

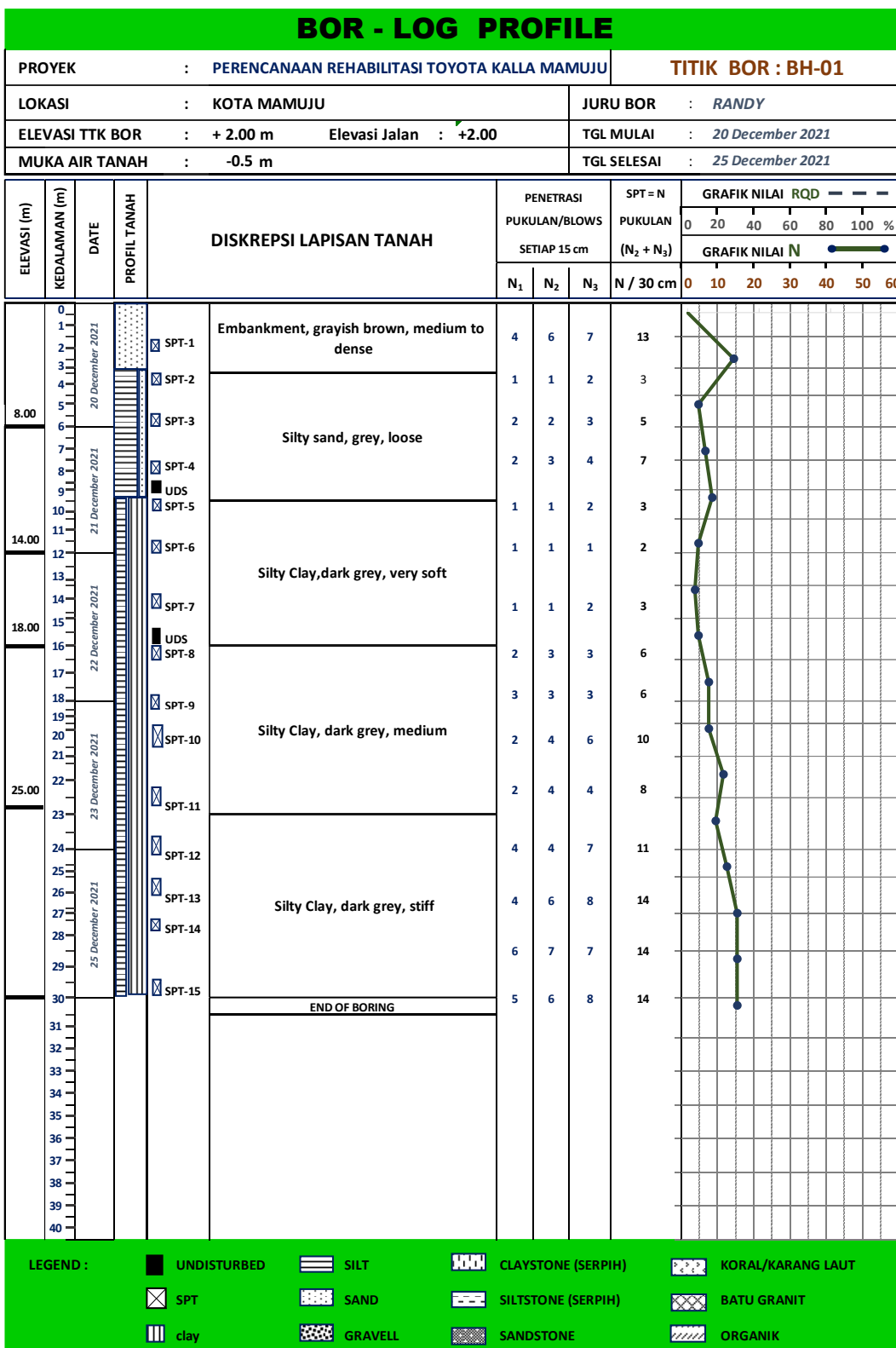
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Lampiran 1 Profil Bor-log SPT



