



## FOUNDATION INDICATOR

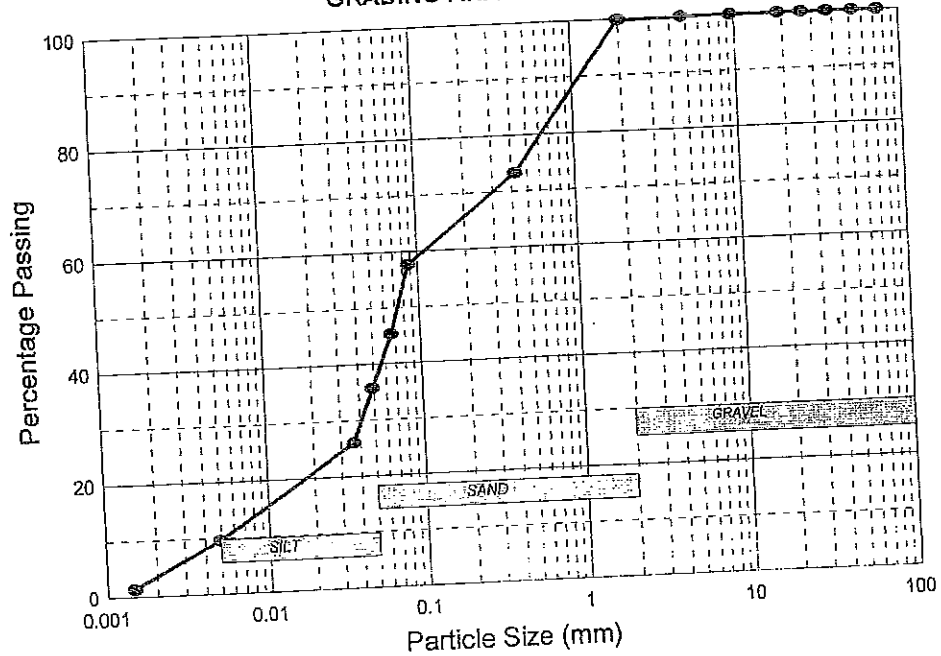
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 50/1 @ 0.3 - 0.75m	
Date	10 OCTOBER 2007	Test No.	1810
Job No.	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.85
0.425	73.23

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

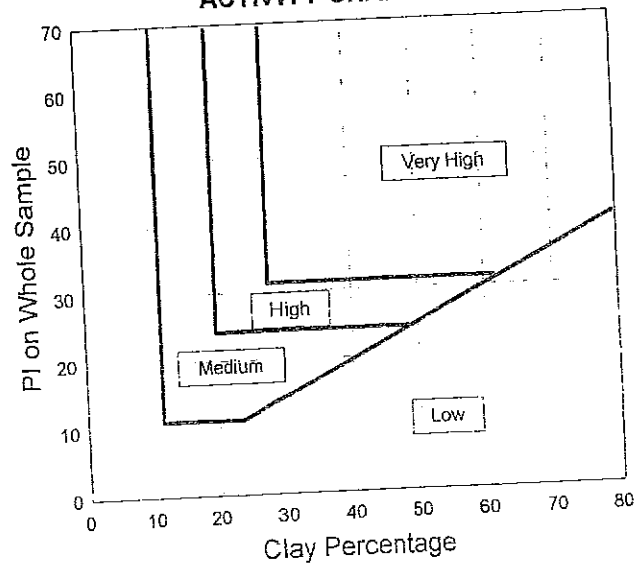
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0881	57.60
0.0665	45.26
0.0492	35.66
0.0362	26.06
0.0050	9.60
0.0015	1.37

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.69
Moisture Content	5.18
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 19/10/2007



## FOUNDATION INDICATOR

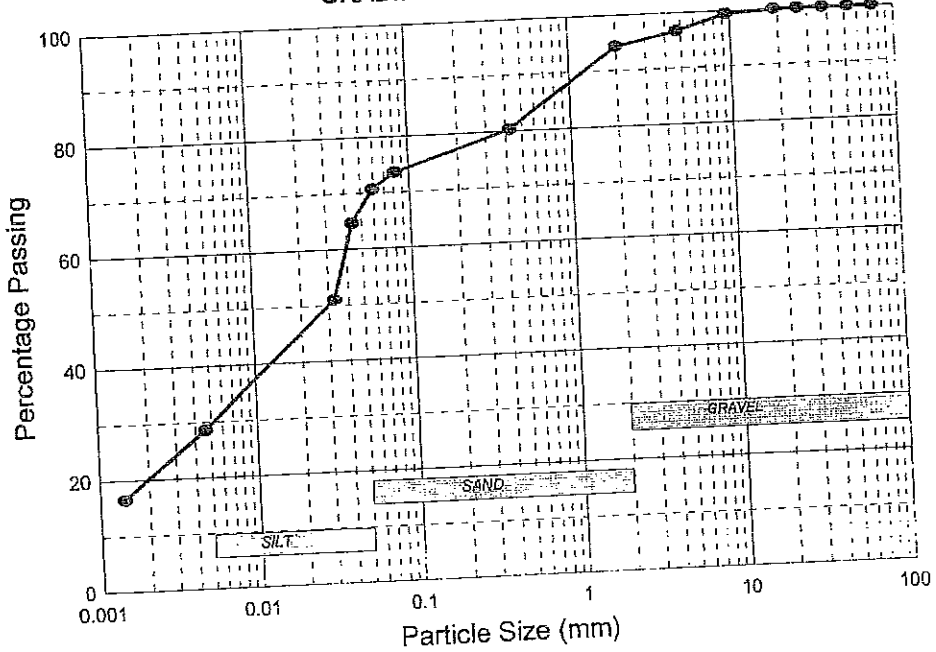
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 50/2 @ 0,75 - 1,5m	
Date	10 OCTOBER 2007	Test No	1811
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.44
4.75	96.75
2.00	94.37
0.425	80.26

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

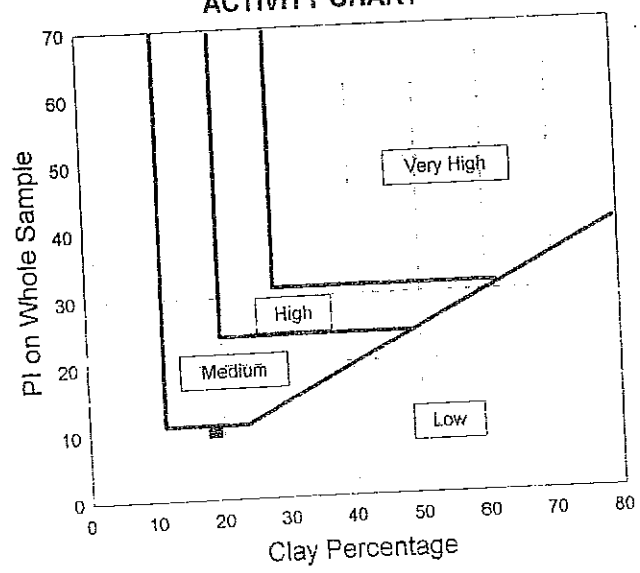
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	73.65
0.0599	70.64
0.0437	64.63
0.0330	51.10
0.0047	28.56
0.0014	16.53

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	28
Plastic Limit	15
Plastic Index	13
Linear Shrinkage	7
Grading Modulus	0.52
Moisture Content	8.33
PI on Whole Sample	10

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

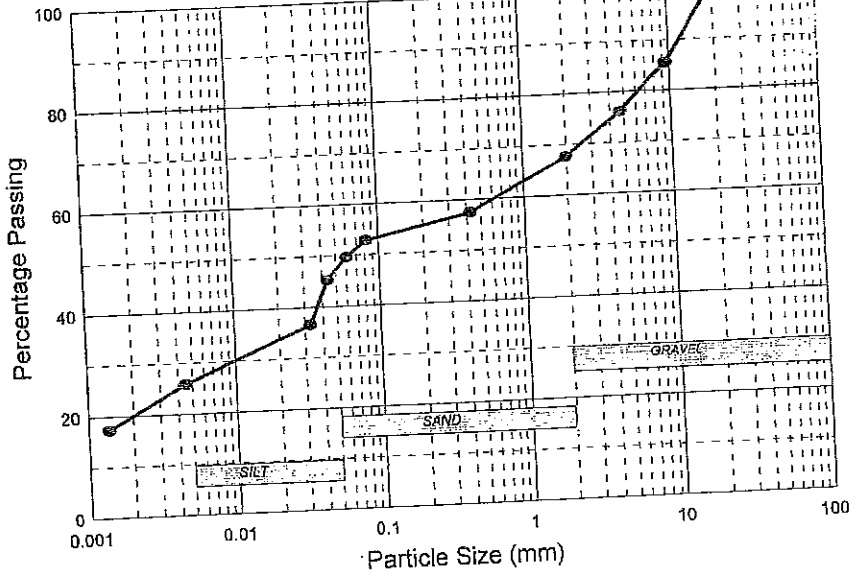
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 38/2 @ 1,35 - 1,8m	
Date	10 OCTOBER 2007	Test No.	1812
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	85.47
4.75	76.13
2.00	67.62
0.425	57.53

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

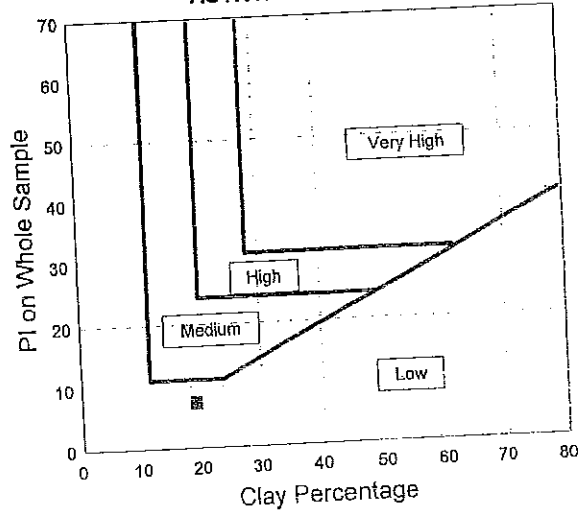
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	52.79
0.0604	49.56
0.0441	45.25
0.0330	36.63
0.0045	25.86
0.0014	17.24

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	28
Plastic Limit	15
Plastic Index	13
Linear Shrinkage	7
Grading Modulus	1.22
Moisture Content	7.54
Pl on Whole Sample	7

### ACTIVITY CHART



**CHECKED BY :**  
*[Signature]*  
**C. DALTON**  
DATE : 10/11/07

**FOUNDATION INDICATOR**

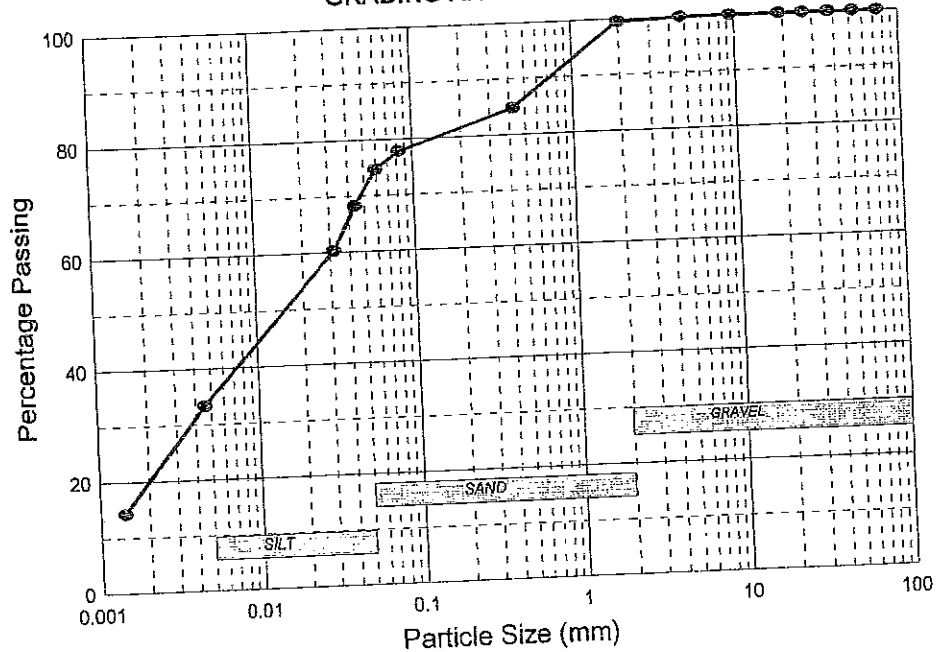
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 39/2 @ 0,35 - 1,8m	
Date	10 OCTOBER 2007	Test No.	1813
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.57
0.425	84.78

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

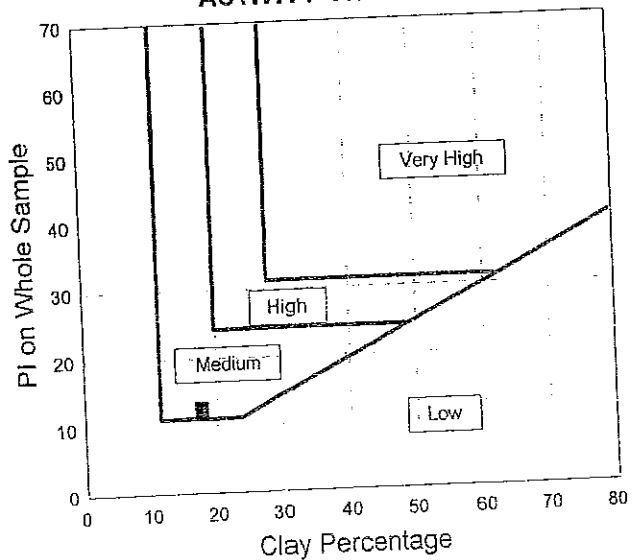
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	77.80
0.0599	74.62
0.0437	68.27
0.0321	60.33
0.0046	33.34
0.0014	14.29

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	28
Plastic Limit	13
Plastic Index	15
Linear Shrinkage	7
Grading Modulus	0.38
Moisture Content	8.54
PI on Whole Sample	13

**ACTIVITY CHART**



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 C. DALTON  
 DATE : 19/11/2007

**COLLAPSE POTENTIAL at 200 kPa**

Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 37 @	0.3 - 1.15m
Date	09 OCTOBER 2007	Test No	1814
Job No	07360	Checked By	EB

Sample Height (mm)	20	Sample Diameter (mm)	64	Sample Specific Gravity	2.613
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Sample Preparation	NMC
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Effective Stress (kPa)	Time (mins)	Consolidation Reading	Void Ratio	Strain (%)
10	10	684	0.915	0.00
10	70	685	0.914	0.05
33	130	696	0.903	0.60
65	250	705	0.895	1.05
127	340	721	0.879	1.85
200	490	733	0.868	2.45
200	1930	878	0.729	9.70
498	2170	962	0.649	13.90
993	2410	1083	0.533	19.95
1868	3850	1145	0.473	23.05
743	3970	1142	0.476	22.90
118	4090	1139	0.479	22.75
10	4210	1128	0.490	22.20

**Moisture Content Calculations**

Mass wet sample plus ring before test (gms)	321.20
Mass wet sample plus ring after test (gms)	325.90
Mass dry sample plus ring (gms)	311.70
Mass ring (gms)	223.90
Moisture content before test (%)	10.82
Moisture content after test (%)	16.17

**Other Data**

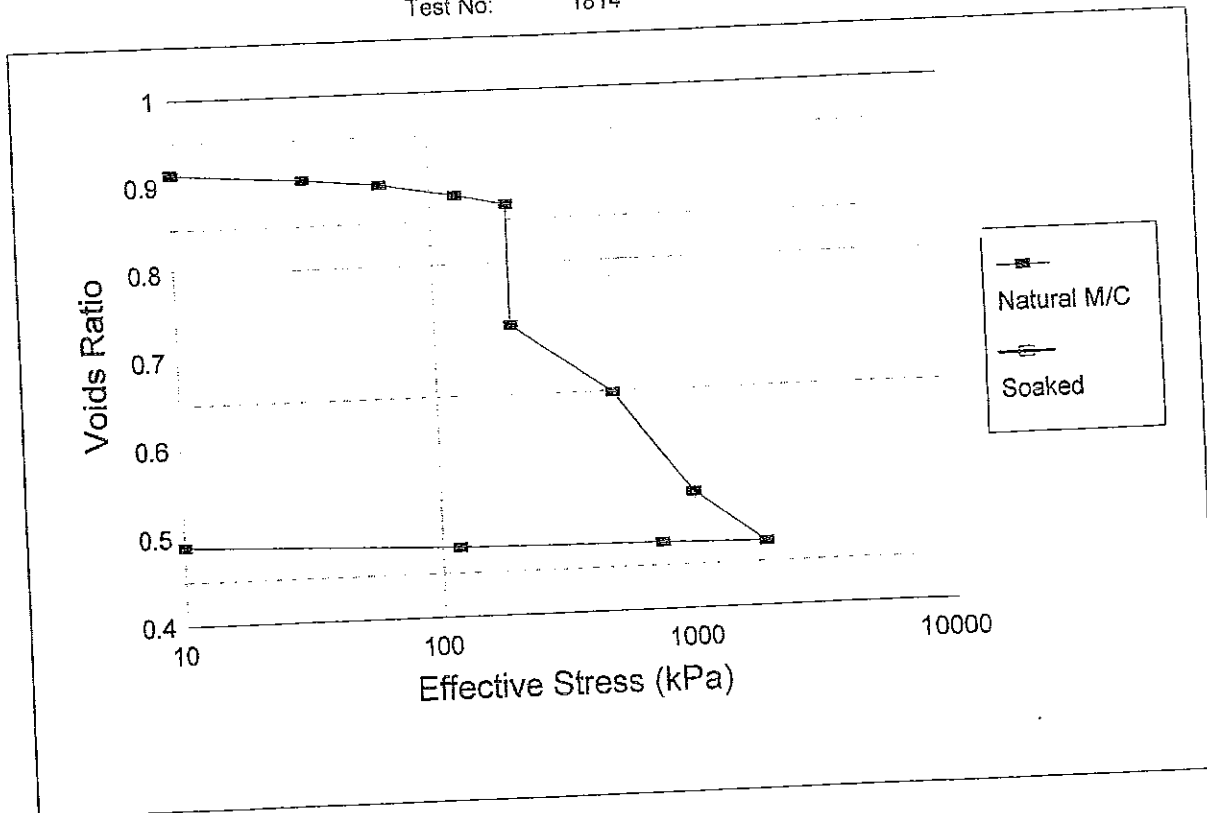
Initial Dry Density (kg/m <sup>3</sup> )	1365
Initial Void Ratio	0.91

Programme Data  
Revision No 2 (19/03/2001)

CHECKED BY :  
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DATE : 9/11/2007

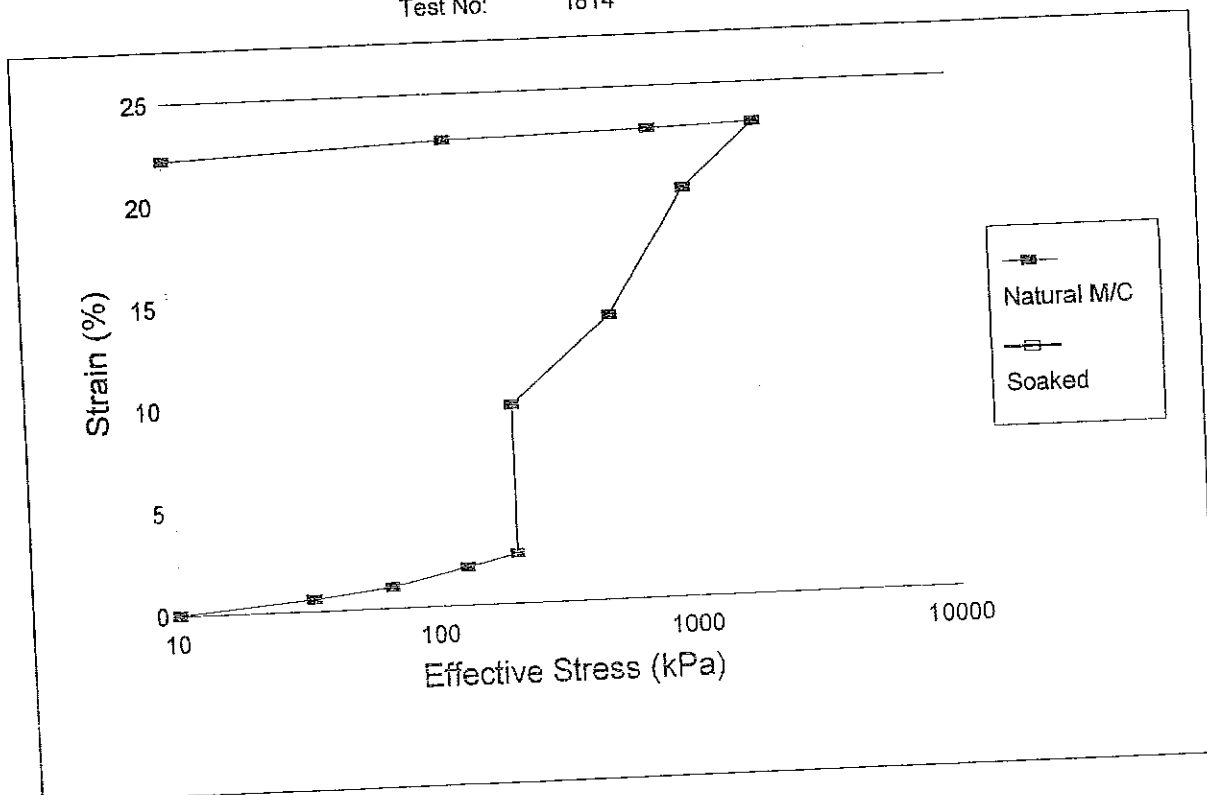
# VOIDS RATIO v EFFECTIVE STRESS

Test No: 1814



# STRAIN v EFFECTIVE STRESS

Test No: 1814



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C. DALTON  
DATE: 19/11/2007

