

COMPACTION TEST

Project PINATUBO Job No. DEPTH : 5.50 M.
 Location of Project SABO DAM #9 Boring No. 2 Sample No. -
 Description of Soil C.A.M. Date of Test _____
 Test Performed By _____ Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g.
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. Vol. 72 cu.cm.

DATE RECEIVED : _____
DATE RELEASED : _____

Water Content Determination

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

COMPUTER PRINT OUT

MANUAL COMPUTATION

BY: JGV

QUALITY ASSURANCE

CHKD BY: _____

6-28-97

DATE: 3:10

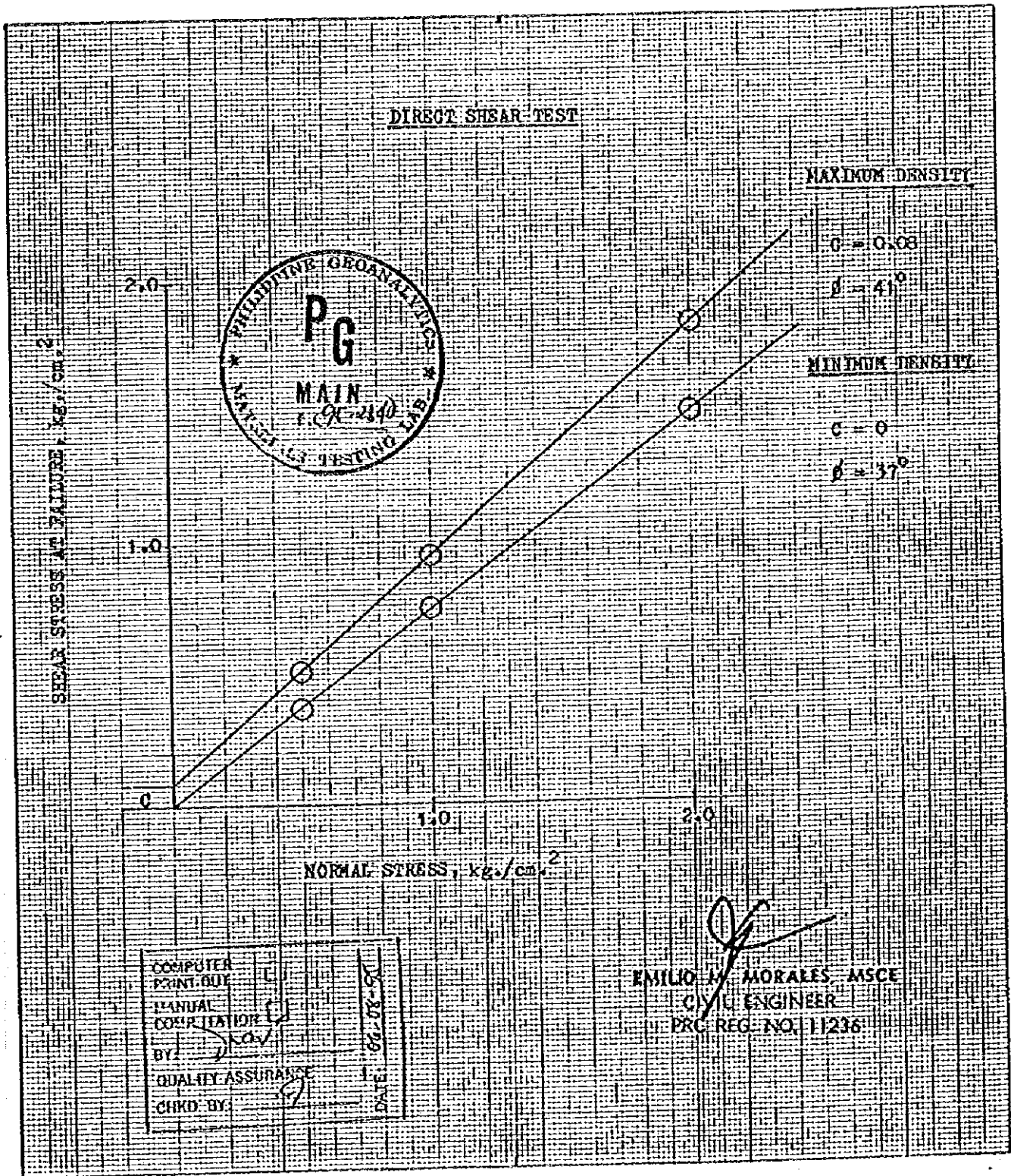
Density Determination	MINIMUM DENSITY			MAXIMUM DENSITY		
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,640	2,641	2,638	2,654	2,657	2,656
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	126	127	124	140	143	142
Wet density, g/cc	1.750	1.764	1.722	1.944	1.986	1.972
Dry density γ , g/cc	Average = 1.745			Average = 1.967		

Dry density γ_{dry} , g/cc

EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

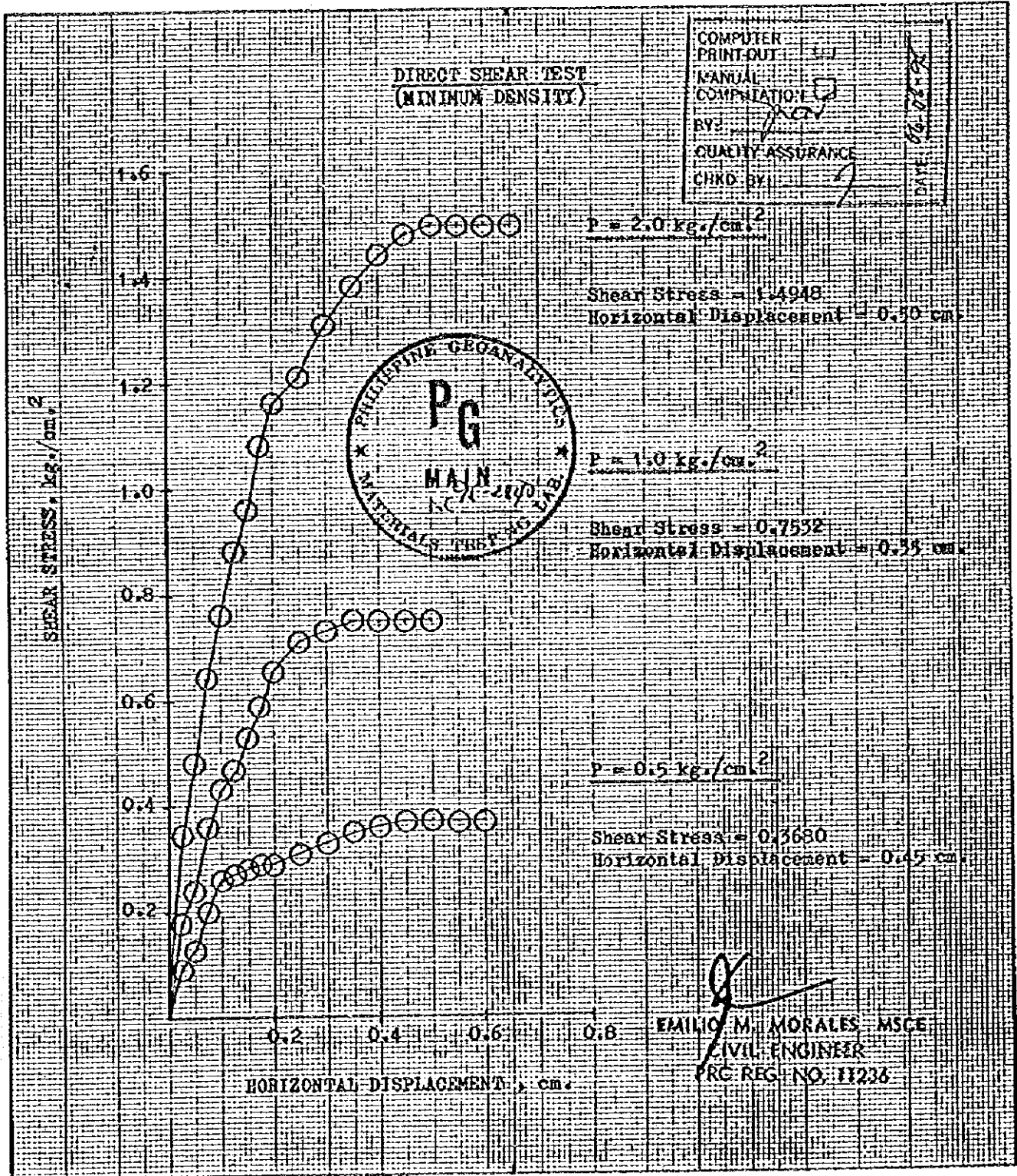
Water content, w% _____
 Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>4</u>	
	PROJECT: PINATUBO	JOB NO.:	CROSS REFERENCE:
	LOCATION: SABO DAM No.9	TESTED BY: C.A.M.	CHECKED BY: J.E.V.
	SAMPLE: BH-2 DEPTH: 5.50 M.	DATE TESTED:	DATE FINISHED:



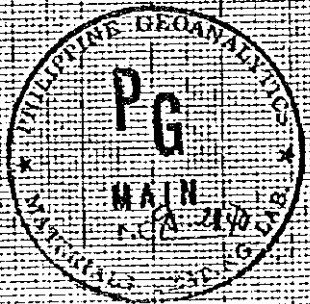
1 KG = 101.971 Kj
 1 KG = 2.20462 LB

PHILIPPINE GEOANALYTICS	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>3</u> of <u>4</u>
	PROJECT: PINATUBO	JOB NO:
LOCATION : SABO DAM No.9	TESTED BY: C.A.M.	CHECKED BY: J.E.Y.
SAMPLE : BH-2 DEPTH : 5.50 M.	DATE TESTED:	DATE FINISHED:



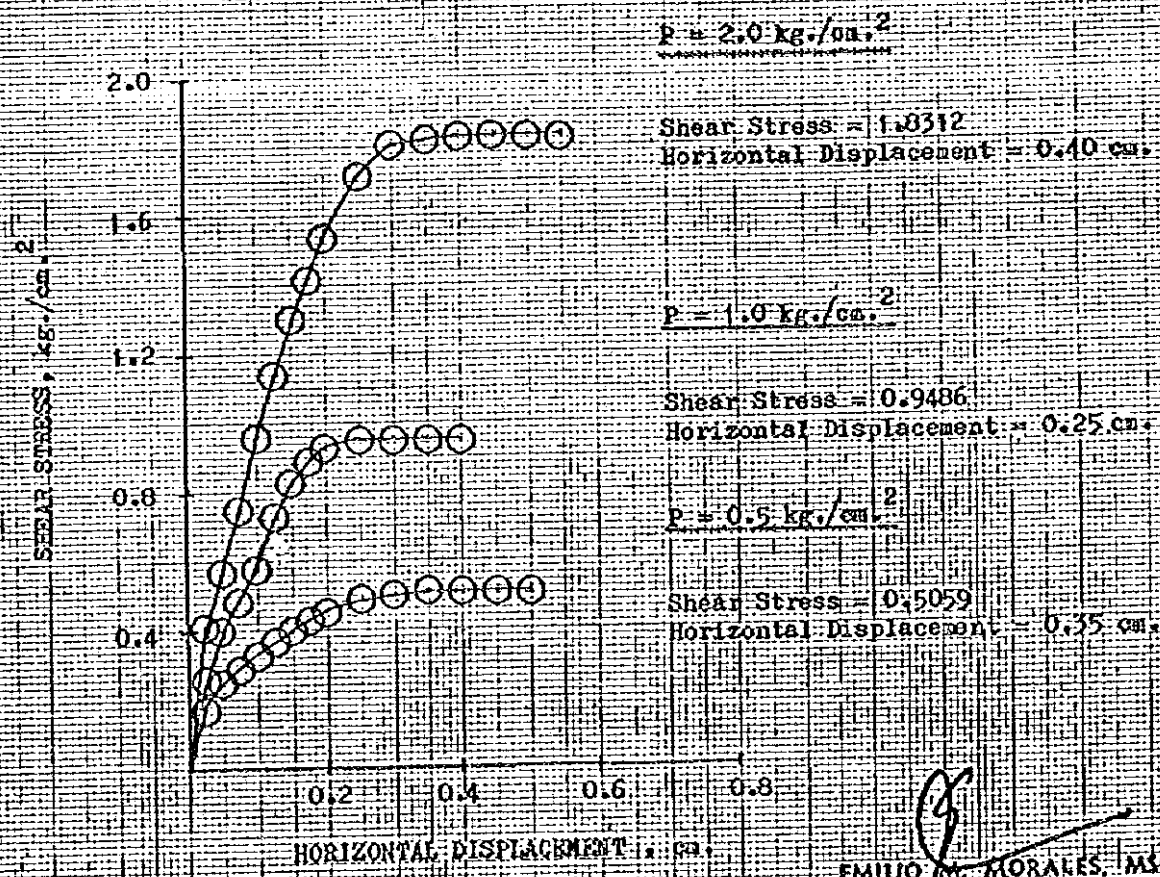
ERN - 101 871 kgf
 EXP. - 25 845 DCE

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION : SABO DAM No.9 SAMPLE : BH-2 DEPTH : 5.50 M.	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>4</u> OF <u>4</u>
	JOB NO:	CROSS REFERENCE:
	TESTED BY: C.A.M.	CHECKED BY: J.E.V.
	DATE TESTED:	DATE FINISHED:



**DIRECT SHEAR TEST
(MAXIMUM DENSITY)**

COMPUTER PRINT-OUT	<input checked="" type="checkbox"/>
MANUAL CORRECTION	<input checked="" type="checkbox"/>
BY:	<i>JACW</i>
QUALITY ASSURANCE	
CHKD. BY:	<i>9</i>



[Signature]
EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 1236

1 KN = 101.971 Kgf
 1 cm. = 0.3937 in.

COMPACTION TEST

Project PINATUBO Job No. DEPTH : 9.50 M.
 Location of Project SABO DAM #9 Boring No. 2 Sample No. -
 Description of Soil C.A.M.
 Test Performed By C.A.M. Date of Test _____
 Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g.
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. Vol. 72 cu.cm.

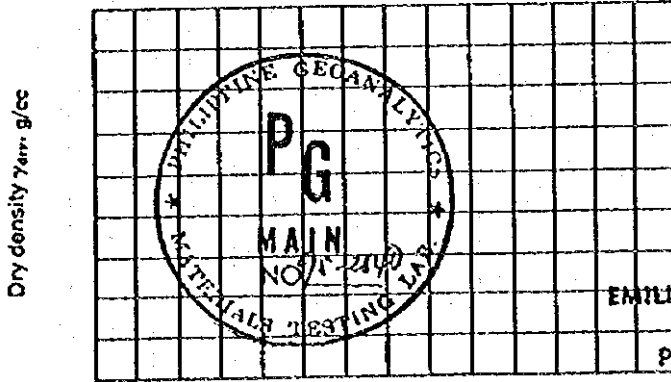
DATE RECEIVED : _____
DATE RELEASED : _____

Water Content Determination

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

COMPUTER PRINTOUT
 MANUAL COMPUTATION
 BY: NAV
 QUALITY ASSURANCE
 CHKD BY: 9
 DATE: 8-28-92

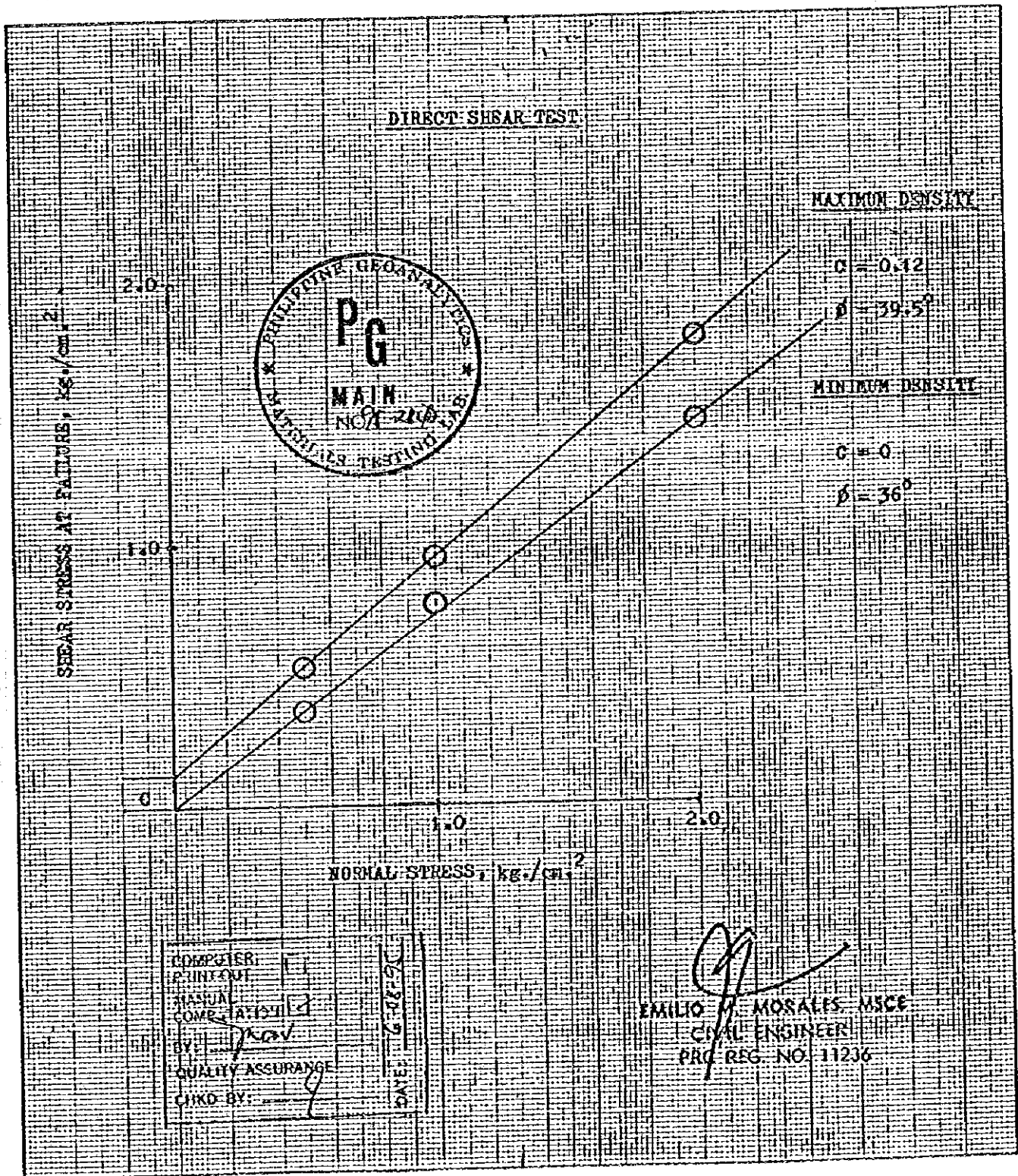
Density Determination	MINIMUM DENSITY			MAXIMUM DENSITY		
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,618	2,618	2,620	2,634	2,635	2,633
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	104	104	106	120	121	119
Wet density, g/cc	1.444	1.444	1.472	1.667	1.681	1.653
Dry density γ_d , g/cc	Average = 1.453			Average = 1.657		



EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRO REG. NO. 11236

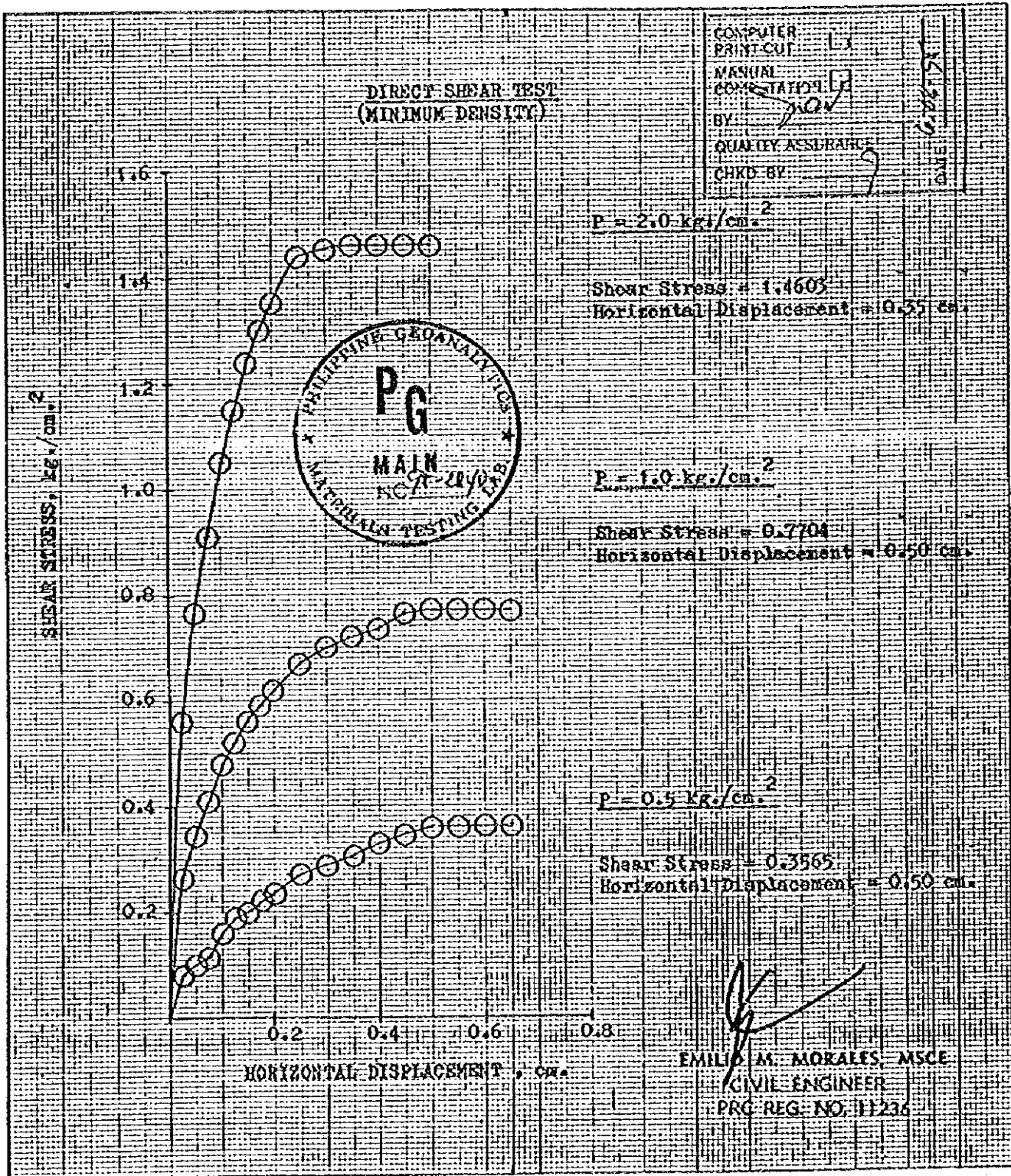
Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: SABO DAM No.9 SAMPLES: BR-2	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>4</u>
	JOB NO:	CROSS REFERENCE:
	TESTED BY: C.A.M.	CHECKED BY: J.B.V.
	DATE TESTED:	DATE FINISHED:



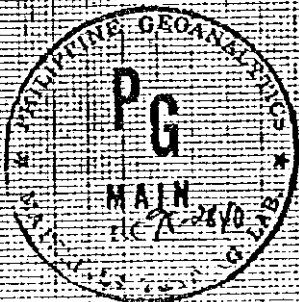
100% 100%
 100% 100%

PHILIPPINE GEOANALYTICS	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>3</u> OF <u>4</u>
	PROJECT: PINATUBO	JOB NO.:
LOCATION : SABO DAM No.9	TESTED BY: C.A.M.	CHECKED BY: J.E.V.
SAMPLE : BH-2	DEPTH : 9.50 M.	DATE TESTED:
		DATE FINISHED:



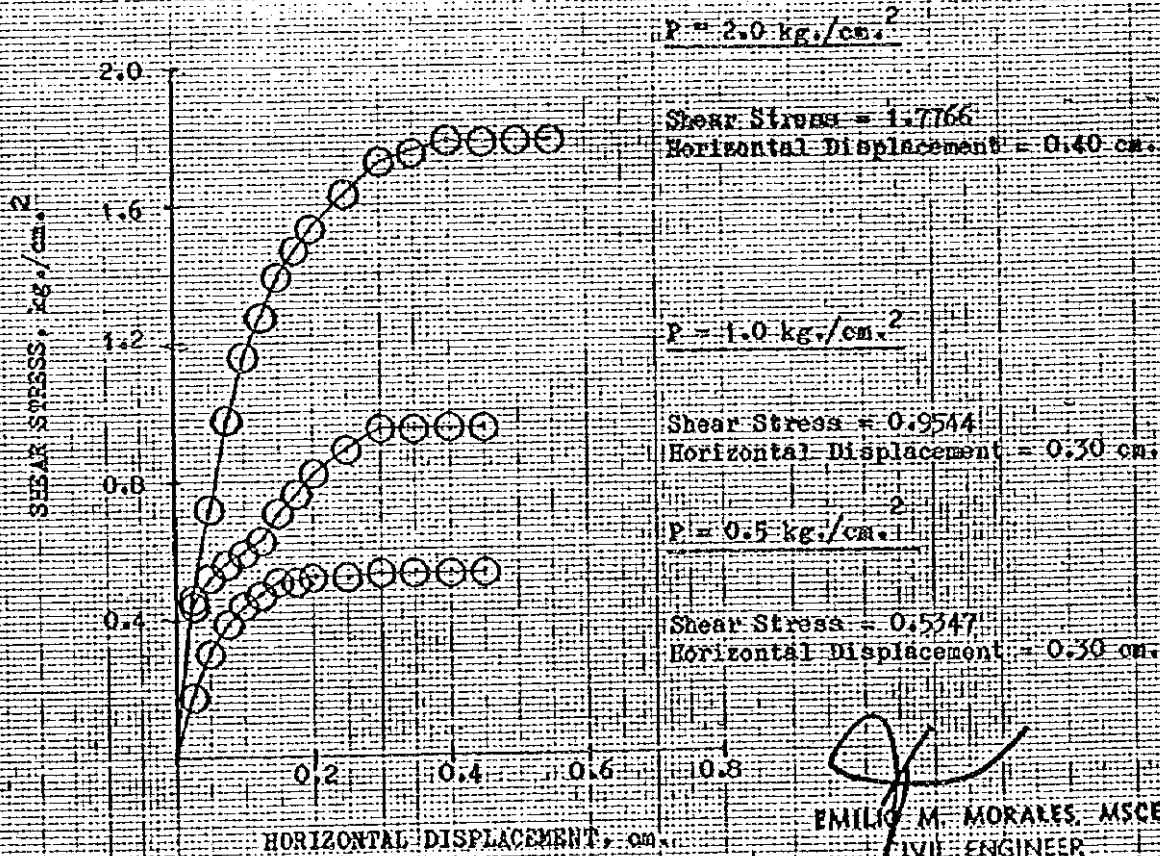
1 KN = 101.971 Kg
 1 MPa = 20.7252 kgf/cm²

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: SABO DAM No.9 SAMPLE BH-2	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET 4 of 4
	JOB NO.	CROSS REFERENCE:
	TESTED BY: G.A.M.	CHECKED BY: J.E.V.
	DEPTH: 9.50 M. DATE TESTED:	DATE FINISHED:



**DIRECT SHEAR TEST
(MAXIMUM DENSITY)**

COMPUTER PRINTOUT	<input type="checkbox"/>	DATE: 6-28-78
MANUAL COMPUTATION	<input checked="" type="checkbox"/>	
BY: JCEV		
QUALITY ASSURANCE		
CHKD. BY:		



EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

COMPACTION TEST

DEPTH : 5.50 M.

Project PINATUBO Job No. _____
 Location of Project SABO DAM #9 Boring No. 3 Sample No. _____
 Description of Soil C.A.M.
 Test Performed By _____ Date of Test _____
 Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g.
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. Vol. 72 cu.cm.

DATE RECEIVED : _____
DATE RELEASED : _____

Water Content Determination

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

COMPUTER PRINT-OUT
 MANUAL COMPUTATION
 BY: MAN
 QUALITY ASSURANCE
 CHKD BY: _____
 DATE: 2-28-92

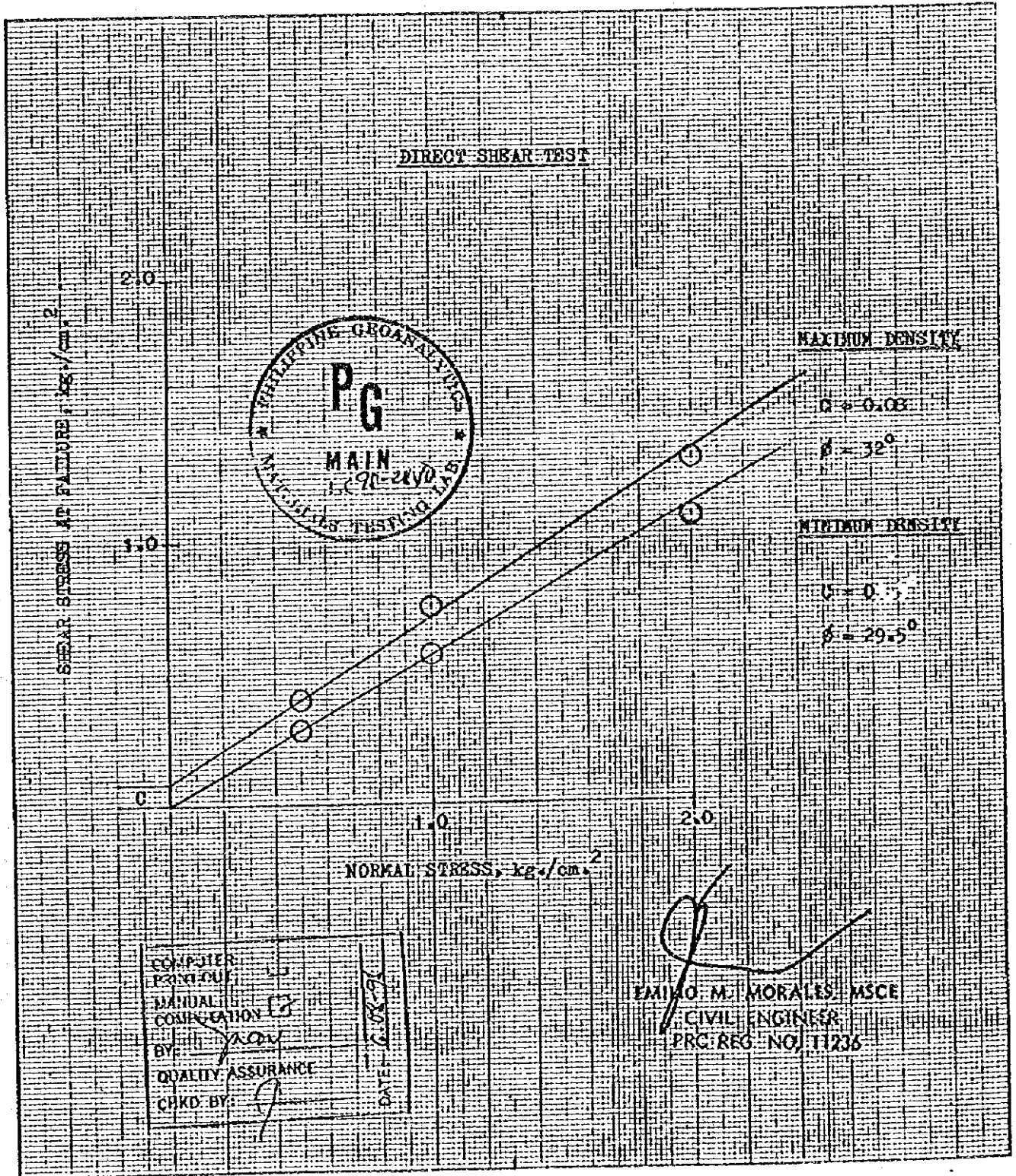
Density Determination	MINIMUM DENSITY			MAXIMUM DENSITY		
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,620	2,618	2,622	2,641	2,644	2,639
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	106	104	108	127	130	125
Wet density, g/cc	1.472	1.444	1.500	1.764	1.806	1.736
Dry density γ , g/cc	Average = 1.472			Average = 1.769		

