

PAARL OFFICE  
13 Pastorie Avenue, Paarl 7646  
PO Box 229  
Paarl 7620  
Tel: + 27 (21) 871-1422  
Fax: + 27 (21) 872-7740

MALMESBURY OFFICE  
9B Church street  
PO Box 63  
Malmesbury 7299  
Tel: +27 (22) 487-3017  
E-mail: skcmsouth@skcm.co.za  
Web: www.skcm.co.za

Offices at Pretoria, Nelspruit, Aliwal North  
Paarl, Durban, Malmesbury and  
Mozambique

B-BBEE LEVEL TWO CONTRIBUTOR

Your ref:

Our ref: W1962/3.5-01

05/07/2019

**Attention: Mr. D. Nell**

Swartland Investments  
Posbus 216  
**MOORREESBURG**  
7310

Sir,

**ERF 245, ATLANTIS: GEOTECHNICAL INVESTIGATION**

A geotechnical investigation was undertaken by Mr. J.V Loubser on Wednesday 03 July 2019 to determine the soil profile, water table and bearing capacity of the soil on erf 245, Atlantis.

The site will be further developed with storage buildings on the bottom left corner of the erf and a gas installation building located on the top right corner of the erf. (See site layout, **W1962-01**).

Geologically, the site is situated in terrain mainly Quaternary calcareous coastal dune sand of the Witzand Formation as well as Quaternary limestone and calcrete of the Langebaan Formation.

Three machine-dug test pits were put down at accessible positions over the proposed development area for exposure of the soil profile down to at least 1,8m below existing ground level. The test pits confirmed the coastal dune sands of the Witzand Formation. The dark grey sandy soil turns light grey in depth (See soil profiles attached, **W1962-TP1**, **W1962-TP2**, **W1962-TP3**). There were rubble observed 1,0m below ground level at TP1 and should be further investigated at construction stage.

The water table was reached at 3,0m below natural ground level.

DCP tests were conducted next to the three test pits and where the gas installation building will be constructed (See site layout plan). The results indicate that the site has a slight variation in soil bearing capacity and 50-100 kPa bearing capacity will be reached between 400 and 800mm below natural ground level (See test results attached). The bearing capacity at founding level will be tested again at construction stage, and a recommendation made as to the best founding solution for the results obtained.

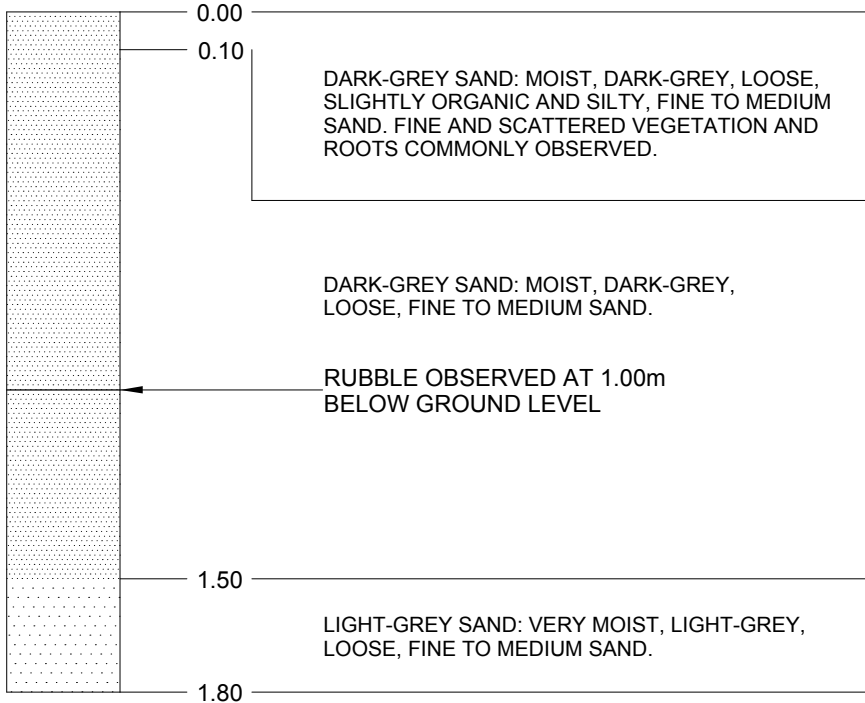
We trust that you will find the above in order.