**FOUNDATION INDICATOR**

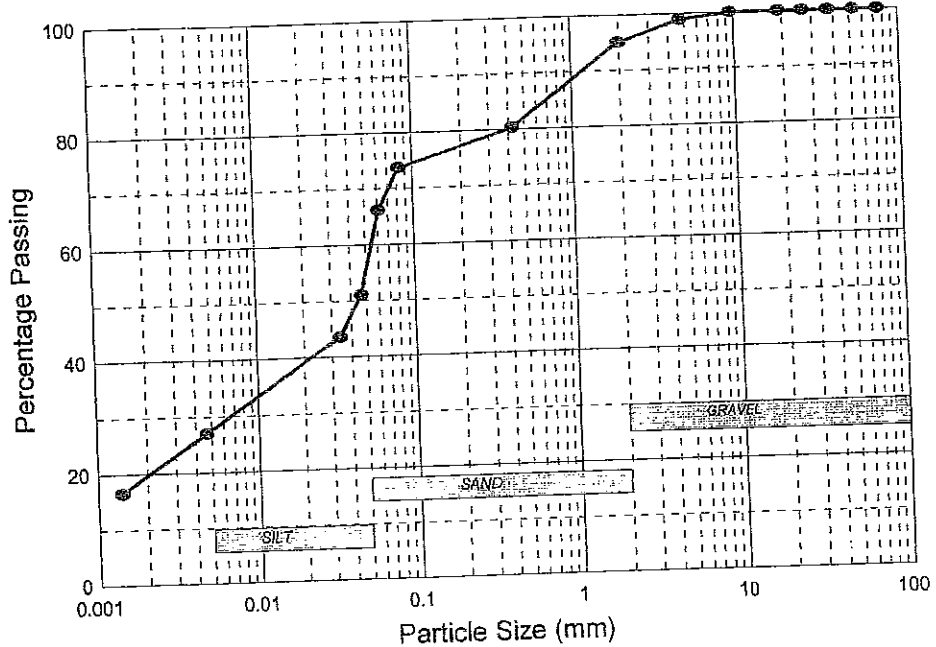
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 38/1 @ 0,35 - 1,35m	
Date	10 OCTOBER 2007	Test No	1814
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	98.97
2.00	95.09
0.425	80.29

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

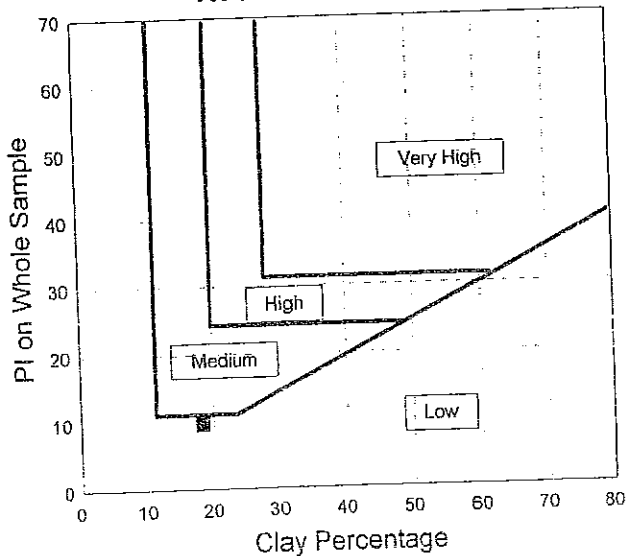
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	73.68
0.0613	66.16
0.0467	51.12
0.0341	43.61
0.0047	27.07
0.0014	16.54

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	26
Plastic Limit	14
Plastic Index	12
Linear Shrinkage	6
Grading Modulus	0.51
Moisture Content	8.27
PI on Whole Sample	10

**ACTIVITY CHART**



CHECKED BY:  
*C. DALTON*  
DATE: 19/11/2007



## FOUNDATION INDICATOR

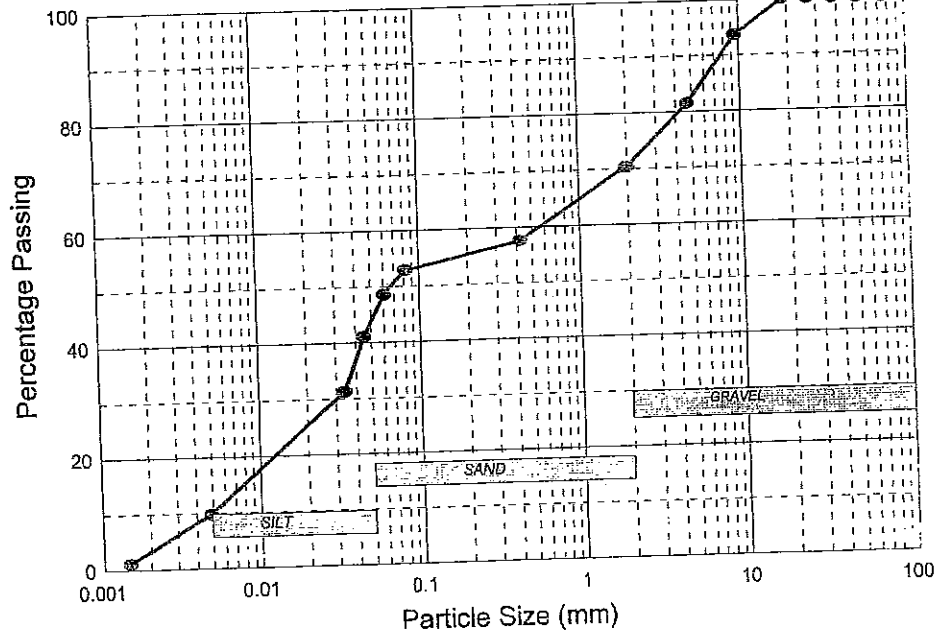
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 12/1 @ 1,3 - 1,5m	
Date	18 OCTOBER 2007	Test No	1850
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	93.66
4.75	81.49
2.00	70.32
0.425	57.65

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

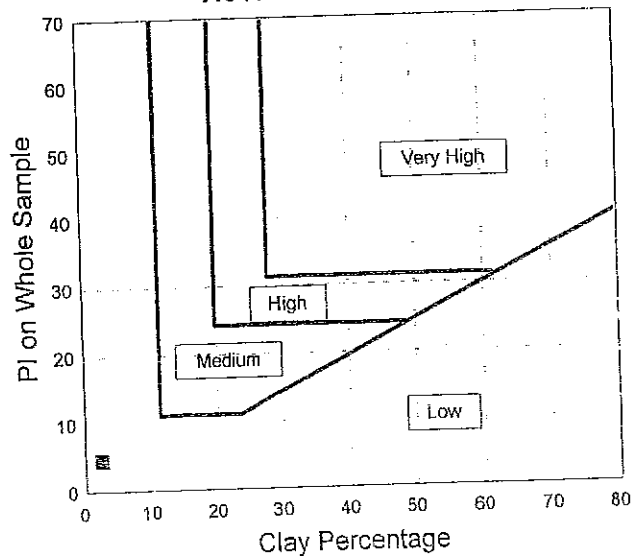
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	52.91
0.0609	48.59
0.0454	41.03
0.0341	31.31
0.0049	9.72
0.0015	1.08

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	27
Plastic Limit	19
Plastic Index	8
Linear Shrinkage	4
Grading Modulus	1.19
Moisture Content	5.84
PI on Whole Sample	5

### ACTIVITY CHART



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 C. DALTON  
 DATE: 19/11/2007





## FOUNDATION INDICATOR

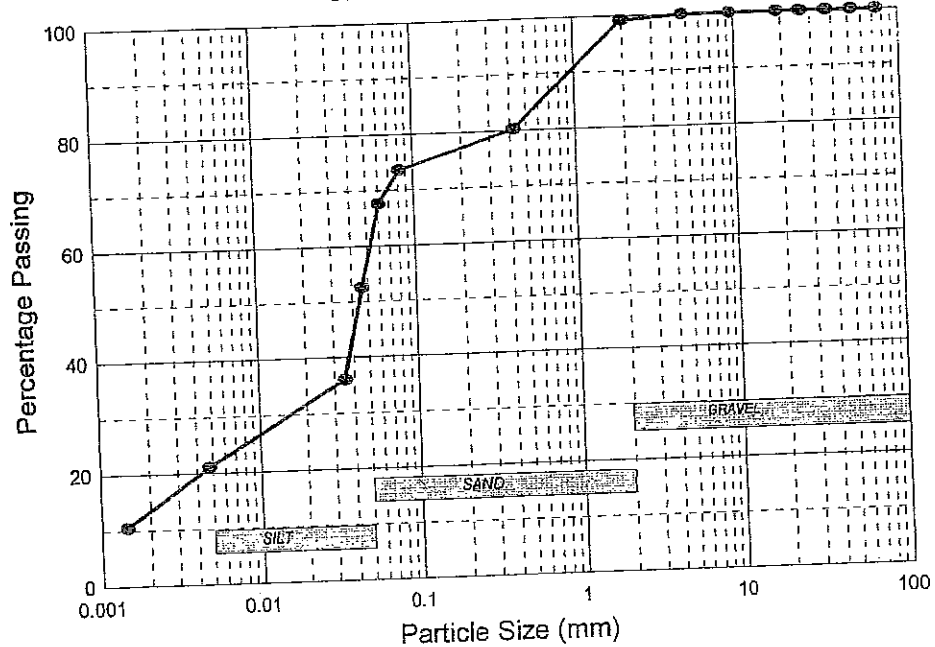
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 12/ @ 2,3 - 2,5m	
Date	18 OCTOBER 2007	Test No	1851
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.29
0.425	80.21

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

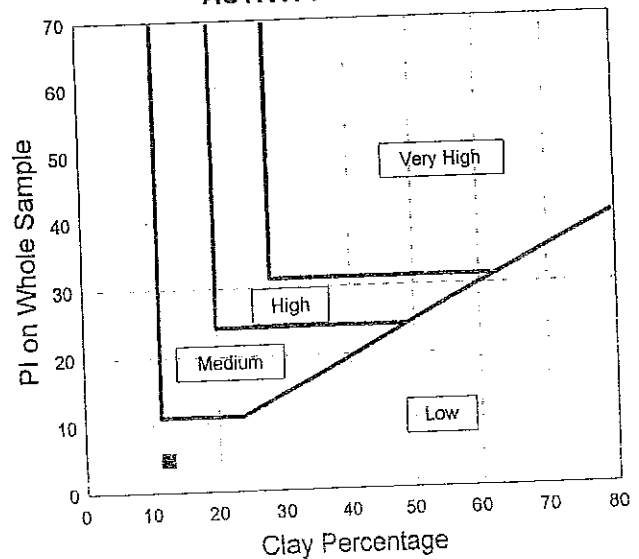
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	73.61
0.0609	67.60
0.0464	52.58
0.0352	36.05
0.0048	21.03
0.0014	10.52

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	19
Plastic Limit	13
Plastic Index	6
Linear Shrinkage	3
Grading Modulus	0.47
Moisture Content	14.99
PI on Whole Sample	5

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE: 19/11/2007

**FOUNDATION INDICATOR**

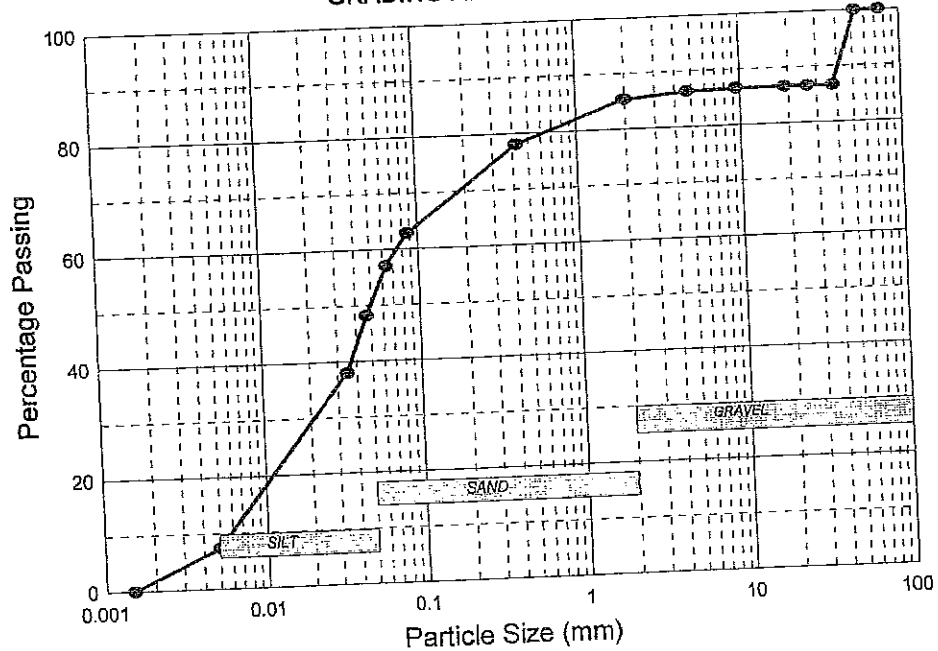
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 17/1 @ 3,0 - 3,5m	
Date	18 OCTOBER 2007	Test No	1852
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	86.62
26.50	86.62
19.00	86.62
9.50	86.62
4.75	86.36
2.00	85.37
0.425	78.00

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

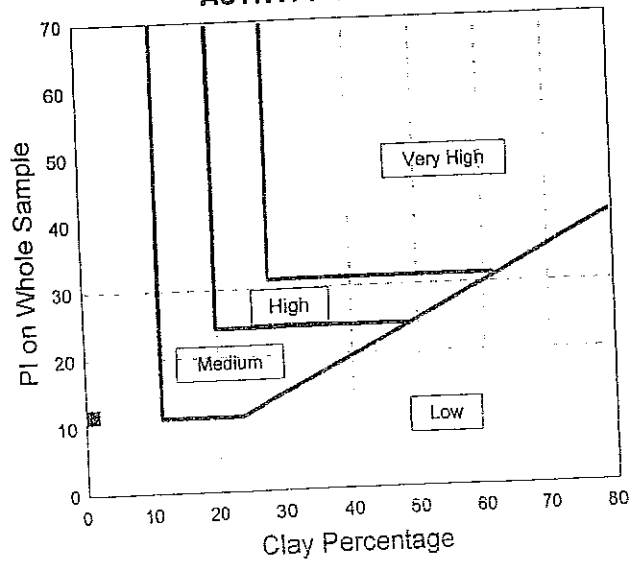
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0874	62.81
0.0637	56.97
0.0470	48.20
0.0348	37.98
0.0050	7.30
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	31
Plastic Limit	16
Plastic Index	15
Linear Shrinkage	8
Grading Modulus	0.74
Moisture Content	16.77
PI on Whole Sample	12

**ACTIVITY CHART**



CHECKED BY :  
 C. DALTON  
 DATE : 19/10/2007



**FOUNDATION INDICATOR**

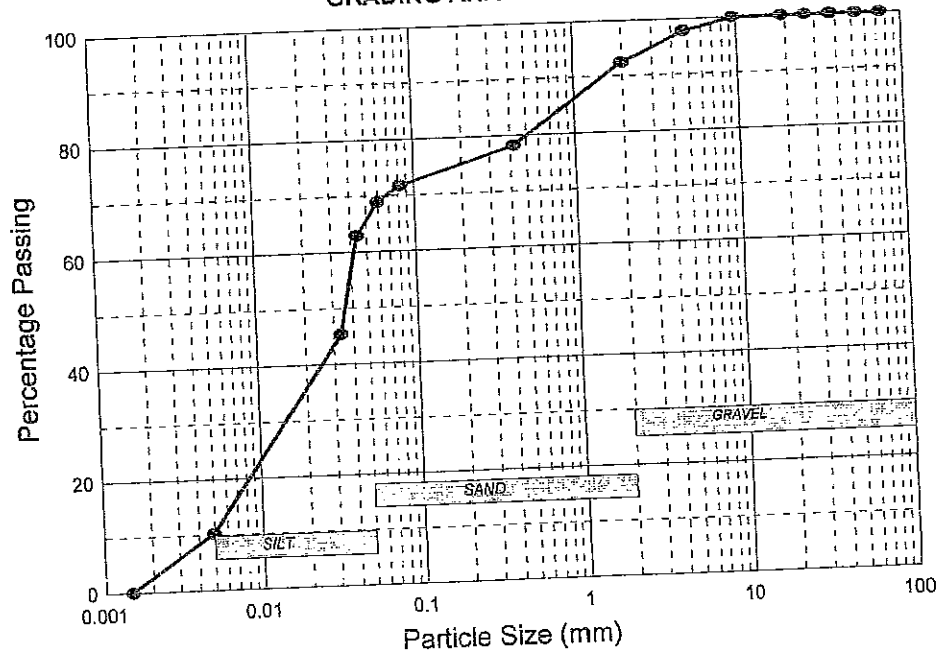
<b>Client</b>	INTRACONSULT PROJECTS		
<b>Location</b>	REIGER PARK - BOKSBURG	TP 13/1 @ 1.0 - 1.5m	
<b>Date</b>	18 OCTOBER 2007	<b>Test No.</b>	1853
<b>Job No.</b>	07360	<b>Checked By</b>	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	97.83
2.00	92.43
0.425	78.20

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

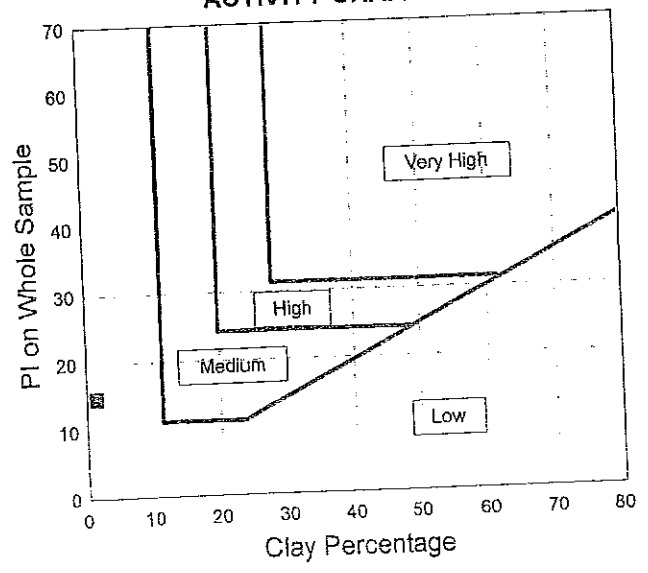
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	71.76
0.0599	68.83
0.0437	62.97
0.0337	45.40
0.0050	10.25
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	41
Plastic Limit	22
Plastic Index	19
Linear Shrinkage	9
Grading Modulus	0.58
Moisture Content	17.14
PI on Whole Sample	15

**ACTIVITY CHART**



CHECKED BY :  
*C. DALTON*  
DATE : 19.11.2007



## FOUNDATION INDICATOR

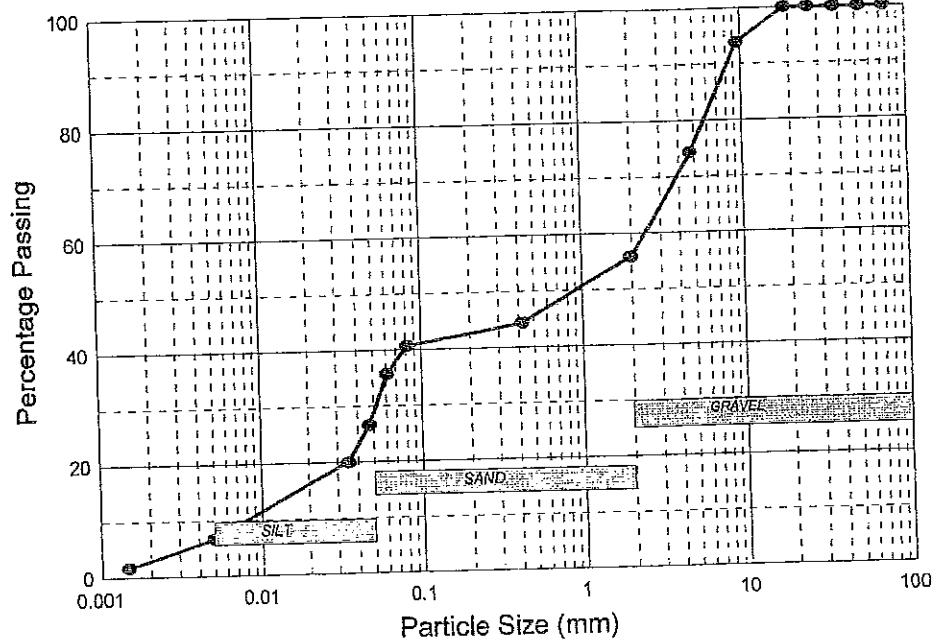
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 14/1 @ 1,0 - 1,35m	
Date	18 OCTOBER 2007	Test No	1854
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	93.82
4.75	74.29
2.00	55.82
0.425	44.39

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

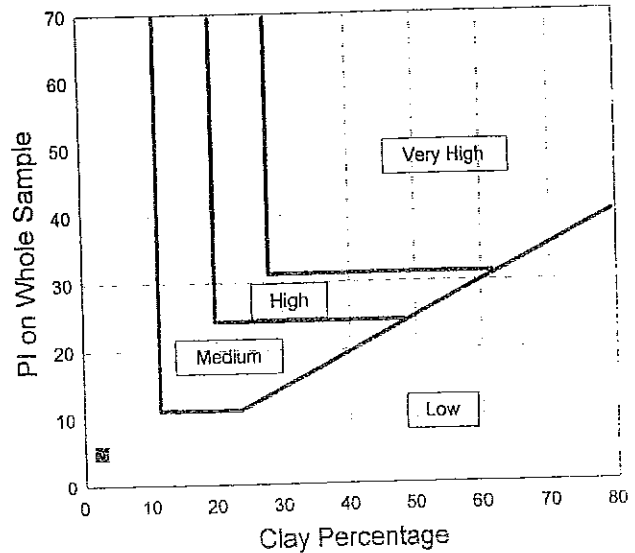
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	40.73
0.0618	35.74
0.0473	26.60
0.0352	19.95
0.0050	6.65
0.0015	1.66

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	31
Plastic Limit	20
Plastic Index	11
Linear Shrinkage	6
Grading Modulus	1.59
Moisture Content	10.42
PI on Whole Sample	5

### ACTIVITY CHART



**CHECKED BY :**  
*C. DALTON*  
DATE : 19/11/2007

## FOUNDATION INDICATOR

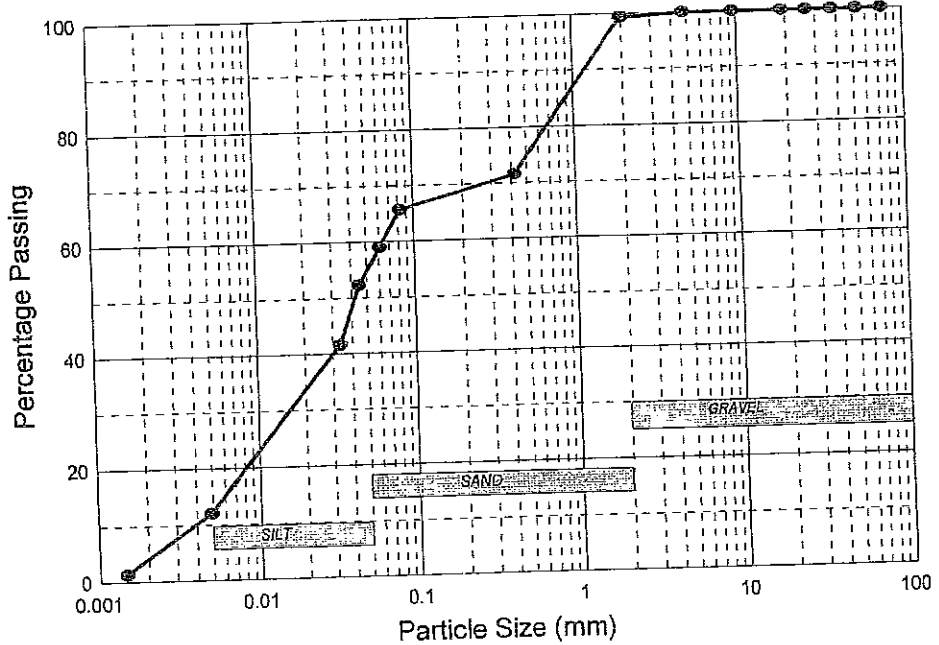
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 19/1 @ 0,5 - 0,9m	
Date	18 OCTOBER 2007	Test No	1855
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.42
0.425	71.63