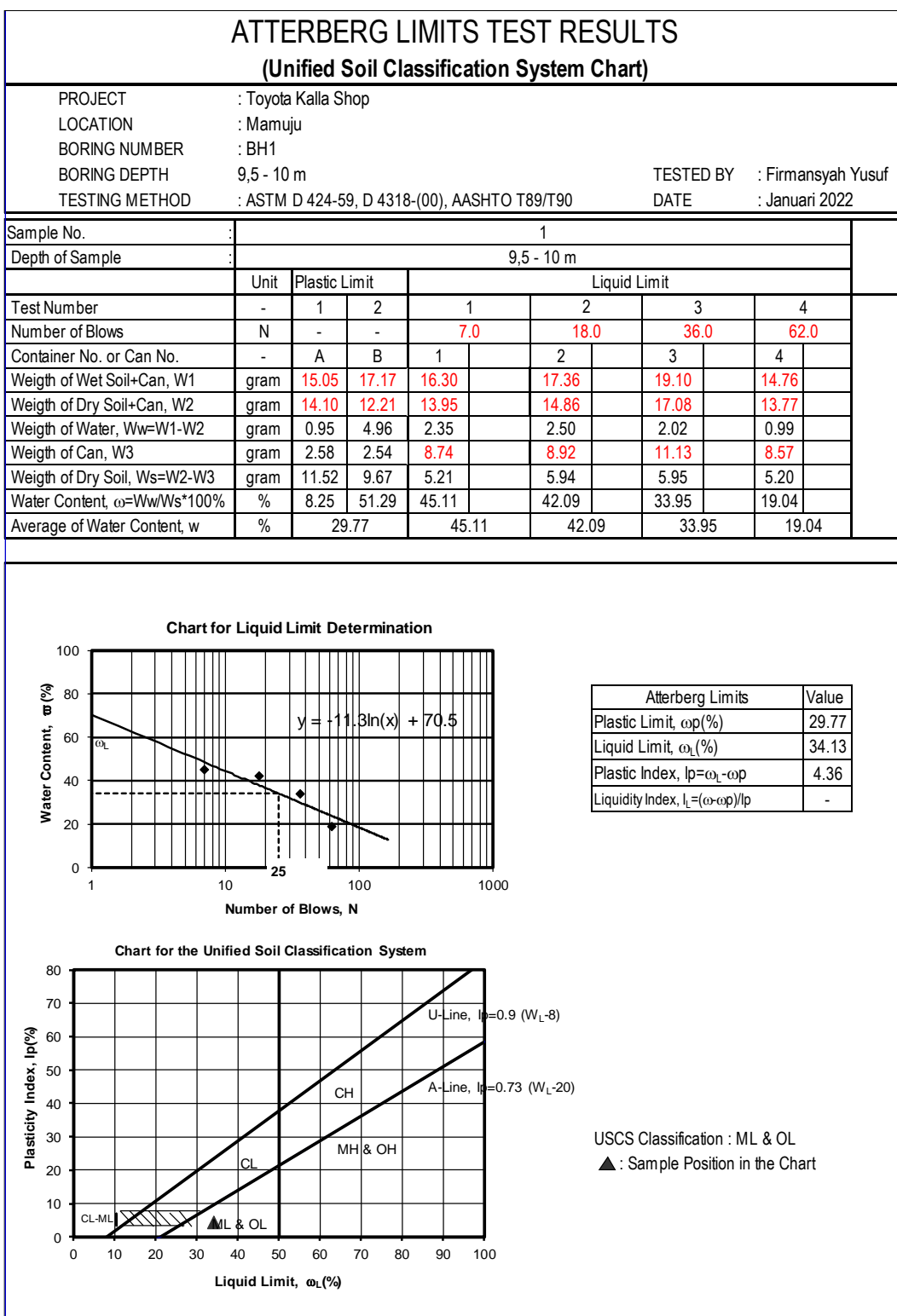
Lampiran 2 Data Pengujian Berat Jenis

SPECIFIC GRAVITY TEST RESULTS								
PROJECT	: Shop Toyota Kalla							
LOCATION	: Mamuju							
BORING NUMBER	: BH 1							
BORING DEPTH	: Meter					TESTED BY : Firmansyah Yusuf		
TESTING METHOD	: ASTM D 854-58(72)					DATE : Januari 2022		
Bore Hole No. / Type	-	BH1		BH1		BH1		
Sample	-	1		2		3		
Sample Depth & Inclination	m	9,5 -10		15,5 - 16		19,5 -20		
Number of Volumetric Flask	-	1	2	1	2	1	2	
Weight of Vol. Flask + Soil (W2)	Gram	44.01	45.36	30.04	32.79	44.18	45.39	
Weight of Vol. Flask (W1)	Gram	34.01	35.36	20.04	22.79	34.18	35.39	
Weight of Dry Soil (Ws=W2-W1)	Gram	10.00	10.00	10.00	10.00	10.00	10.00	
Temperature, T (oC)	Degree	29.00	29.00	30.00	30.00	30.00	30.00	
Weight of Vol. Flask+Water at T (W4)	Gram	82.29	83.61	69.84	74.90	82.36	83.50	
Weight of Vol. Flask+Water+Soil (W3)	Gram	88.83	89.65	76.25	81.17	88.67	89.89	
Unit Weight of Water at T, γ_T	Gram/Cm ³	0.9963	0.9963	0.9963	0.9963	0.9963	0.9963	
Temp. Corr. Coefficient, $\alpha = \gamma_T / \gamma_{20}^{oC}$	-	1.00	1.00	1.00	1.00	1.00	1.00	
Weight of Soil (Wu=(Ws+W4-W3))	Gram	3.46	3.96	3.59	3.73	3.69	3.61	
Specific Gravity of Soil (Gs= $\alpha \cdot W_s / W_u$)	-	2.885	2.520	2.780	2.676	2.705	2.765	
Average of Gs	-	2.702		2.728		2.735		
Remarks:	Unit Weight of Water, $\gamma_w 20^oC = 0.99823$							