Dry density γ_{err} , g/cc

EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

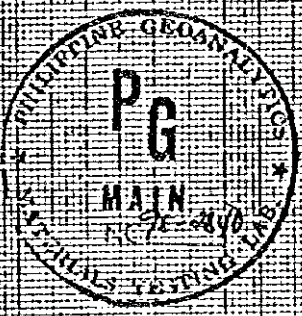
Water content, w% _____
 Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> of <u>4</u>
	PROJECT: PINATUBO	JOB NO.:
LOCATION: SABO DAM No.9	TESTED BY: C.A.M.	CHECKED BY: J.R.V.
SAMPLE: BH-3	DEPTH: 5.50 M.	DATE FINISHED:



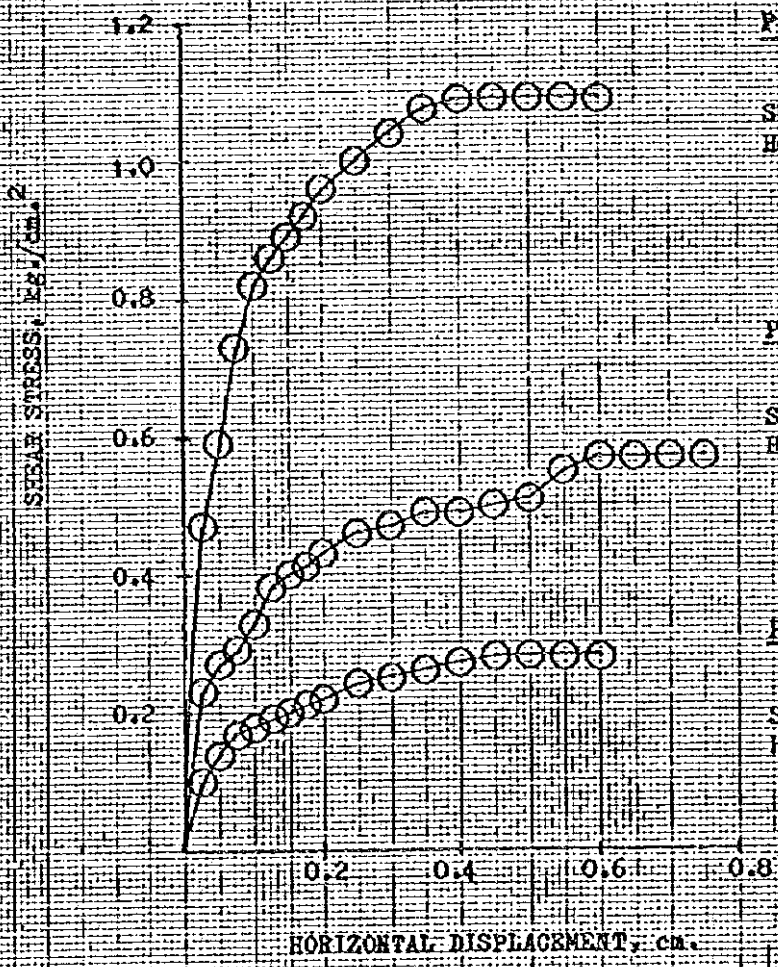
1 KN = 101.97 kg
 1 MPa = 10.197 kg/cm²

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: SABO DAM No.9 SAMPLE BH-3 DEPTH: 5.50 M.	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>3</u> of <u>4</u>
	JOB NO:	CROSS REFERENCE:
	TESTED BY: <u>C.A.M.</u>	CHECKED BY: <u>J.B.V.</u>
	DATE TESTED:	DATE FINISHED:



**DIRECT SHEAR TEST
(MINIMUM DENSITY)**

COMPUTER PRINTOUT	<input type="checkbox"/>
MANUAL CHECK TAKEN BY	<input checked="" type="checkbox"/>
QUALITY ASSURANCE	<input type="checkbox"/>
CHKD. BY	<input type="checkbox"/>



$P = 2.0 \text{ kg./cm.}^2$
 Shear Stress = 1.0924
 Horizontal Displacement = 0.45 cm.

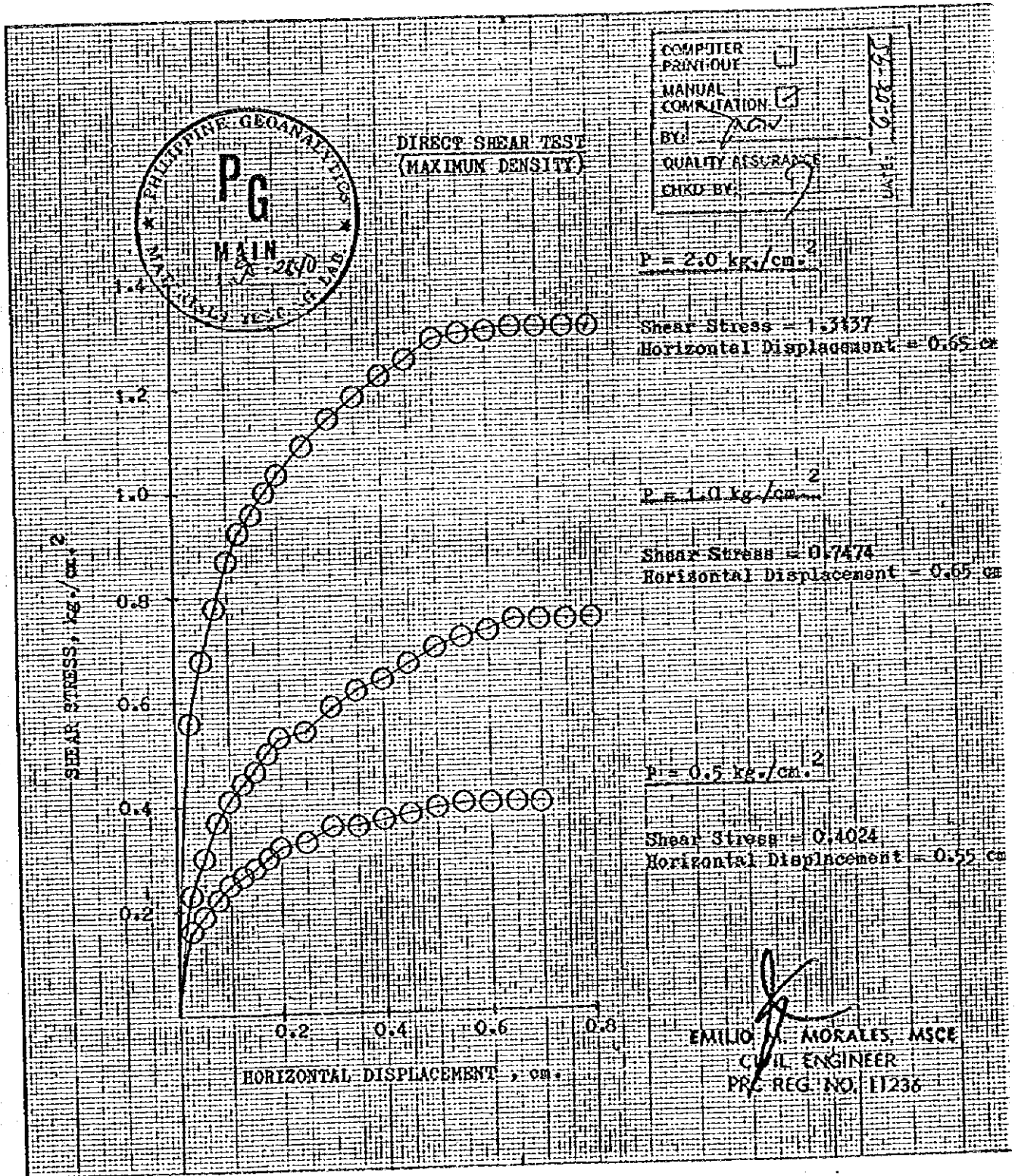
$P = 1.0 \text{ kg./cm.}^2$
 Shear Stress = 0.5692
 Horizontal Displacement = 0.60 cm.

$P = 0.5 \text{ kg./cm.}^2$
 Shear Stress = 0.2760
 Horizontal Displacement = 0.45 cm.

[Signature]
EMILIO A. MORALES, MSCE
 CIVIL ENGINEER
 P.E. REG. NO. 11236

1 KM = 101.97 kgf
 1 MPa = 10.197 kgf/cm²

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: SABO DAM No.9 SAMPLE BH-3	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET 4 OF 4
	JOB NO:	CROSS REFERENCE:
	TESTED BY: C.A.M.	CHECKED BY: J.S.V.
	DATE TESTED:	DATE FINISHED:



COMPACTION TEST

Project PINATUBO Job No. DEPTH : 9.50 M.
 Location of Project SABO DAM #9 Boring No. 3 Sample No. ---
 Description of Soil _____
 Test Performed By C.A.M. Date of Test _____
 Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g.
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. Vol. 72 cu.cm.

