



# SOILCO MATERIALS INVESTIGATIONS (PTY) LTD

## CIVIL ENGINEERING MATERIALS TESTING LABORATORY



Reg. No. : 1985 / 009585 / 07

25 WESTMEAD ROAD - WESTMEAD P.O.BOX 15318 WESTMEAD 3608 KWAZULU - NATAL

TELEPHONE : 031 7004325 TELEFAX : 031 7001909 email : info@soilco.co.za



T 0213

Customer : Mabhedla SP82 Trading

Project : Giba Gorge Trading

Condition of Sample : Slightly Moist

Environmental Conditions : Samples Delivered by Customer

Sampling Process : Samples Delivered by Customer

Job Card No. : 249250

Date Received : 2023-10-19

Date Tested : 2023-10-24 - 2023-10-30

Date Reported : 2023-10-30

Date Sampled : Samples Delivered by Customer

### MATERIALS TEST REPORT

Laboratory Number	0702	0703		
Field Number				
Position in field / Location	Proposed G5/G6	Proposed G9		
Depth (mm)				
Sample Description	Lt.Br.Y.Granite	Lt.R.Br.Wth.Granite		
Stabilising Agent	Natural	Natural		

#### Sieve Analysis ( Wet Preparation ) SANS 3001 - GR 1

100.0 mm	Percentage Passing		
75.0 mm		100	
63.0 mm		96	
50.0 mm		95	
37.5 mm		88	100
28.0 mm		81	99
20.0 mm		76	98
14.0 mm		66	96
5.0 mm		34	79
2.0 mm		18	63
0.425 mm		6	42
0.075 mm		2	23
Grading Modulus SANS 3001 PR 5		2.75	1.72

#### Mechanical Analysis - SANS 3001 - GR 1

Coarse Sand (%)	68	34
Coarse - Fine Sand (%)	10	10
Medium - Fine Sand (%)	7	10
Fine - Fine Sand (%)	5	9
Silt and Clay (%)	10	37

#### Atterberg Limits - SANS 3001 - GR 10 and GR 12

Liquid Limit (%)	CBD	34
Plasticity Index (%)	NP	5
Linear Shrinkage (%)	0.0	3.0

#### Materials Classification

Classification Group Index #	A-1-4 (0)	A-1-b (0)
COLTO Classification #	Less than G9	G7
TRH 14 Classification (1985) #	G7	G7

#### Maximum Dry Density and Optimum Moisture Content - SANS 3001 - GR 30

Maximum Dry Density (kg/m <sup>3</sup> )	2098	1949
Optimum Moisture Content (%)	6.3	11.2

#### California Bearing Ratio - SANS 3001 - GR 40

CBR @ 100 % Compaction	91	27
CBR @ 98 % Compaction	68	23
CBR @ 95 % Compaction	44	19
CBR @ 93 % Compaction	33	17
CBR @ 90 % Compaction	21	14
Swell @ 100 % Compaction	0.00	0.08

Remarks : The Colto / TRH 14 Classifications are only based on the above results. Further testing may be required.

For Soilco - K. Govender ( Technical Signatory )