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

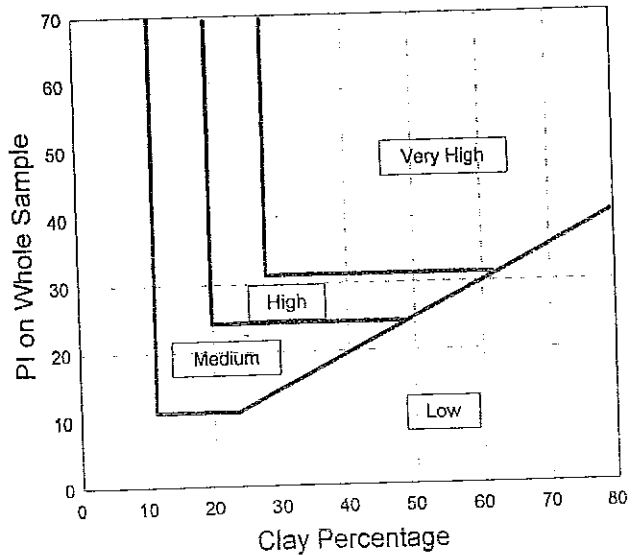
Values are expressed as a percentage of total sample


Sieve Size (mm)	Total Passing (%)
0.0832	65.73
0.0613	59.03
0.0451	52.32
0.0337	41.59
0.0049	12.07
0.0015	1.34

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.63
Moisture Content	18.64
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



  
**CHECKED BY :**  
**C. DALTON**  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

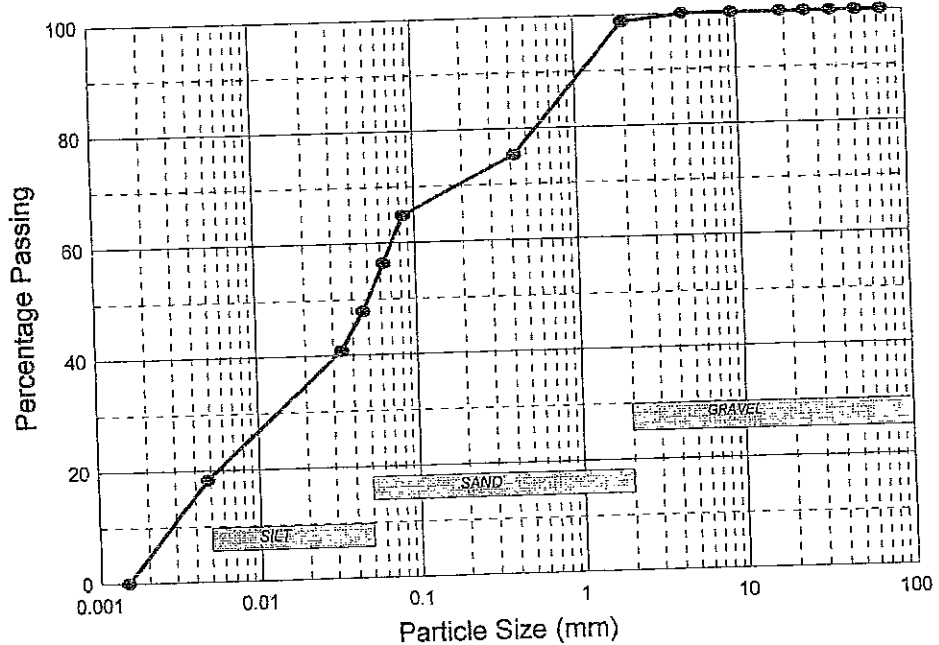
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 19/ @ 1,0 - 1,5m	
Date	18 OCTOBER 2007	Test No	1856
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	98.80
0.425	75.24

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

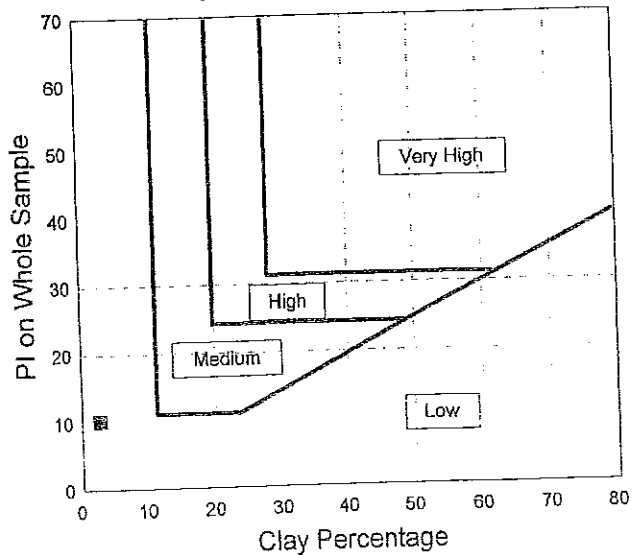
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0854	64.81
0.0633	56.36
0.0467	47.91
0.0341	40.86
0.0048	18.32
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	27
Plastic Limit	13
Plastic Index	14
Linear Shrinkage	7
Grading Modulus	0.61
Moisture Content	9.37
PI on Whole Sample	10

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

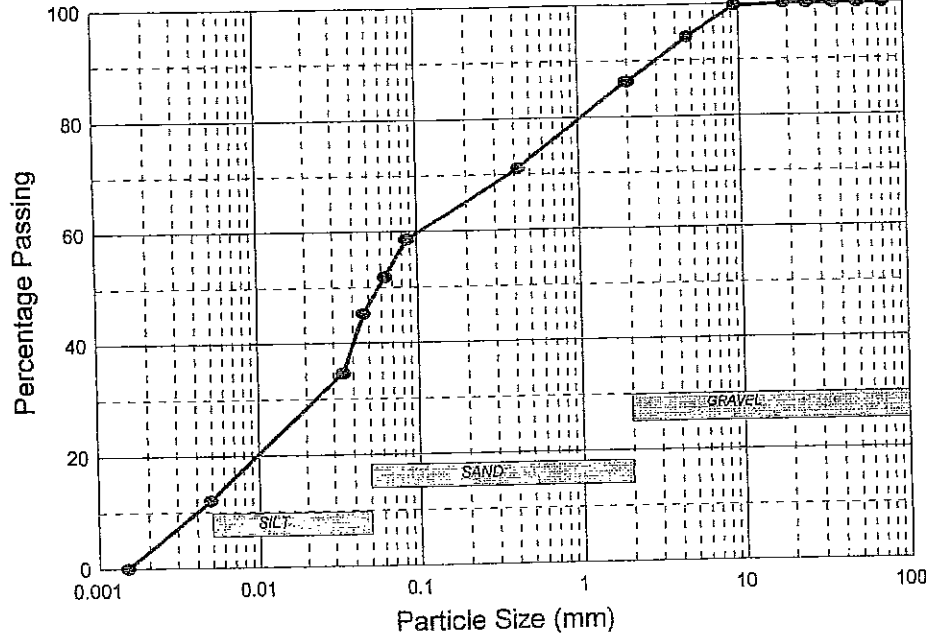
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 20/1 @ 0,35 - 0,65m	
Date	18 OCTOBER 2007	Test No	1857
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.75
4.75	94.19
2.00	86.31
0.425	71.01

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

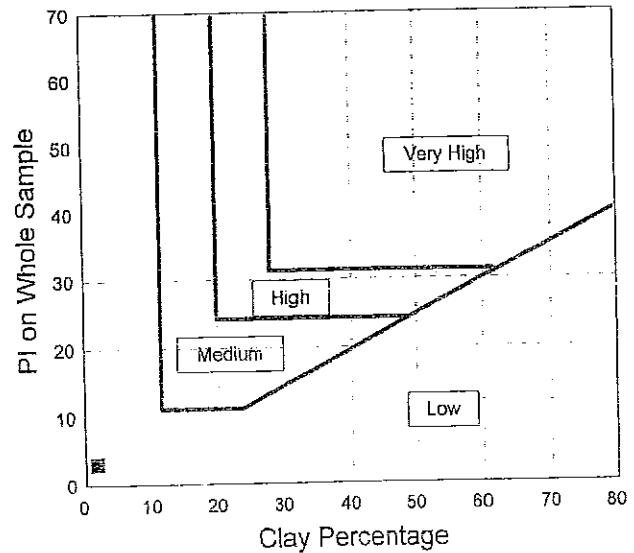
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0867	58.52
0.0637	51.87
0.0467	45.22
0.0348	34.58
0.0049	11.97
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	25
Plastic Limit	21
Plastic Index	4
Linear Shrinkage	2
Grading Modulus	0.84
Moisture Content	20.32
PI on Whole Sample	3

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 19/11/2007

**FOUNDATION INDICATOR**

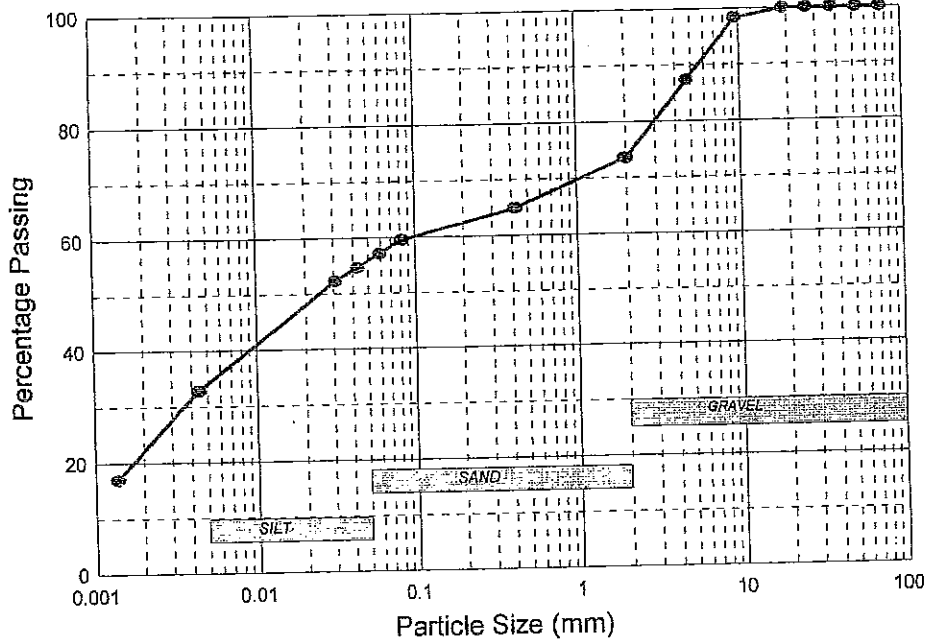
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 23/1 @ 2.0 - 2,3m	
Date	18 OCTOBER 2007	Test No	1858
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	98.41
4.75	87.39
2.00	73.49
0.425	64.92

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

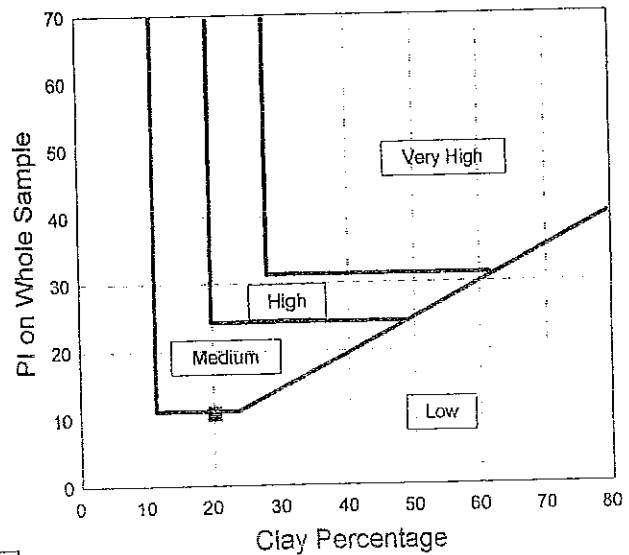
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	59.58
0.0599	57.15
0.0430	54.71
0.0309	52.28
0.0045	32.83
0.0014	17.02

**ATTERBERG LIMITS & OTHER VALUES**

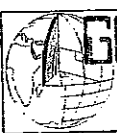
Liquid Limit	40
Plastic Limit	23
Plastic Index	17
Linear Shrinkage	9
Grading Modulus	1.02
Moisture Content	19.51
Pl on Whole Sample	11

**ACTIVITY CHART**



CHECKED BY :  
*C. DALTON*  
 DATE : 19/11/2007





## FOUNDATION INDICATOR

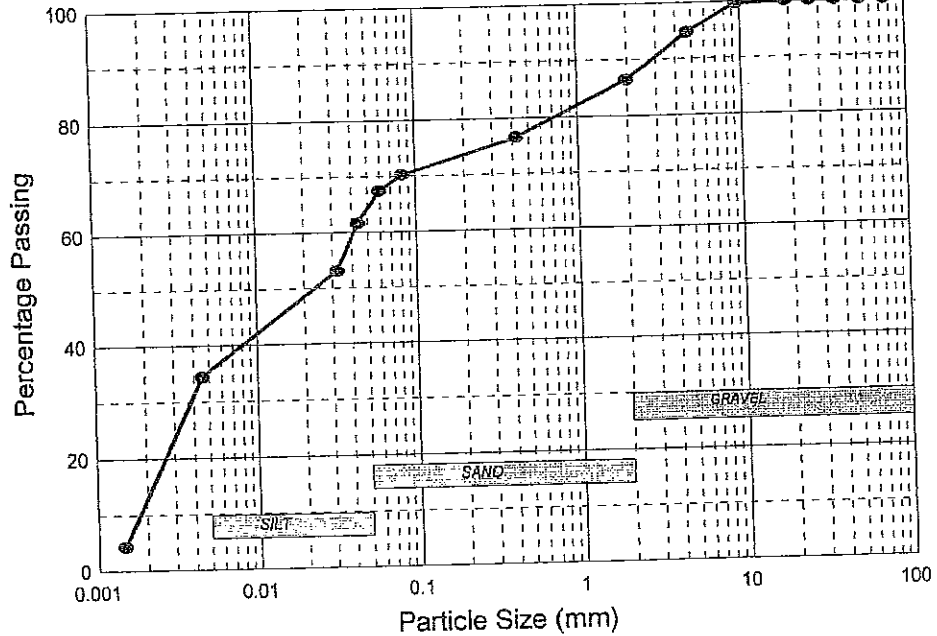
Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	TP 28/1 @ 1,4 - 1,7m	
Date:	18 OCTOBER 2007	Test No:	1859
Job No:	07360	Checked By:	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.73
4.75	94.70
2.00	86.43
0.425	76.54

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

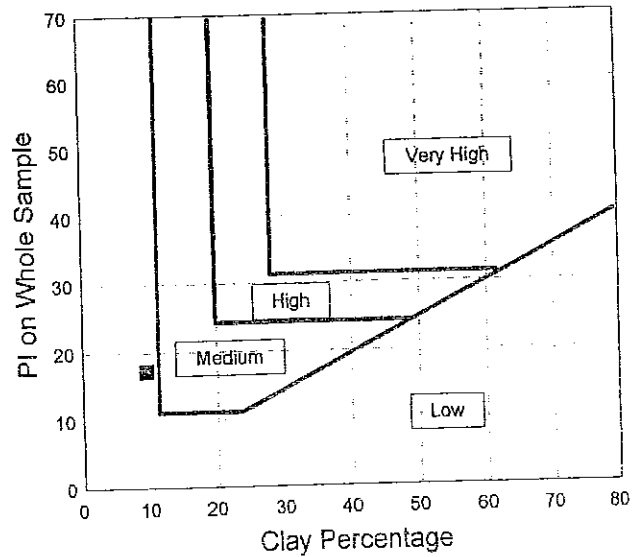
Values are expressed as a percentage of total sample

Stieve Size (mm)	Total Passing (%)
0.0832	70.24
0.0599	67.37
0.0437	61.64
0.0323	53.04
0.0045	34.40
0.0015	4.30

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	48
Plastic Limit	26
Plastic Index	23
Linear Shrinkage	12
Grading Modulus	0.67
Moisture Content	24.06
PI on Whole Sample	17

### ACTIVITY CHART



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 C. DALTON  
 DATE: 19/11/2007

**FOUNDATION INDICATOR**

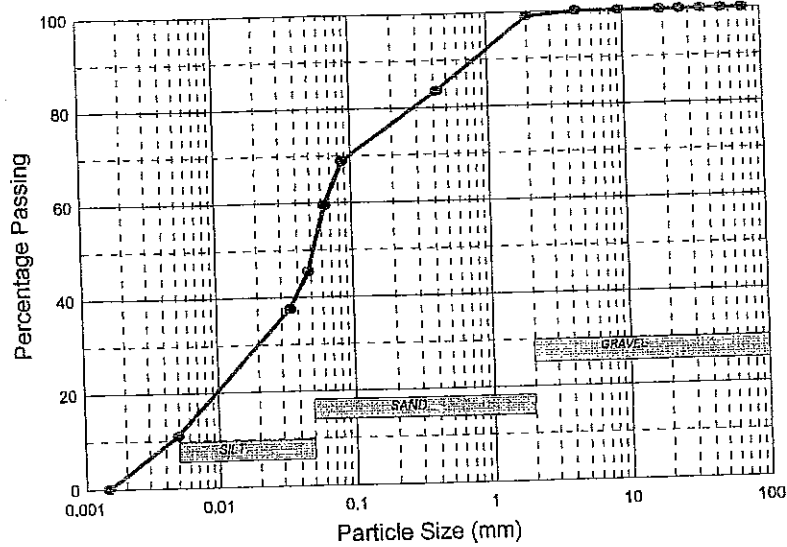
Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	TP 29/1 @ 0,5 - 0,8m	
Date:	18 OCTOBER 2007	Test No:	1860
Job No:	07360	Checked By:	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.08
0.425	83.57

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

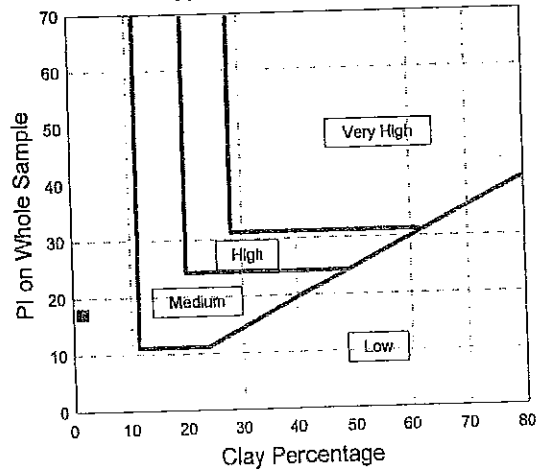
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0867	68.86
0.0642	59.47
0.0482	45.39
0.0352	37.56
0.0050	10.96
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	42
Plastic Limit	21
Plastic Index	21
Linear Shrinkage	11
Grading Modulus	0.48
Moisture Content	20.27
PI on Whole Sample	17

**ACTIVITY CHART**



Programed Data  
 Revision No 3 (06/04/2001)

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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

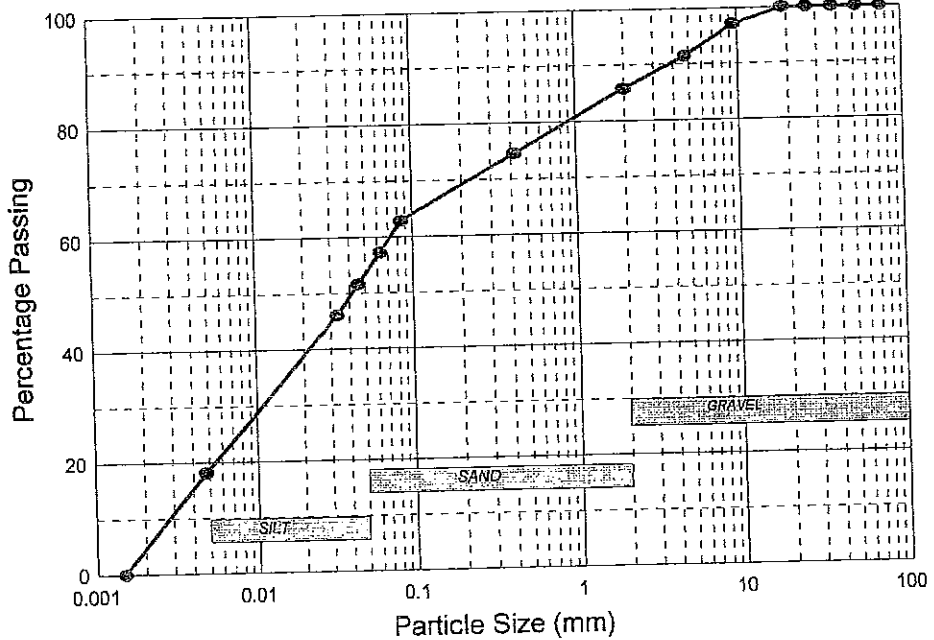
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 30/2 @ 1.3 - 1.6m	
Date	18 OCTOBER 2007	Test No.	1861
Job No.	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	97.12
4.75	91.40
2.00	85.73
0.425	74.52

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

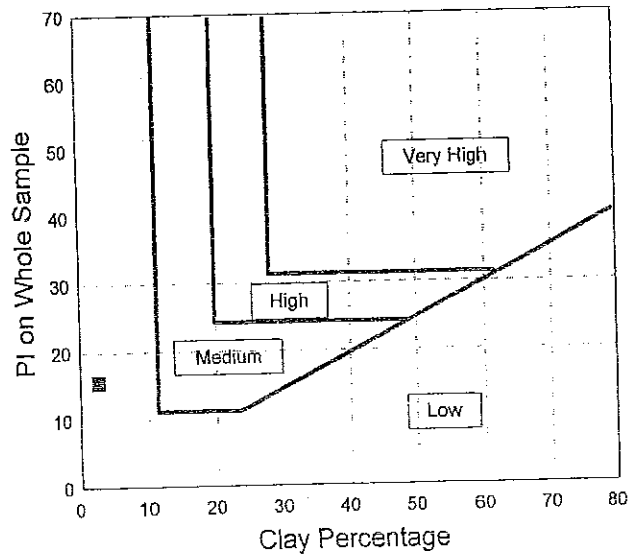
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0861	62.80
0.0628	57.22
0.0457	51.64
0.0332	46.05
0.0048	18.14
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	41
Plastic Limit	20
Plastic Index	21
Linear Shrinkage	10
Grading Modulus	0.77
Moisture Content	17.83
PI on Whole Sample	16