DATE RECEIVED :
DATE RELEASED :

Water Content Determination

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

COMPUTER PRINT-OUT

MANUAL COMPUTATION

BY: JAGV

QUALITY ASSURANCE

CHKD BY: _____

DATE: 6-08-98

Density Determination

MINIMUM DENSITY

MAXIMUM DENSITY

	MINIMUM DENSITY			MAXIMUM DENSITY		
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,624	2,627	2,626	2,648	2,650	2,650
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	110	113	112	134	136	136
Wet density, g/cc	1.528	1.569	1.556	1.861	1.889	1.889
Dry density γ , g/cc	Average = 1.531			Average = 1.879		

PHILIPPINE INSTITUTE OF GEOTECHNICAL ENGINEERING AND MATERIALS TESTING LABORATORY

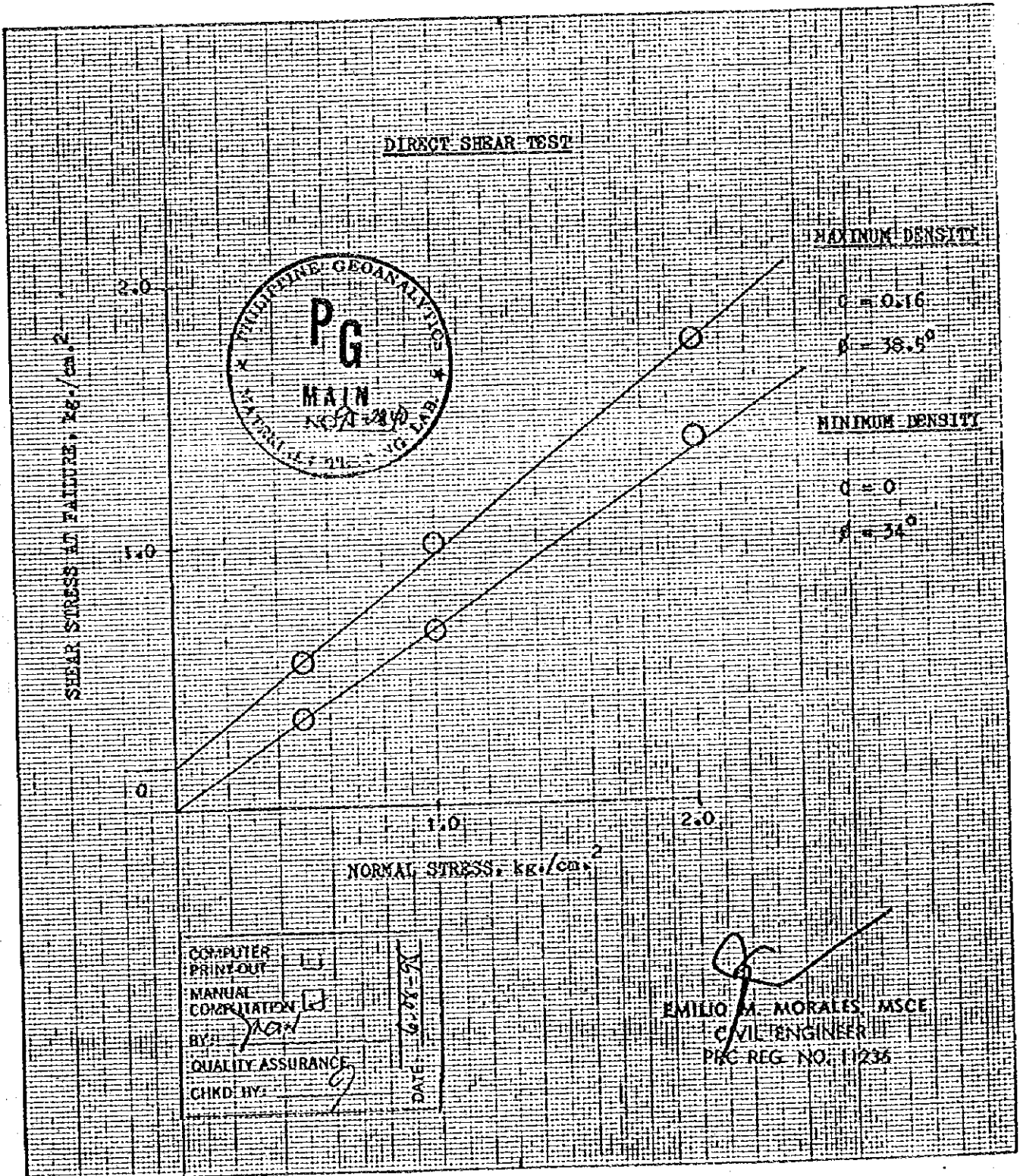
PG

NO. 11236

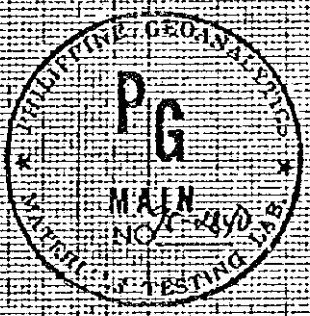
EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRO REG. NO. 11236

Water content, w% _____
 Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION : SABO DAM No.9 SAMPLE : BH-3 DEPTH : 9.50 M.	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>4</u>
	JOB NO:	CROSS REFERENCE:
	TESTED BY: C.A.M.	CHECKED BY: J.E.V.
	DATE TESTED:	DATE FINISHED:

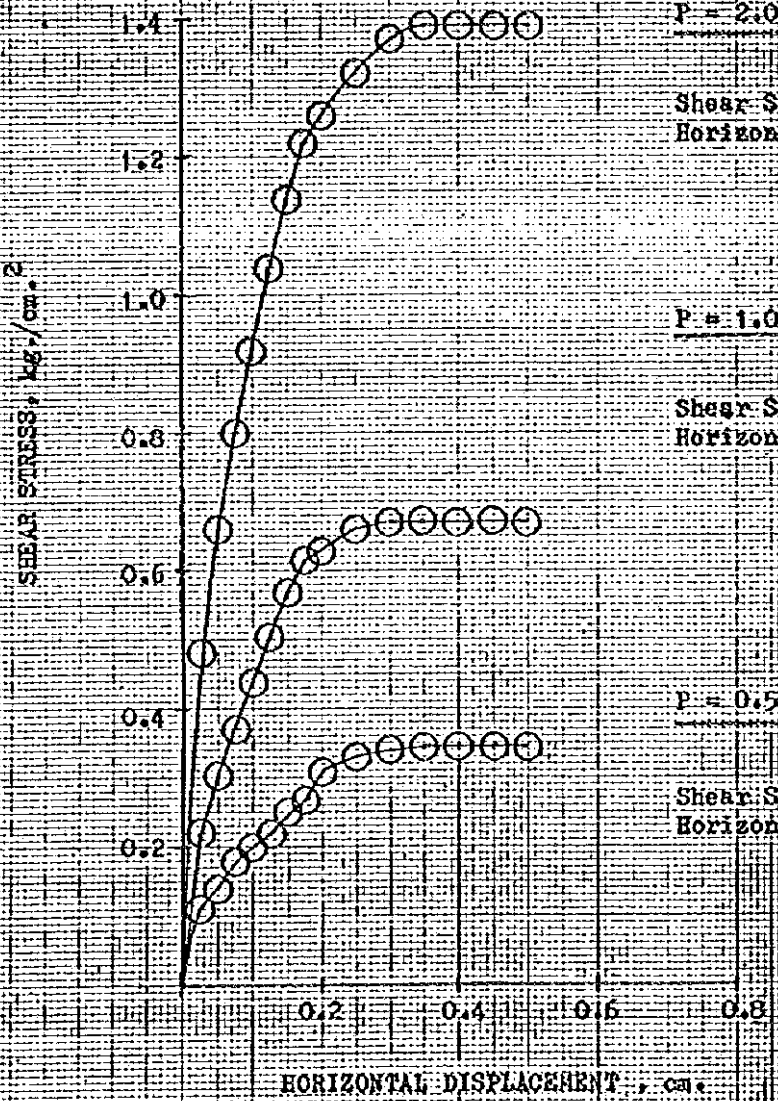


PHILIPPINE GEOANALYTICS		COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>3</u> OF <u>4</u>
PROJECT: PINATUBO		JOB NO:	CROSS REFERENCE:
LOCATION: SABO DAM No.9		TESTED BY: C.A.M.	CHECKED BY: J.S.V.
SAMPLE: BH-3 DEPTH: 9.50 M.		DATE TESTED:	DATE FINISHED:



**DIRECT SHEAR TEST
(MINIMUM DENSITY)**

COMPUTER PRINT-OUT
 MANUAL CORRECTION:
 BY: *Cam*
 QUALITY ASSURANCE
 CHKD BY: *JSV*
 DATE: *9-28-77*



$P = 2.0 \text{ kg/cm}^2$


Shear Stress = 1.3913
 Horizontal Displacement = 0.35 cm.

$P = 1.0 \text{ kg/cm}^2$

Shear Stress = 0.6669
 Horizontal Displacement = 0.30 cm.

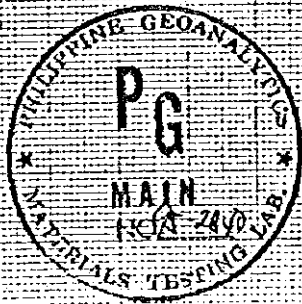
$P = 0.5 \text{ kg/cm}^2$

Shear Stress = 0.3450
 Horizontal Displacement = 0.35 cm.


EMILIO MORALES, MSCE
 CIVIL ENGINEER
 PRO. REG. NO. 11236

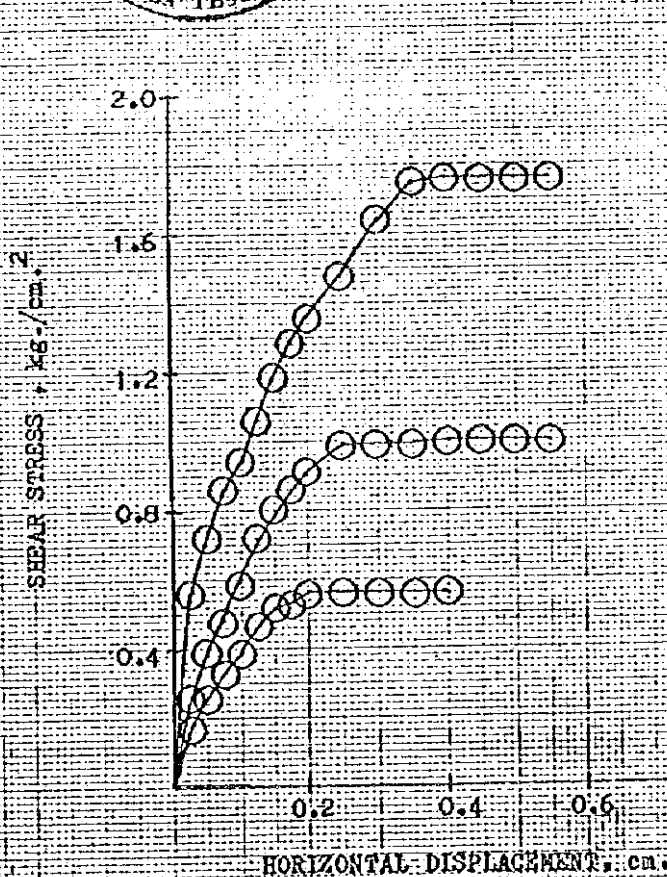
1 KN = 1000 Kg
1 MPa = 100 kg/cm²

PHILIPPINE GEOANALYTICS		COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>4</u> OF <u>4</u>
PROJECT: PINATUBO		JOB NO.	CROSS REFERENCE:
LOCATION: SABO DAM No.9		TESTED BY: <u>G.A.M.</u>	CHECKED BY: <u>J.E.V.</u>
SAMPLE: BH-3 DEPTH: 9.50 M.		DATE TESTED:	DATE FINISHED:



**DIRECT SHEAR TEST
(MAXIMUM DENSITY)**

COMPUTER PRINTOUT <input type="checkbox"/> MANUAL COMPUTATION <input checked="" type="checkbox"/> BY: <u>Jan</u> QUALITY ASSURANCE <input checked="" type="checkbox"/> CHKD. BY: <u>g</u>	DATE: <u>10-20-9</u>
---	----------------------



$P = 2.0 \text{ kg./cm.}^2$

Shear Stress = 1.7564
 Horizontal Displacement = 0.40 cm.

