SPECIFIC GRAVITY OF SOIL SOLIDS	LOCATION: **Sto. Tomas River, San Marcelino, Zambales** BORING NO.: **SL-4-1** DATE TESTED: **January 17, 2003** TESTED BY: **R. Cagbabanua** SHEET NO. **2 of 2**
PROJECT: THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO	

Sample Number	ss-10					
Depth (m)	10.00-10.45					
Volume of Flask @ 20° , ml	100	100				
Method of air removal	Rolling	Rolling				
Wt. of Flask + Water + Soil = Wbws	175.81	175.56				
Temperature, ^{o}C	28	28				
Wt. of Flask + Water = Wbw	157.00	156.72				
Wt. of Dry Soil = Ws	30.00	30.00				
Wt. of Water, Ww = Ws + Wbw - Wbws	11.19	11.16				
Specific Gravity, Gs = Ws / Ww	2.68	2.69				
Viscosity Correction	0.9963	0.9963				
Specific Gravity corrected for Temp.	**2.67**	**2.68**				

Sample Number						
Depth (m)						
Volume of Flask @ 20°C						
Method of air removal						
Wt. of Flask + Water + Soil = Wbws						
Temperature, ^{o}C						
Wt. of Flask + Water = Wbw						
Wt. of Dry Soil = Ws						
Wt. of Water, Ww = Ws + Wbw - Wbws						
Specific Gravity, Gs = Ws / Ww						
Viscosity Correction						
Specific Gravity corrected for Temp.						

Remarks:

BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : ***Sto. Tomas River, San Marcelino, Zambales***

BORING NO.: **SL-4-2**
FINAL DEPTH: **20.00 m.**
GWT: **14.40 m.**
ELEVATION: **84.00 m.**
DATE STARTED: **Jan. 11, 2003**
DATE FINISHED: **Jan. 13, 2003**
SHEET NO. **1 of 3**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	REC.RATIO / R. Q. D / N - VALUE (10 30 50)	WATER CONTENT PL NMC LL (20 60 100)	P.I.	OTHER TEST RESULTS
1	(1.0-1.45 m) Light gray lahar SAND, with fine to coarse pyroclastic materials. (Rec: 45/45 cm.)	ss-1	Loose	*	7			
2	(2.0-2.45 m) Light gray lahar SAND, with non-plastic silt, with little amount of fine and coarse pyroclastic materials. (Rec: 45/35 cm.) *Permeability is conducted @ 3.00 m.*	ss-2	Very loose	SM	3			Gs = 2.67
3	(3.0-3.45 m) - same materilas - (Rec: 45/35 cm.)	ss-3	Med. dense	*	24			
4	(4.0-4.45 m) - same materials - (Rec: 45/30 cm.)	ss-4	Med. dense	SM	12			Gs = 2.63
5	(5.0-5.45 m) - same materials - (Rec: 45/35 cm.)	ss-5	Med. dense	*	13			
6	*Permeability is conducted @ 6.00 m.* (6.0-6.45 m) Light gray lahar SAND, with traces of coarse pyroclastic materials. (Rec: 45/35 cm.) *Note: Sample degraded into SILT/sandy SILT after oven drying in the Laboratory*	ss-6	Med. dense	SM-ML	18			Gs = 2.69
7	(7.0-7.45 m) - same materials - (Rec: 45/45 cm.)	ss-7	Dense	*	33			
8	(8.0-8.45 m) - same materials - (Rec: 45/45 cm.) *Note: Sample degraded into SILT/sandy SILT after oven drying in the Laboratory*	ss-8	Dense	SM-ML	44			Gs = 2.64
9	(9.0-9.45 m) - same materials - (Rec: 45/45 cm.) *Permeability is conducted @ 9.00 m.*	ss-9	Med. dense	*	29			
10								

BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : ***Sto. Tomas River, San Marcelino, Zambales***

BORING NO.: **SL-4-2**
FINAL DEPTH: **20.00 m.**
GWT: **14.40 m.**
ELEVATION: **84.00 m.**
DATE STARTED: **Jan. 11, 2003**
DATE FINISHED: **Jan. 13, 2003**
SHEET NO. **2 of 3**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	N - VALUE	WATER CONTENT (PL NMC LL)	P.I.	OTHER TEST RESULTS
	(10.0-10.45 m) Light gray lahar SAND, non-plastic silt and traces of pyroclastic materials. (Rec: 45/45 cm.) *Note: Sample became friable after oven drying into SILT.*	ss-10	Med. dense	SM-ML	29			Gs = 2.63
11	(11.0-11.45 m) Light gray to gray lahar SAND, with fine pyroclastic materials. (Rec: 45/45 cm.) *Approximately change formation @ 12.00 m.*	ss-11	Med. dense	SM-ML	15		NP	No Plasticity
12	(12.0-12.45 m) Light gray to gray sandy SILT, non-plastic, with traces of pyroclastic materials. (Rec: 45/25 cm.)	ss-12	Med. dense	ML	14			Gs = 2.72
13	(13.0-13.45 m) Brownish gray silty SAND, with traces of pyroclastic materials. (Rec: 45/30 cm.)	ss-13	Med. dense	*	18			
14	(14.0-14.45 m) Brownish gray silty SAND, non-plastic, with traces of gravel/pyroclastic materials. (Rec: 45/45 cm.) *Note: Water table @ 14.50 m.*	ss-14	Med. dense	SM	19			Gs = 2.68
15	(15.0-15.45 m) Brownish gray fine SAND, non-plastic, with little amount of non-plastic silt. (Rec: 45/20 cm.)	ss-15	Med. dense	*	30			
16	(16.0-16.45 m) Brownish gray silty SAND, with traces of fine pyroclastic materials. (Rec: 45/25 cm.)	ss-16	Med. dense	SM	22			Gs = 2.68
17	(17.0-17.45 m) Brownish gray fine to coarse SAND, with gravel and traces of non-plastic silt. (Rec: 45/35 cm.)	ss-17	Dense	*	38			
18	(18.0-18.45 m) Gray fine to coarse SAND, with some gravel-size pyroclastic materials and non-plastic silt. (Rec: 45/30 cm.)	ss-18	Dense	SM	30			Gs = 2.68
19	(19.0-19.45 m) - same materials - (Rec: 45/45 cm.)	ss-19	Med. dense	*	23			
20	(19.55-20.0 m) Gray silty fine to coarse SAND, with little amount of gravel-size pyroclastic	ss-20	Med. dense	SM	29			Gs = 2.66

BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

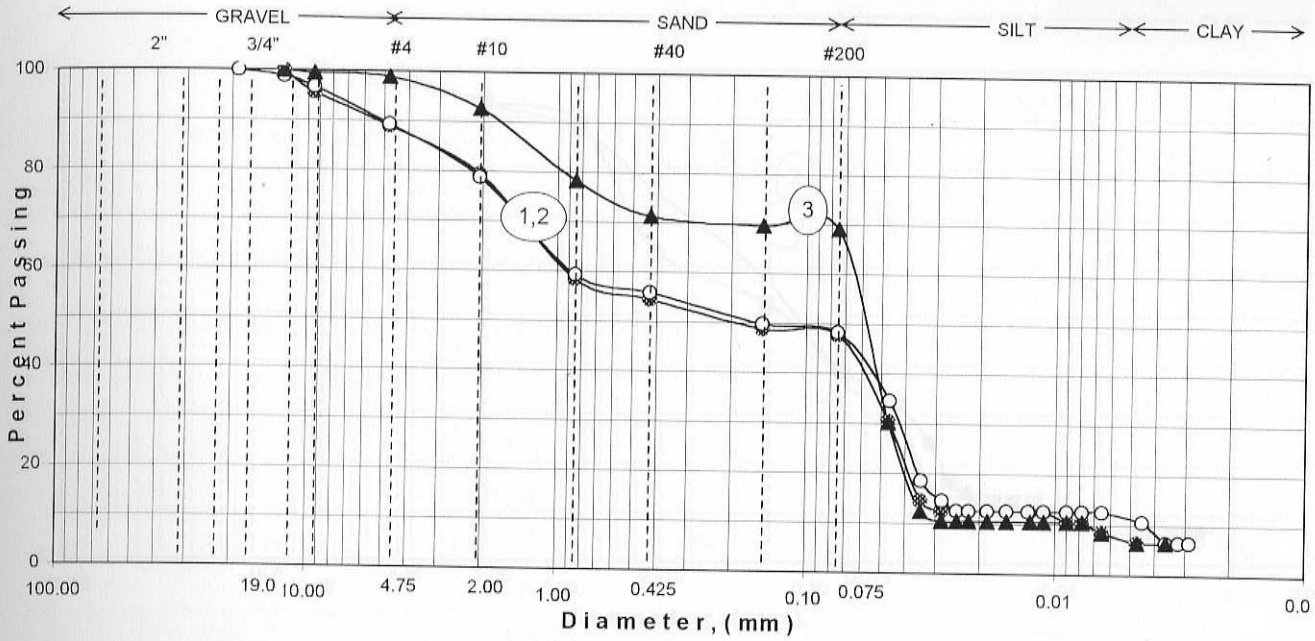
LOCATION : ***Sto. Tomas River, San Marcelino, Zambales***

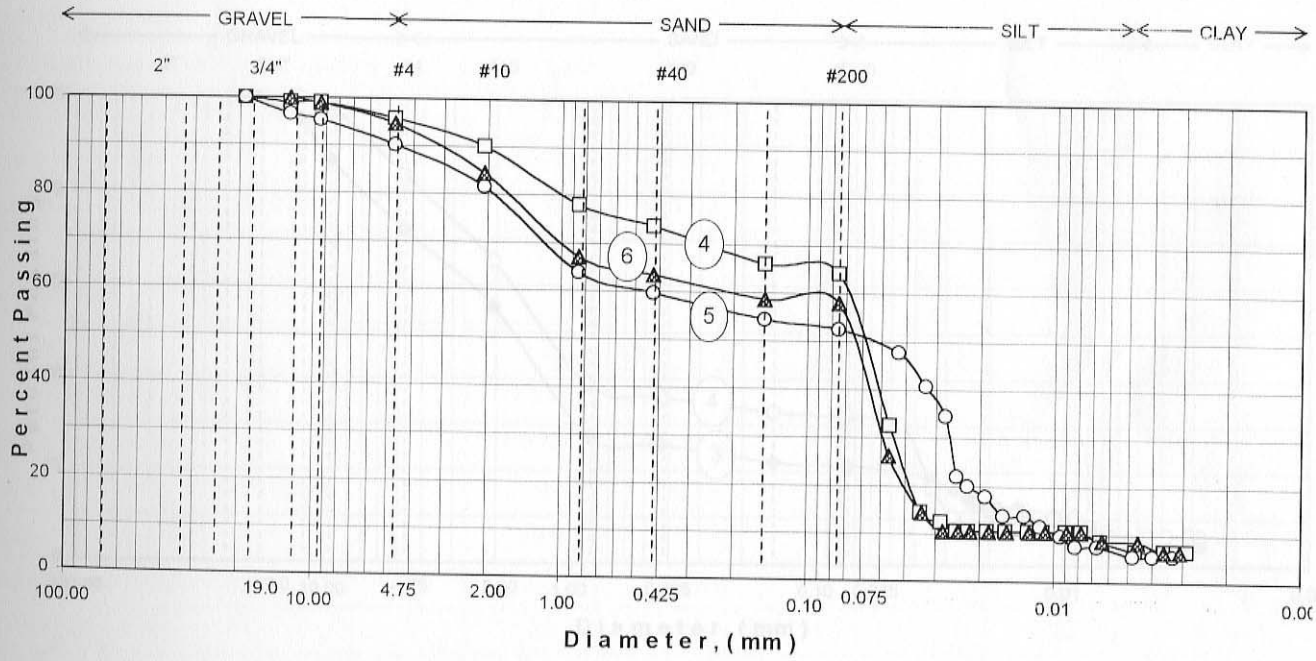
BORING NO.: **SL-4-2**
FINAL DEPTH: **20.00 m.**
GWT: **14.40 m.**
ELEVATION: **84.00 m.**
DATE STARTED: **Jan. 11, 2003**
DATE FINISHED: **Jan. 13, 2003**
SHEET NO. **3 of 3**

A G E S

DEPTH (m)		SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	REC.RATIO / R. Q. D / N - VALUE (10 30 50)	WATER CONTENT PL NMC LL (20 60 100)	P.I.	OTHER TEST RESULTS
		materials. (Rec: 45/45 cm.)							
		Note: Water table @ 14.40 m.							
		(01-14-03 @ 7:00 AM)							
11		***End of Borehole @ 20.00 m. depth***							
		Note:							
		*** - - - - - - - - - Visual Description**							
12		**Drlling Machine - - - - - - - - TONE - TDC**							
		Size of Casing - - - - - - - - 76 mm.							
13									
14									
15									
16									
17									
18									
19									
20									

GRAIN-SIZE DISTRIBUTION CURVES





BH. NO.	SAMPLE NO.	DEPTH (m)	CURVE NO.	NMC	LL	PL	PI	USCS	DESCRIPTION
SL-4-2	ss-2	2.00-2.45	1	11.04	NP	NP	NP	SM	Light gray lahar SAND, with non-plastic silt
SL-4-2	ss-4	4.00-4.45	2	22.21	NP	NP	NP	SM	Light gray lahar SAND, with non-plastic silt
SL-4-2	ss-6	6.00-6.45	3	17.08	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-2	ss-8	8.00-8.45	4	14.39	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-2	ss-10	10.00-10.45	5	19.46	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-2	ss-11	11.00-11.45		-	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-2	ss-12	12.00-12.45	6	14.58	NP	NP	NP	ML	Light gray to gray sandy SILT, non-plastic

Note: * - - - - - - - - Visual Description

SPECIFIC GRAVITY OF SOIL SOLIDS	LOCATION: **Sto. Tomas River, San Marcelino, Zambales** BORING NO.: **SL-4-2** DATE TESTED: **January 20, 2003** TESTED BY: **R. Cagbabanua** SHEET NO. **1 of 3**
PROJECT: THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO	