### ACTIVITY CHART



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 C. DALTON  
 DATE: 19/11/2007



## FOUNDATION INDICATOR

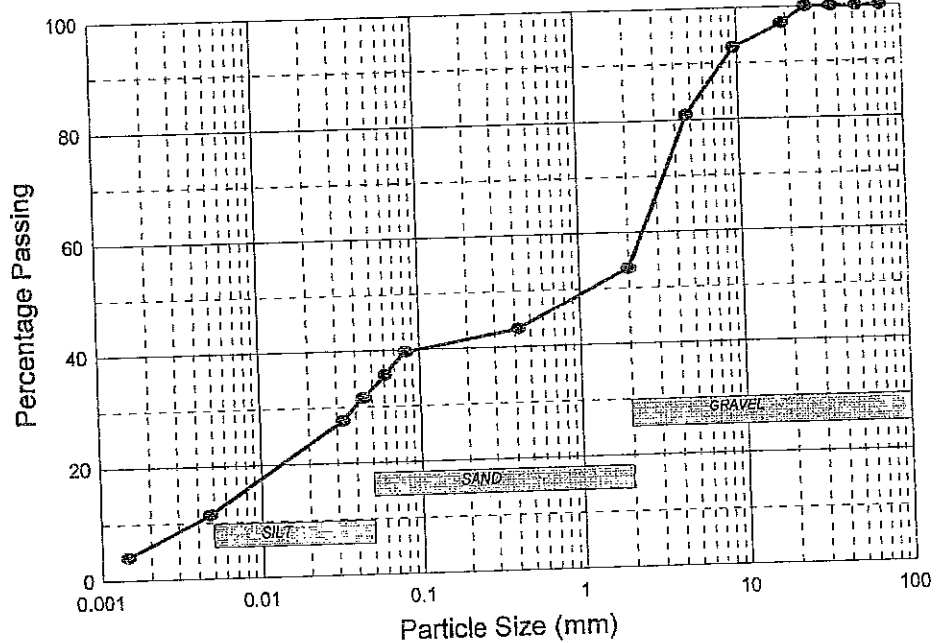
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 32/1 @	
Date	18 OCTOBER 2007	Test No	1862
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	97.06
9.50	92.80
4.75	80.92
2.00	53.58
0.425	43.29

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

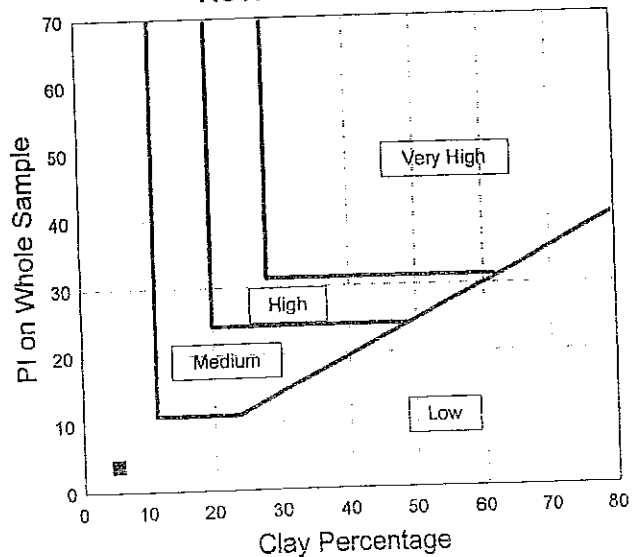
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	39.72
0.0613	35.67
0.0451	31.62
0.0330	27.56
0.0048	11.35
0.0015	4.05

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	26
Plastic Limit	17
Plastic Index	9
Linear Shrinkage	5
Grading Modulus	1.63
Moisture Content	10.97
Pl on Whole Sample	4

### ACTIVITY CHART



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*[Signature]*  
C. DALTON  
DATE: 19/11/2007




**VOIDS RATIO / BULK DENSITY / MOISTURE CONTENT DETERMINATION**

Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	U12/1 @ 0,6 - 0,9m	
Date	18 OCTOBER 2007	Test No	1864
Job No	07360	Checked By	EB

Specific Gravity of wax	0.9
Specific Gravity of soil	2658

	A	B	Average
Sample Number	U12/1	U12/1	
Depth (m)	0,6 - 0,9m	0,6 - 0,9m	
Wet mass in air (gm)	105.50	150.8	
Wet mass + wax coat in air (gm)	117.70	166.7	
Wet mass + wax coat in water (gm)	38.60	53.9	
Mass of wax (gm)	12.20	15.90	
Volume of wax (cc)	13.56	17.67	
Volume of soil + water + wax (cc)	79.10	112.80	
Volume of soil + water (cc)	65.54	95.13	
Wet density of soil (kg/m <sup>3</sup> )	1,610	1,585	1,597
<b>Moisture Content Calculations</b>			
Wet mass of soil (gm)	501.10	500.00	
Dry Mass of soil (gm)	470.00	467.00	
Moisture Content	6.62	7.07	7
Dry Density of soil (kg/m <sup>3</sup> )	1,510	1,481	1,495
<b>Void Ratio Calculations</b>			
Volume of solids (cc)	0.57	0.56	
Volume of voids	0.43	0.44	
Void Ratio	0.76	0.80	0.78

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 C. DALTON  
 DATE : 19/11/2007

**VOIDS RATIO / BULK DENSITY / MOISTURE CONTENT DETERMINATION**

Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	U17/1 @ 0,8 - 1,2m	
Date	18 OCTOBER 2007	Test No.	1865
Job No	07360	Checked By	EB

Specific Gravity of wax	0,9
Specific Gravity of soil	2703

	A	B	Average
Sample Number	U17/1	U17/1	
Depth (m)	0,8 - 1,2m	0,8 - 1,2m	
Wet mass in air (gm)	192,20	107,6	
Wet mass + wax container (gm)	216,80	126,7	
Wet mass + wax container in water (gm)	90,60	48,9	
Mass of wax (gm)	24,60	19,10	
Volume of wax (cc)	27,33	21,22	
Volume of soil + water + wax (cc)	126,20	77,80	
Volume of soil + water (cc)	98,87	56,58	
Wet density of soil (kg/m <sup>3</sup> )	1,944	1,902	1,923
<b>Moisture Content Calculations</b>			
Wet mass of soil (gm)	587,60	500,00	
Dry Mass of soil (gm)	512,00	434,00	
Moisture Content	14,77	15,21	15
Dry Density of soil (kg/m <sup>3</sup> )	1,694	1,651	1,672
<b>Void Ratio Calculations</b>			
Volume of solids (cc)	0,63	0,61	
Volume of voids	0,37	0,39	
Void Ratio	0,60	0,64	0,62


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C. DALTON  
DATE : 19/10/2007

**GEO PRACTICA**SOILS & MATERIALS TESTING  
P.O.BOX 227, MARAISBURG, 1700TEL: (011) 674 1326  
FAX: (011) 674 4513  
e mail: lab@geopractica.co.za**VOIDS RATIO / BULK DENSITY / MOISTURE CONTENT DETERMINATION**

Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	U18/1 @ 0,7 - 1,0m	
Date:	18 OCTOBER 2007	Test No:	1866
Job No:	07360	Checked By:	EB

Specific Gravity of wax:	0.9
Specific Gravity of soil:	2650

	A	B	Average
Sample Number:	U18/1	U18/1	
Depth (m):	0,7 - 1,0m	0,7 - 1,0m	
Wet mass in air (gm):	135.00	189.7	
Wet mass + wax coat in air (gm):	171.60	208.5	
Wet mass + wax coat in water (gm):	44.00	68.2	
Mass of wax (gm):	36.60	18.80	
Volume of wax (cc):	40.67	20.89	
Volume of soil + water + wax (cc):	127.60	140.30	
Volume of soil + water (cc):	86.93	119.41	
Wet density of soil (kg/m <sup>3</sup> ):	1,553	1,589	1,571
<b>Moisture Content Calculations</b>			
Wet mass of soil (gm):	421.30	390.00	
Dry Mass of soil (gm):	390.20	362.00	
Moisture Content:	7.97	7.73	8
Dry Density of soil (kg/m <sup>3</sup> ):	1,438	1,475	1,456
<b>Void Ratio Calculations</b>			
Volume of solids (cc):	0.54	0.56	
Volume of voids:	0.46	0.44	
Void Ratio:	0.84	0.80	0.82

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 C. DALTON  
 DATE: 18/10/2007



**VOIDS RATIO / BULK DENSITY / MOISTURE CONTENT DETERMINATION**

Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	U20/1 @ 1,5 - 1,9m	
Date	18 OCTOBER 2007	Test No.	1867
Job No	07360	Checked By	EB

Specific Gravity of wax	0.9
Specific Gravity of soil	2644

	A	B	Average
Sample Number	U20/1	U20/1	
Depth (m)	1,5 - 1,9m	1,5 - 1,9m	
Wet mass in air (gm)	97.50	146.8	
Wet mass + wax coat in air (gm)	119.90	180.2	
Wet mass + wax coat in water (gm)	28.90	45.8	
Mass of wax (gm)	22.40	33.40	
Volume of wax (cc)	24.89	37.11	
Volume of soil + water + wax (cc)	91.00	134.40	
Volume of soil + water (cc)	66.11	97.29	
Wet density of soil (kg/m <sup>3</sup> )	1,475	1,509	1,492
<b>Moisture Content Calculations</b>			
Wet mass of soil (gm)	491.00	480.60	
Dry Mass of soil (gm)	456.70	446.00	
Moisture Content	7.51	7.76	8
Dry Density of soil (kg/m <sup>3</sup> )	1,372	1,400	1,386
<b>Void Ratio Calculations</b>			
Volume of solids (cc)	0.52	0.53	
Volume of voids	0.48	0.47	
Void Ratio	0.93	0.89	0.91

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C. DALTON  
DATE : 19/10/2007





**GEO PRACTICA**  
SOILS & MATERIALS TESTING  
P.O. BOX 227, MARAISBURG, 1700

TEL: (011) 674 1325  
FAX: (011) 674 4513  
e mail: lab@geopractica.co.za

## VOIDS RATIO / BULK DENSITY / MOISTURE CONTENT DETERMINATION

Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	U45/1 @ 0,8 - 1,0m	
Date:	18 OCTOBER 2007	Test No:	1868
Job No:	07360	Checked By:	EB

Specific Gravity of Wax:	0.9
Specific Gravity of soil:	2691

	A	B	Average
Sample Number	U45/1	U45/1	
Depth (m)	0,8 - 1,0m	0,8 - 1,0m	
Wet mass in air (gm)	223.40	185.2	
Wet mass + wax coat in air (gm)	248.80	205.7	
Wet mass + wax coat in water (gm)	114.60	95.2	
Mass of wax (gm)	25.40	20.50	
Volume of wax (cc)	28.22	22.78	
Volume of soil + water + wax (cc)	134.20	110.50	
Volume of soil + water (cc)	105.98	87.72	
Wet density of soil (kg/m <sup>3</sup> )	2,108	2,111	2,110
<b>Moisture Content Calculations</b>			
Wet mass of soil (gm)	565.70	515.50	
Dry Mass of soil (gm)	456.70	416.90	
Moisture Content	23.87	23.65	24
Dry Density of soil (kg/m <sup>3</sup> )	1,702	1,707	1,705
<b>Void Ratio Calculations</b>			
Volume of solids (cc)	0.63	0.63	
Volume of voids	0.37	0.37	
Void Ratio	0.58	0.58	0.58

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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

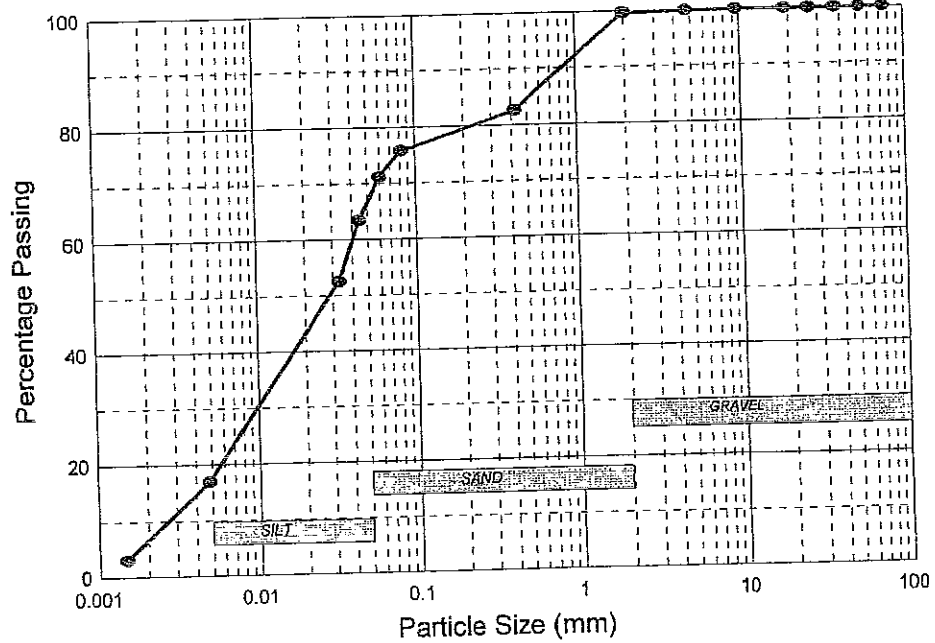
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	TP 45/2 @ 1,5 - 1,8m	
Date	18 OCTOBER 2007	Test No	1868
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.96
2.00	99.71
0.425	82.59

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

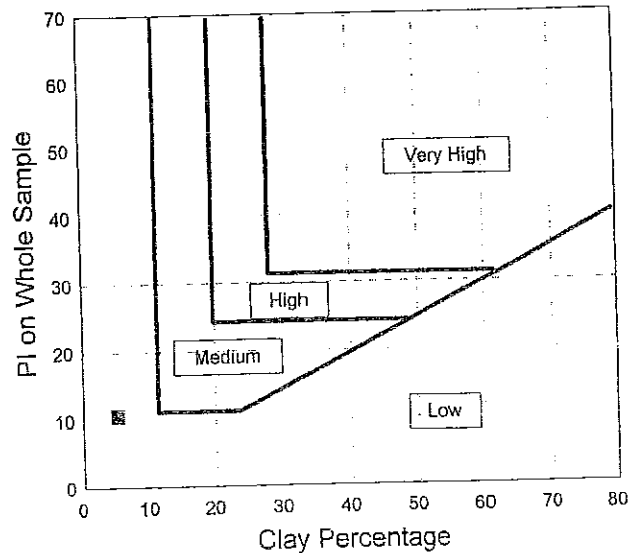
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	75.79
0.0604	71.15
0.0444	63.41
0.0330	52.59
0.0049	17.01
0.0015	3.09

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	30
Plastic Limit	17
Plastic Index	13
Linear Shrinkage	7
Grading Modulus	0.42
Moisture Content	23.70
PI on Whole Sample	11

### ACTIVITY CHART



CHECKED BY: *[Signature]*  
 C. DALTON  
 DATE: 19/11/2007

**FOUNDATION INDICATOR**

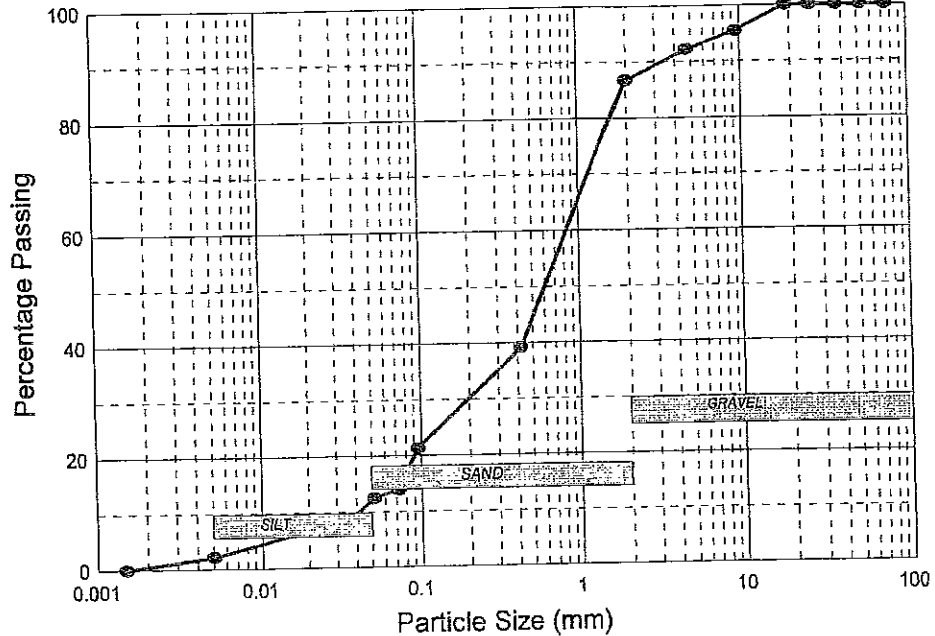
Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	393/85 - TP 2 @ 0,6m	
Date:	29 OCTOBER 2007	Test No:	1926
Job No:	07360	Checked By:	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	95.42
4.75	92.18
2.00	86.75
0.425	39.21

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

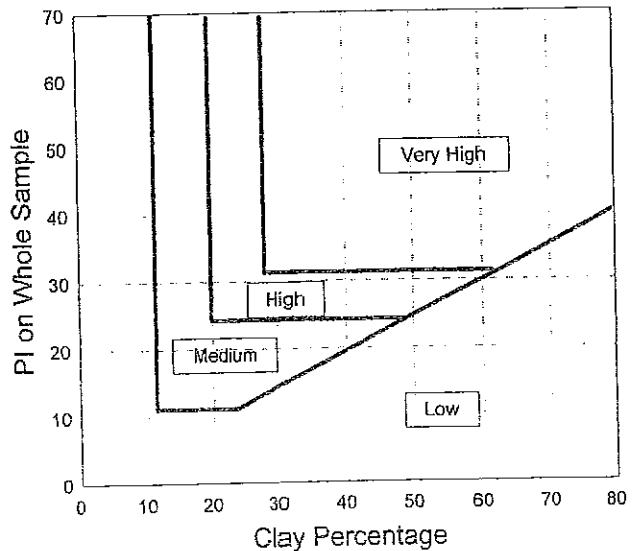
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	21.30
0.0725	13.95
0.0518	12.48
0.0376	8.81
0.0051	2.20
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	0
Grading Modulus	1.53
Moisture Content	3.25
PI on Whole Sample	Non Plastic

**ACTIVITY CHART**



CHECKED BY :  
*[Signature]*  
C. DALTON  
DATE : 19/11/2007



## FOUNDATION INDICATOR

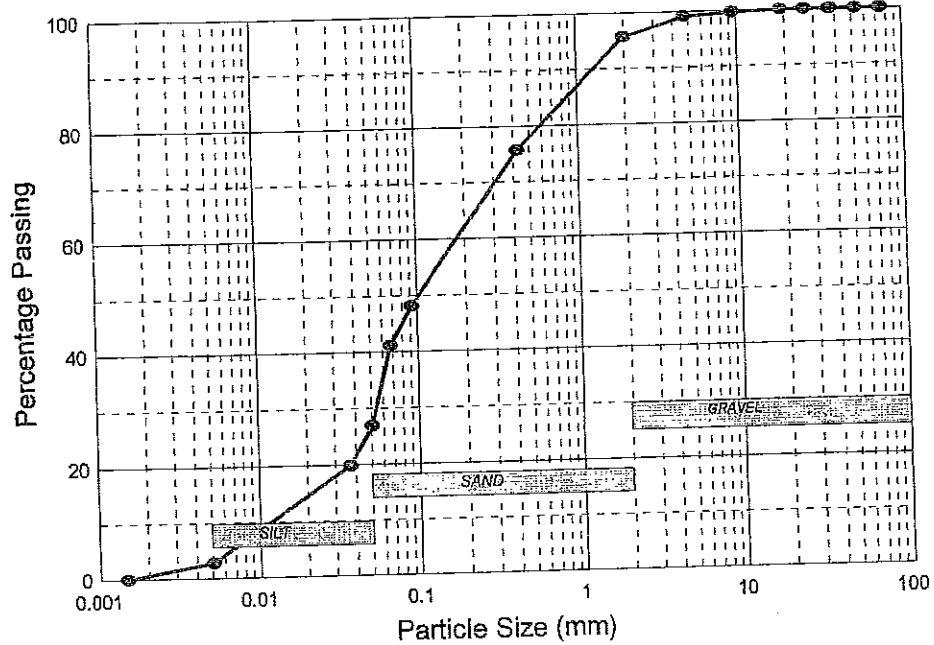
Client	INTRACONSULT		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/13 @ 0,5m	
Date	29 OCTOBER 2007	Test No	1927
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.73
4.75	99.17
2.00	95.71
0.425	75.70

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

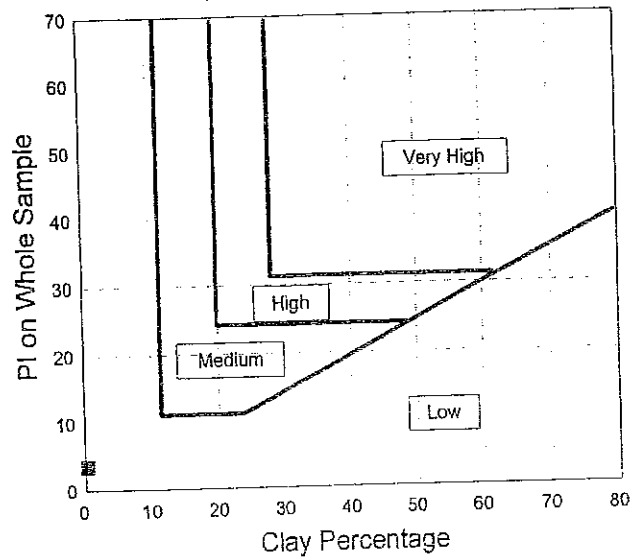
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	48.20
0.0682	41.11
0.0512	26.93
0.0372	19.85
0.0051	2.84
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	17
Plastic Limit	12
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	0.80
Moisture Content	8.20
PI on Whole Sample	4