$P = 1.0 \text{ kg./cm.}^2$

Shear Stress = 0.9975
 Horizontal Displacement = 0.40 cm.

$P = 0.5 \text{ kg./cm.}^2$

Shear Stress = 0.5634
 Horizontal Displacement = 0.25 cm.

[Signature]
 EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

FORM - 101 974-497

COMPACTION TEST

PINATUBO

Page 1 of 3 pages

DEPTH : 5.00 M.

Project _____ Job No. _____
 Location of Project MASKUP CONSOLIDATION DAM Boring No. 1 Sample No. -
 Description of Soil C.A.M.
 Test Performed By _____ Date of Test 07-03-95
 Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. Vol. 72 cu.cm.

DATE RECEIVED :
DATE RELEASED : 07 JUL 1995

Water Content Determination

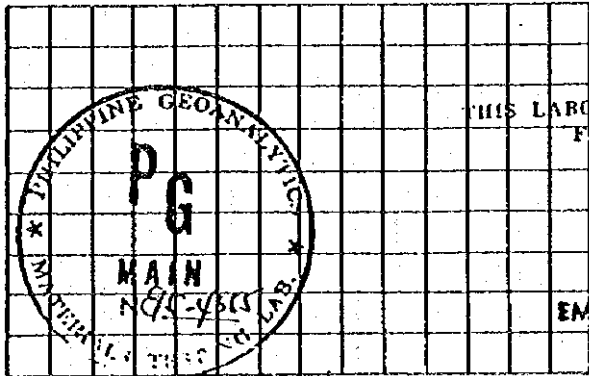
Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

MAXIMUM DENSITY

Density Determination

	1	2	3	4	5	6
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,648	2,649	2,646	-	-	-
Wt. of mold	2,514	2,514	2,514	-	-	-
Wt. of soil in mold	134	135	132	-	-	-
Wet density, g/cc	1.861	1.875	1.833	-	-	-
Dry density γ , g/cc	Average = 1.856			-	-	-

Angelita K. Morales
ANGELITA K. MORALES
 CIVIL ENGINEER
 REG. NO. 12394
 DEPUTY-TECHNICAL MANAGER

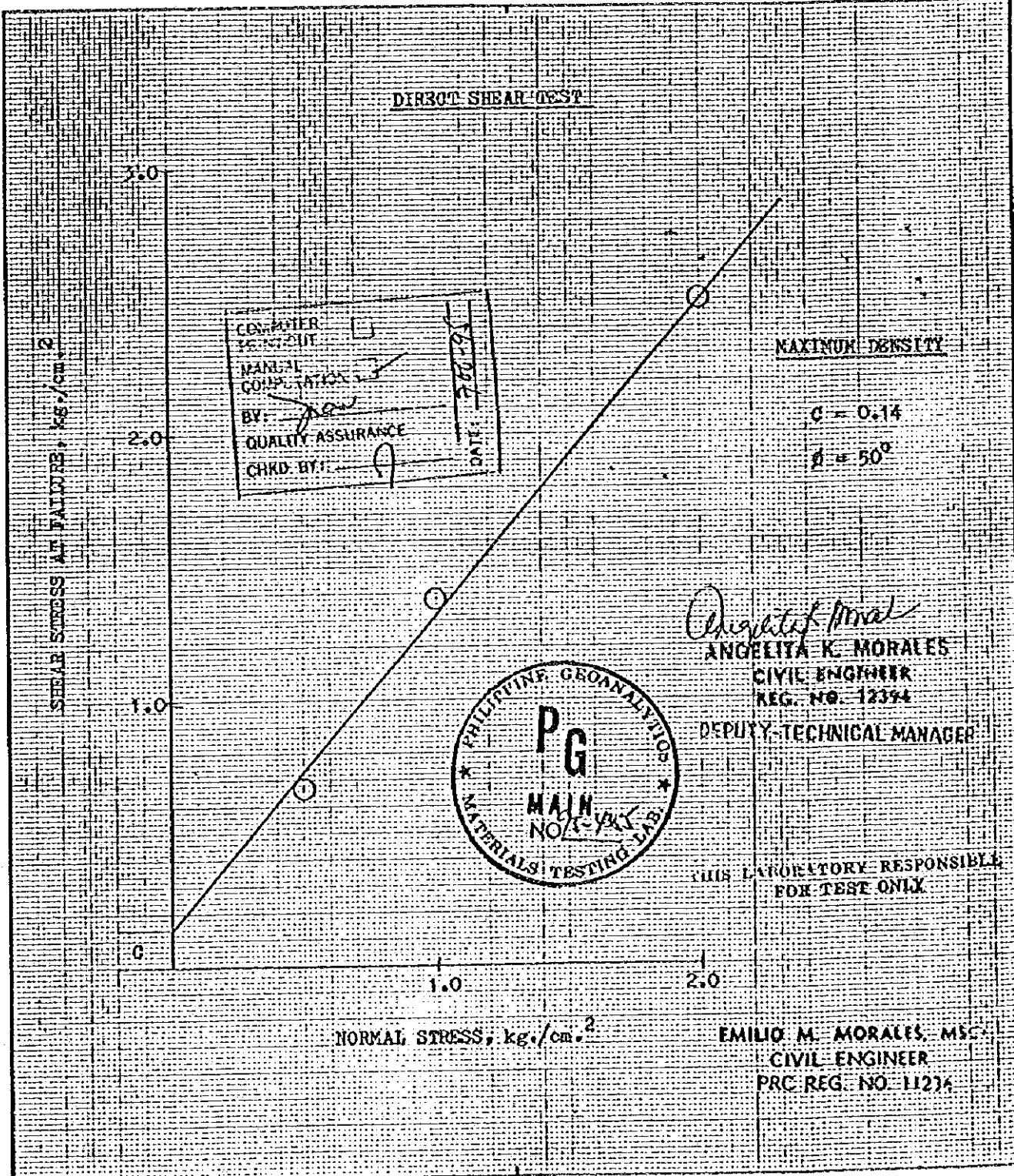


THIS LABORATORY RESPONSIBLE FOR TEST ONLY

EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

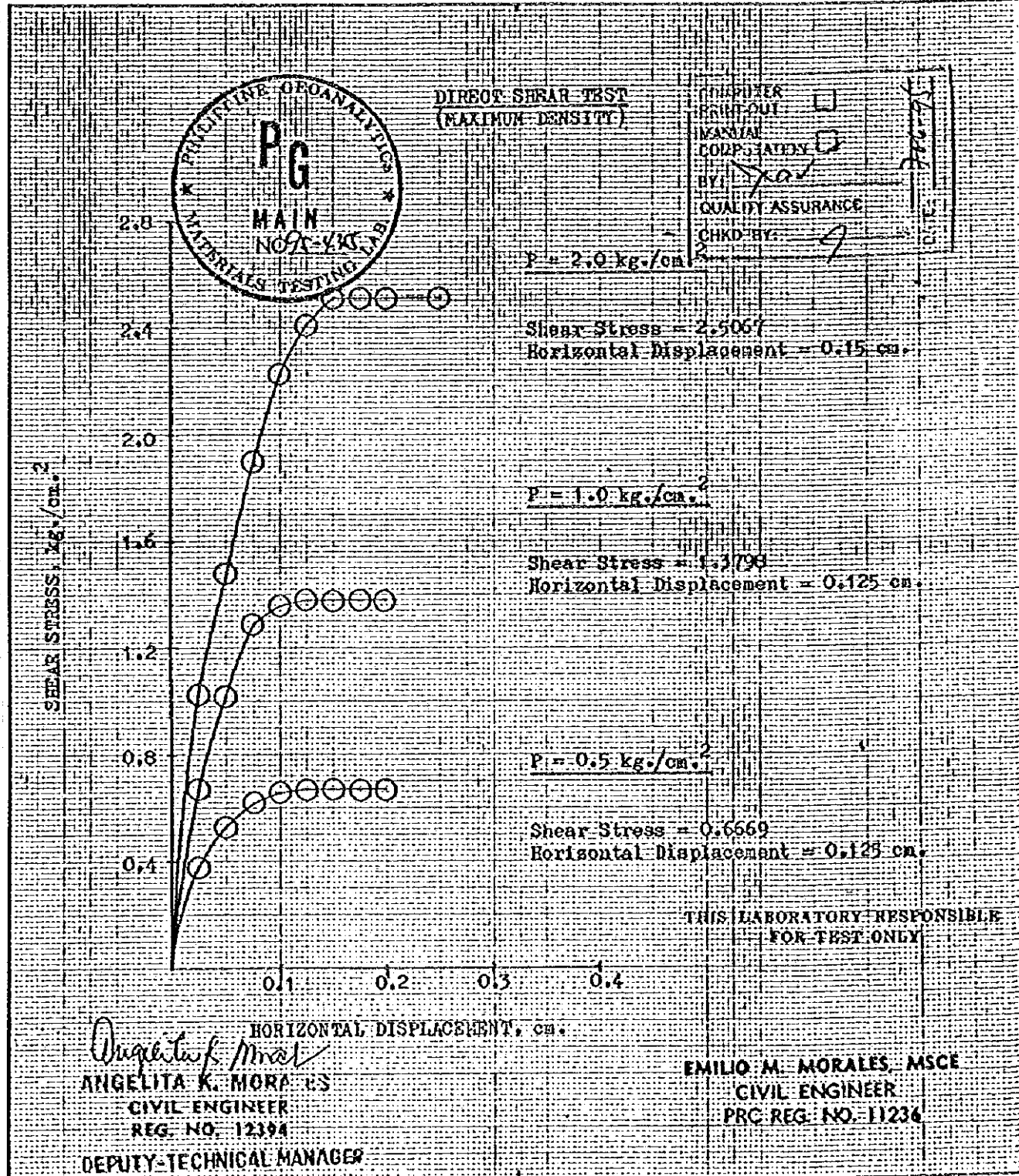
Water content, w% _____
 Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: MASKUP CONSOLIDATION DAM SAMPLE: BH-1 DEPTH: 5.00 M.	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>3</u>
	JOB NO:	CROSS REFERENCE:
	TESTED BY: <u>CAN</u>	CHECKED BY: <u>JEV</u>
	DATE TESTED: <u>07-03-95</u>	DATE FINISHED: <u>07-03-95</u>



1 KG = 101.971 Kgf
 1 GPa = 10,000 kg/cm²

PHILIPPINE GEOANALYTICS PROJECT: PINATUBO LOCATION: MASKUP CONSOLIDATION DAM SAMPLE: BH-1 DEPTH: 5.00 M.	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>3</u> OF <u>3</u>
	JOB NO.:	CROSS REFERENCE:
	TESTED BY: CAM	CHECKED BY: JSV
	DATE TESTED: 07-03-95	DATE FINISHED: 07-03-95



SKN - 101 878 Npt
 1996 - 04 2000 0002

COMPACTION TEST

Page 1 of 4 pages
DEPTH : 9.55 M.