Sample Number	ss-2				ss-4	
Depth (m)	2.00-2.45				4.00-4.45	
Volume of Flask @ 20° , ml	100	100			100	100
Method of air removal	Rolling	Rolling			Rolling	Rolling
Wt. of Flask + Water + Soil = Wbws	175.13	175.91			175.33	175.35
Temperature, ^{o}C	28	28			28	28
Wt. of Flask + Water = Wbw	156.39	157.08			156.70	156.75
Wt. of Dry Soil = Ws	30.00	30.00			30.00	30.00
Wt. of Water, Ww = Ws + Wbw - Wbws	11.26	11.17			11.37	11.40
Specific Gravity, Gs = Ws / Ww	2.66	2.69			2.64	2.63
Viscosity Correction	0.9963	0.9963			0.9963	0.9963
Specific Gravity corrected for Temp.	**2.65**	**2.68**			**2.63**	**2.62**

Sample Number	ss-6				ss-8	
Depth (m)	6.00-6.45				8.00-8.45	
Volume of Flask @ 20°C	100	100			100	100
Method of air removal	Rolling	Rolling			Rolling	Rolling
Wt. of Flask + Water + Soil = Wbws	175.68	176.10			175.80	175.59
Temperature, ^{o}C	28	28			28	28
Wt. of Flask + Water = Wbw	156.74	157.25			157.00	157.02
Wt. of Dry Soil = Ws	30.00	30.00			30.00	30.00
Wt. of Water, Ww = Ws + Wbw - Wbws	11.06	11.15			11.20	11.43
Specific Gravity, Gs = Ws / Ww	2.71	2.69			2.68	2.62
Viscosity Correction	0.9963	0.9963			0.9963	0.9963
Specific Gravity corrected for Temp.	**2.70**	**2.68**			**2.67**	**2.61**

Remarks:

SPECIFIC GRAVITY OF SOIL SOLIDS	LOCATION: **Sto. Tomas River, San Marcelino, Zambales** BORING NO.: **SL-4-2** DATE TESTED: **January 20, 2003** TESTED BY: **R. Cagbabanua** SHEET NO. **2 of 3**
PROJECT: THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO	

Sample Number	ss-10				ss-12	
Depth (m)	10.00-10.45				12.00-12.45	
Volume of Flask @ 20° , ml	100	100			100	100
Method of air removal	Rolling	Rolling			Rolling	Rolling
Wt. of Flask + Water + Soil = Wbws	175.53	175.28			176.00	175.73
Temperature, ^{o}C	28	28			28	28
Wt. of Flask + Water = Wbw	156.84	156.72			157.00	156.75
Wt. of Dry Soil = Ws	30.00	30.00			30.00	30.00
Wt. of Water, Ww = Ws + Wbw - Wbws	11.31	11.44			11.00	11.02
Specific Gravity, Gs = Ws / Ww	2.65	2.62			2.73	2.72
Viscosity Correction	0.9963	0.9963			0.9963	0.9963
Specific Gravity corrected for Temp.	**2.64**	**2.61**			**2.72**	**2.71**

Sample Number	ss-14				ss-16	
Depth (m)	14.00-14.45				16.00-16.45	
Volume of Flask @ 20°C	100	100			100	100
Method of air removal	Rolling	Rolling			Rolling	Rolling
Wt. of Flask + Water + Soil = Wbws	175.70	176.02			175.74	175.05
Temperature, ^{o}C	28	28			28	28
Wt. of Flask + Water = Wbw	156.80	157.25			156.74	156.39
Wt. of Dry Soil = Ws	30.00	30.00			30.00	30.00
Wt. of Water, Ww = Ws + Wbw - Wbws	11.10	11.23			11.00	11.34
Specific Gravity, Gs = Ws / Ww	2.70	2.67			2.73	2.65
Viscosity Correction	0.9963	0.9963			0.9963	0.9963
Specific Gravity corrected for Temp.	**2.69**	**2.66**			**2.72**	**2.64**

Remarks:

SPECIFIC GRAVITY OF SOIL SOLIDS	LOCATION: **Sto. Tomas River, San Marcelino, Zambales** BORING NO.: **SL-4-2** DATE TESTED: **January 20, 2003** TESTED BY: **R. Cagbabanua** SHEET NO. **3 of 3**
PROJECT: THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO	

Sample Number	ss-18				ss-20	
Depth (m)	18.00-18.45				19.55-20.00	
Volume of Flask @ 20° , ml	100	100			100	100
Method of air removal	Rolling	Rolling			Rolling	Rolling
Wt. of Flask + Water + Soil = Wbws	175.75	175.64			175.79	175.53
Temperature, ^{o}C	28	28			28	28
Wt. of Flask + Water = Wbw	157.02	156.70			157.08	156.75
Wt. of Dry Soil = Ws	30.00	30.00			30.00	30.00
Wt. of Water, Ww = Ws + Wbw - Wbws	11.27	11.06			11.29	11.22
Specific Gravity, Gs = Ws / Ww	2.66	2.71			2.66	2.67
Viscosity Correction	0.9963	0.9963			0.9963	0.9963
Specific Gravity corrected for Temp.	**2.65**	**2.70**			**2.65**	**2.66**

Sample Number						
Depth (m)						
Volume of Flask @ 20°C						
Method of air removal						
Wt. of Flask + Water + Soil = Wbws						
Temperature, ^{o}C						
Wt. of Flask + Water = Wbw						
Wt. of Dry Soil = Ws						
Wt. of Water, Ww = Ws + Wbw - Wbws						
Specific Gravity, Gs = Ws / Ww						
Viscosity Correction						
Specific Gravity corrected for Temp.						

Remarks:

BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : **Sto. Tomas River, San Marcelino, Zambales**

BORING NO.: **SL-4-3**
FINAL DEPTH: **40.25 m.**
GWT: **15.65 m.**
ELEVATION: **86.00 m.**
DATE STARTED: **Jan. 14, 2003**
DATE FINISHED: **Jan. 20, 2003**
SHEET NO. **1 of 5**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	N - VALUE (10 30 50)	WATER CONTENT (PL NMC LL; 20 60 100)	P.I.	OTHER TEST RESULTS
1	(1.0-1.45 m) Light brown SAND and SILT, with traces of fine pyroclastic materials, (Rec: 45/40 cm.)	ss-1	Med. dense	*	15			
2	(2.0-2.45 m) Light brown gravelly SAND, with some non-plastic silt. (Rec: 45/40 cm.)	ss-2	Med. dense	SM	23			Gs = 2.70
3	(3.0-3.45 m) - same materials - (Rec: 45/35 cm.)	ss-3	Med. dense	*	14			
4	(4.0-4.45 m) Light brown silty SAND, with some gravel and little amount of fine pyroclastic materials. (Rec: 45/35 cm.)	ss-4	Med. dense	SM	18			Gs = 2.66
5	(5.0-5.45 m) Grayish brown sandy SILT, with traces of fine pyroclastic materials. (Rec: 45/45 cm.) *Permeability is conducted @ 6.00 m.*	ss-5	Med. dense	*	13			
6	(6.0-6.45 m) Grayish brown sandy gravel-size PYROCLASTIC materials, with little amount of fine sand. (Rec: 45/20 cm.)	ss-6	Med. dense	GM	11			Gs = 2.63
7	(7.0-7.45 m) Light gray to gray lahar SAND, with fine to medium pyroclastic materials. (Rec: 45/45 cm.)	ss-7	Med. dense	*	27			
8	(8.0-8.45 m) Light gray lahar SAND, with non-plastic silt and little amount of gravel-size pyroclastic materials. (Rec: 45/45 cm.) *Permeability is conducted @ 9.00 m.*	ss-8	Med. dense	SM	22			Gs = 2.55
9	(9.0-9.45 m) - same materials - (Rec: 45/45 cm.)	ss-9	Med. dense	*	15			
10								