Revision 1

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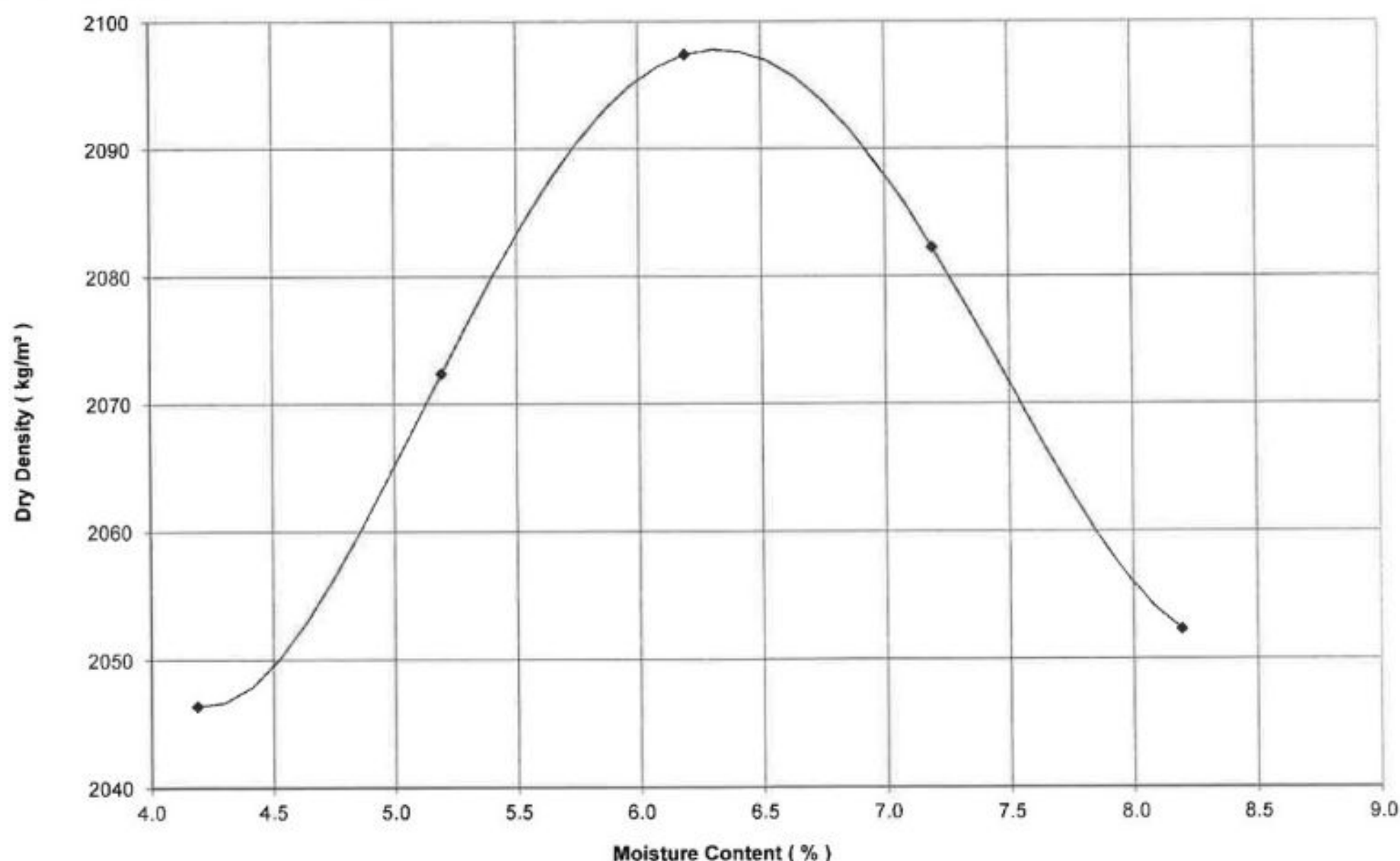
T 0213

Client : Mabhedla SP82 Trading Job Card No. : 249250  
 Project : Giba Gorge Trading Date Received : 2023-10-23  
 Date Tested : 2023-10-24  
 Environmental Conditions : Samples Delivered by Customer Date Reported : 2023-10-30  
 Sampling Process : Samples Delivered by Customer Date Sampled : Samples Delivered by Customer

Laboratory Number : 0702 Field Reference No. :  
 Position in field / Location : Proposed G5/G6 Depth ( mm ) :  
 Material Description : Lt.Br.Y.Granite Condition of Sample : Slightly Moist

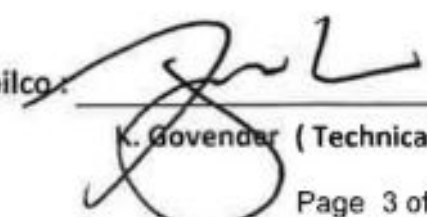
### MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	5.2	6.2	7.2	8.2	4.2	Maximum Dry Density	2098 kg/m <sup>3</sup>
Dry Density ( kg/m <sup>3</sup> )	2072	2097	2082	2052	2046	Optimum Moisture Content	6.3 %