Regards



**M.P.J. LOUBSER PrEng**  
ECSA: 880632  
SKCM Engineers  
.../jvl

<u>PROFILE NO :</u>	TP1	<u>DATE</u>	2019/07/03	<u>PROFILED BY:</u>	JVL
<u>LATITUDE :</u>	33°35'27.00"S	<u>LONGITUDE :</u>	18°28'30.83"E	<u>ELEVATION (m)</u>	NA
<u>DEPTH OF PROFILE PIT (m)</u>		<u>DEPTH OF WATER TABLE (m)</u>		<u>DEPTH TO WEATHERED ROCK</u>	
1.80 m		NOT ENCOUNTERED		UNKNOWN	




SCALE 1:20

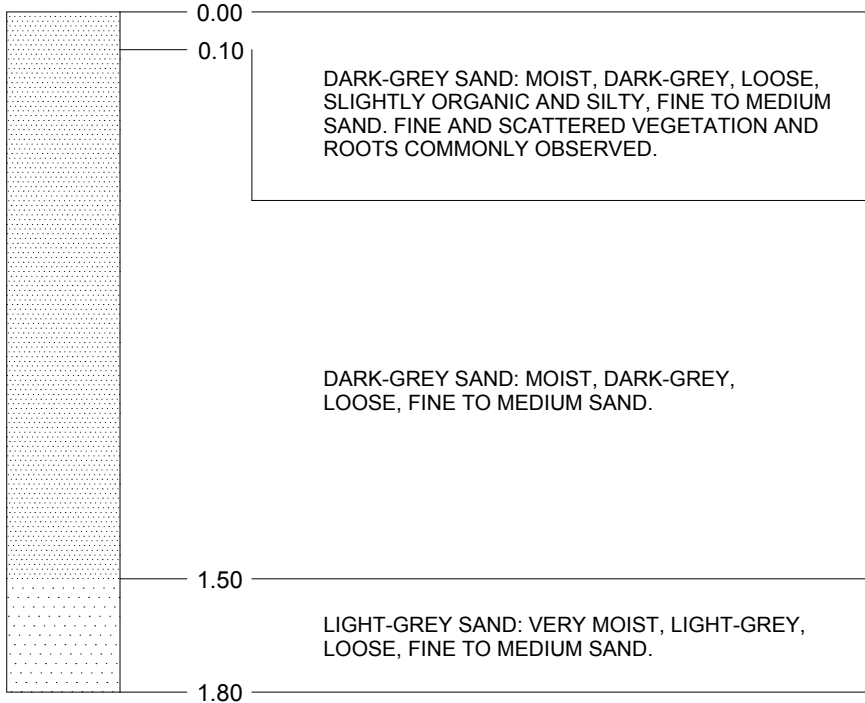


RUBBLE OBSERVED AT 1.00m BELOW GROUND LEVEL

PHOTO: TP 1

 <p><b>SKCM</b> SKCMasakhizwe Engineers (Pty) Ltd CONSULTING ENGINEERS TO BUILD THE NATION</p> <p>13 PASTORIE AVENUE PO BOX 229 PAARL 7620 TEL: (021) 871 1422/3 FAX: (021) 872 7740</p> <p>9B CHURCH STREET P.O.BOX 63 MALMESBURY 7300 TEL: (022) 487 3017 eMail: skcmsouth@skcm.co.za</p>	<u>TITLE</u>	TEST PIT 1: ERF 245, ATLANTIS	<u>CLIENT</u>	SWARTLAND INVESTMENTS	<u>DESIGNED</u>	<u>BY</u>	<u>DATE</u>	<u>CH</u>
	<u>DRAWN</u>	JVL	2019/07/04					
	<u>TRACED</u>							
	<u>NOTE:</u>				<u>SCALE :</u>		1:20	
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				W1962-TP1		0		


<u>PROFILE NO :</u>	TP2	<u>DATE</u>	2019/07/03	<u>PROFILED BY:</u>	JVL
<u>LATITUDE :</u>	33°35'26.17"S	<u>LONGITUDE :</u>	18°28'30.93"E	<u>ELEVATION (m)</u>	NA
<u>DEPTH OF PROFILE PIT (m)</u>		<u>DEPTH OF WATER TABLE (m)</u>		<u>DEPTH TO WEATHERED ROCK</u>	
1.80 m		NOT ENCOUNTERED		UNKNOWN	