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 31/10/2007

**FOUNDATION INDICATOR**

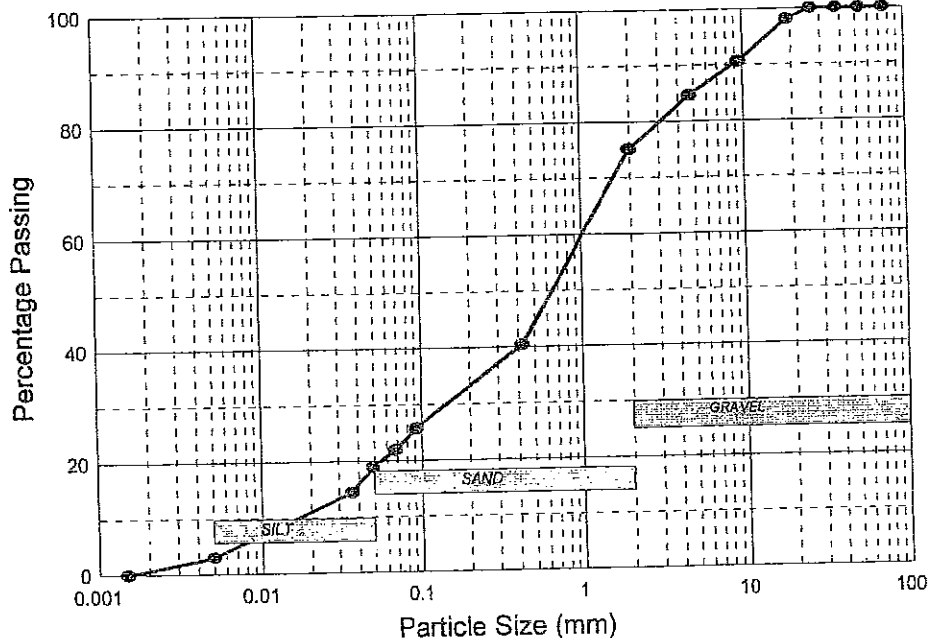
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/13 @ 0,5m	
Date	29 OCTOBER 2007	Test No	1928
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	98.15
9.50	90.64
4.75	84.64
2.00	75.13
0.425	40.39

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

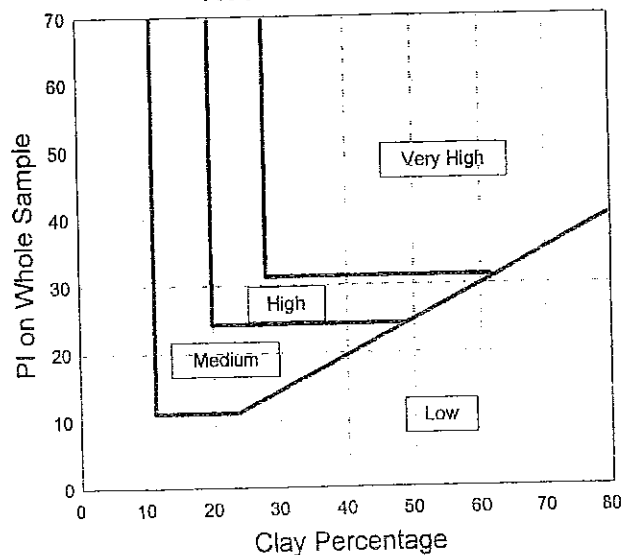
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	25.72
0.0682	21.94
0.0495	18.91
0.0362	14.37
0.0051	3.03
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	1.59
Moisture Content	4.93
PI on Whole Sample	Non Plastic

**ACTIVITY CHART**



CHECKED BY :  
 C. DALTON  
 DATE : 19.11.2007



## COLLAPSE POTENTIAL at 65 kPa

Client	INTRA CONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	R/85 IR - TP 1/63 @ 0,7m	
Date	29 OCTOBER 2007	Test No	1926
Job No	07360	Checked By	EB

Sample Height (mm)	20	Sample Diameter (mm)	64	Sample Specific Gravity	2.584
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Sample Preparation	NMC
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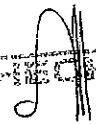
Effective Stress (kPa)	Time (mins)	Consolidation Reading	Void Ratio	Strain (%)
10	10	757	1.050	0.00
10	70	761	1.046	0.20
33	190	789	1.017	1.60
65	490	857	0.947	5.00
65	1930	991	0.810	11.70
127	2050	1067	0.732	15.50
251	2170	1142	0.655	19.25
498	2290	1208	0.588	22.55
993	2410	1274	0.520	25.85
1868	3850	1330	0.463	28.65
743	3970	1313	0.480	27.80
118	4090	1293	0.501	26.80
10	4210	1278	0.516	26.05

### Moisture Content Calculations

Mass wet sample plus ring before test (gms)	307.10
Mass wet sample plus ring after test (gms)	316.30
Mass dry sample plus ring (gms)	302.00
Mass ring (gms)	220.90
Moisture content before test (%)	6.29
Moisture content after test (%)	17.63

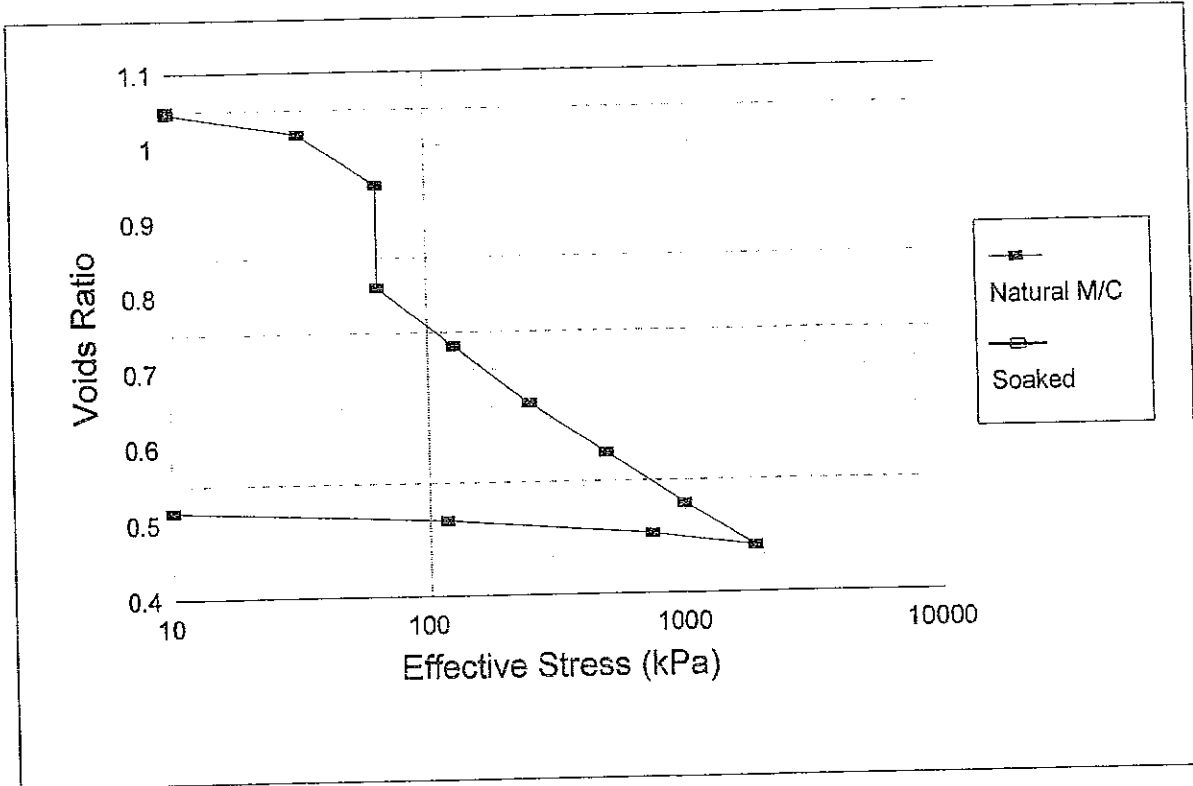
### Other Data

Initial Dry Density (kg/m <sup>3</sup> )	1260
Initial Void Ratio	1.05

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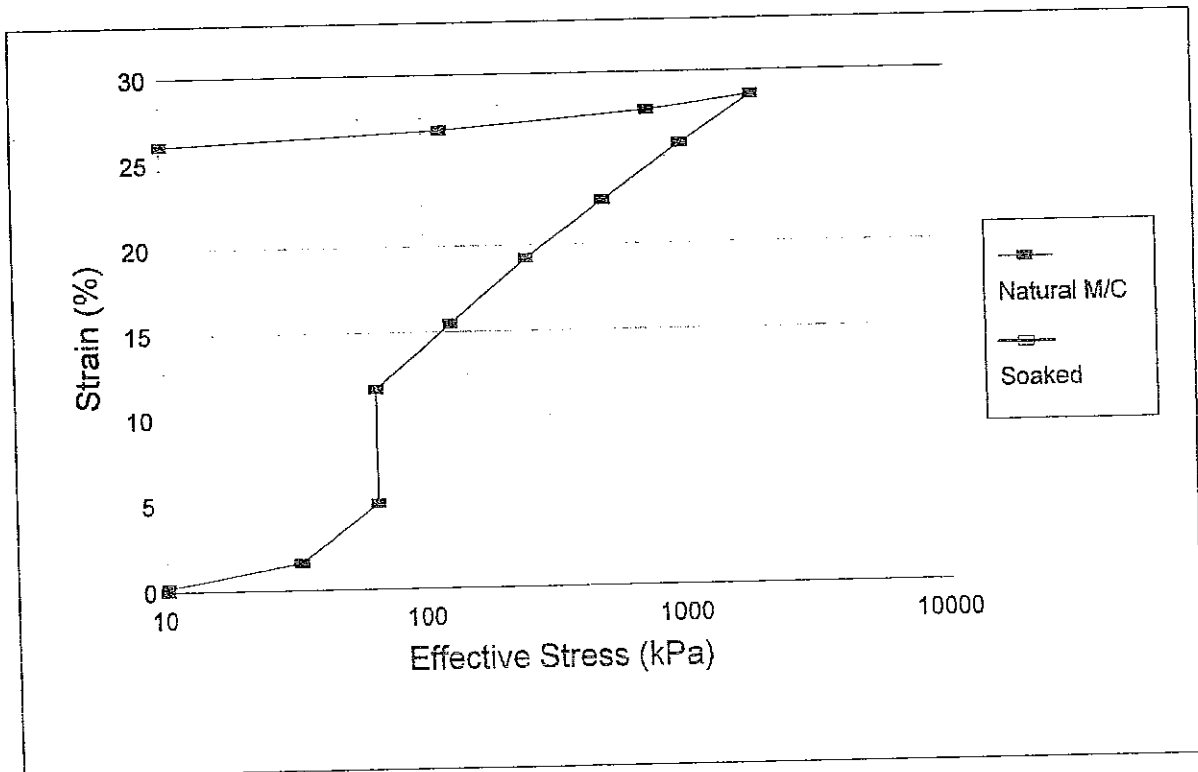
# VOIDS RATIO v EFFECTIVE STRESS

Test No: 1926

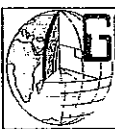


# STRAIN v EFFECTIVE STRESS

Test No: 1926



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C. DALTON  
DATE: 19/11/2007



## FOUNDATION INDICATOR

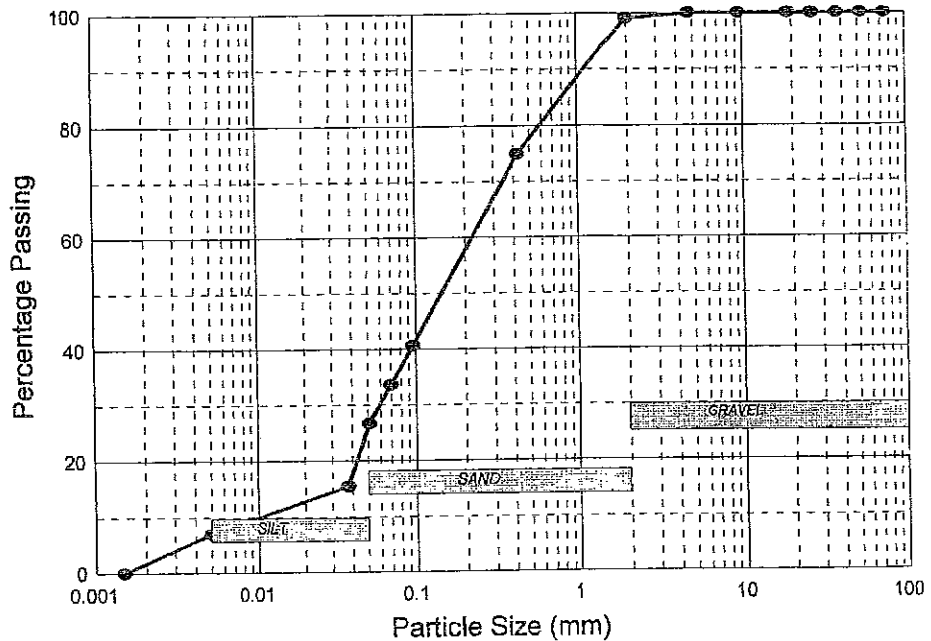
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	R/85 IR - TP 1/4 @ 0,5m	
Date	29 OCTOBER 2007	Test No	1929
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.12
0.425	74.91

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

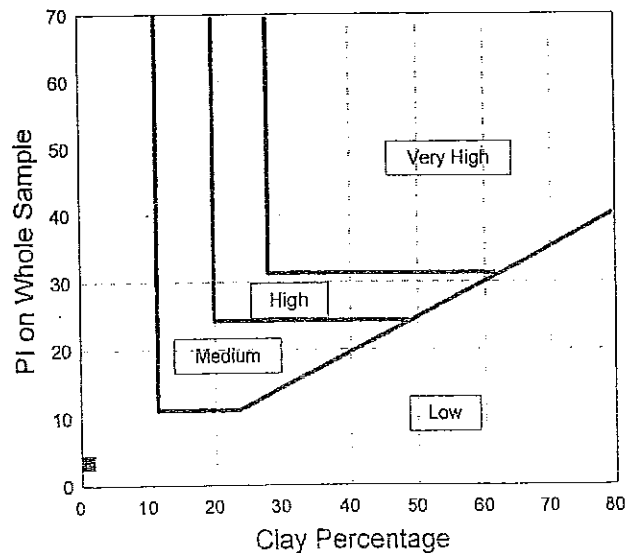
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	40.68
0.0704	33.67
0.0512	26.65
0.0378	15.43
0.0050	7.01
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	17
Plastic Limit	12
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	0.85
Moisture Content	8.55
PI on Whole Sample	4

### ACTIVITY CHART



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DATE : 29/10/2007



**FOUNDATION INDICATOR**

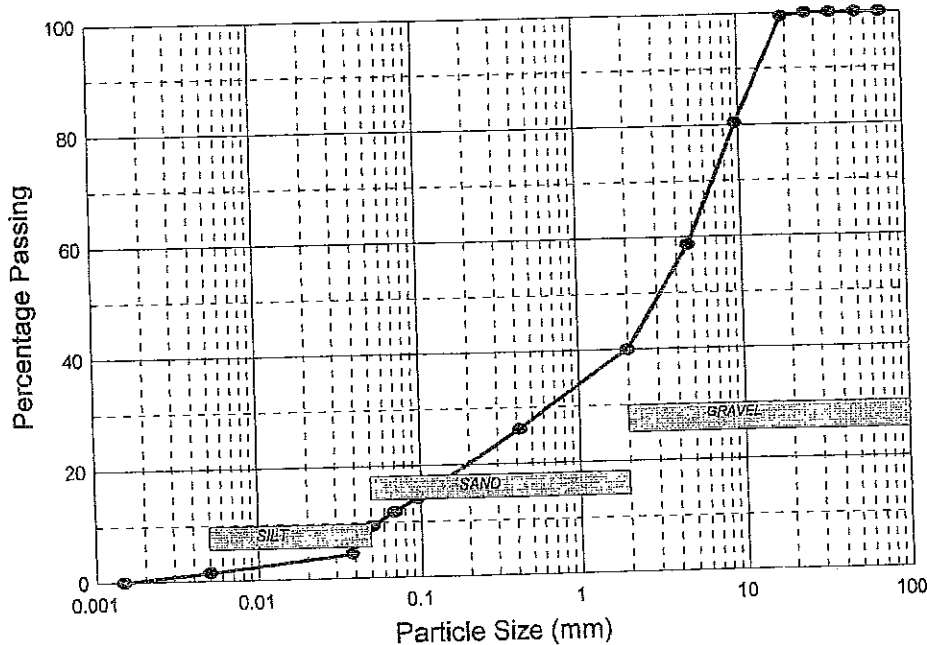
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/2 @ 0,8m	
Date	29 OCTOBER 2007	Test No	1930
Job No	07360	Checked By	EB

**SIEVE ANALYSIS**

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	99.46
9.50	80.32
4.75	58.66
2.00	40.04
0.425	26.20

**GRADING ANALYSIS**



**HYDROMETER ANALYSIS**

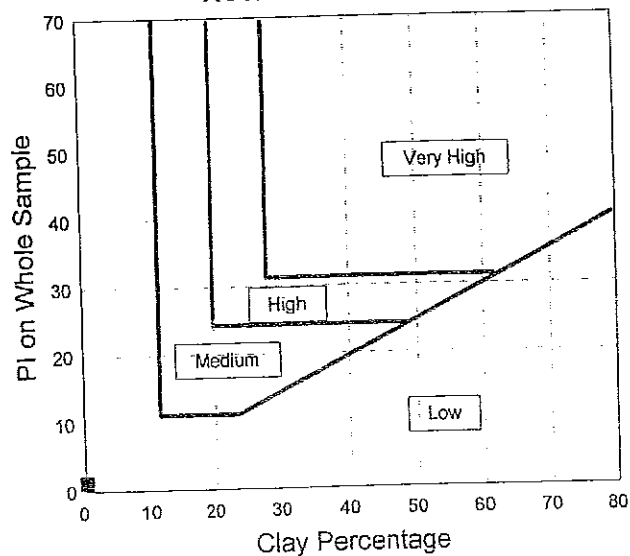
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	14.23
0.0704	11.77
0.0512	9.32
0.0382	4.42
0.0051	1.47
0.0015	0.00

**ATTERBERG LIMITS & OTHER VALUES**

Liquid Limit	18
Plastic Limit	13
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	2.20
Moisture Content	3.29
PI on Whole Sample	1

**ACTIVITY CHART**



CHECKED BY :  
*C. DALTON*  
DATE : 19/11/2007



SOILS & MATERIALS TESTING  
P.O. BOX 227, MARAISBURG, 1700

TEL: (011) 674 1325  
FAX: (011) 674 4513  
e mail: lab@geopractica.co.za

### COLLAPSE POTENTIAL at 65 kPa

Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/6 @ 0.3m	
Date	29 OCTOBER 2007	Test No	1929
Job No	07360	Checked By	EB

Sample Height (mm)	20	Sample Diameter (mm)	64	Sample Specific Gravity	2.567
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Sample Preparation	NMC
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Effective Stress (kPa)	Time (mins)	Consolidation Reading	Voids Ratio	Strain (%)
10	10	518	1.075	0.00
10	70	539	1.053	1.05
33	190	585	1.005	3.35
65	490	642	0.946	6.20
65	1930	710	0.876	9.60
127	2050	785	0.798	13.35
251	2170	850	0.730	16.60
498	2290	913	0.665	19.75
993	2410	972	0.604	22.70
1868	3850	1023	0.551	25.25
743	3970	1017	0.557	24.95
118	4090	1000	0.575	24.10
10	4210	990	0.585	23.60

#### Moisture Content Calculations

Mass wet sample plus ring before test (gms)	309.40
Mass wet sample plus ring after test (gms)	312.70
Mass dry sample plus ring (gms)	300.00
Mass ring (gms)	220.40
Moisture content before test (%)	11.81
Moisture content after test (%)	15.95