BOREHOLE LOG

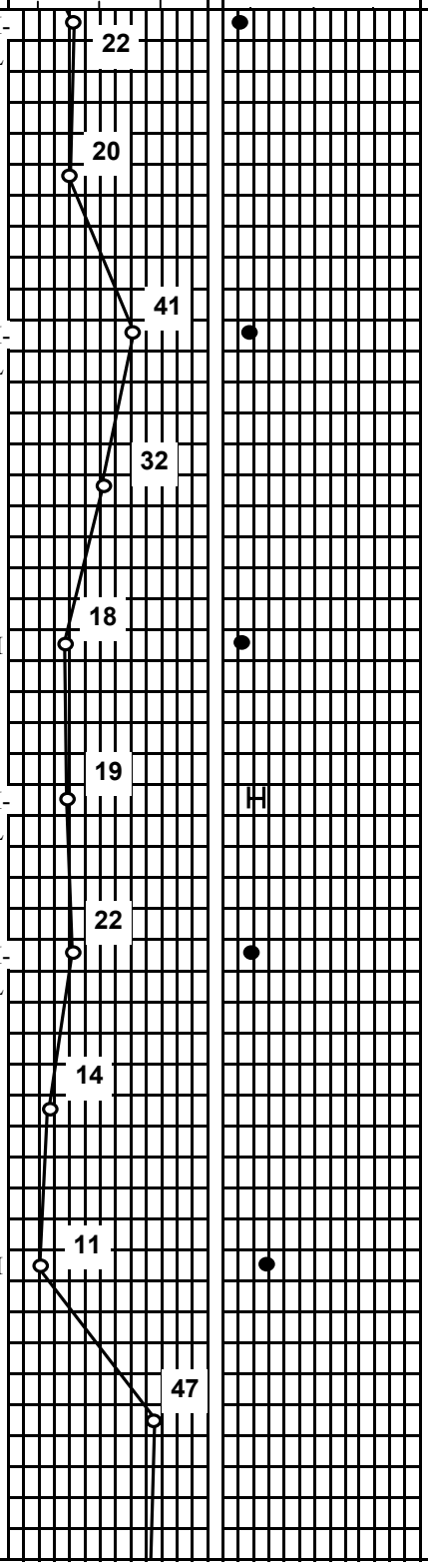
PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : **Sto. Tomas River, San Marcelino, Zambales**

BORING NO.: **SL-4-3**
FINAL DEPTH: **40.25 m.**
GWT: **15.65 m.**
ELEVATION: **86.00 m.**
DATE STARTED: **Jan. 14, 2003**
DATE FINISHED: **Jan. 20, 2003**
SHEET NO. **2 of 5**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	N - VALUE	WATER CONTENT (PL NMC LL)	P.I.	OTHER TEST RESULTS
	(10.0-10.45 m) Light gray lahar SAND, with some fine to medium pyroclastic materials (Rec: 45/45 cm.) *Note: Sample became friable after oven drying and degraded into silt..*	ss-10	Med. dense	SM-ML	22			Gs = 2.63
11	(11.0-11.45 m) - same materials - (Rec: 45/35 cm.)	ss-11	Med. dense	*	20			
12	*Permeability is conducted @ 12.00 m.* (12.0-12.45 m) Light gray lahar SAND, with fine to coarse pyroclastic materials (Rec: 45/30 cm.) *Note: Sample became friable after oven drying into SILT.*	ss-12	Dense	SM-ML	41			Gs = 2.51
13	(13.0-13.45 m) Light gray lahar SAND, with fine and coarse pyroclastic materials. (Rec: 45/35 cm.)	ss-13	Dense	*	32			
14	(14.0-14.45 m) Grayish brown silty fine SAND, with little amount of fine pyroclastic materials. (Rec: 45/30 cm.)	ss-14	Med. dense	SM	18			Gs = 2.62
15	*Permeability is conducted @ 15.00 m.* (15.0-15.45 m) Grayish brown SAND and SILT, slightly plastic, traces of fine pyroclastic materials. (Rec: 45/20 cm.)	ss-15	Very stiff	SM-ML	19	H	9	
16	(16.0-16.45 m) Grayish brown lahar SAND, with some non-plastic silt and traces of fine pyroclastic materials. (Rec: 45/25 cm.) *Note: Sample became friable after oven drying and degraded into silt..*	ss-16	Med. dense	SM-ML	22			Gs = 2.63
17	(17.0-17.45 m) - same materials - (Rec: 45/30 cm.)	ss-17	Med. dense	*	14			
18	*Permeability is conducted @ 18.00 m.* (18.0-18.45 m) Grayish brown fine SAND, with non-plastic silt sand and fine pyroclastic materials. (Rec: 45/30 cm.)	ss-18	Med. dense	SM	11			Gs = 2.60
19	(19.0-19.45 m) Brownish gray fine to medium SAND, with some pyroclastic materials. (Rec: 45/45 cm.)	ss-19	Dense	*	47			
20								



BOREHOLE LOG

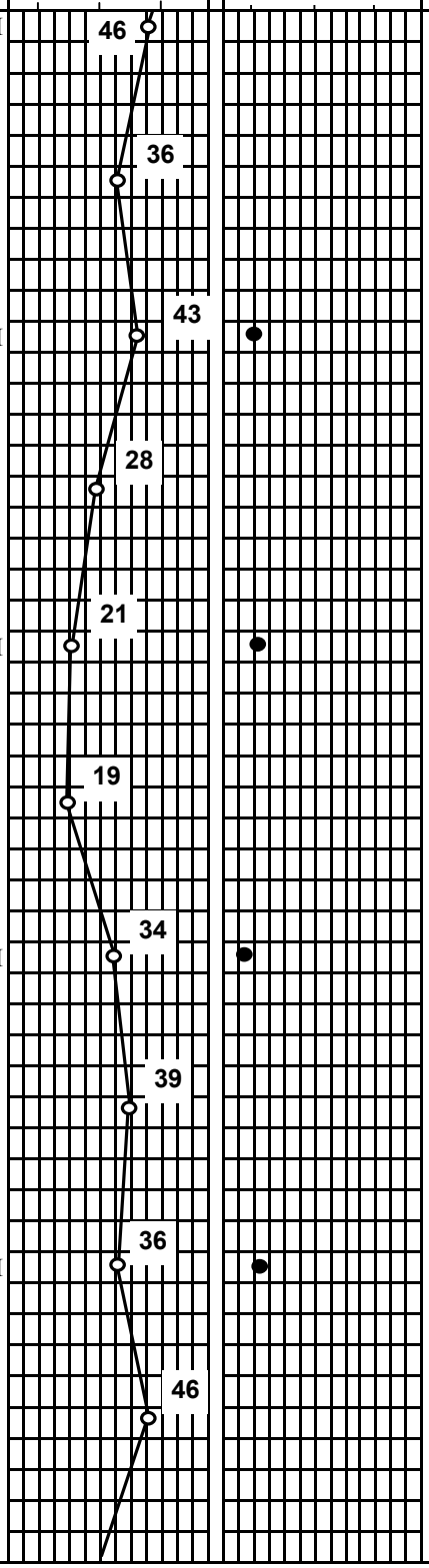
PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : **Sto. Tomas River, San Marcelino, Zambales**