SCALE 1:20



PHOTO: TP 2

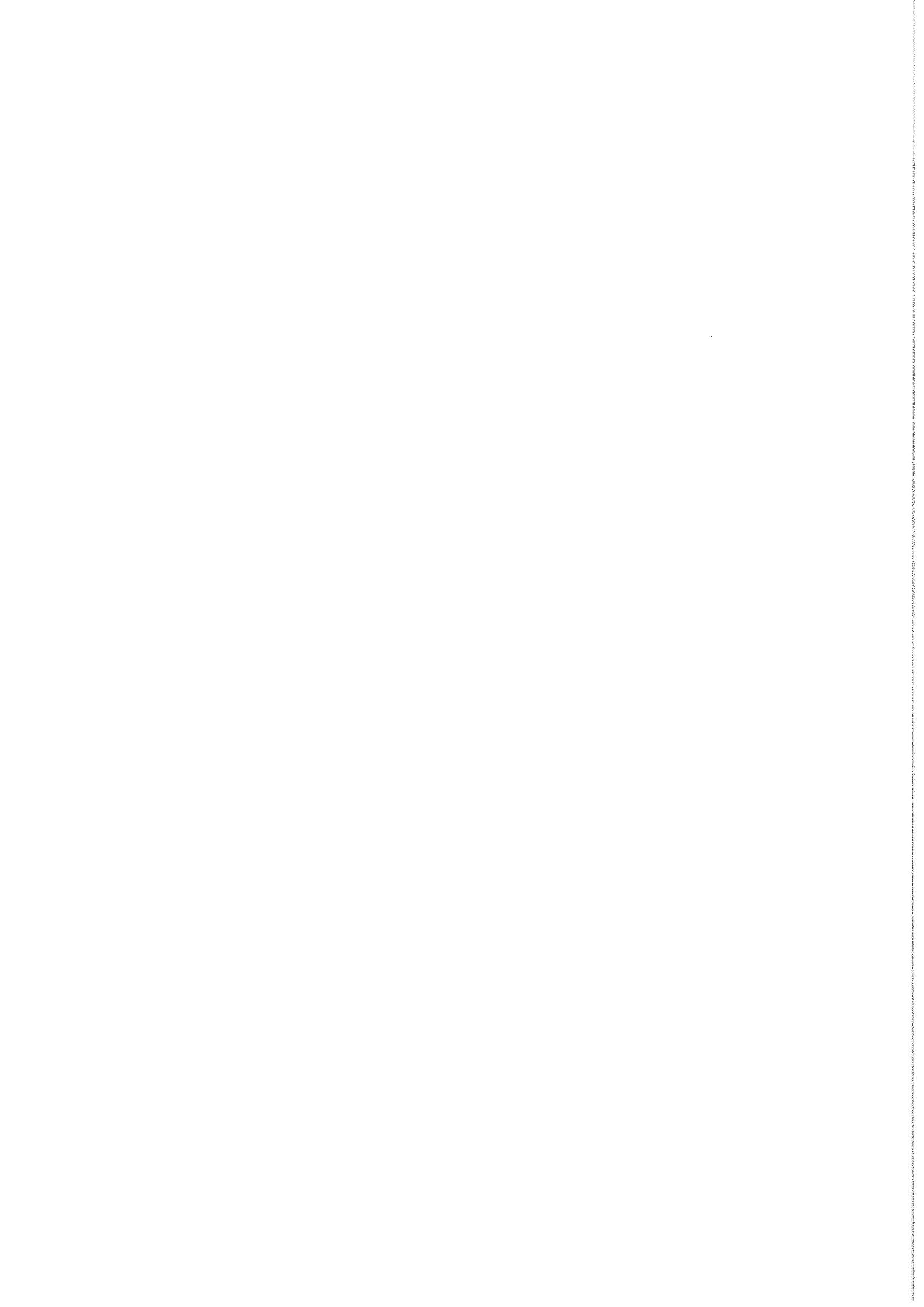
 <p><b>SKCM</b> SKCMasakhizwe Engineers (Pty) Ltd CONSULTING ENGINEERS TO BUILD THE NATION</p> <p>13 PASTORIE AVENUE PO BOX 229 PAARL 7620 TEL: (021) 871 1422/3 FAX: (021) 872 7740</p> <p>9B CHURCH STREET P.O.BOX 63 MALMESBURY 7300 TEL: (022) 487 3017 eMail: skcmsouth@skcm.co.za</p>	<u>TITLE</u>	TEST PIT 2: ERF 245, ATLANTIS	<u>CLIENT</u>	SWARTLAND INVESTMENTS	<u>DESIGNED</u>	<u>BY</u>	<u>DATE</u>	<u>CH</u>
	<u>DRAWN</u>	JVL	2019/07/04					
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				W1962-TP2		0		





