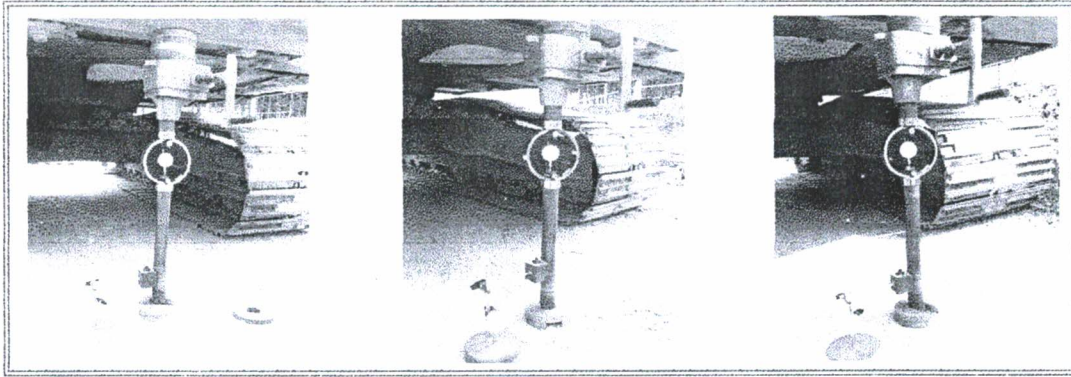
Field Water Content (%)

	Unit
Weight of Container	gm
Wet Soil & Container	gm
Dry Soil & Container	gm
Field Water Content	%

C.B.R VALUE

	Penetration	
	0.1 inch	0.2 inch
CBR VALUE	23.73	20.04

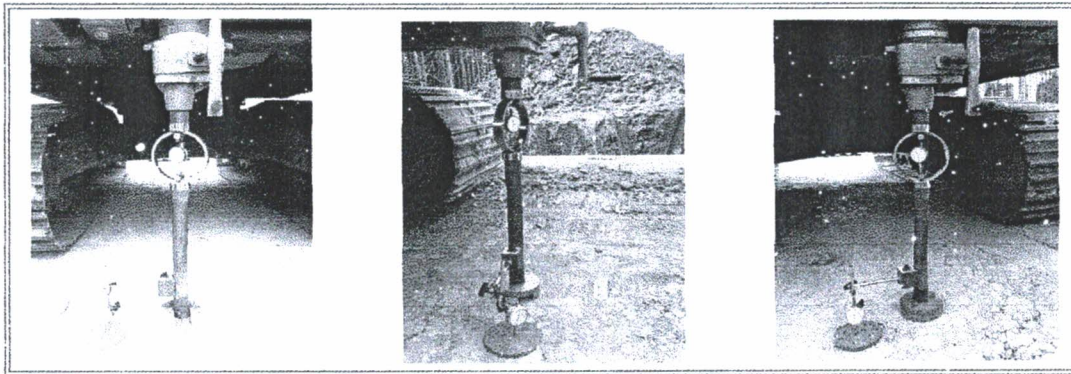
DOKUMENTASI CBR : JABABEKA 5
CIKARANG PUSAT



Titik 1

Titik 2

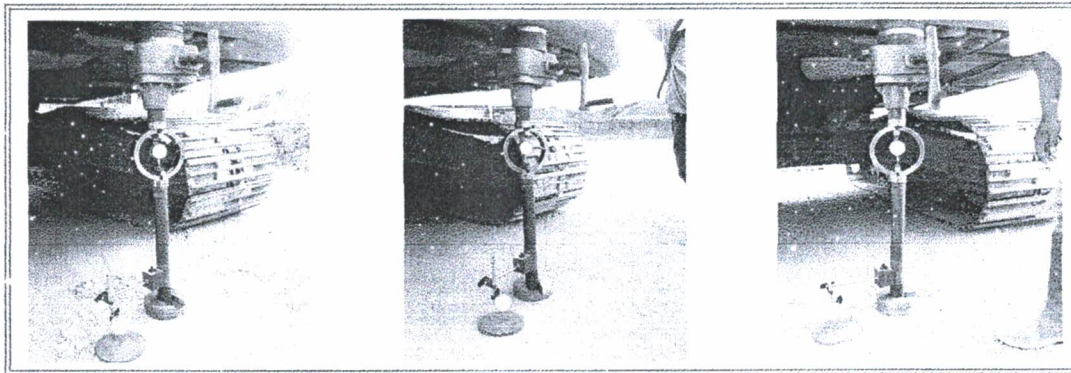
Titik 3



Titik 4

Titik 5

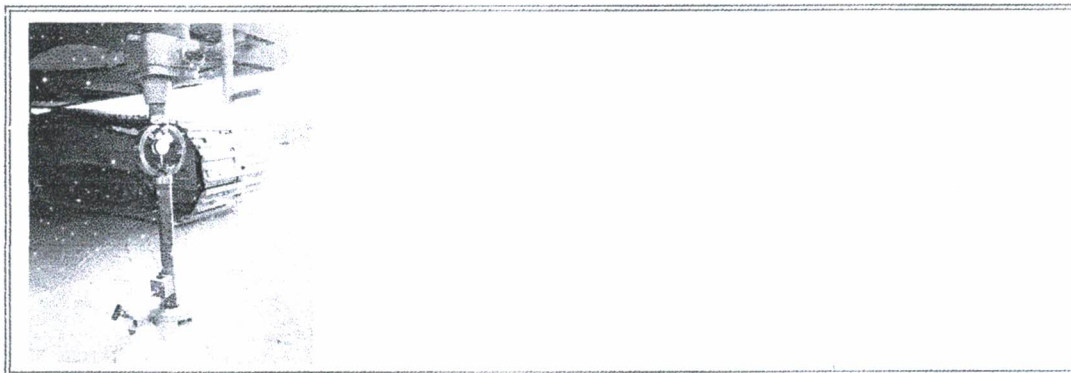
Titik 6



Titik 7

Titik 8

Titik 9



Titik 10