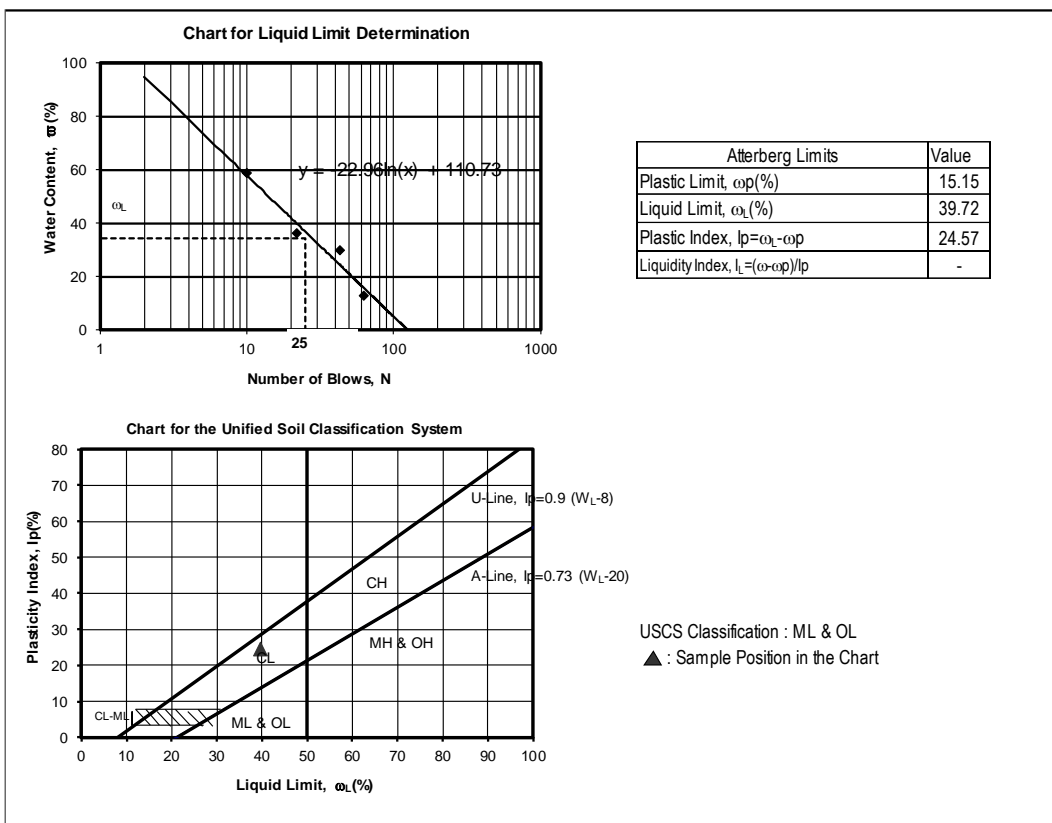
Lampiran 3 Data Pengujian Berat Isi

TEST RESULTS OF GENERAL PROPERTIES (Wet Density, Water Content, Dry Density, Porosity, & Degree of Saturation)											
PROJECT	: Shop Toyota Kalla										
LOCATION	: Mamuju										
BORING NUMBER	: BH 1										
BORING DEPTH	: Meter										
TESTING METHOD	: ASTM D 2216-(98), D 2937-(71), AASHTO T100-71										
	TESTED BY : Firmansyah Yusuf										
	DATE : Januari 2022										
Bore Hole No.	-	BH 1			BH 1			BH 1			KETERANGAN
Sample	-	1			2			3			
Sample Depth & Inclination	m	9-9,5			15,5-16			19,5-20			D ring = 63 mm h ring = 20 mm d= diameter h = tinggi
Ring / Container Number	-	1	2	2	1	2	3	1	2	3	
Weight of Ring, (1)	Gram	65.95	65.95	65.95	65.95	65.95	65.95	65.95	65.95	65.95	
Weight of Container, (2)	Gram	8.77	8.55	10.99	8.62	10.94	11.21	11.21	8.60	8.76	
Weight of Ring+Container+Wet Soil, (3)	Gram	164.60	156.47	169.20	156.41	153.30	154.34	147.48	148.65	150.86	
Weight of Wet Soil, (4)={(3)-(2)-(1)}	Gram	89.88	81.97	92.26	81.84	76.41	77.18	70.32	74.10	76.15	