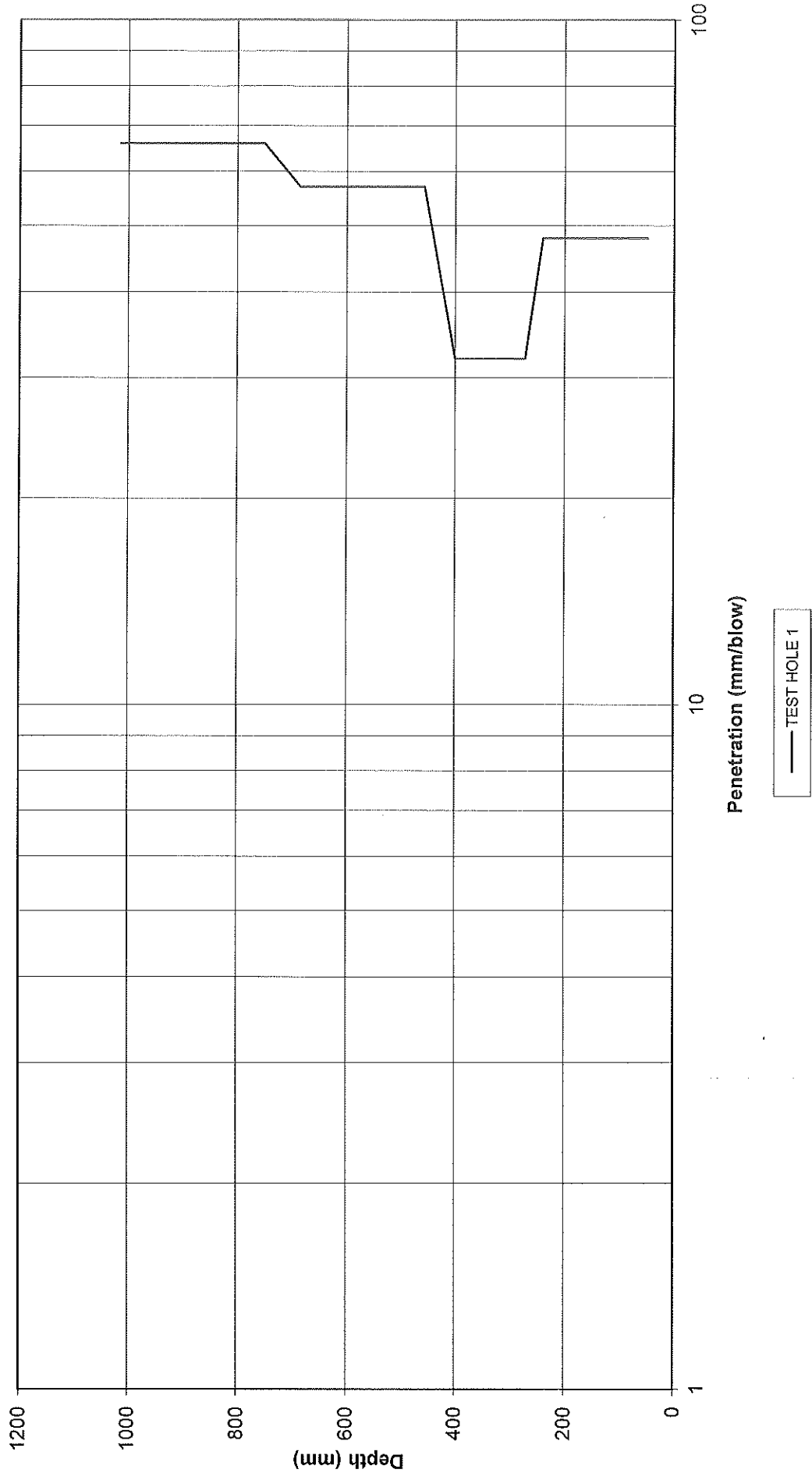




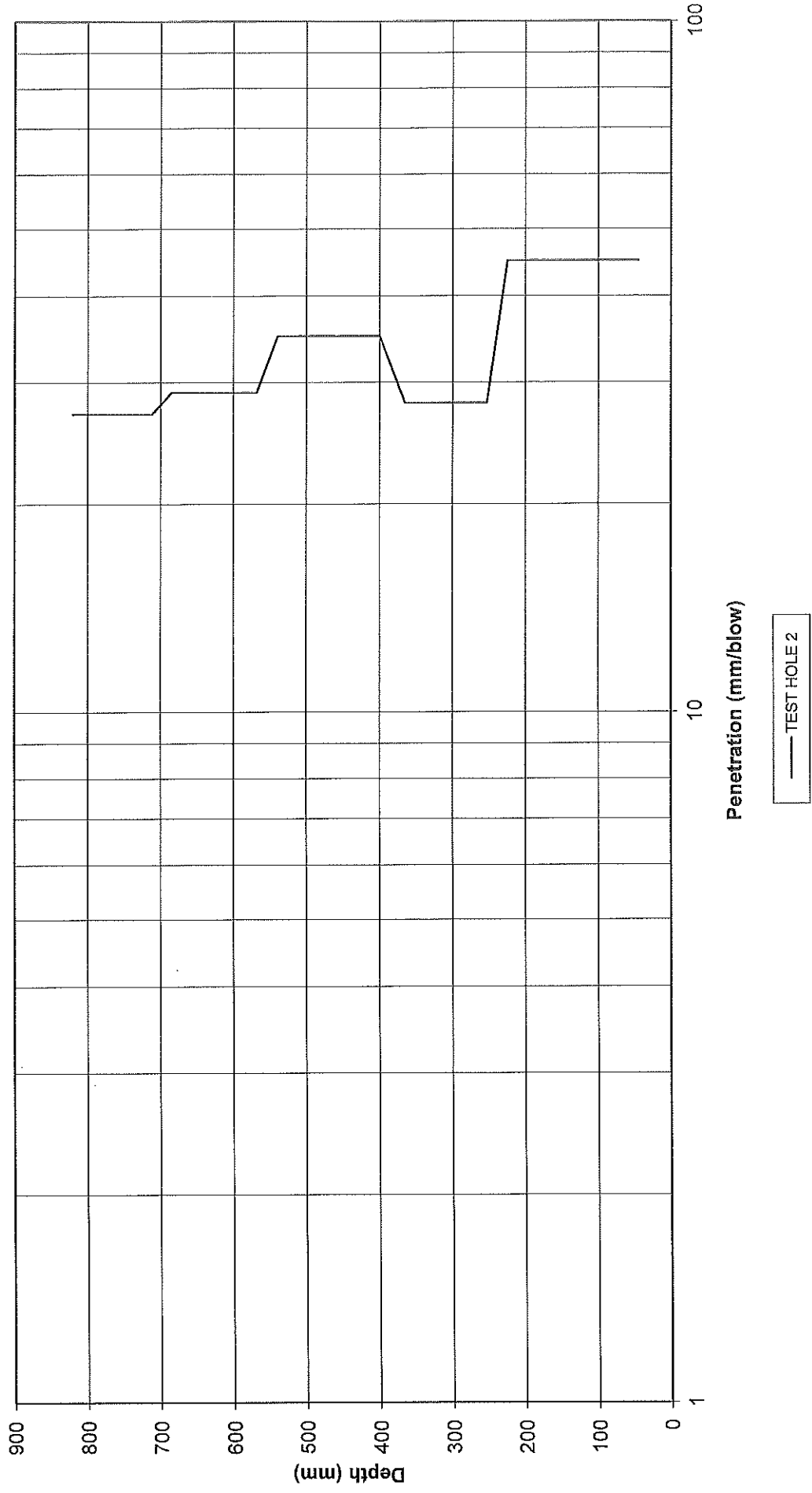




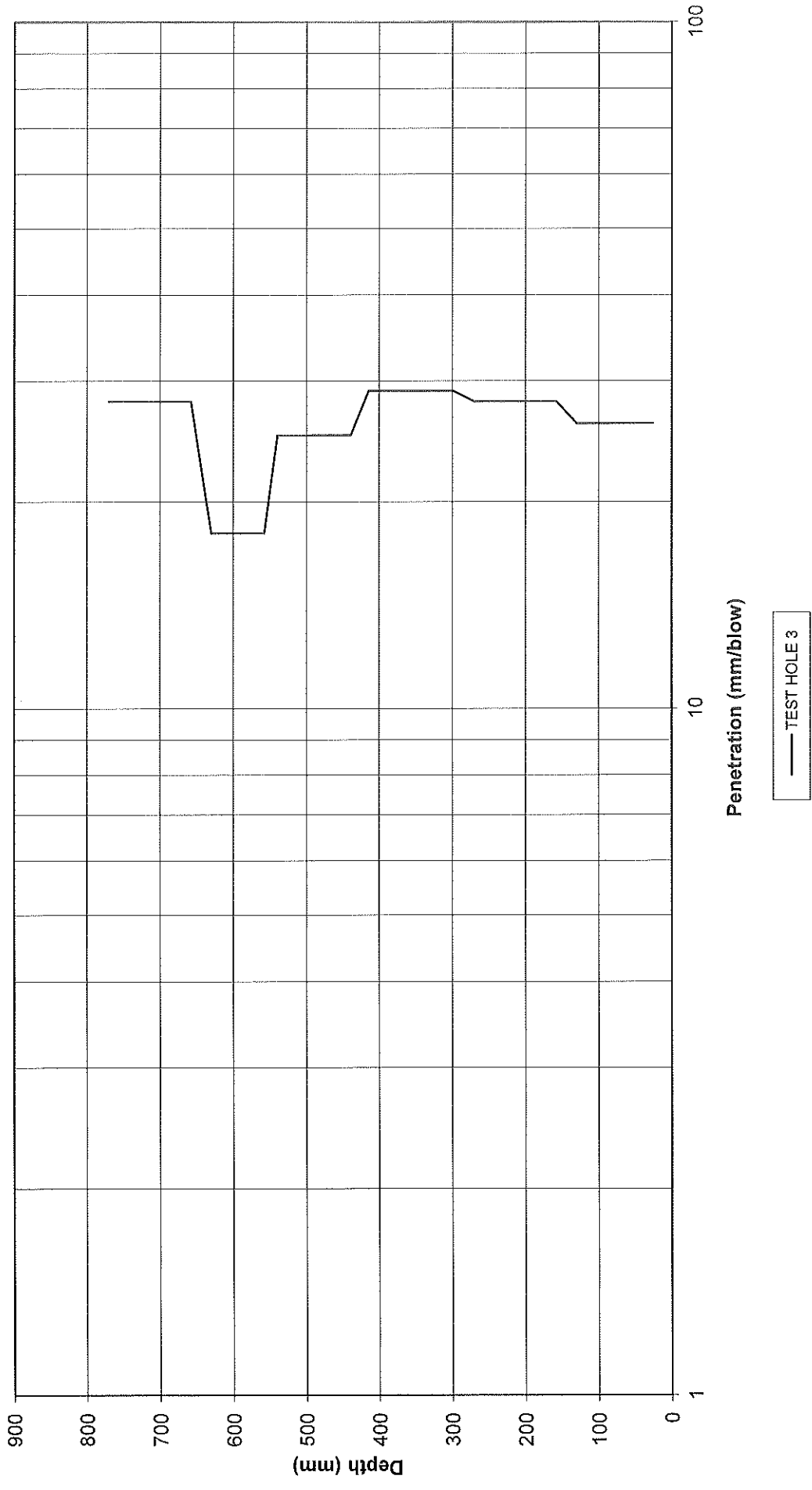
W1962/12.1-01 Erf 245, Atlantis



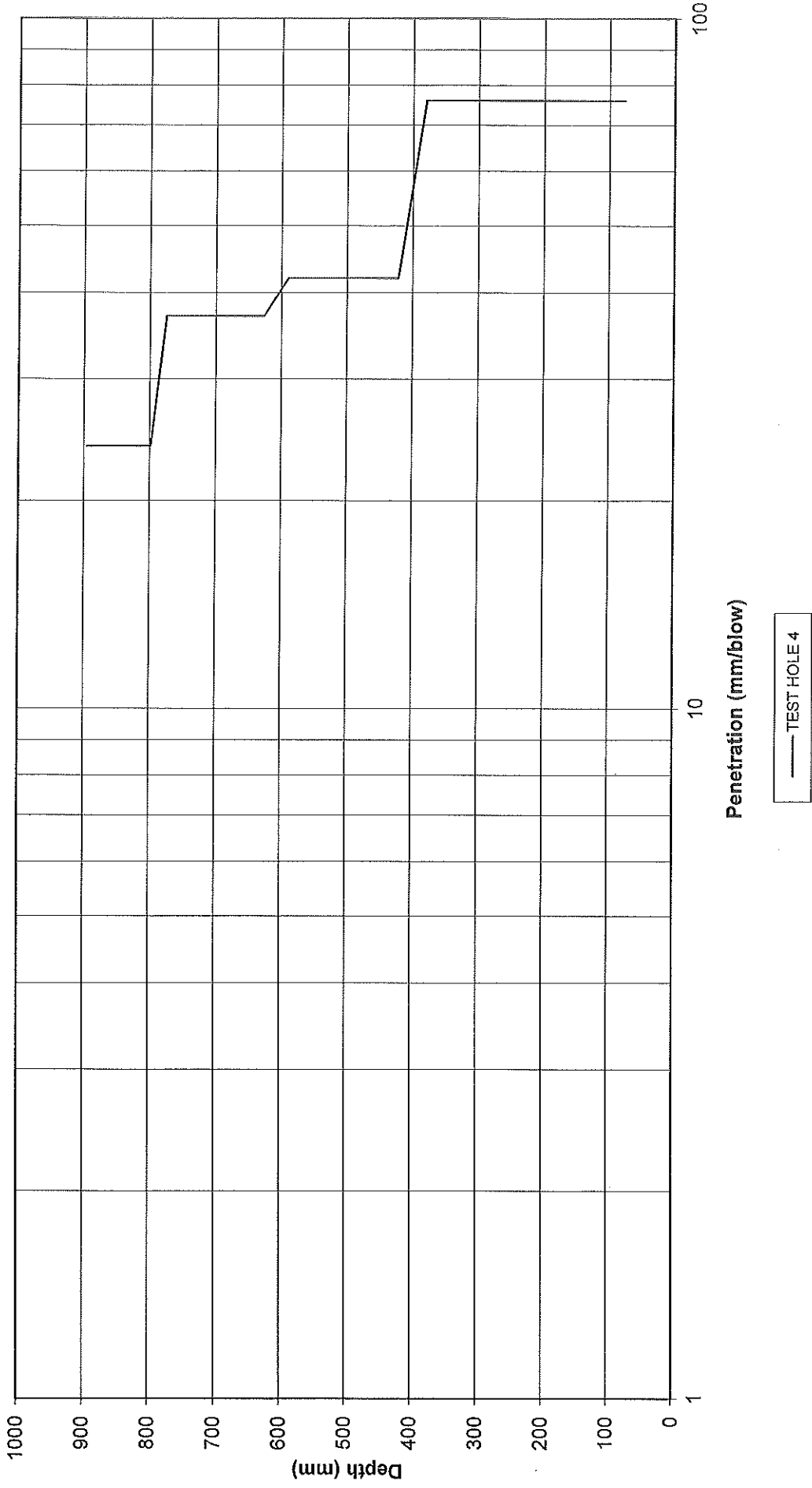