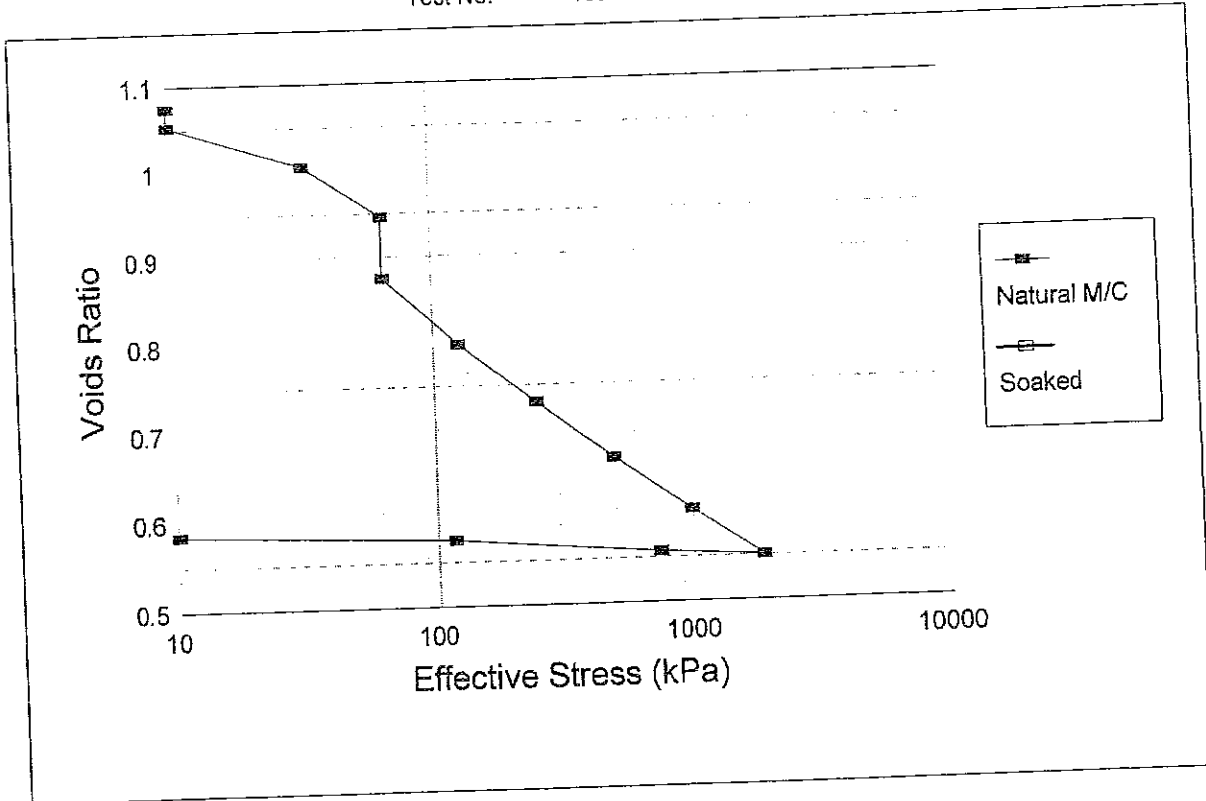
#### Other Data

Initial Dry Density (kg/m <sup>3</sup> )	1237
Initial Void Ratio	1.07

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DATE : 19/11/2007

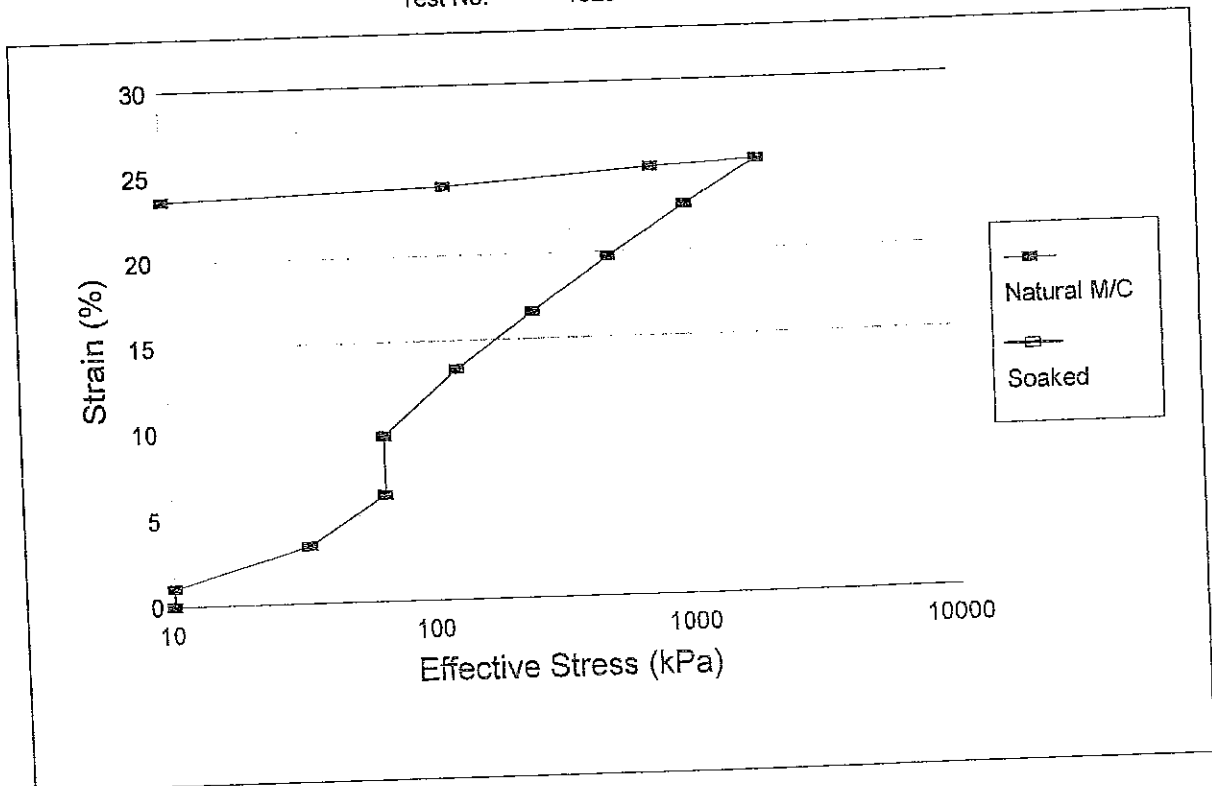
# VOIDS RATIO v EFFECTIVE STRESS

Test No: 1929



# STRAIN v EFFECTIVE STRESS

Test No: 1929



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## FOUNDATION INDICATOR

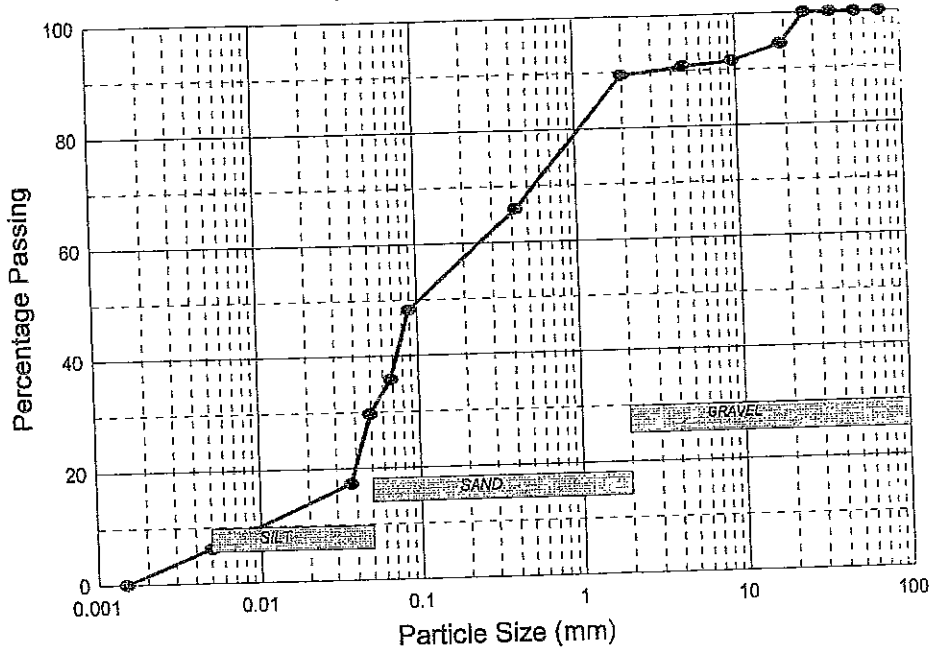
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	PANCEL - TP 3/1 @ 0,5m	
Date	29 OCTOBER 2007	Test No	1931
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	94.52
9.50	91.62
4.75	90.86
2.00	89.48
0.425	65.95

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

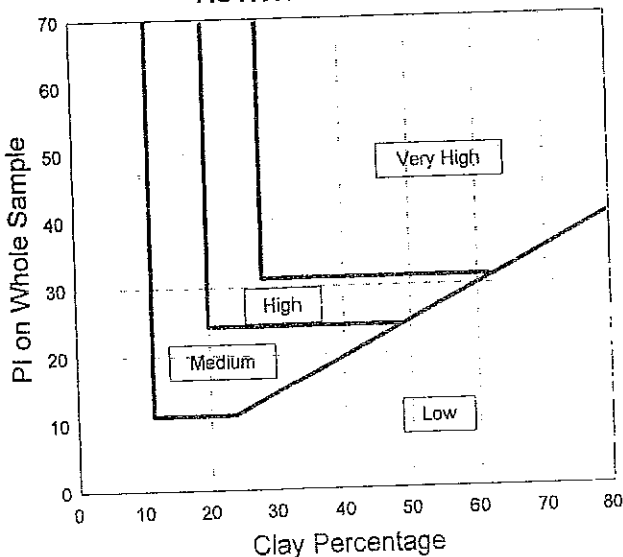
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	48.17
0.0682	35.82
0.0498	29.64
0.0372	17.29
0.0050	6.18
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.96
Moisture Content	6.47
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



CHECKED BY:  
 C. DALTON  
 19/11/2007



## FOUNDATION INDICATOR

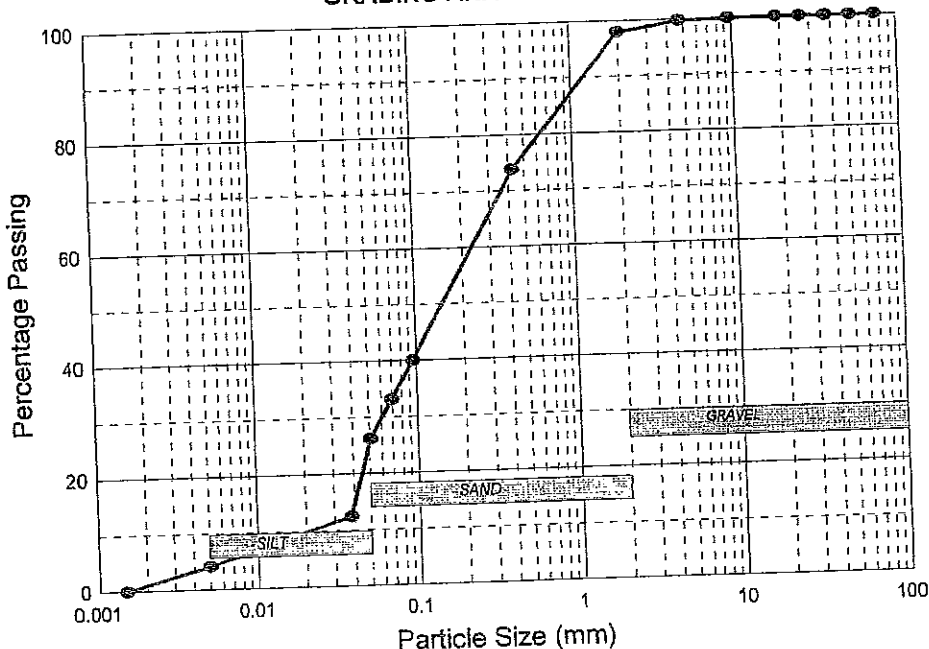
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/14 @ 0,2m	
Date	29 OCTOBER 2007	Test No	1932
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.76
2.00	97.99
0.425	73.76

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

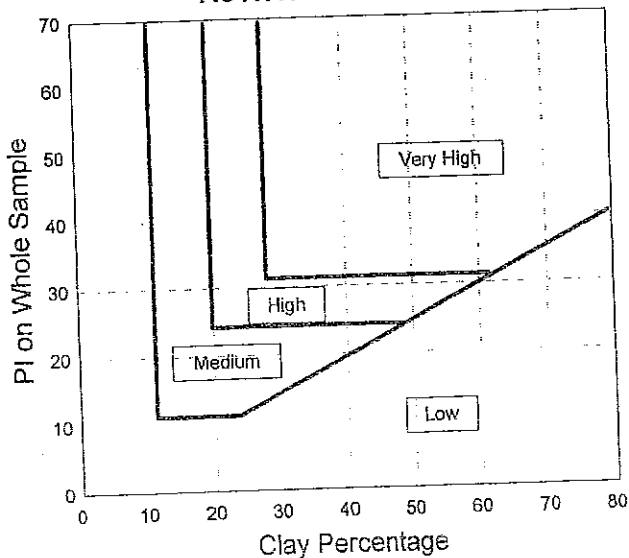
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	40.06
0.0704	33.15
0.0512	26.24
0.0382	12.43
0.0051	4.14
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.88
Moisture Content	8.71
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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**C. DALTON**  
 DATE : ..... 29/10/2007 .....



## FOUNDATION INDICATOR

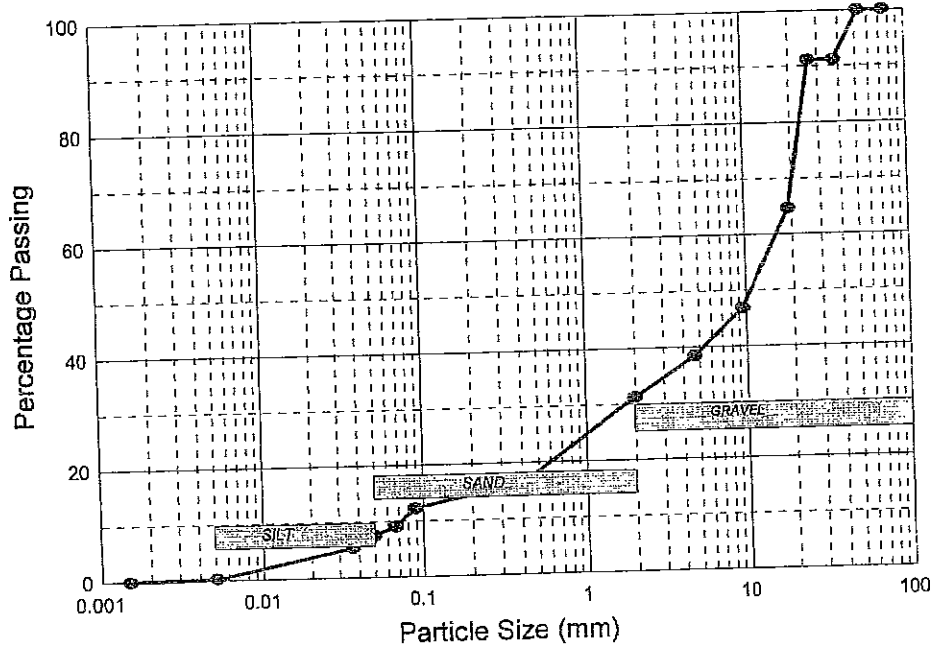
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/25 @ 0.2m	
Date	29 OCTOBER 2007	Test No	1933
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	91.15
26.50	91.15
19.00	64.63
9.50	46.94
4.75	38.54
2.00	31.27
0.425	16.73

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

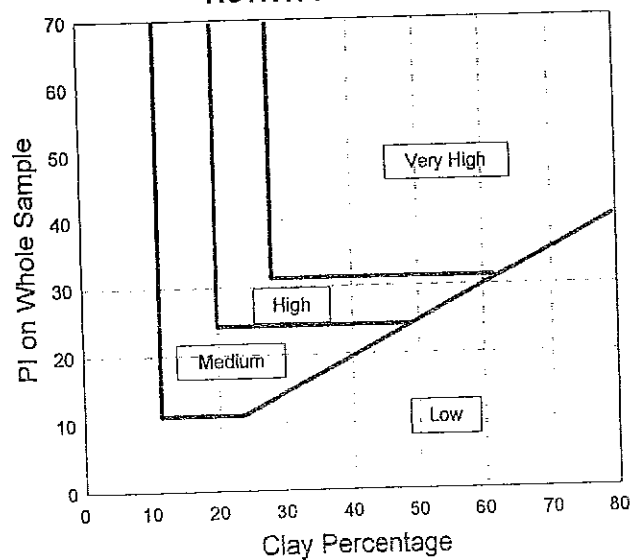
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	12.22
0.0682	9.09
0.0498	7.52
0.0366	5.33
0.0051	0.31
0.0015	0.00

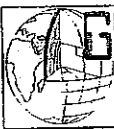
### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	2.40
Moisture Content	3.85
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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 DATE : 19/11/2007



## FOUNDATION INDICATOR

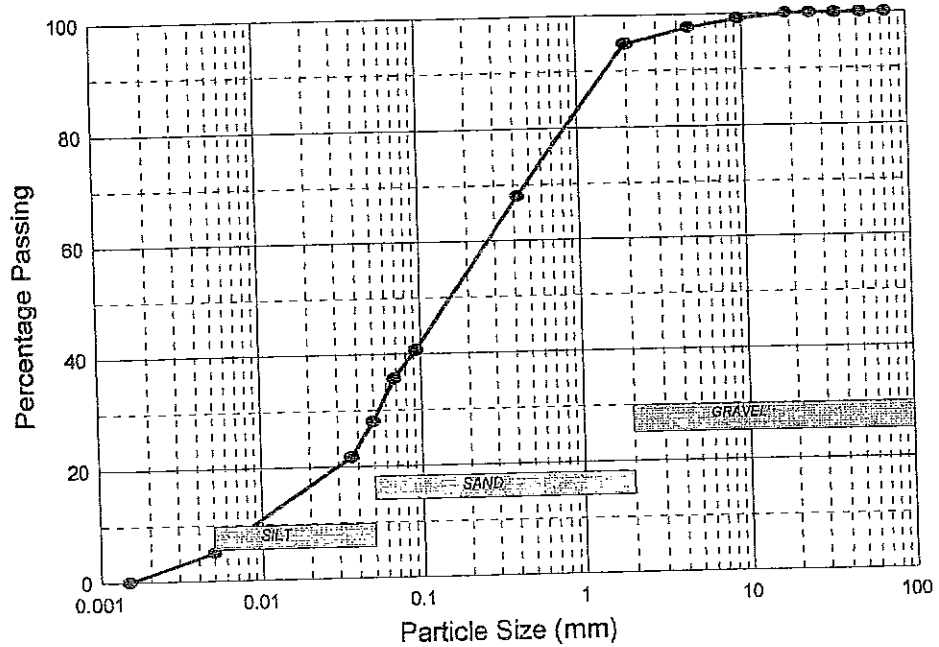
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/2 @ 0,3m	
Date	29 OCTOBER 2007	Test No	1934
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.14
4.75	97.68
2.00	94.94
0.425	68.01

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

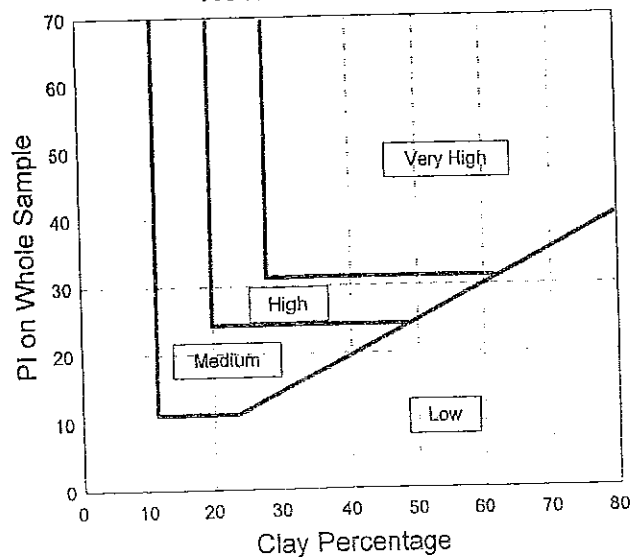
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0946	40.76
0.0687	35.66
0.0504	28.02
0.0366	21.65
0.0051	5.09
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.96
Moisture Content	9.64
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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C. DALTON  
DATE : 19/11/2007



## FOUNDATION INDICATOR

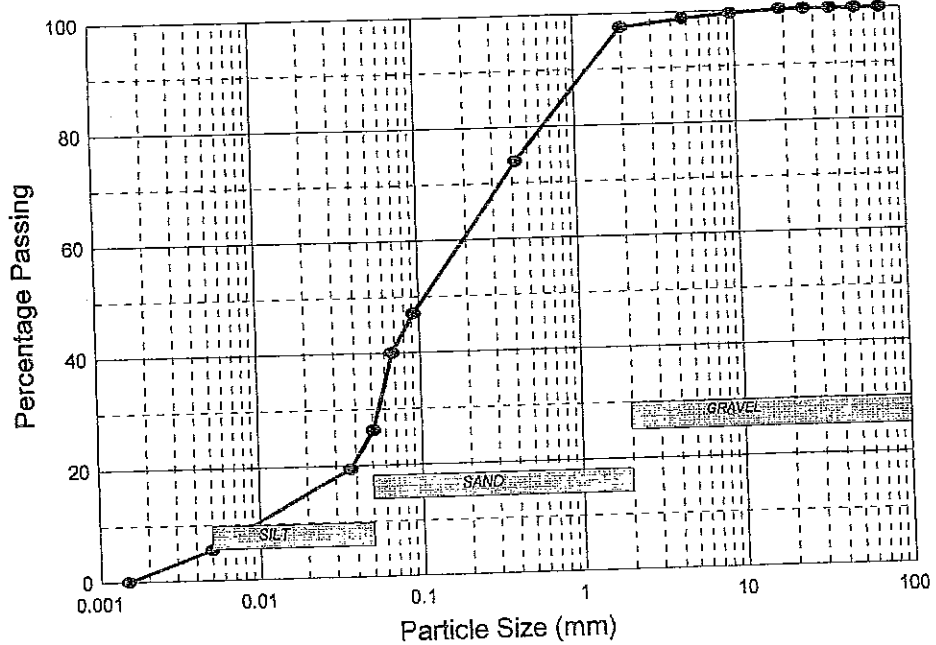
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 7/ @ 0,2m	
Date	29 OCTOBER 2007	Test No.	1935
Job No.	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.52
4.75	98.81
2.00	97.58
0.425	73.87

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

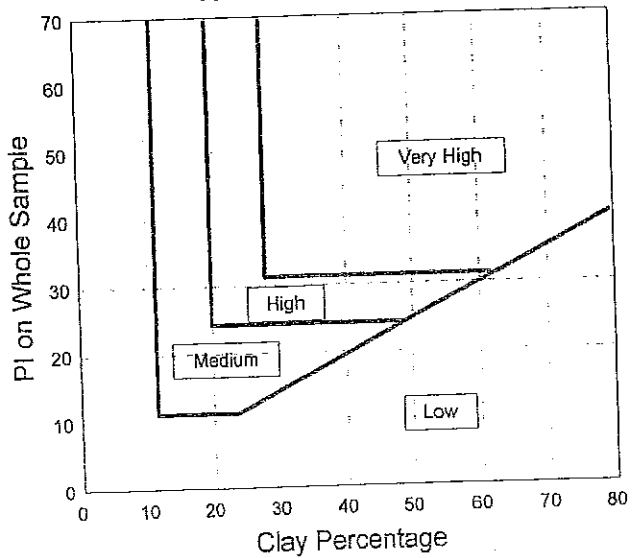
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	47.04
0.0682	40.12
0.0512	26.28
0.0372	19.37
0.0051	5.53
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.82
Moisture Content	9.96
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



CHECKED BY: *[Signature]*  
 C. DALTON  
 DATE: 19/11/2007





## FOUNDATION INDICATOR

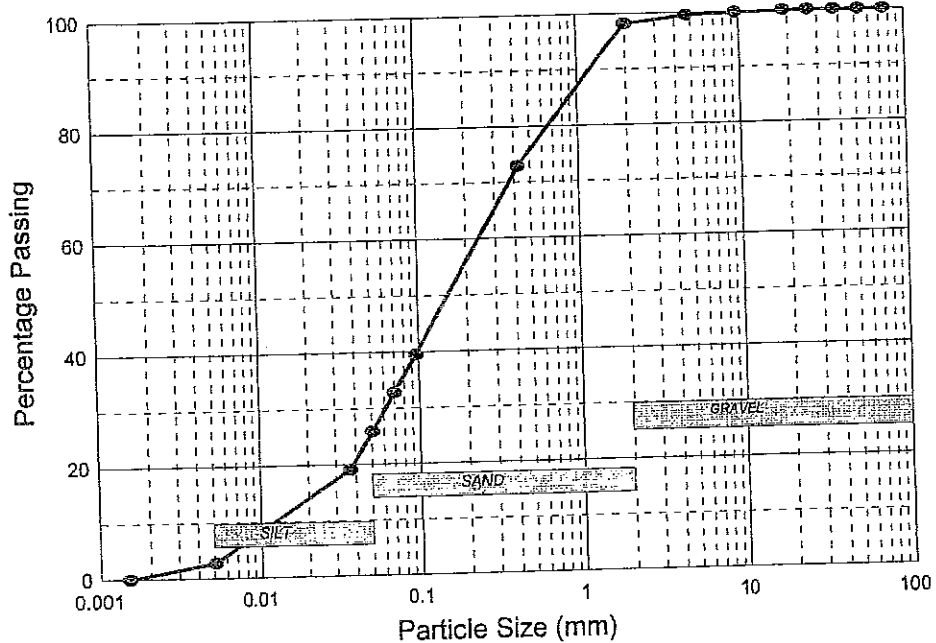
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/28 @ 0,2m	
Date	29 OCTOBER 2007	Test No	1936
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.87
4.75	99.55
2.00	98.23
0.425	72.84