Volume of Soil or Ring, (5)	cm ³	35.33	35.33	35.33	35.33	35.33	35.33	35.33	35.33	35.33	
Weight of Container+Dry Soil, (6)	Gram	58.85	56.91	64.69	52.03	52.27	53.42	51.65	49.60	46.74	
Weight of Dry Soil, (7)={(6)-(2)}	Gram	50.08	48.36	53.70	43.41	41.33	42.21	40.44	41.00	37.98	
Weight of Water, (8)=(4)-(7)	Gram	48.16	44.13	48.87	46.17	45.18	45.29	40.72	40.47	45.43	
Specific Gravity, G _s	-	2.702	2.702	2.702	2.728	2.728	2.728	2.735	2.735	2.735	
Volume of Dry Soil, (9)=(7)/G _s	cm ³	18.53	17.90	19.87	15.91	15.15	15.47	14.79	14.99	13.89	
Volume of Pore, (10)=(5)-(9)	cm ³	16.79	17.43	15.45	19.41	20.17	19.85	20.54	20.34	21.44	
Wet Density, $\gamma_{wet} = (4)/(5)$	Gr/cm ³	2.54	2.32	2.61	2.32	2.16	2.18	1.99	2.10	2.16	
Water Content, $w=(8)/(7)*100\%$	%	96.17	91.25	91.01	106.36	109.32	107.30	100.69	98.71	119.62	
Dry Density, $\gamma_d = \gamma_{wet}/(1+w)$	Gr/cm ³	1.30	1.21	1.37	1.12	1.03	1.05	0.99	1.06	0.98	
Porosity, $n=(10)/(5)*100\%$	%	47.53	49.33	43.74	54.95	57.11	56.20	58.15	57.57	60.69	
Degree of Saturation, $S_r=(8)/(10)*100\%$	%	286.83	253.23	316.29	237.84	223.94	228.14	198.21	198.98	211.86	