W1962/12.1-01 Erf 245, Atlantis



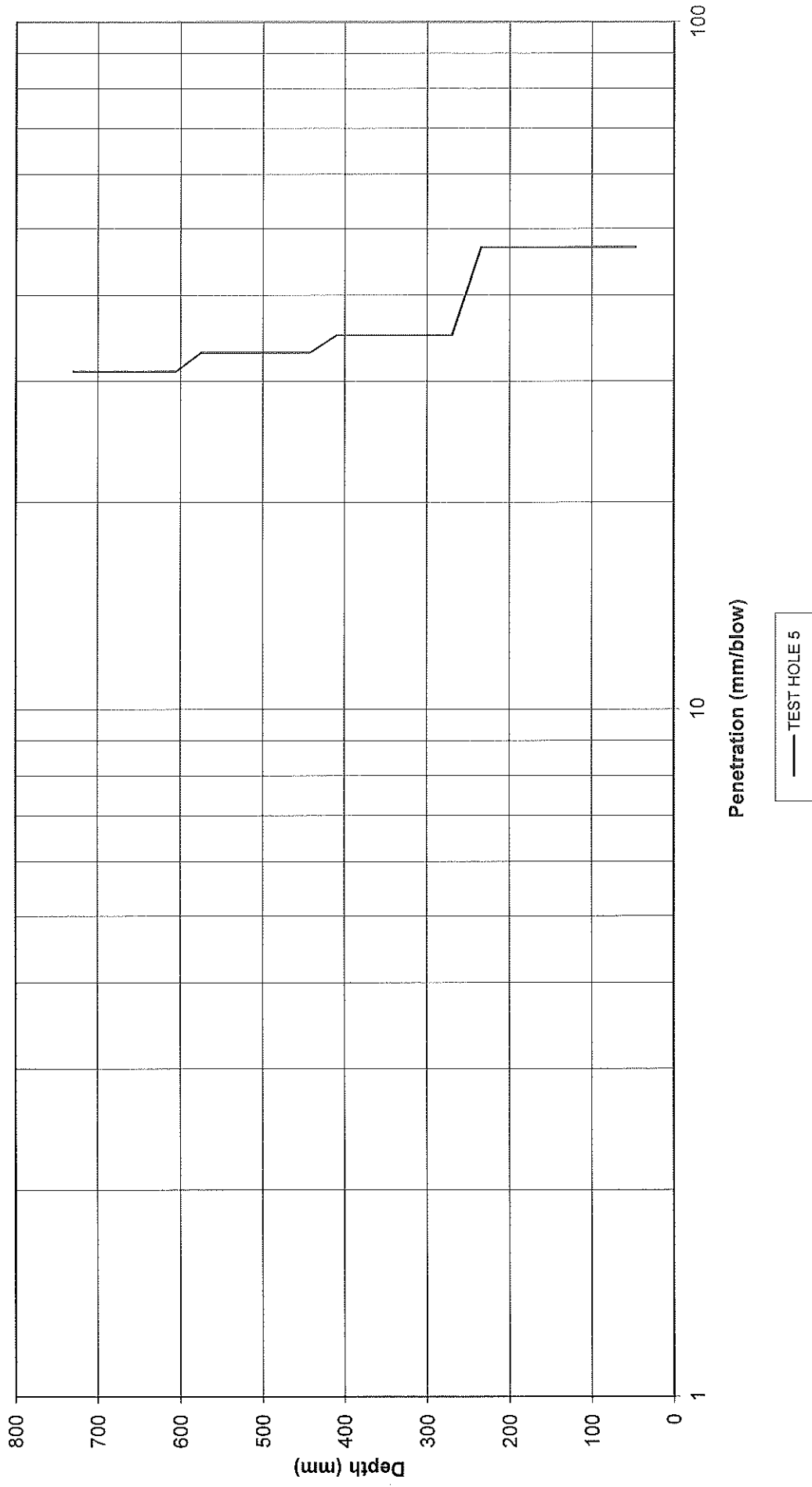
W1962/12.1-01 Erf 245, Atlantis




W1962/12.1-01 Erf 245, Atlantis



W1962/12.1-01 Erf 245, Atlantis





NOTES		
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<p>CLIENT  <b>SWARTLAND INVESTMENTS</b></p>		
<p>PROJECT  <b>GEOTECHNICAL REPORT, ERF 245, ATLANTIS</b></p>		
<p>TITLE  <b>SITE LAYOUT</b></p>		
		
<p><b>SKCMasakhizwe Engineers</b>            CONSULTING ENGINEERS TO BUILD THE NATION</p>		
13 PASTORIE AVENUE PO BOX 229 PAARL 7620 TEL: (021) 871 1422/3 FAX: (021) 872 7740		58 CHURCH STREET PO BOX 63 MALVESBURY 7300 TEL: (022) 487 3017 eMail: skcmsouth@skcm.co.za
ARCHITECTS		
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JVL	JVL	M. COUSIN (PENG 450632)
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