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

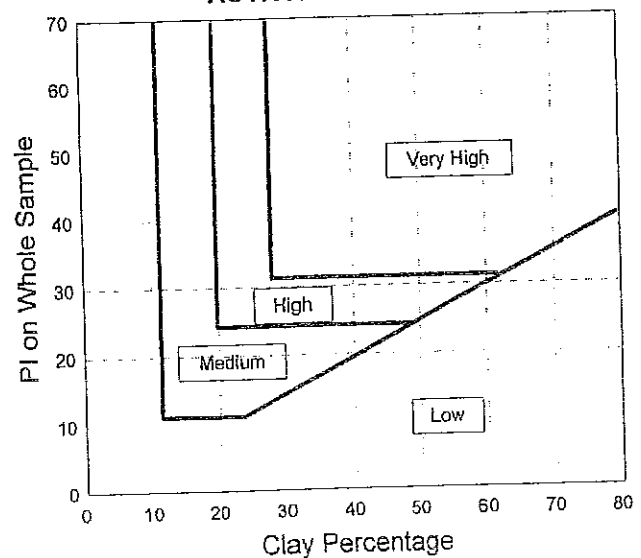
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	39.56
0.0704	32.74
0.0512	25.92
0.0372	19.10
0.0051	2.73
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.89
Moisture Content	9.42
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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 C. DALTON  
 DATE: 19/11/2007



## FOUNDATION INDICATOR

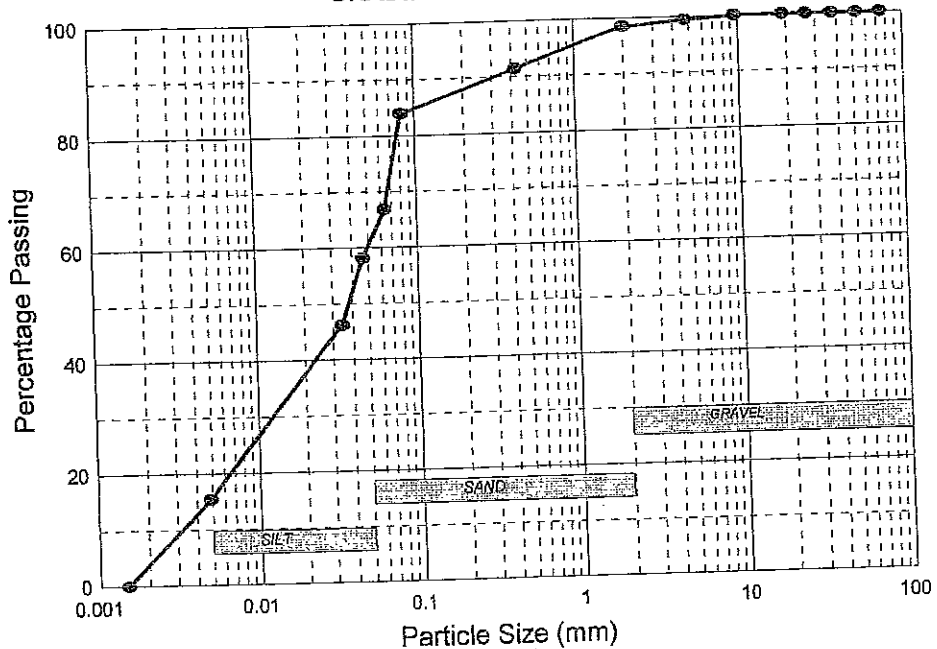
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	396/85 IR - TP 11/ @ 0,2m	
Date	29 OCTOBER 2007	Test No	1937
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.49
2.00	98.54
0.425	91.44

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

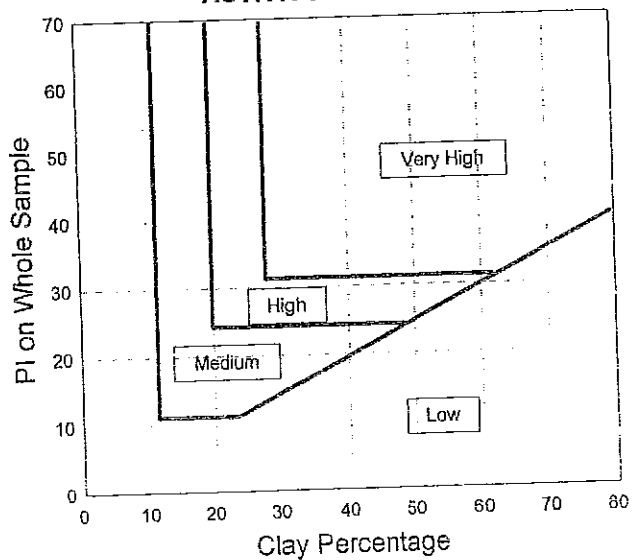
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0832	83.91
0.0637	66.79
0.0467	58.22
0.0346	46.24
0.0049	15.41
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.26
Moisture Content	16.18
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



CHECKED BY :  
*C. DALTON*  
DATE : 19/11/2007



## FOUNDATION INDICATOR

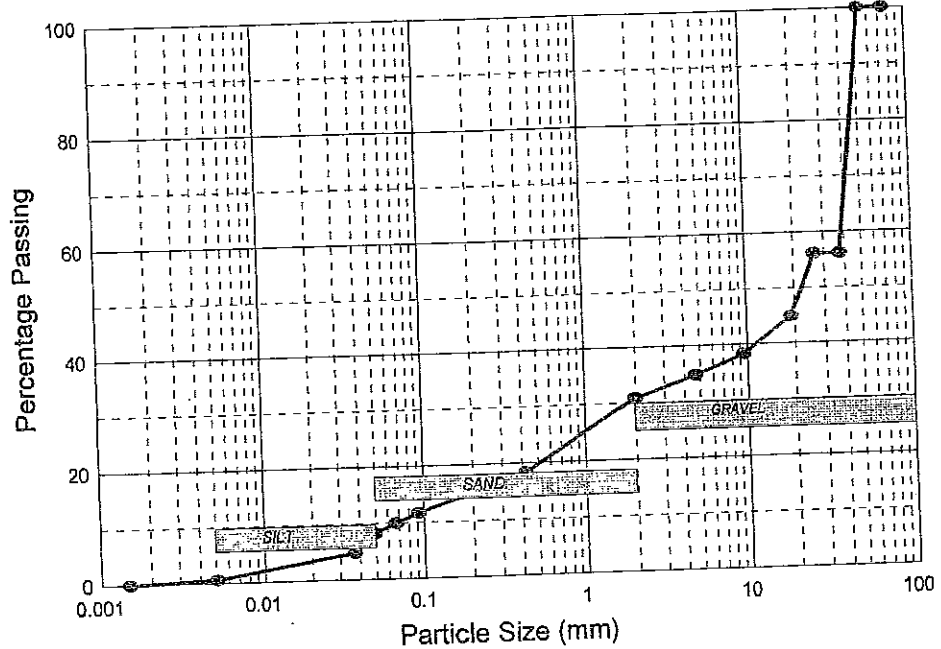
Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	R/85 IR - TP 1/2 @ 0,5m	
Date:	29 OCTOBER 2007	Test No:	1938
Job No:	07360	Checked By:	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	56.20
26.50	56.20
19.00	44.89
9.50	38.26
4.75	34.72
2.00	30.84
0.425	18.31

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

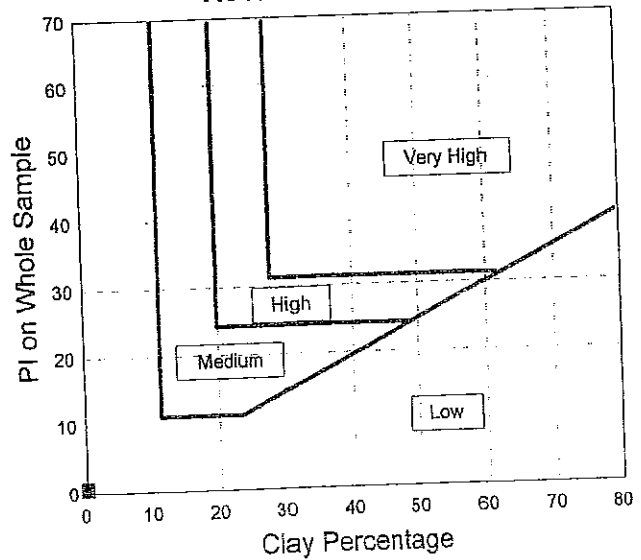
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	11.66
0.0682	9.94
0.0498	8.23
0.0372	4.80
0.0051	0.69
0.0015	0.00

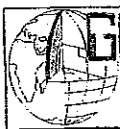
### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	21
Plastic Limit	18
Plastic Index	3
Linear Shrinkage	2
Grading Modulus	2.39
Moisture Content	6.09
PI on Whole Sample	1

### ACTIVITY CHART



CHECKED BY :  
  
 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

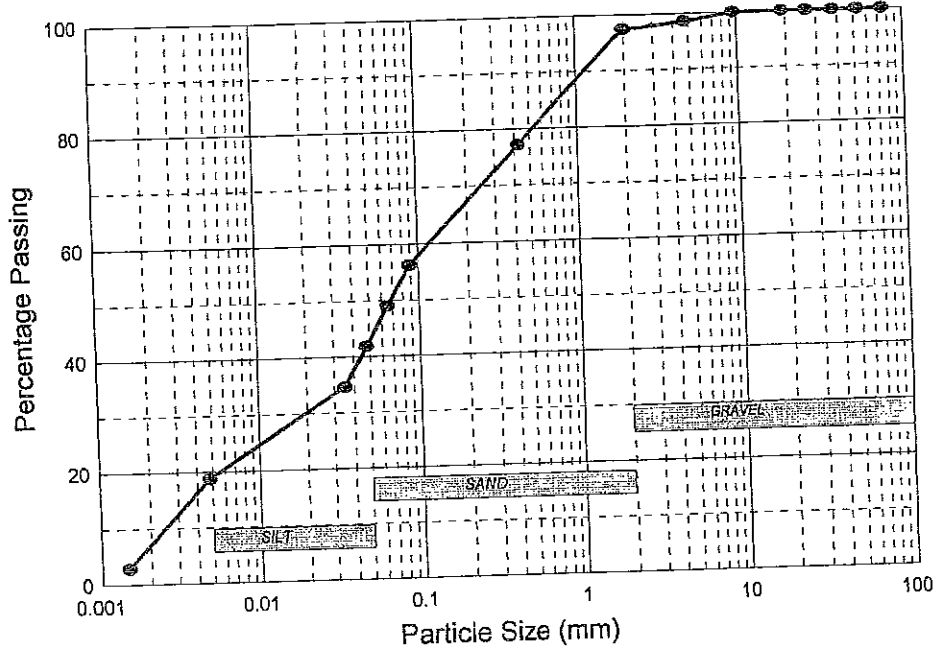
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	396/85 IR - TP 9 @ 0,8m	
Date	29 OCTOBER 2007	Test No.	1939
Job No.	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	98.66
2.00	97.41
0.425	77.11

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

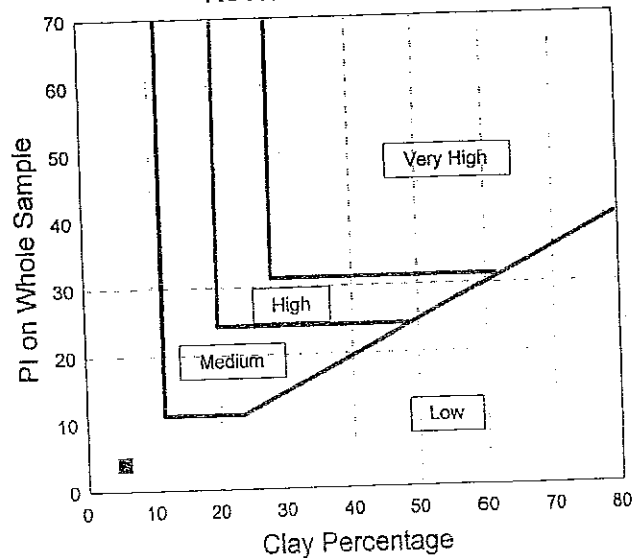
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	56.32
0.0660	49.10
0.0482	41.88
0.0352	34.66
0.0048	18.77
0.0015	2.89

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	16
Plastic Limit	11
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	0.69
Moisture Content	4.80
PI on Whole Sample	4

### ACTIVITY CHART



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 C. DALTON  
 DATE : 29/10/2007



## FOUNDATION INDICATOR

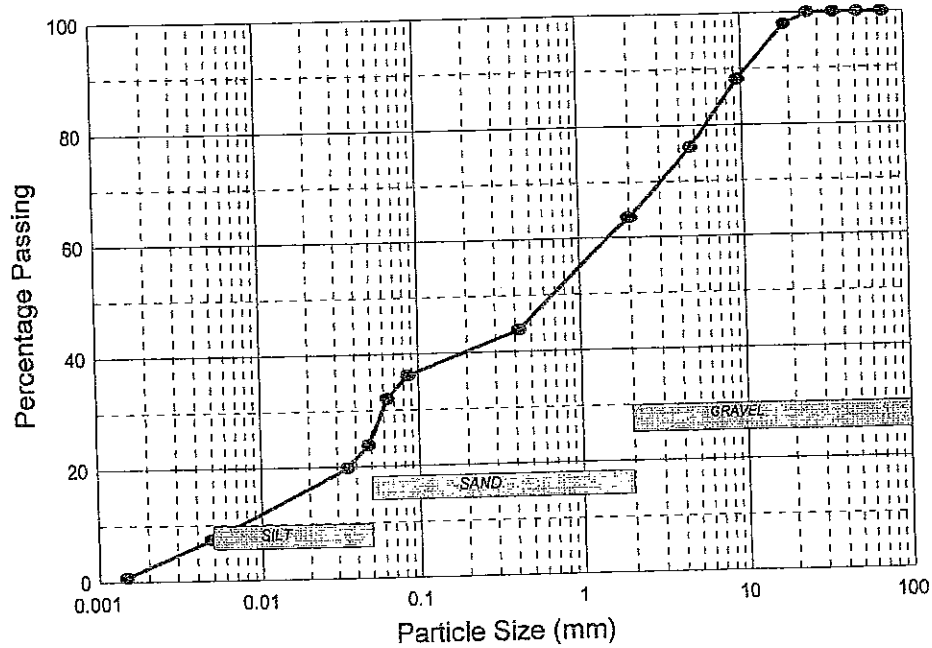
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	396/85 IR - TP 5 @ 0.8m	
Date	29 OCTOBER 2007	Test No	1941
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	97.96
9.50	88.13
4.75	76.17
2.00	63.67
0.425	43.90

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

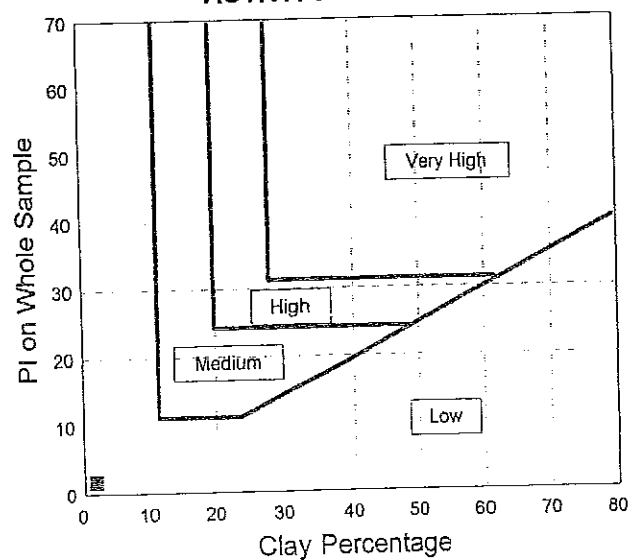
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0867	36.18
0.0637	32.07
0.0482	23.84
0.0352	19.73
0.0049	7.40
0.0015	0.82

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	23
Plastic Limit	19
Plastic Index	4
Linear Shrinkage	2
Grading Modulus	1.56
Moisture Content	6.42
PI on Whole Sample	2

### ACTIVITY CHART



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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

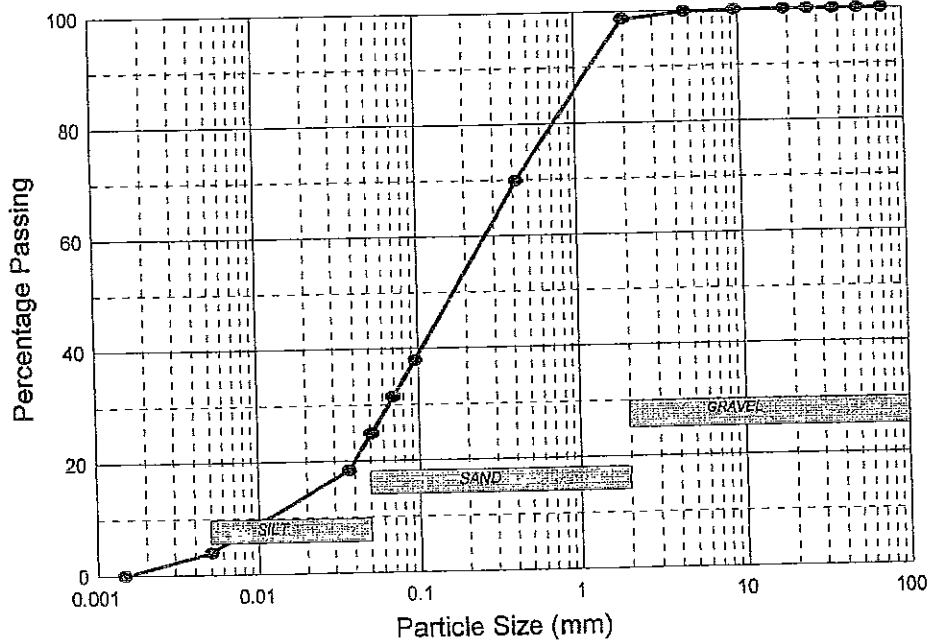
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	396/85 IR - TP 12 @ 0,3m	
Date	29 OCTOBER 2007	Test No.	1942
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.82
2.00	98.68
0.425	69.91

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

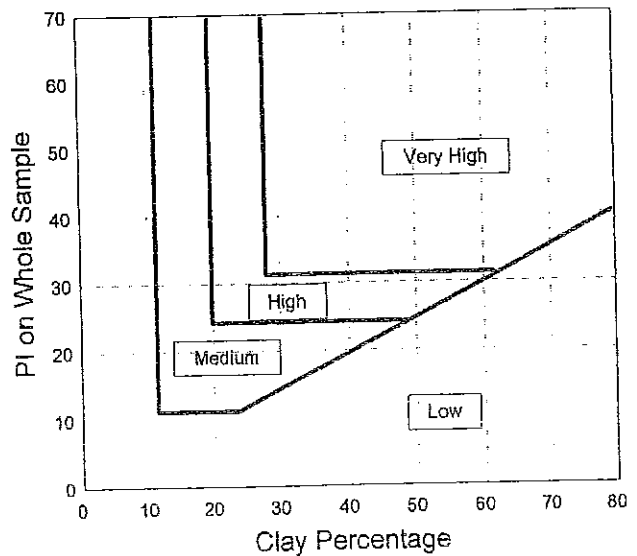
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	37.97
0.0704	31.42
0.0512	24.88
0.0372	18.33
0.0051	3.93
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.93
Moisture Content	7.58
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



CHECKED BY  
*[Signature]*  
C. DALTON  
DATE: 19/11/2007



## FOUNDATION INDICATOR

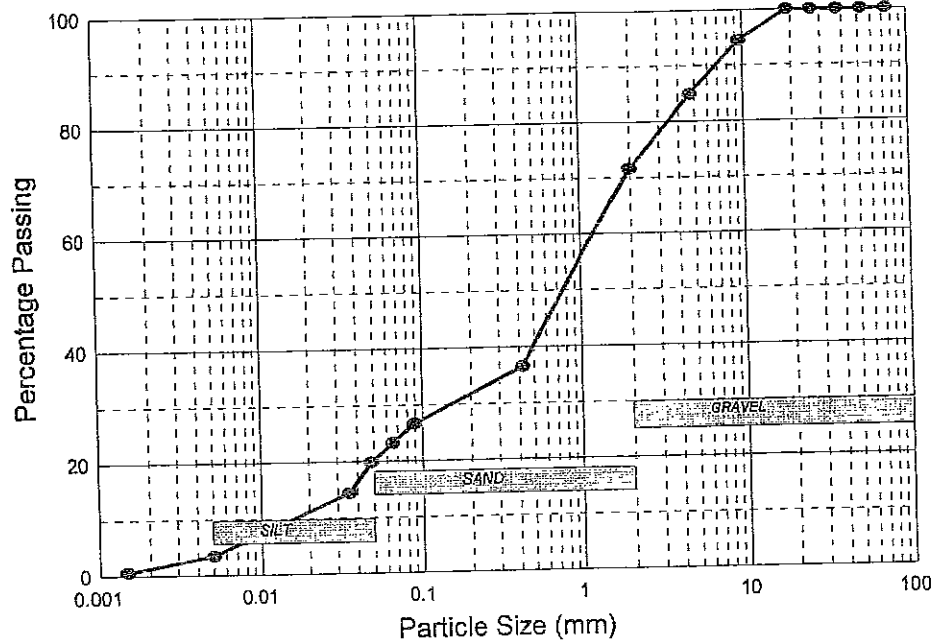
Client:	INTRACONSULT PROJECTS		
Location:	REIGER PARK - BOKSBURG	1/85 IR - TP 14 @ 0.9m	
Date:	29 OCTOBER 2007	Test No.:	1943
Job No.:	07360	Checked By:	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	94.47
4.75	84.88
2.00	71.62
0.425	36.57

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

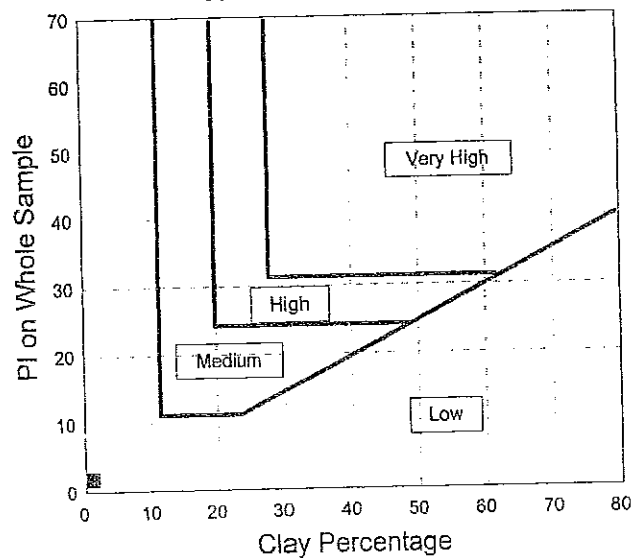
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	26.71
0.0660	23.28
0.0482	19.86
0.0358	14.38
0.0050	3.42
0.0015	0.68

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	20
Plastic Limit	15
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	1.65
Moisture Content	1.90
PI on Whole Sample	2

### ACTIVITY CHART



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*[Signature]*  
C. DALTON  
DATE : 19/11/2007