BORING NO.: **SL-4-3**
FINAL DEPTH: **40.25 m.**
GWT: **15.65 m.**
ELEVATION: **86.00 m.**
DATE STARTED: **Jan. 14, 2003**
DATE FINISHED: **Jan. 20, 2003**
SHEET NO. **3 of 5**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	N - VALUE	WATER CONTENT (PL NMC LL)	P.I.	OTHER TEST RESULTS
	(20.0-20.45 m) Brownish gray silty fine to coarse SAND, with some gravel-size pyroclastic materials. (Rec: 45/30 cm.)	ss-20	Dense	SM	46			Gs = 2.70
	Permeability is conducted @ 21.00 m.							
21	(21.0-21.45 m) Gray fine to coarse SAND, with some fine pyroclastic materials. (Rec: 45/30 cm.)	ss-21	Dense	*	36			
22	(22.0-22.45 m) Gray silty SAND, non-plastic, with traces of fine pyroclastic materials. (Rec: 45/30 cm.)	ss-22	Dense	SM	43			Gs = 2.74
23	(23.0-23.45 m) Gray fine to medium SAND, some fine pyroclastic materials. (Rec: 45/40 cm.)	ss-23	Med. dense	*	28			
24	(24.0-24.45 m) Gray fine to medium SAND, with fine pyroclastic materials and little amount of non-plastic silt. (Rec: 45/15 cm.)	ss-24	Med. dense	SM	21			Gs = 2.64
25	(25.0-25.45 m) Gray fine to medium-grained SAND, with some coarse pyroclastic materials. (Rec: 45/20 cm.)	ss-25	Med. dense	*	19			
26	(26.0-26.45 m) Gray silty SAND, non-plastic, with traces of fine to coarse pyroclastic materials. (Rec: 45/25 cm.)	ss-26	Dense	SM	34			Gs = 2.64
27	(27.0-27.45 m) - same materials - (Rec: 45/35 cm.)	ss-27	Dense	*	39			
28	(28.0-28.45 m) Gray fine to medium SAND, with some non-plastic silt and little amount of coarse pyroclastic materials . (Rec: 45/20 cm.)	ss-28	Dense	SM	36			Gs = 2.67
29	(29.0-29.45 m) - same materials - Rec: 45/25 cm.) *Note: Water table @ 15.65 m. (01-19-03 @ 7:00 AM)*	ss-29	Dense	*	46			
30								



BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : **Sto. Tomas River, San Marcelino, Zambales**

BORING NO.: **SL-4-3**
FINAL DEPTH: **40.25 m.**
GWT: **15.65 m.**
ELEVATION: **86.00 m.**
DATE STARTED: **Jan. 14, 2003**
DATE FINISHED: **Jan. 20, 2003**
SHEET NO. **4 of 5**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	REC.RATIO / R. Q. D / N - VALUE (10 30 50)	WATER CONTENT (PL NMC LL; 20 60 100)	P.I.	OTHER TEST RESULTS
	(30.0-30.45 m) Gray fine to medium SAND, with some non-plastic silt and traces of coarse pyroclastic materials. (Rec: 45/25 cm.)	ss-30	Med. dense	SM	23			Gs = 2.60
31	(31.0-31.45 m) - same materials - (Rec: 45/30 cm.)	ss-31	Dense	*	37			
32	(32.0-32.45 m) - same materials - (Rec: 45/25 cm.)	ss-32	Med. dense	SM	20			Gs = 2.62
33	(33.0-33.45 m) Gray fine to medium SAND, with non-plastic silt and little amount of coarse pyroclastic materials. (Rec: 45/20 cm.)	ss-33	Dense	*	33			
34	(34.0-34.45 m) - same materials - (Rec: 45/20 cm.) *Note: Water table @ 15.85 m. (01-20-03 @ 7:00 AM)*	ss-34	Med. dense	SM	20			Gs = 2.62
35	(35.0-35.45 m) Gray fine to coarse SAND, with some fine and coarse pyroclastic materials. (Rec: 45/45 cm.)	ss-35	Dense	*	35			
36	(36.0-36.45 m) Gray fine to coarse SAND, with little amount of non-plastic silt and traces of pyroclastic materials. (Rec: 45/35 cm.)	ss-36	Very dense	SM	52			Gs = 2.62
37	(37.0-37.45 m) Gray fine SAND, with some fine pyroclastic materials. (Rec: 45/30 cm.)	ss-37	Med. dense	*	18			
	Hard strata encountered @ 38.40 m.							
38	(38.0-38.40 m) Gray fine to coarse SAND, with amount of gravel and non-plastic silt. (Rec: 40/35 cm.)	ss-38	Very dense	SM	60/25 cm.			Gs = 2.71
39	(39.0-39.40 m) - same materials - Rec: 40/30 cm.)	ss-39	Very dense	*	60/25 cm.			
40								

BOREHOLE LOG

PROJECT : ***THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO***

LOCATION : **Sto. Tomas River, San Marcelino, Zambales**

BORING NO.: **SL-4-3**
FINAL DEPTH: **40.25 m.**
GWT: **15.65 m.**
ELEVATION: **86.00 m.**
DATE STARTED: **Jan. 14, 2003**
DATE FINISHED: **Jan. 20, 2003**
SHEET NO. **5 of 5**