Project PINATUBO Job No. _____
 Location of Project MASKUP CONSOLIDATION DAM Boring No. 1 Sample No. _____
 Description of Soil C.A.M. Date of Test 06-14-95
 Test Performed By _____ No. of Layers 2 Wt. of Hammer 349 g.
 Blows/Layer 50 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. in. Vol. 72 cu.cm.

DATE RECEIVED : _____
DATE RELEASED : _____

Water Content Determination

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, $w\%$						

COMPUTER PRINT OUT
 MANUAL COMPUTATION
 BY: [Signature]
 QUALITY ASSURANCE
 CHECK BY: [Signature]

DATE: 6-27-95

Density Determination

	MINIMUM DENSITY			MAXIMUM DENSITY		
Assumed water content	-	-	-	-	-	-
Water content, $w\%$	-	-	-	-	-	-
Wt. of soil + mold	2,638	2,639	2,642	2,645	2,647	2,646
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	124	125	128	131	133	132
Wet density, g/cc	1.722	1.736	1.778	1.819	1.847	1.833
Dry density γ , g/cc	Average = 1.745			Average = 1.833		

Dry density γ_{dry} , g/cc

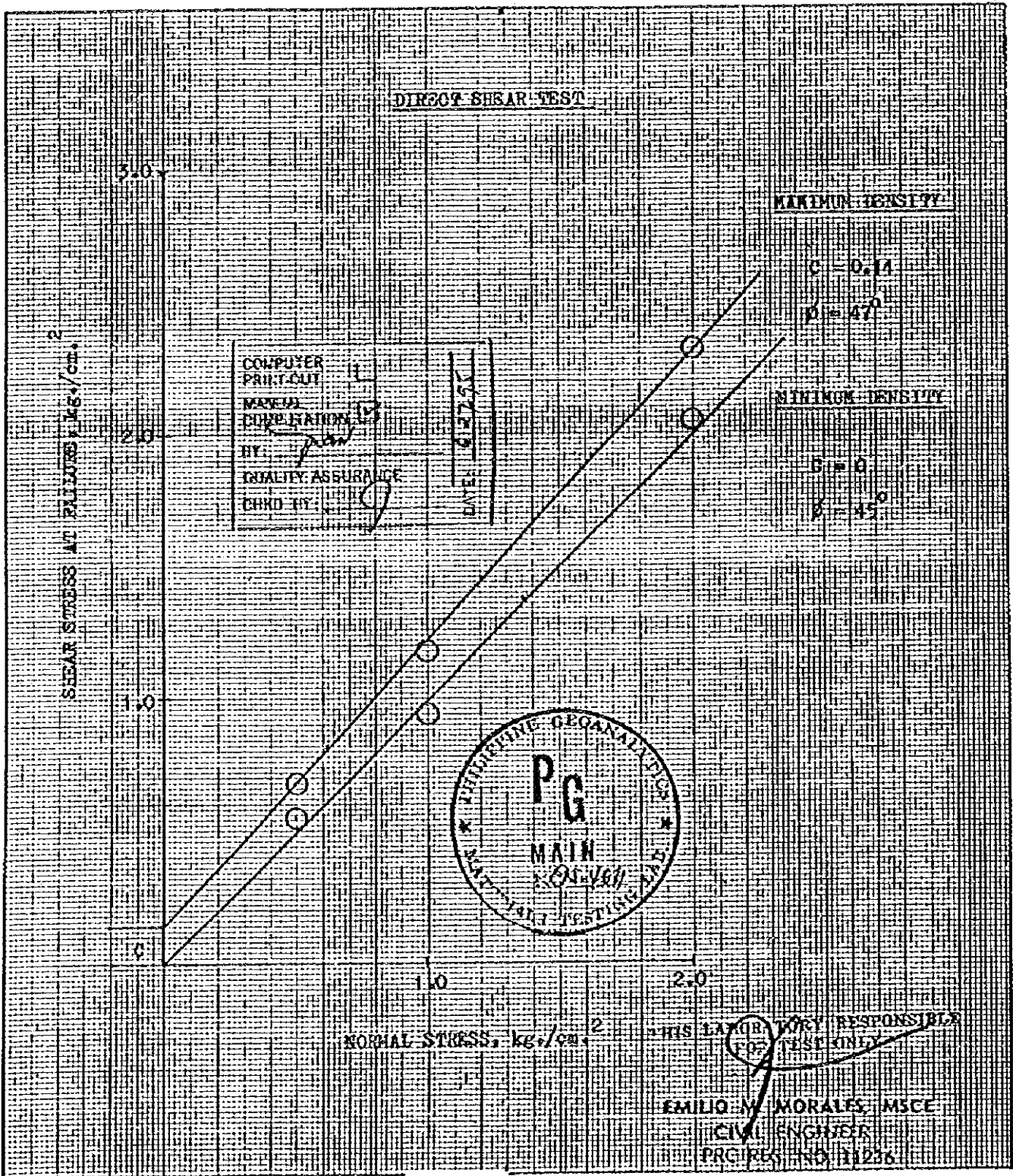
PHILIPPINE GEOANALYTICAL MATERIALS TESTING LAB.
PG
MAIN
NOT FOR TESTING LAB.

THIS LABORATORY RESPONSIBLE FOR TEST ONLY

[Signature]
 EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

Water content, $w\%$ _____
 Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS	COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>4</u>
	PROJECT: PINATUBO	JOB NO.:
LOCATION : MASKUP CONSOLIDATION DAM	TESTED BY: C.A.M.	CHECKED BY: JEV
SAMPLE : BH-1 DEPTH : 9.55 M.	DATE TESTED: 06-14-95	DATE FINISHED: 06-14-95



1 KN = 101.971 Kg
 1 KPa = 20.435 PSF

PHILIPPINE

GEOTECHNICAL ANALYTICS

PROJECT: PINATUBO

LOCATION: MASKUP CONSOLIDATION DAM

SAMPLE: BR-1

DEPTH: 9.55 M.

COMPUTER PRINTOUT

DETAILS PREPARED

JOB NO:

TESTED BY: CAM

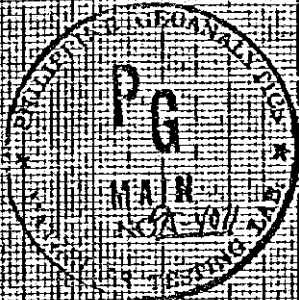
DATE TESTED: 06-14-95

SHEET 3 OF 4

CROSS REFERENCE:

CHECKED BY: JEV

DATE FINISHED: 06-14-95



DIRECT SHEAR TEST (MINIMUM DENSITY)

COMPUTER PRINT-OUT

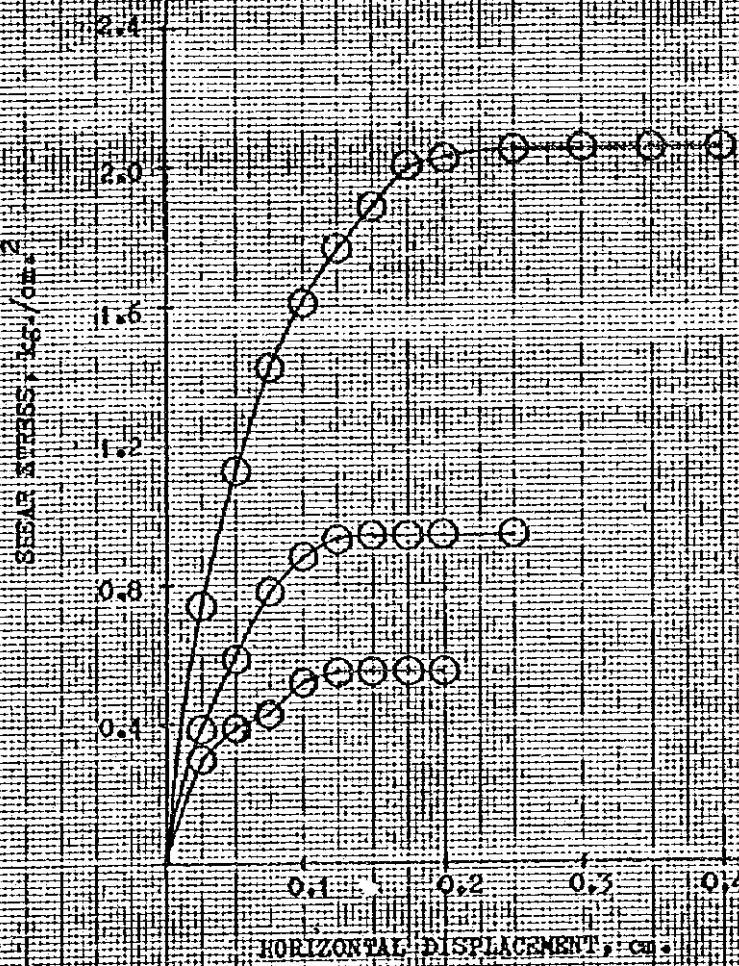
MANUAL CALCULATION

BY: *[Signature]*

QUALITY ASS. SECT.

CHECKED BY: *[Signature]*

0.5229



$P = 2.0 \text{ kg/cm}^2$

Shear Stress = 2.0168
Horizontal Displacement = 0.25 cm

$P = 1.0 \text{ kg/cm}^2$

Shear Stress = 0.9400
Horizontal Displacement = 0.15 cm

$P = 0.5 \text{ kg/cm}^2$

Shear Stress = 0.5462
Horizontal Displacement = 0.125 cm

THIS LABORATORY RESPONSIBLE FOR TEST ONLY

[Signature]
 EMILIO M. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

1 KN = 101.871 Kg
1 KPa = 20.481 PSF

**INTERNATIONAL
GEOANALYTICS**

COMPUTER PRINTOUT
DETAILS PREPARED

SHEET 4 OF 4

PROJECT: PINATUBO

JOB NO:

CROSS REFERENCE:

LOCATION: MASKUP CONSOLIDATION DAM

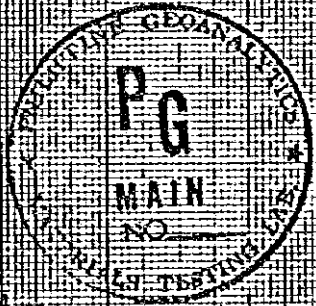
TESTED BY: CAM

CHECKED BY: JBV

SAMPLE: BH-1 DEPTH: 9.55 M.