Lampiran 4 Data Pengujian Batas-Batas Atterberg



ATTERBERG LIMITS TEST RESULTS (Unified Soil Classification System Chart)									
LOCATION	: Mamuju								
BORING NUMBER	: BH1								
BORING DEPTH	: 15,5 - 16 m				TESTED BY	: Firmansyah Yusuf			
TESTING METHOD	: ASTM D 424-59, D 4318-(00), AASHTO T89/T90				DATE	: Januari 2022			
Sample No.	: 2								
Depth of Sample	: 15,5-16 m								
	Unit	Plastic Limit		Liquid Limit					
Test Number	-	1	2	1	2	3	4		
Number of Blows	N	-	-	10.0	22.0	43.0	63.0		
Container No. or Can No.	-	A	B	1	2	3	4		
Weigth of Wet Soil+Can, W1	gram	14.52	14.70	24.08	18.25	20.41	20.12		
Weigth of Dry Soil+Can, W2	gram	12.94	13.11	19.22	15.70	17.76	18.83		
Weigth of Water, Ww=W1-W2	gram	1.58	1.59	4.86	2.55	2.65	1.29		
Weigth of Can, W3	gram	2.58	2.54	10.94	8.68	8.84	8.76		
Weigth of Dry Soil, Ws=W2-W3	gram	10.36	10.57	8.28	7.02	8.92	10.07		
Water Content, $\omega = Ww/Ws * 100\%$	%	15.25	15.04	58.70	36.32	29.71	12.81		
Average of Water Content, w	%	15.15		58.70	36.32	29.71	12.81		

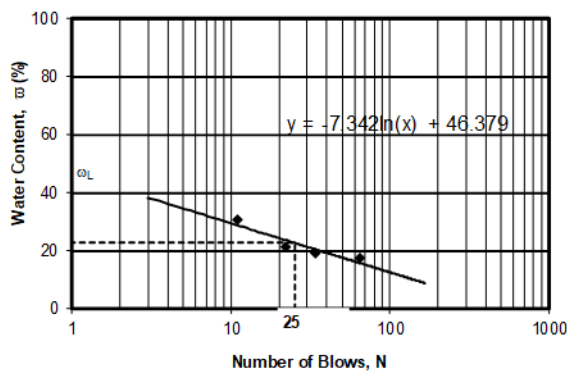


ATTERBERG LIMITS TEST RESULTS (Unified Soil Classification System Chart)

LOCATION	: Mamuju			TESTED BY	: Firmansyah Yusuf		
BORING NUMBER	: BH1			DATE	: Januari 2022		
BORING DEPTH	: 19,5 - 20 m			TESTING METHOD	: ASTM D 424-59, D 4318-(00), AASHTO T89/T90		

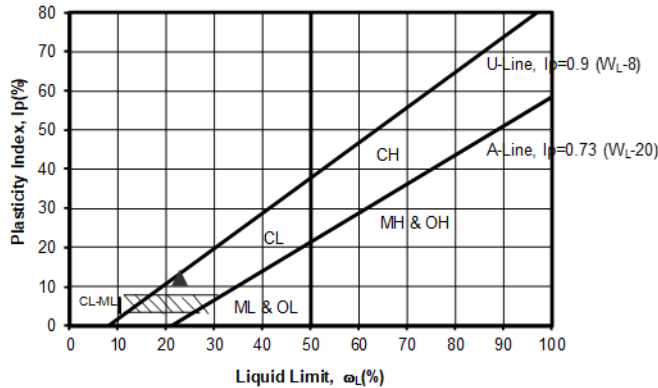
Sample No.	3							
Depth of Sample	19,5-20							
	Unit	Plastic Limit		Liquid Limit				
Test Number	-	1	2	1	2	3	4	
Number of Blows	N	-	-	11.0	22.0	34.0	65.0	
Container No. or Can No.	-	A	B	1	2	3	4	
Weight of Wet Soil+Can, W1	gram	14.45	14.75	21.99	17.37	20.78	22.36	
Weight of Dry Soil+Can, W2	gram	13.33	13.59	18.90	15.84	18.85	20.66	
Weight of Water, Ww=W1-W2	gram	1.12	1.16	3.09	1.53	1.93	1.70	
Weight of Can, W3	gram	2.58	2.54	8.82	8.69	8.77	10.93	
Weight of Dry Soil, Ws=W2-W3	gram	10.75	11.05	10.08	7.15	10.08	9.73	
Water Content, $\omega = Ww/Ws * 100\%$	%	10.42	10.50	30.65	21.40	19.15	17.47	
Average of Water Content, w	%	10.46		30.65	21.40	19.15	17.47	