A G E S

DEPTH (m)	SAMPLE DESCRIPTION	SAMPLE NO.	CONSISTENCY	USCS	REC.RATIO / R. Q. D / N - VALUE (10 30 50)	WATER CONTENT PL NMC LL (20 60 100)	P.I.	OTHER TEST RESULTS
	(40.00-40.25 m) Gray poorly graded GRAVEL and SAND, with traces of non-plastic silt. (Rec: 25/15 cm.) *Note: Water table @ 15.65 m. (01-21-03 @ 7:00 AM)*	ss-40	Very dense	GP-SP	60/10 cm.			Gs = 2.71
41	***End of Borehole @ 40.25 m.***							
42	**Note:** *** - - - - - - - - - - Visual Description** **Drilling Machine - - - - - - - - - - TONE - TDC** **Size of Casing - - - - - - - - - - 76 mm.**							
43								
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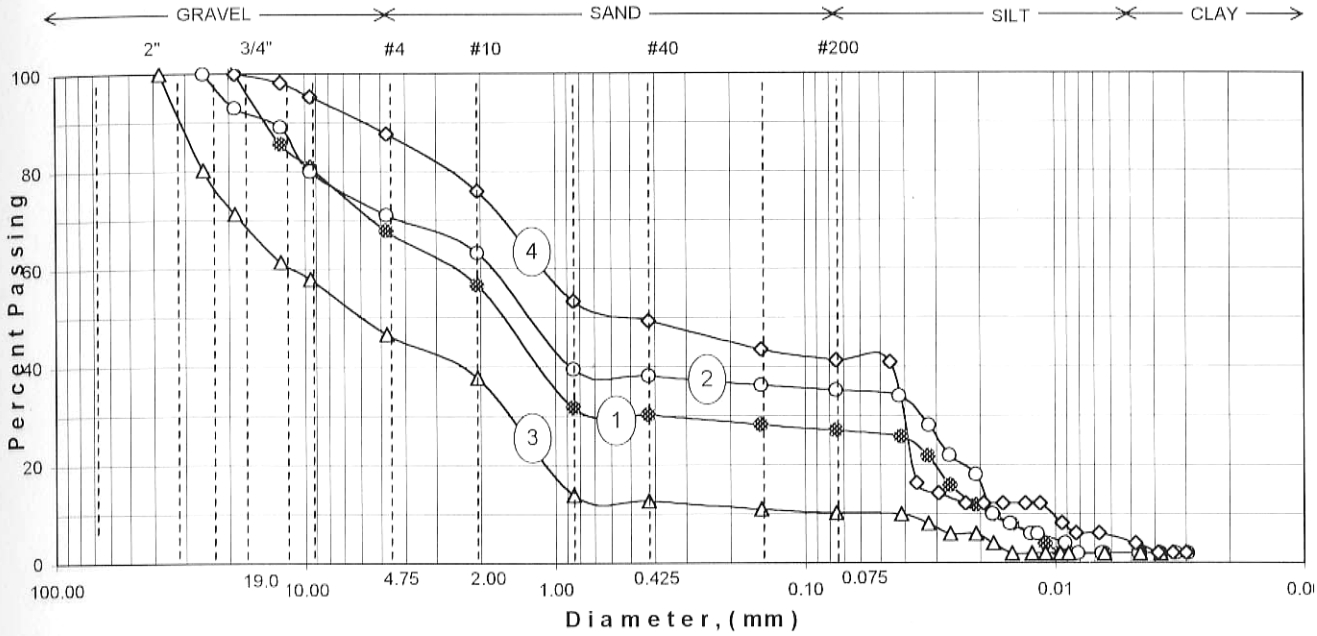
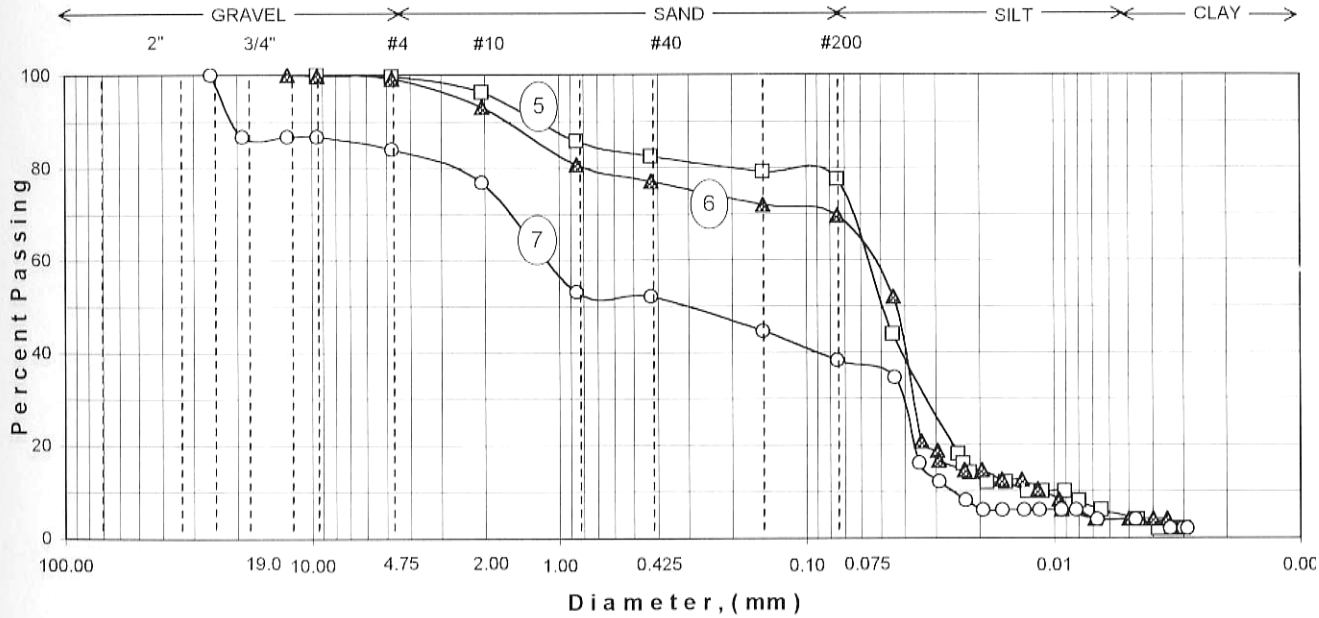
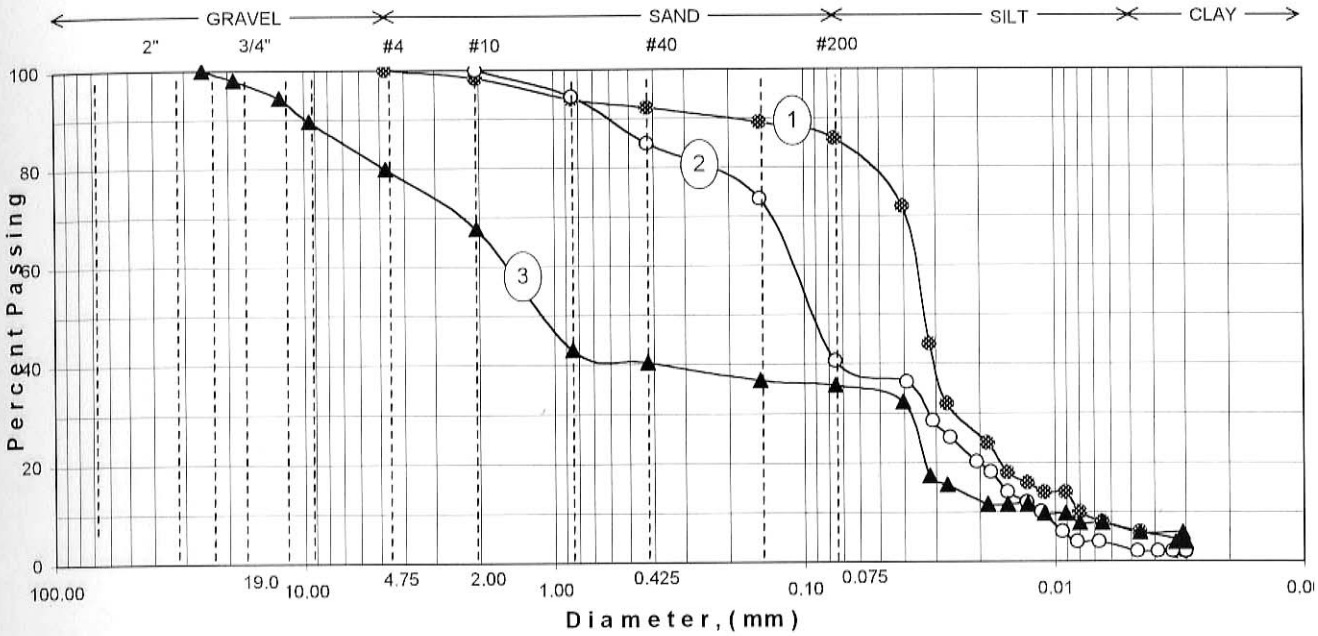
GRAIN-SIZE DISTRIBUTION CURVES