DATE TESTED: 06-14-95

DATE FINISHED: 06-14-95



**DIRECT SHEAR TEST
(MAXIMUM DENSITY)**

COMPUTER PRINTOUT
MANUAL CORRECTIONS
BY:
QUALITY ASSURANCE
CHD BY:

$P = 2.0 \text{ kg/cm}^2$

Shear Stress = 2.3170
Horizontal Displacement = 0.20 cm.

$P = 1.0 \text{ kg/cm}^2$

Shear Stress = 1.1814
Horizontal Displacement = 0.25 cm.

$P = 0.5 \text{ kg/cm}^2$

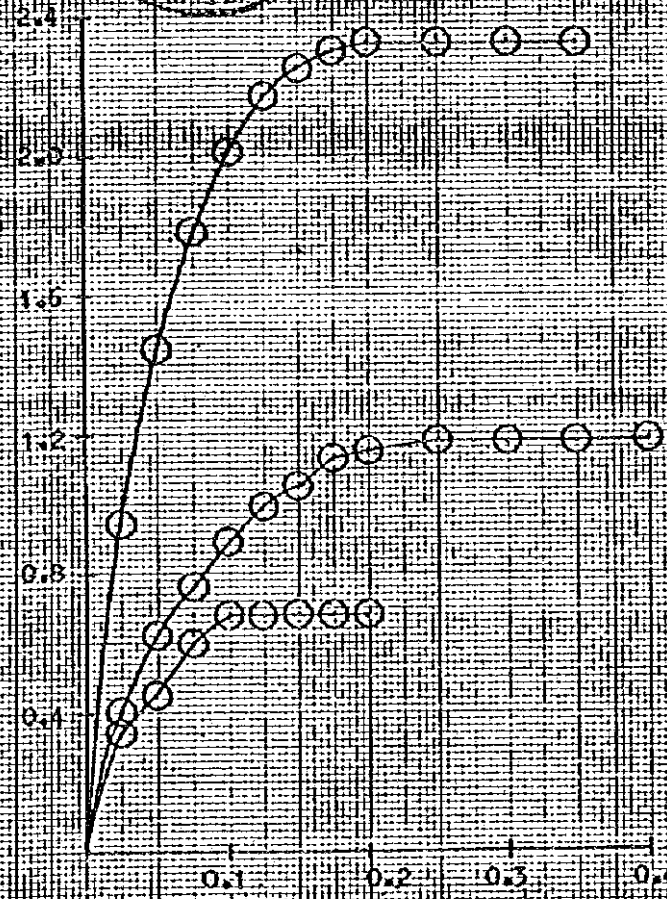
Shear Stress = 0.6842
Horizontal Displacement = 0.25 cm.

THIS LABORATORY RESPONSIBLE
FOR TEST ONLY

EMILIO A. MORALES, MSCE
CIVIL ENGINEER
P.E. REG. NO. 1236

SHEAR STRESS, kg/cm²

HORIZONTAL DISPLACEMENT, cm



COMPACTION TEST

Project PINATUBO Job No. DEPTH : 5.55 M.
 Location of Project MASKUP CONSOLIDATION DAM Boring No. 2 Sample No. -
 Description of Soil _____
 Test Performed By C.A.M. Date of Test 06-15-95
 Blows/Layer 50 No. of Layers 2 Wt. of Hammer 349 g.
 Mold dimensions: Diam. 6 X 6 cm. Ht. 2 cm. in. Vol. 72 cu.cm.

Water Content Determination

DATE RECEIVED _____
DATE RELEASED _____

Sample no.	1	2	3	4	5	6
Moisture can no.						
Wt. of can + wet soil						
Wt. of can + dry soil						
Wt. of water						
Wt. of can						
Wt. of dry soil						
Water content, w%						

COMPUTER PRINT-OUT
 MANUAL COMPACTION
 BY: [Signature]
 QUALITY ASSURANCE
 CHECKED BY: [Signature]
 DATE: 06-15-95

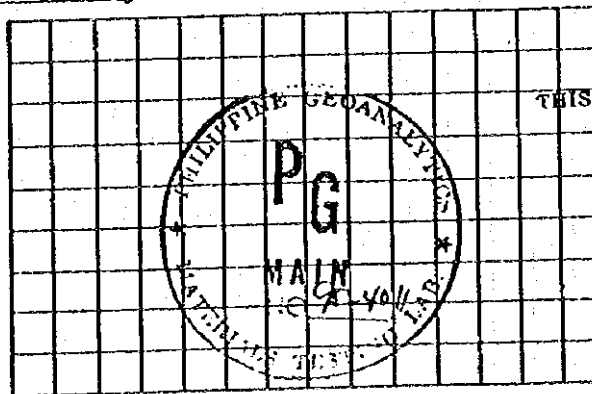
Density Determination

MINIMUM DENSITY

MAXIMUM DENSITY

	1	2	3	4	5	6
Assumed water content	-	-	-	-	-	-
Water content, w%	-	-	-	-	-	-
Wt. of soil + mold	2,615	2,624	2,623	2,697	2,691	2,696
Wt. of mold	2,514	2,514	2,514	2,514	2,514	2,514
Wt. of soil in mold	105	110	109	133	127	132
Wet density, g/cc	1.458	1.528	1.514	1.897	1.764	1.833
Dry density γ , g/cc	Average = 1.500			Average = 1.815		

Dry density γ_{dry} , g/cc

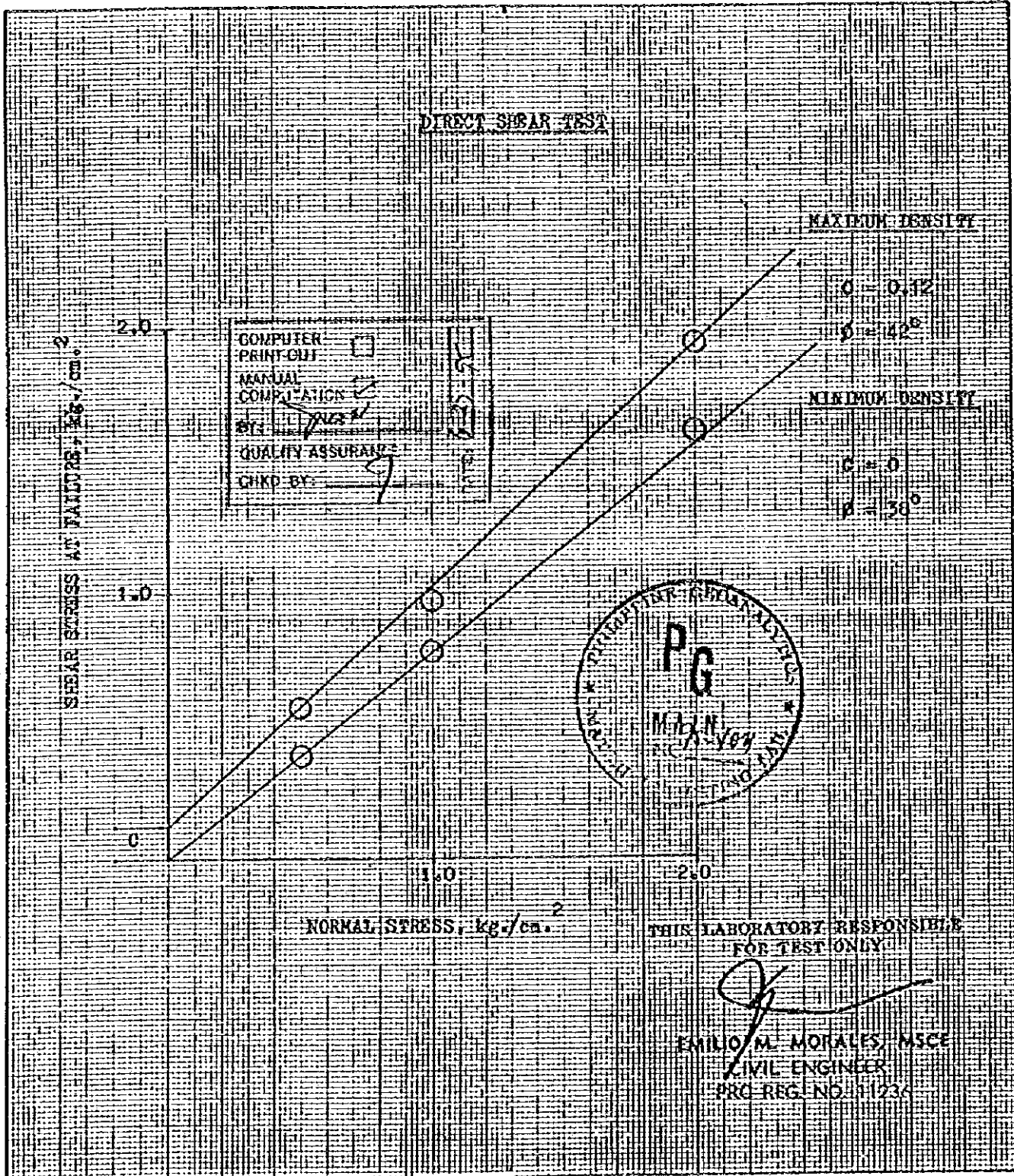


THIS LABORATORY RESPONSIBLE FOR TEST ONLY

[Signature]
 LEO A. MORALES, MSCE
 CIVIL ENGINEER
 PRC REG. NO. 11236

Optimum moisture = _____ % Maximum dry density = _____ g/cc

PHILIPPINE GEOANALYTICS		COMPUTER PRINTOUT <input type="checkbox"/> DETAILS PREPARED <input type="checkbox"/>	SHEET <u>2</u> OF <u>4</u>
PROJECT: PINATUBO		JOB NO.:	CROSS REFERENCE:
LOCATION : MASKUP CONSOLIDATION DAM		TESTED BY: CAN	CHECKED BY: JEV
SAMPLE : BH-2 DEPTH : 5.55 M.		DATE TESTED: 06-15-95	DATE FINISHED: 06-15-95



1 KN = 101.971 Kgf
 1 KPa = 20.885 PSF