Chart for Liquid Limit Determination



Atterberg Limits	Value
Plastic Limit, ω_p (%)	10.46
Liquid Limit, ω_L (%)	22.75
Plastic Index, $I_p = \omega_L - \omega_p$	12.29
Liquidity Index, $I_L = (\omega - \omega_p) / I_p$	-

Chart for the Unified Soil Classification System



USCS Classification : ML & OL
 ▲ : Sample Position in the Chart

Lampiran 5 Data Pengujian Triaksial

PT.TAWANG REKATAMA

PROYEK : SHOP TOYOTA KALLA
 LOKASI : MAMUJU
 BH : 01
 DEPTH : 9,5 - 10 m
 TANGGAL : FEBRUARY 2022

OPERATOR : FIRMANSYAH
 PENGUJIAN : TRAKSIAL UU

C	pembacaan ring O1= 50 kg/cm ²	pembacaan ring O2= 100kg/cm ²	pembacaan ring O3= 200 kg/cm ²
0	0	0	0
0.2	25	30	37
0.4	30	35	50
0.6	35	40	56
0.8	40	45	60
1	44	50	65
1.2	48	55	68
1.4	50	60	75
1.6	55	65	80
1.8	58	70	85
2	60	74	90
2.2	61	76	95
2.4	62	78	100
2.6	62	80	104
2.8	62	84	106
3	62	86	107
3.2		88	110
3.4		90	110
3.6		90	110
3.8		90	
4		90	
		86	

PT.TAWANG REKATAMA

PROYEK : SHOP TOYOTA KALLA

OPERATOR : FIRMANSYAH

LOKASI : MAMUJU

PENGUJIAN : TRAKSIAL UU

BH : 01

DEPTH : 15,5-16 m

TANGGAL : FEBRUARY 2022

C	pembacaan ring O1= 50 kg/cm ²	pembacaan ring O2= 100kg/cm ²	pembacaan ring O3= 200 kg/cm ²
0	0	0	0
0.2	25	55	37
0.4	30	64	50
0.6	38	70	56
0.8	40	75	60
1	42	78	65
1.2	45	82	68
1.4	48	85	75
1.6	50	88	80
1.8	55	92	85
2	60	95	90
2.2	62	98	95
2.4	63	100	100
2.6	63	110	104
2.8	62	120	106
3	59	130	107
3.2		130	110
3.4		130	110
3.6			110
3.8			
4			

PT.TAWANG REKATAMA

PROYEK : SHOP TOYOTA KALLA

OPERATOR : FIRMANSYAH

LOKASI : MAMUJU

PENGUJIAN : TRAKSIAL UU

BH : 01

DEPTH : 19,5 - 20 m

TANGGAL : FEBRUARY 2022

C	pembacaan ring	pembacaan ring	pembacaan ring
	Ø1= 50 kg/cm²	Ø2= 100kg/cm²	Ø3= 200 kg/cm²
0	0	0	0
0.2	25	40	50
0.4	30	44	75
0.6	33	47	81
0.8	35	50	85
1	42	53	90
1.2	44	60	96
1.4	47	65	102
1.6	49	70	105
1.8	50	75	112
2	55	80	116
2.2	58	86	120
2.4	60	91	125
2.6	60	96	130
2.8	60	100	135
3	60	109	140
3.2	58	110	150
3.4		130	155
3.6		135	160
3.8		135	165
4		135	170
4.2		135	175
4.4			180
4.6			180
5			
5.2			
5.4			
5.6			