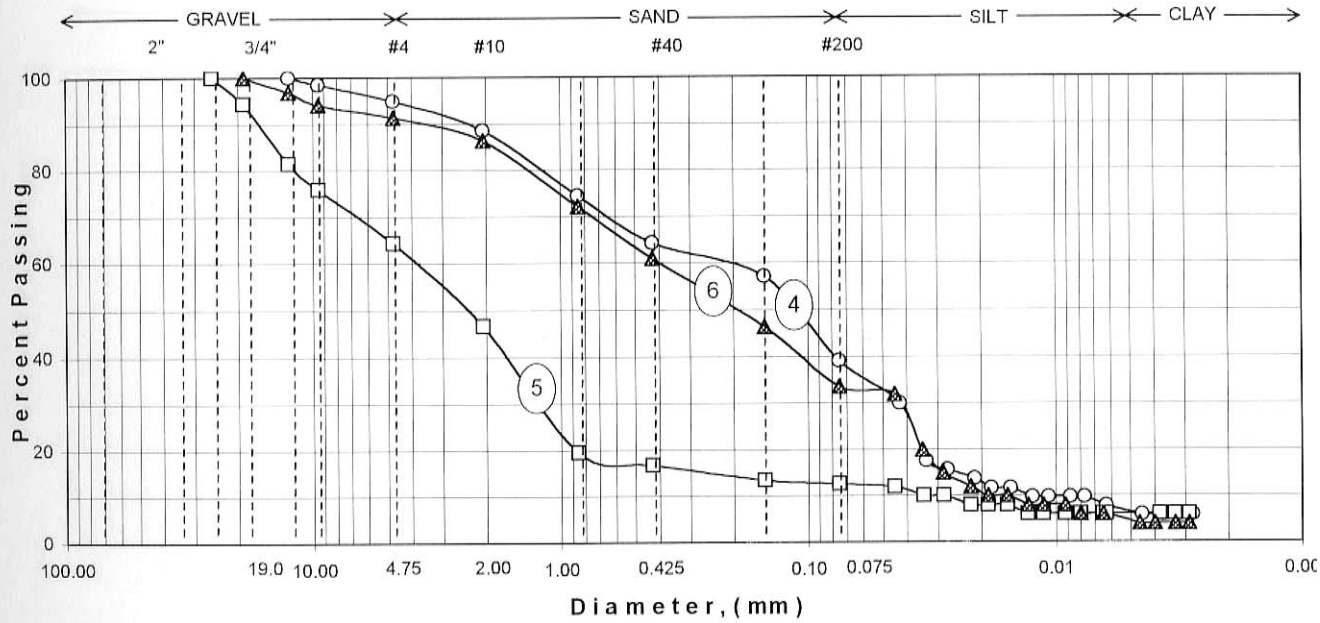




BH. NO.	SAMPLE NO.	DEPTH (m)	CURVE NO.	NMC	LL	PL	PI	USCS	DESCRIPTION
SL-4-3	ss-2	2.00-2.45	1	10.75	NP	NP	NP	SM	Light brown gravelly SAND
SL-4-3	ss-4	4.00-4.45	2	11.70	NP	NP	NP	SM	Light brown silty SAND
SL-4-3	ss-6	6.00-6.45	3	13.13	NP	NP	NP	GM	Grayish brown sandy gravel-size PYROCLASTIC materials.
SL-4-3	ss-8	8.00-8.45	4	18.44	NP	NP	NP	SM	Light gray lahar SAND, with non-plastic silt
SL-4-3	ss-10	10.00-10.45	5	11.41	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-3	ss-12	12.00-12.45	6	18.44	NP	NP	NP	SM-ML	Light gray lahar SAND
SL-4-3	ss-14	14.00-14.45	7	11.05	NP	NP	NP	SM	Grayish brown silty fine SAND