## FOUNDATION INDICATOR

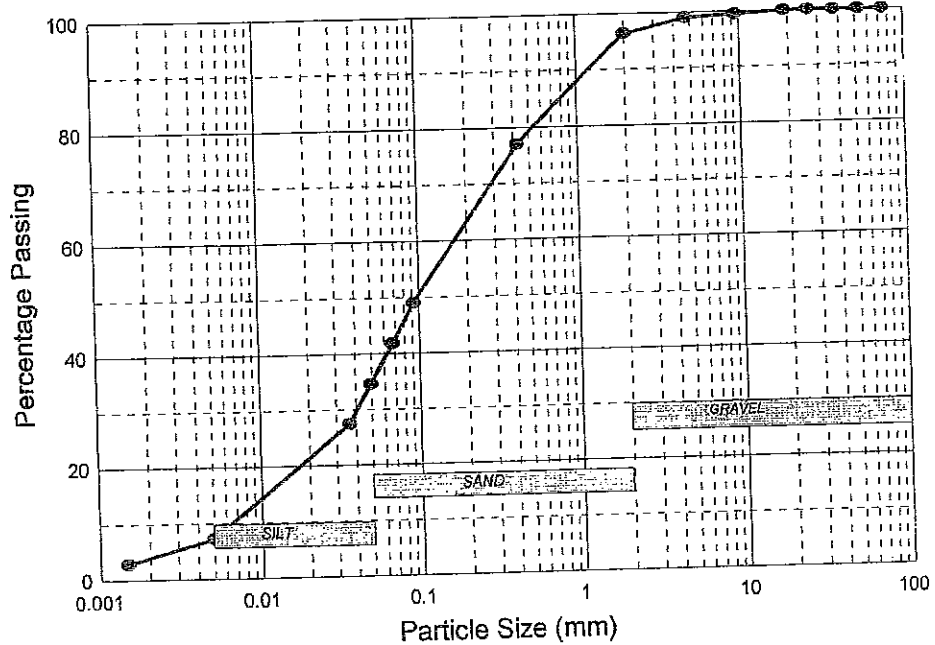
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	396/85 IR - TP 1 @ 0,3m	
Date	29 OCTOBER 2007	Test No	1944
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	99.51
4.75	99.11
2.00	96.42
0.425	77.06

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

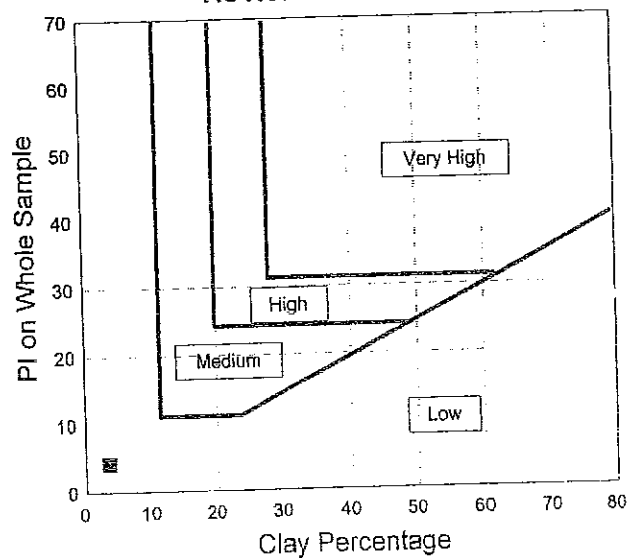
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	49.07
0.0682	41.85
0.0498	34.64
0.0362	27.42
0.0050	7.22
0.0015	2.89

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	17
Plastic Limit	12
Plastic Index	5
Linear Shrinkage	2
Grading Modulus	0.77
Moisture Content	11.09
PI on Whole Sample	4

### ACTIVITY CHART



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*C. DALTON*  
DATE: 19/11/2007





## FOUNDATION INDICATOR

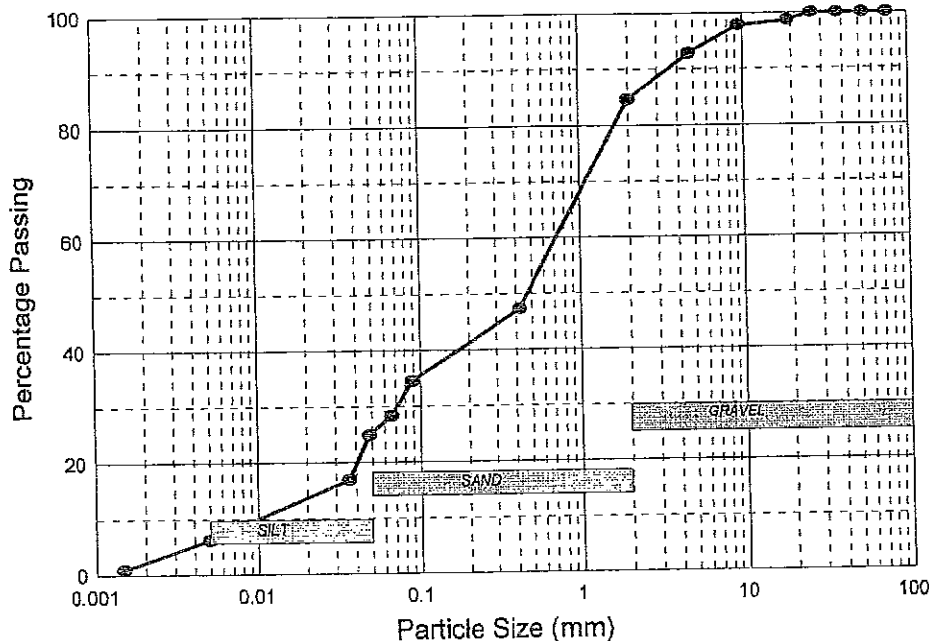
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 15 @ 0,4m	
Date	29 OCTOBER 2007	Test No	1945
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	98.72
9.50	97.91
4.75	92.79
2.00	84.56
0.425	47.32

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

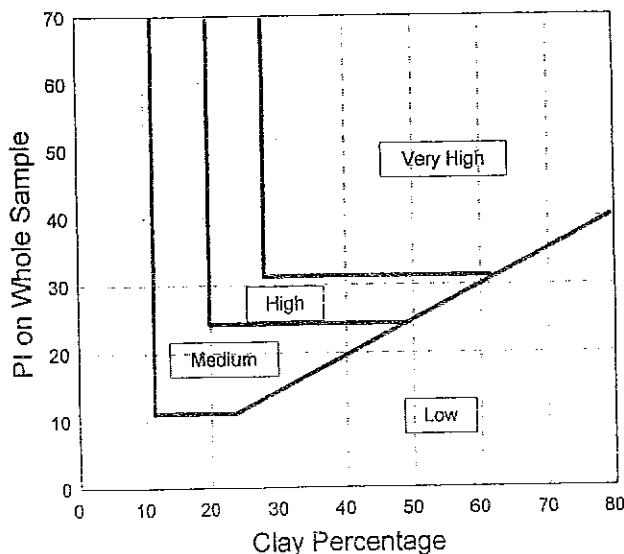
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	34.56
0.0669	28.36
0.0486	24.81
0.0362	16.84
0.0050	6.20
0.0015	0.89

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	1.34
Moisture Content	2.54
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

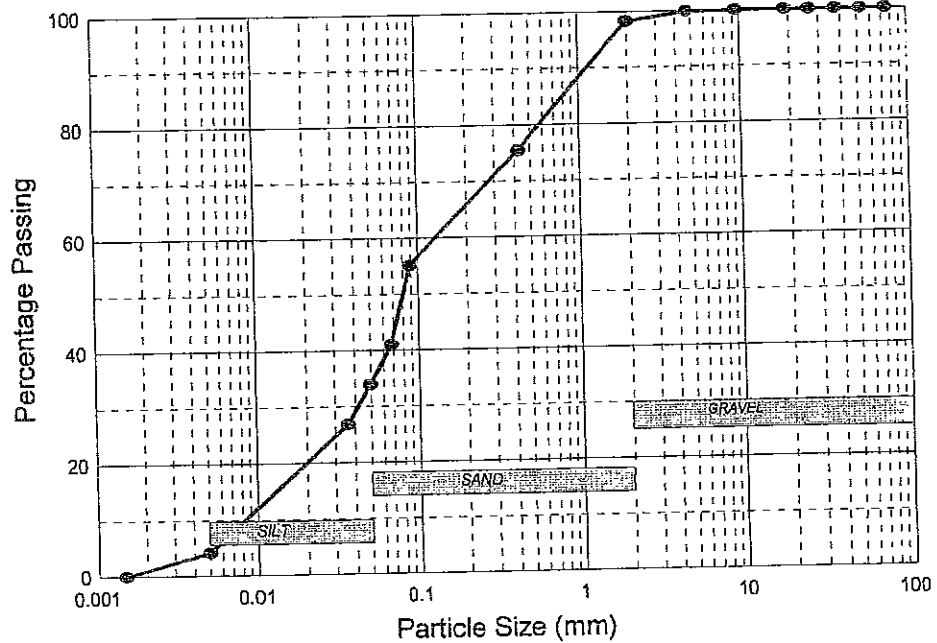
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/4 @ 0,3m	
Date	29 OCTOBER 2007	Test No	1946
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.89
2.00	98.32
0.425	75.45

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

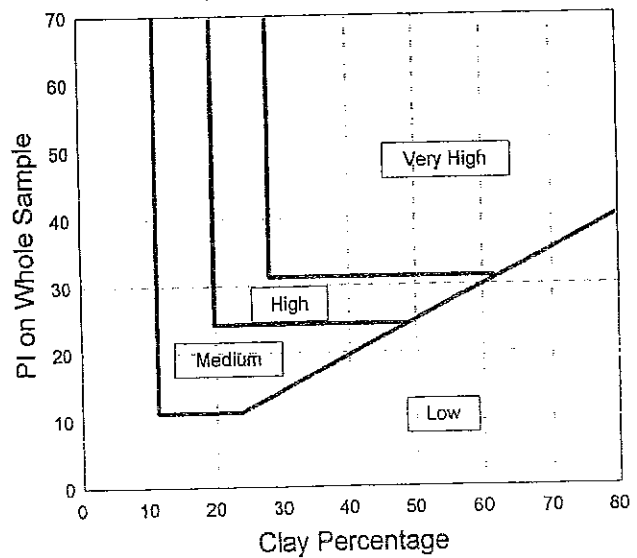
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0901	55.11
0.0682	40.98
0.0498	33.91
0.0362	26.85
0.0051	4.24
0.0015	0.00

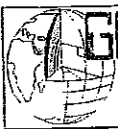
### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.71
Moisture Content	7.64
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

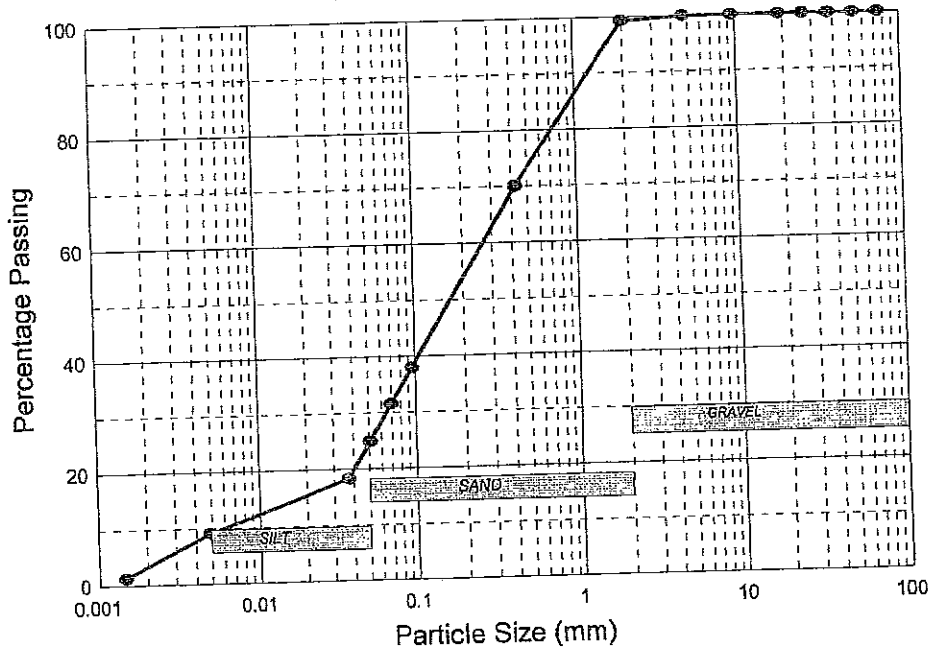
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/8 @ 0,2m	
Date	29 OCTOBER 2007	Test No	1947
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	100.00
2.00	99.34
0.425	70.00

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

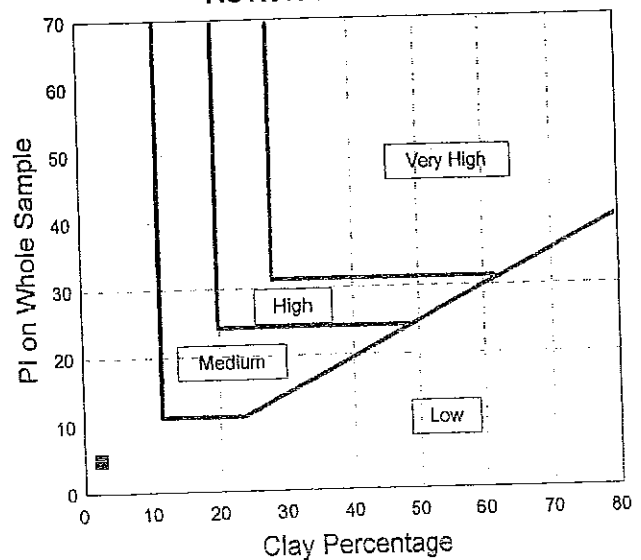
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0965	38.02
0.0704	31.46
0.0512	24.91
0.0372	18.35
0.0050	9.18
0.0015	1.31

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	18
Plastic Limit	11
Plastic Index	7
Linear Shrinkage	3
Grading Modulus	0.93
Moisture Content	10.49
PI on Whole Sample	5

### ACTIVITY CHART



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 C. DALTON  
 DATE : 19/11/2007



## FOUNDATION INDICATOR

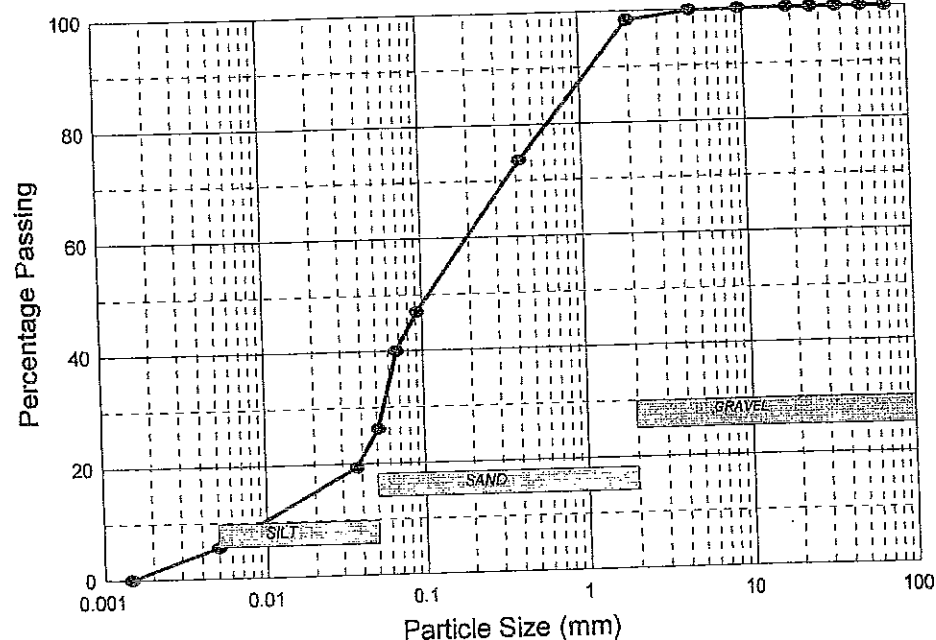
Client	INTRACONSULT PROJECTS		
Location	REIGER PARK - BOKSBURG	1/85 IR - TP 2/21 @ 0,2m	
Date	29 OCTOBER 2007	Test No	1948
Job No	07360	Checked By	EB

### SIEVE ANALYSIS

Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
75.00	100.00
53.00	100.00
37.50	100.00
26.50	100.00
19.00	100.00
9.50	100.00
4.75	99.90
2.00	98.38
0.425	73.66

### GRADING ANALYSIS



### HYDROMETER ANALYSIS

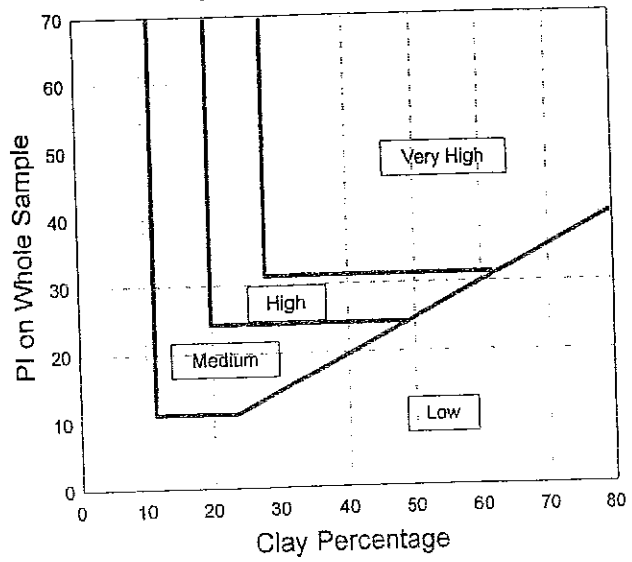
Values are expressed as a percentage of total sample

Sieve Size (mm)	Total Passing (%)
0.0934	46.90
0.0682	40.01
0.0512	26.21
0.0372	19.31
0.0051	5.52
0.0015	0.00

### ATTERBERG LIMITS & OTHER VALUES

Liquid Limit	Non Plastic
Plastic Limit	Non Plastic
Plastic Index	Non Plastic
Linear Shrinkage	1
Grading Modulus	0.81
Moisture Content	9.79
PI on Whole Sample	Non Plastic

### ACTIVITY CHART



**CHECKED BY :**  
**C. DALTON**  
 DATE 19/11/2007

**APPENDIX C**  
**SITE CLASS RATIONALE**

## Site Classification Rationale

In terms of the investigation guidelines, it is necessary to classify the proposed township into Site Classes according to the requirements of the NHBRC Home Building Manual and the Code of Practice (COP) for Foundations and Superstructures for Single Storey Residential Buildings and Masonry Construction compiled by the Joint Structural Division of the SAICE and the IStructE.

According to the GFSH-2 *Guidelines for Urban Engineering Geological Investigation*, any site can be divided into one of three primary Geotechnical Sub-Areas which indicate the **general development potential** of an area, as summarized in Table 1, Appendix C. The first objective is thus to classify the site in terms of its development potential according to geotechnical, geo-hydrological and environmental considerations highlighted in the study.

The second objective is then met by applying the COP to categorize areas with **common site / founding characteristics** and **potential foundation movements**, giving recommendations for typical founding options for single-storey buildings of masonry construction. The assumptions on which these recommendations are based include a maximum foundation bearing pressure of 50kPa applied through minimum 0,6m wide strip foundations installed at approximately 0,4m founding depth below natural ground surface. A summary of the various Site Classes for which a site may be classified, is contained in Table 2, Appendix C.

*As an example, a site class of 2/C/H/R(locally) as defined in accordance with Tables 1 and 2 is thus associated with a developable site (with precautions) (2), with collapse and/or consolidation settlement potential of less than 5mm (C), heave/shrinkage potential of less than 7,5mm (H) and (local) occurrences of rock outcrop or shallow sub-outcrop (R).*

**Table 1: Geotechnical Constraints on Planned Development**

Sub-Area	Development Potential	Impact of Geotechnical Character of Area on Construction Measures
1	The geotechnical conditions are such that urban development can take place without any special precautionary/remedial measures for geotechnical conditions.	- None - Normal building construction
2	Geotechnical conditions are such that the area may be developed for urban use, but appropriate remedial measures and/or precautionary measures are required in the context of the geotechnical constraints.	- Problem Soils - Special foundation and top structure requirements
3	Geotechnical conditions are such that urban development is not recommended.	- Severe Geotechnical or Environmental Constraints - Development not recommended / permitted

**Table 2: Typical Residential Site Class Designations**

Site Class	Typical Founding Material	Character of Founding Material	Expected Range of Total Soil Movements (mm)	Assumed Differential Movement (% of Total)
R	Rock (excluding mud rocks which may exhibit swelling to some depth)	Stable	Negligible	-
H	Fine grained soils with moderate to very high plasticity (clays, silty clays, clayey silts and sandy clays)	Expansive Soils	<7.5	50%
H1			7.5 - 15	50%
H2			15 - 30	50%
H3			>30	50%
C	Silty sands, sands, sandy and gravelly soils	Compressible and Potentially Collapsible Soils	<5.0	75%
C1			5.0 - 10	75%
C2			>10	75%
S	Fine grained soils (clayey silts and clayey sands of low plasticity), sands, sandy and gravelly soils	Compressible Soil	<10	50%
S1			10 - 20	50%
S2			>20	50%
P	Contaminated soils; Controlled fill; Dolomitic areas; Landslip; Land fill; Marshy areas; Mine waste fill; Mining subsidence; Reclaimed areas; Very soft silt/silty clays; Uncontrolled fill	Variable	Variable	
W	Development probably controlled by floodline considerations	N/A	N/A	N/A

**APPENDIX D  
SITE DRAINAGE, SERVICES &  
PLUMBING PRECAUTIONS**



## SITE DRAINAGE, SERVICE AND PLUMBING PRECAUTIONS ( Ref: Drainage (C1/S1)

(Reference: National Home Builders Registration Council, Home Building Manual Part 1 and 2, Revision 1 February 1999)

### **Site Drainage**

The site shall be drained so as to ensure that water cannot pond adjacent or near the structure. The surface of the ground immediately adjacent to the building shall fall 75mm over the first 1,5m. Any paving shall be similarly sloped.

### **Limitations on Gardens**

Flower beds, trees and shrubs should not be planted within 1,5m of buildings and either a lawn or impermeable apron should be provided around the building so as to provide a surface which will facilitate free run-off of water.

### **Restrictions on the Planting of Trees**

The recommendations regarding the planting of trees contained in the relevant Clause C5 of the Joint Structural Division of SAICE and IstructE Code of Practice for "Foundations and Superstructures for Single Storey Residential Buildings of Masonry Construction" should be observed.

### **Repair of Leaks**

Leaks in plumbing, including stormwater, sewerage and other drainage shall be repaired promptly so as to prevent wetting up of the founding horizons in the vicinity of foundations.

### **Services**

The following shall be observed :

- s No plumbing and drainage shall be placed under floor slabs as far as is practicable.
- s The fall of all trenches shall be in a direction away from buildings.
- s All service trenches shall be located at least 1,5m away from structures and shall be backfilled with in situ materials compacted to not less than 88% Mod AASHTO density.
- s Sewer and drain pipes and fittings shall be provided with flexible joints.

Water pipe entries into buildings shall be provided to allow for movement. Pipes through walls shall be sleeved to permit relative movement and WC pans shall be provided with a flexible connection at the junction with the pipe.