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco.   
 K. Govender ( Technical Signatory )  
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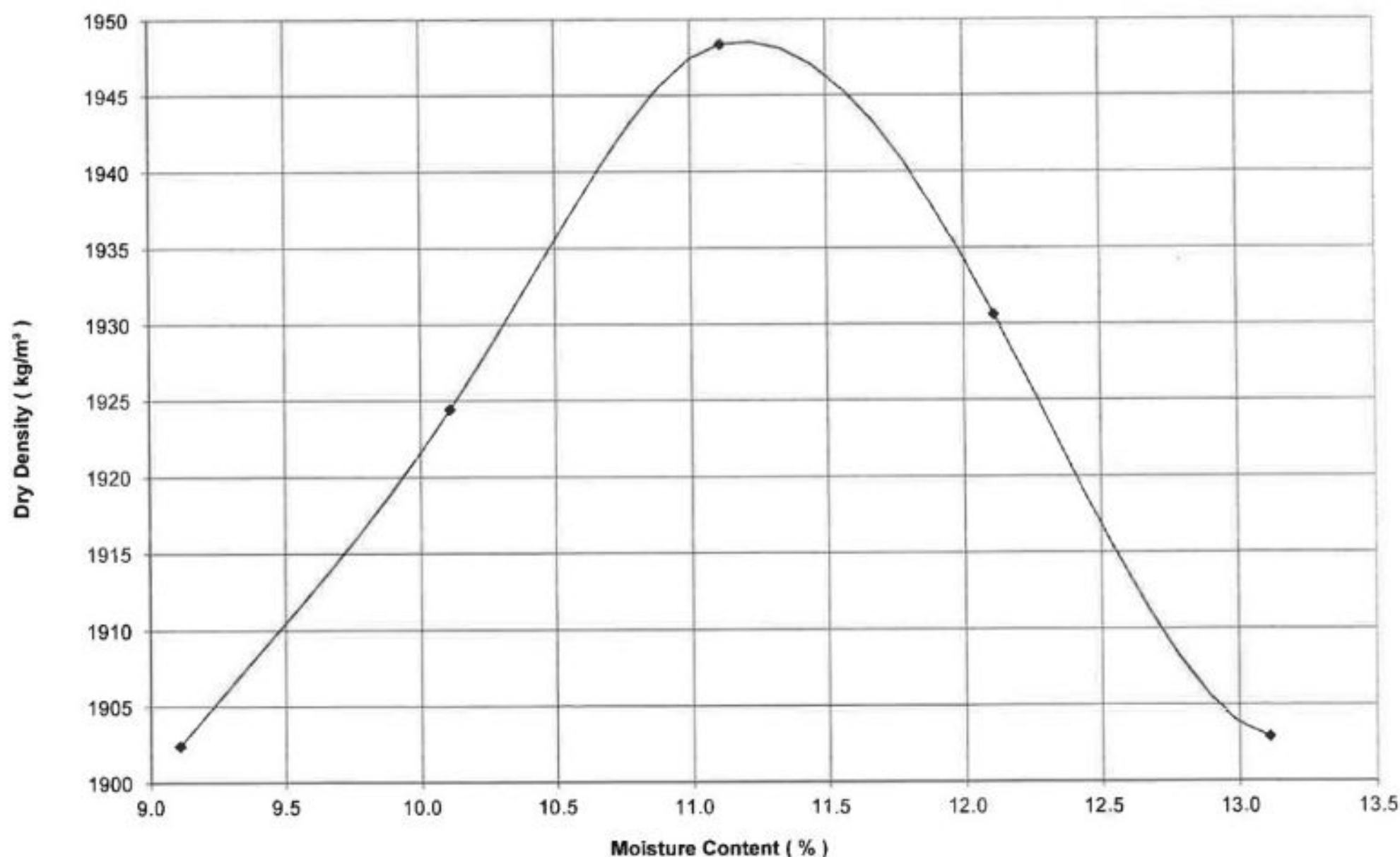
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 Environmental Conditions : Samples Delivered by Customer Date Reported : 2023-10-30  
 Sampling Process : Samples Delivered by Customer Date Sampled : Samples Delivered by Customer

Laboratory Number : 0703 Field Reference No. :  
 Position in field / Location : Proposed G9 Depth ( mm ) :  
 Material Description : Lt.R.Br.Wth.Granite Condition of Sample : Slightly Moist

### MOISTURE / DENSITY RELATIONSHIP - SANS 3001 - GR 30

Moisture Content; (%)	11.1	12.1	10.1	9.1	13.1	Maximum Dry Density	<b>1949 kg/m<sup>3</sup></b>
Dry Density ( kg/m <sup>3</sup> )	1948	1931	1924	1902	1903	Optimum Moisture Content	<b>11.2 %</b>



Remarks :

Method of Preparation : All Material passed the 20mm Sieve

For Soilco :

K. Govender ( Technical Signatory )

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