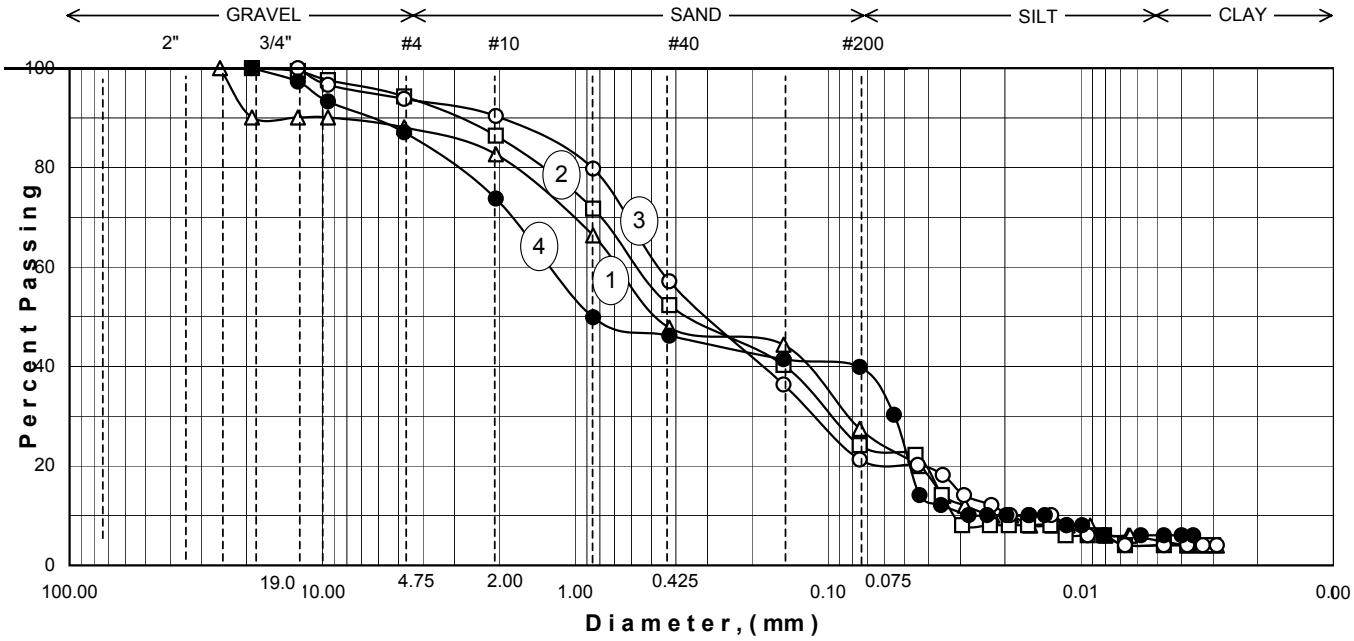
GRAIN-SIZE DISTRIBUTION CURVES

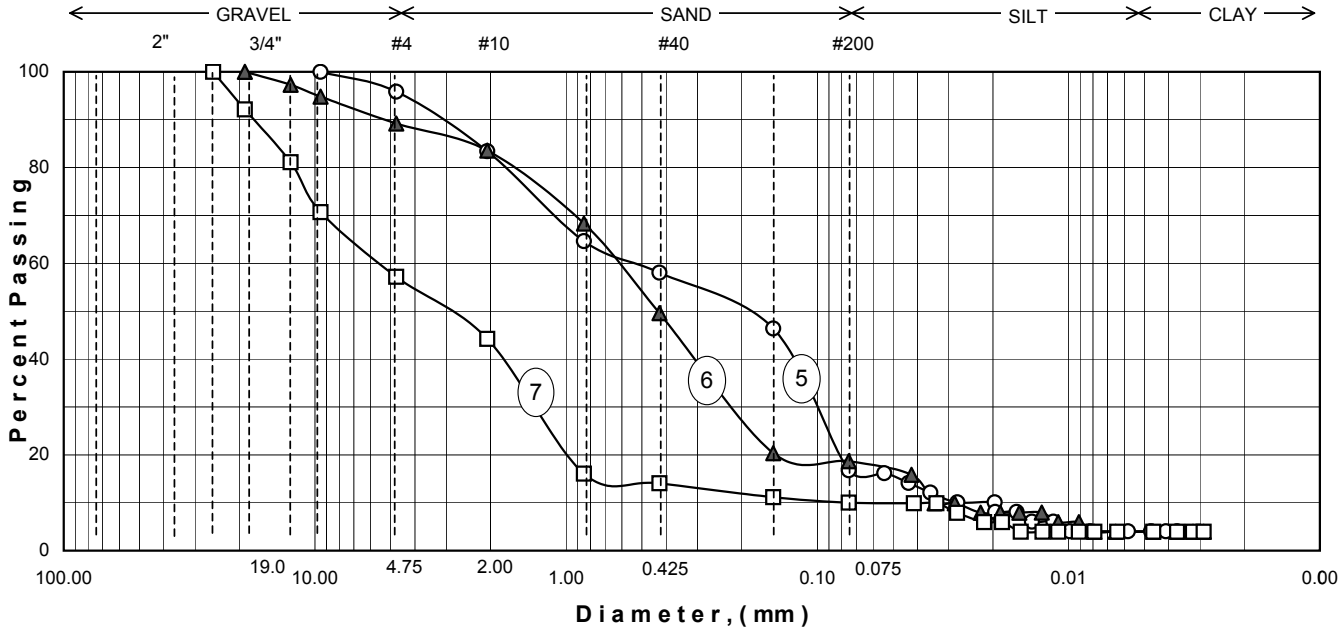




BH. NO.	SAMPLE NO.	DEPTH (m)	CURVE NO.	NMC	LL	PL	PI	USCS	DESCRIPTION
SL-4-3	ss-15	15.00-15.45		-	28	19	9	SM-ML	Grayish brown SAND and SILT, slightly plastic
SL-4-3	ss-16	16.00-16.45	1	19.03	NP	NP	NP	SM-ML	Grayish brown lahar SAND
SL-4-3	ss-18	18.00-18.45	2	29.19	NP	NP	NP	SM	Grayish brown fine SAND, with non-plastic silt
SL-4-3	ss-20	20.00-20.45	3	9.02	NP	NP	NP	SM	Brownish gray silty fine to coarse SAND
SL-4-3	ss-22	22.00-22.45	4	12.13	NP	NP	NP	SM	Gray silty SAND, non-plastic
SL-4-3	ss-24	24.00-24.45	5	13.70	NP	NP	NP	SM	Gray fine to medium SAND, with fine pyroclastic materials
SL-4-3	ss-26	26.00-26.45	6	16.27	NP	NP	NP	SM	Gray silty SAND, non-plastic

GRAIN-SIZE DISTRIBUTION CURVES





BH. NO.	SAMPLE NO.	DEPTH (m)	CURVE NO.	NMC	LL	PL	PI	USCS	DESCRIPTION
SL-4-3	ss-28	28.00-28.45	1	16.12	NP	NP	NP	SM	Gray fine to medium SAND
SL-4-3	ss-30	30.00-30.45	2	19.79	NP	NP	NP	SM	Gray fine to medium SAND
SL-4-3	ss-32	32.00-32.45	3	20.74	NP	NP	NP	SM	Gray fine to medium SAND
SL-4-3	ss-34	34.00-34.45	4	14.52	NP	NP	NP	SM	Gray fine to medium SAND
SL-4-3	ss-36	36.00-36.45	5	14.28	NP	NP	NP	SM	Gray fine to coarse SAND
SL-4-3	ss-38	38.00-38.40	6	14.52	NP	NP	NP	SM	Gray fine to coarse SAND
SL-4-3	ss-40	40.00-40.25	7	10.04	NP	NP	NP	GP-SP	Gray poorly graded GRAVEL and SAND

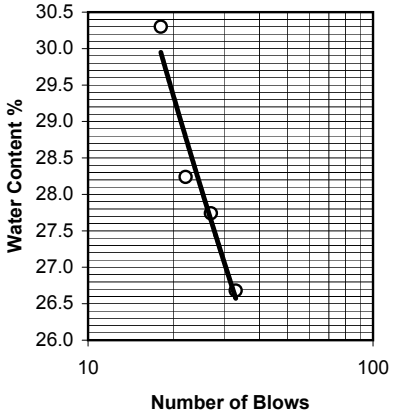
LIQUID AND PLASTIC LIMIT
(AASHTO T-89 & T-90)

Project	:	THE STUDY ON SABO AND FLOOD CONTROL FOR WESTERN RIVER BASINS OF MOUNT PINATUBO
Location	:	Sto. Tomas River, San Marcelino, Zambales
Tested by	:	J. Castro
Checked by	:	E. CRUZ - Materials Engineer
BOREHOLE NO.	:	SL-4-3

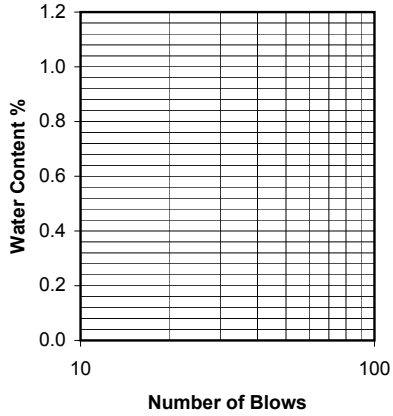
SAMPLE NO. ss-15 (15.00-15.45 m)

LIQUID LIMIT TEST			PLASTIC LIMIT TEST	
Run No.	No. of Blows	Water Content	Run No.	Water Content
1	33	26.68	1	19.40
2	27	27.74	2	19.39
3	22	28.24		
4	18	30.30		
Liquid Limit (%)	*Plastic Limit (%)*		*Plasticity Index (%)*	
28	19		9	

REMARKS:



SAMPLE NO. ss-18 (18.00-18.45 m)

			PLASTIC LIMIT TEST	
Run No.	No. of Blows	Water Content	Run No.	Water Content
1			1	
2	Non plastic		2	
3				
4				
Liquid Limit (%)	*Plastic Limit (%)*		*Plasticity Index (%)*	

REMARKS: